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100 CORPORATE WOMEN LEADERS IN STEM

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Lorena Fimbres, VP & Chief Business Development Officer
Bahar Etemadian, Manager, Graphic Design
Fiorella Gil, Graphic Design

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Dr. Dane Boyington, Senior Advisor, Technology
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Diversified was founded by Judith von Seldeneck, who is our Chairman today. Judie made diversity—of gender, race, ideas and capabilities—the heart and soul of our firm and innovation our engine. That overwhelming sense of mission and purpose is what many of us share today, and speaks to our collective “calling” as social citizens who want to make the world a better place. In all industries and sectors, we look for the exceptional leader who brings both skill and passion to the mantle of leadership. At Diversified no idea is dismissed, especially if it has the potential to improve our clients’ performance. Also at Diversified Search, we intimately understand that leaders have to be prepared to lead themselves, their families and the organizations which they have been entrusted to serve. However growth for a leader often occurs during challenging times, whether personal or professional. Regardless of the crisis, our job is to assess how leaders weather the difficult seasons of life and determine how those experiences have shaped and prepared them for the next mantle of leadership. Most importantly, we understand that a good leader embraces change when it comes and seeks change when it becomes necessary. A crisis can be a crucible that forges moral leadership. We are looking for leaders for whom crisis and challenge create a resilience and strength making one a more principled leader. We are looking for leaders who can lead for all seasons.

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ABOUT DALE E. JONES

Dale Elton Jones is President and CEO of Diversified Search, a key global partner of AltoPartners worldwide. His responsibilities include management of the firm and its global CEO Advisory Services.

Before joining Diversified in 2013, Dale served as Vice Chairman and Partner of the CEO and Board Practice at Heidrick & Struggles International, where he consulted with CEOs and Corporate Boards on human capital issues including recruiting, retention, succession planning, and corporate governance. He also served as one of H&S’s leaders in its Global Telecommunications and Global Consumer Practices.

Dale concurrently served as Managing Partner of the Atlanta office from 1999 to 2007. He was later asked to oversee the CEO and Board Practices in the Americas. Dale originally joined Heidrick & Struggles in 1999, following a four-year tenure with another leading search firm.

Prior to entering search, Dale held a series of positions in business with increasing responsibility. He has also taken on special strategic roles to serve Steve and Jean Case, founders of AOL as CEO of Revolution Ventures. Dale brings many years of longstanding relationships to his clients from his involvement with YPO, the CEO Forum, and the National Association of Corporate Directors. He is an experienced and sought-after advisor on leadership issues for Fortune 500 companies.

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Making Manufacturing a Destination of Choice for Top Female Talent

Michelle Drew Rodriguez, Manufacturing Leader, Deloitte’s Center for Industry Insights

The fourth industrial revolution—industries 4.0—converges the physical and digital worlds to fundamentally transform how manufacturing operates. As a result, hiring with increasingly sophisticated skill sets is a must. To address the talent shortage, manufacturers face a looming problem: a talent shortage. New workers that could be as many as two million jobs unfilled by 2025. The good news? Manufacturers can more fully utilize an existing resource that can help close the talent gap—women.

Women represent nearly half (47 percent) of the US labor force; however, they comprise just 25 percent of the manufacturing workforce. Considering that women earn more than half of all bachelor’s and master’s degrees awarded each year, and hold more than 50 percent of all managerial and professional positions in the United States, several questions come to mind:

• Why are women underrepresented in the manufacturing sector?
• Why might some women find manufacturing unappealing?
• What can (and should) manufacturers do to attract and retain more women?

WHAT WOMEN WANT

According to Women in Manufacturing, a recent report authored by Deloitte, the Manufacturing Institute, and the American Production and Inventory Control Society, manufacturers seeking to attract and retain top female talent can improve across all facets of employee hiring, training, and advancement.

The more than 600 female manufacturing executives who participated in the report say the most important factors in new positions are competitive pay, challenging and interesting work, and an attractive work-life balance. They also indicate what programs are most effective in meeting these requirements: formal and informal mentoring programs, flexible work practices, and increasing the visibility of female leaders who serve as role models.

Even with progress in certain areas, manufacturers have opportunities to strengthen their efforts to attract, retain, and develop women in the industry. According to the survey respondents:

• Women are under-represented in leadership positions across their organizations (72 percent).

ATTRACTION TODAY’S TALENT, DEVELOPING TOMORROW’S LEADERS

The rapid pace of innovation and adoption represented by Industry 4.0 is apt to impact all facets of how manufacturers conduct business. This means it’s likely more important than ever for organizations to find and foster emerging talent and create robust talent pipelines. Such efforts can create great opportunities for women entering and advancing their manufacturing careers, and drive manufacturers to support externally focused STEM initiatives that help encourage young women to pursue careers in science and technology.

Many manufacturers are engaging with local elementary and high schools to deliver training and certification programs to help young women build interest in STEM skills. In addition, many manufacturers are sponsoring initiatives such as “Manufacturing Day” that promote the industry as a viable career choice, thus creating a higher level of familiarity. Combined with efforts from the government, companies like the recent announcement to direct $200 million in US Department of Education grants to STEM and computer science education programs, all parts of the ecosystem will help to develop an early and effective talent pipeline. Programs like these will also help manufacturers to better interest, recruit, and retain women throughout their careers.

While these outreach efforts are having a positive effect at attracting new women to manufacturing, other types of outreach can help organizations boost morale, fuel a positive work environment, drive creativity and, importantly, lead to greater retention of women who are already in the workforce. Some examples include:

• Leading by example — With 72 percent of women saying they are under-represented in leadership positions, companies that want to promote diversity need to take steps toward making gender parity a priority by setting clear goals and visibly promoting women into positions of authority throughout the organization.

• Fostering inclusive corporate cultures – Diversity efforts need to go beyond talk, building support and embracing throughout the organization. By creating gender-diverse leadership teams and working groups, companies create environments in which executives and managers can more easily recognize the value women bring to the workplace, reward the best performers, and promote the most talented employees.

• Creating aspirational brands – Closely related to a company’s internal culture is its ability to promote itself to potential external candidates as a progressive and diverse work environment. By highlighting their commitment to hiring and rewarding the most talented candidates regardless of gender, manufacturers can help ensure that the best candidates will want to work for them when job opportunities arise.

• Tackling diversity issues head-on – Companies should do more than just talk a good game when it comes to diversity. By creating equitable, gender-neutral compensation structures, they can create opportunities for advancement for both men and women, companies can put their money – and their resources – behind their most talented employees.

• Driving accountability – By setting clear goals and using analytics to assess and develop the talent pipeline, executives can foster the growth of promising female employees, and support their personal and professional growth through challenging assignments.

• Professional development – By identifying and increasing the visibility of key female leaders and role models, organizations can help to mentor younger women within the organization by investing in their careers through mentorships and other continuing educational opportunities.

• Partnering with the community – With the pool of talented, interested candidates steadily shrinking, manufacturers should be proactive in their attempts to recruit women to enter the industry. This means acting early to educate women about the opportunities manufacturing provides, dispelling any negative, preconceived opinions they may hold, and celebrating the accomplishments of their talented female employees.

THE BOTTOM LINE

Making manufacturing a destination of choice for top female talent is crucial. Many manufacturers are taking a number of proactive steps to raise awareness of the benefits of manufacturing careers, including creating new, cutting-edge training initiatives that are helping provide real-world opportunities for women. Given today’s highly competitive talent pools and the need to find, hire, retain, and promote the best and the brightest candidates, manufacturers can do even more by utilizing programs that build hands-on skills development (internships, apprenticeships), and raising awareness of high-paying jobs and strong job benefits. Taking strategic steps now can go a long ways in attracting the top talent needed to compete and drive overall competitiveness in the marketplace. Finally, by encouraging the next generation of manufacturing leaders to focus on STEM subjects, manufacturers can help ensure there is a viable pool of talent ready to embark on high-tech manufacturing careers, the benefits of which can improve their lives, and, ultimately, the industry as a whole.

ABOUT MICHELLE DREW RODRIGUEZ

Michelle Drew Rodriguez is the Manufacturing Leader for Deloitte’s Center for Industry Insights and leads Deloitte’s Manufacturing Competitiveness research initiative. With nearly two decades of strategic and operational experience, she worked as an automotive engineer before becoming an advisor to global manufacturing executives. Michelle has authored research studies on manufacturing competitiveness outlining strategies for driving growth and high-value job creation. Additionally, she facilitates constructive dialogue and collaboration between business leaders and public policy makers regarding competitiveness, the role of government, and the path to prosperity for countries and individual companies. She is a strategic advisor to manufacturing executives and institutes within the innovation ecosystem. Michelle has presented insights on Capitol Hill, Brookings Institute, World Bank, as well as industry conferences, client forums and media roundtables. She earned her MBA at the University of Michigan and a B.S. in Mechanical Engineering from the University of Wisconsin. She serves on the board for the Illinois Manufacturing Excellence Center.
Leanne Pittsford, CEO and Founder, TechJobsTour, include.io, LesbiansWhoTech & nation, and we've shown that time and again. From the opportunity, we can do anything. We are the 'moonshot' motion of sorts. Ours is the technological one, and we know every generation and decade faces an economic revolution with little passion, input, perspective, priorities or talent from largely algorithmically driven --- yet, so much is being built.

At the same time, there are over 6 million unemployed Americans. By 2020, this number will grow to over 1.4 million. These are our youth, teachers are working to bring this to many more students. More Americans than ever are starting to find education and apprentice opportunities from non-traditional sources, many that train in talents not years.

For example, large numbers of new developers and data scientists are emerging from code bootcamps and industry-current vocational schools. There are effective, high impact programs emerging from all corners of the country led by entrepreneurial American teams working to try to address needs and demand — with the goal to engage and include so many more neighbors in current and future opportunities. To highlight a few:

- The all-hands-on-deck ‘CSforAll’ (Computer Science for All) movement we all launched in 2016 just held a national summit in St Louis this month with an update on extraordinary progress and more commitments, critical from across the country: (https://csforallconsortium.org/)
- This fall saw the 6th annual “Rise of the Rest Tour”, which over 30 cities have part of. The tour is led by AOL co-founder and former CEO Steve Case in conjunction with Revolution team to broaden participation in entrepreneurial and expanding entrepreneurial ecosystems: (https://www.rireset.com/)
- The XQSuperSchools movement supported by Emeron, a coalition led by Laurene Powell Jobs is working to modernize our high schools by supporting what’s working and building a national movement: (https://xqsuperchools.org) - catch the 1-hour CBL-NBC-FOX-ABC-TV special linked on their website if you have not seen it yet)
- The UN hosted its 3rd annual Solutions-Summit at UNGA with over 30 cities have part of. The tour is led by AOL co-founder and former CEO Steve Case in conjunction with Revolution team to broaden participation in entrepreneurial and expanding entrepreneurial ecosystems: (https://www.rireset.com/)
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- The UN hosted its 3rd annual Solutions-Summit at UNGA to scout and scale what’s working or promising for our global goals challenges: (http://www.solutions-summit.org/)
- The CSO movement started in Arizona – which elects “Chief Science Officer” youth student government positions -- is growing in over 100 other regions now: (https://chiefscienceofficers.org/)
- More than 1,000 distributed Fab Labs are part of the Fab Lab Network linking with other makerspaces emerging across the U.S. to support American manufac-
ABOUT LEANNE PITTSFORD

Leanne Pittsford is an entrepreneur changing the face of technology. After founding LesbiansWhoTech.org, the largest LGBTQ community of technologists with 30,000 members, Leanne launched include.io. The mentoring and recruiting platform fights bias in technology. Current employees validate the skills of underrepresented candidates to scale access to direct referrals. In 2017, Leanne and Megan Smith, 3rd CTO of the United States, are headed to 50 cities with the Tech Jobs Tour to connect diverse and non-traditional talent to over 600,000 open jobs. Before her work within tech, Leanne worked for Equality California and the No Prop 8 campaign; created her own digital agency, Start Somewhere; and started leanimpact.org, acquired by Lean Startup in 2016.

ABOUT MEGAN SMITH

Megan Smith is an award-winning entrepreneur, engineer, and tech evangelist. As the third U.S. chief technology officer, Smith helped the President and federal teams harness the power of technology, data, and innovation to advance the future of our nation and the world. Smith recruited top tech talent to serve across government collaborating on pressing issues from data science, AI and open source, to inclusive economic growth and criminal justice reform. Her teams focused on broad capacity building by co-creating all-hands-on-deck initiatives, including the public-private program TechHire, the Computer Science for All initiative, and the Image of STEM campaigns.

For over a decade, Smith served as vice president of new business development at Google, managing early-stage partnerships globally, led acquisitions of Google Earth, Maps, and Picasa, and co-created SolveForX and Women Techmakers. Earlier, Smith served as CEO of PlanetOut, an online LGBTQ community in the early days of the Internet, worked on early smartphone technologies at General Magic and at Apple Japan.

Smith is an advisor to the MIT Media Lab, Vital Voices, the Malala Fund, which she co-founded and a National Academy of Engineering member. Smith holds bachelor’s and master’s degrees in mechanical engineering from MIT, where she now serves on the board. Smith has recently co-founded shift7, to focus on community organizing innovation for economic inclusion and impact.
It was 75 years ago that Austrian-born actress Hedy Lamarr received a patent for a radio guidance system that used spread spectrum and frequency hopping technology to prevent Allied torpedo signals during World War II.

She didn’t realize it then, but Hedy’s STEM (Science, Technology, Engineering and Math) principles that she, and co-patent recipient, composer George Antheil, applied would be transformed and go on to make up components of modern Wi-Fi, CDMA, and Bluetooth technology. Innovation that helps drive Sprint’s telecommunications business.

Today we find ourselves at the threshold of another technological transformation – the Internet of Things (IoT). Faster than you can say “URL,” Sprint is becoming a global leader in connecting the IoT. Every day, new uses for IoT technology are discovered and Sprint, thanks to the vision and leadership of its parent company SoftBank, is at the forefront of developing the technology to support them.

Being part of a transformation, technology or otherwise, is something Sprint is accustomed to because we’ve been undergoing our own transformation for the better part of three decades. Sprint is a local telephone company that started in the late 19th Century in Western Kansas by the son of a grist mill owner. Now a global, diverse senior executive leadership team moves the company at warp speed through industry challenges with the belief that anything can happen and that defying the odds is a good thing.

We are powered by 29,000-plus employee partners who come to work every day obsessed with delivering better ways for our 53-plus million customers to connect with their families and friends. Across this team are women who rely on STEM capabilities to lead, execute, and deliver strategies that are innovative and game-changing across our industry.

An unparalleled example of integrated STEM achievement was this year’s debut of the Sprint Magic Box, the world’s first all wireless small cell. Magic Box dramatically improves data service for Sprint customers by connecting wirelessly to the nearest macro site. Its plug-n-play functionality covers about 30,000 square feet and is a great coverage solution for any space – from large public venues to living rooms.

STEM skills applied across Sprint help us achieve mission-critical transformation strategies today. But Sprint is also focused on tomorrow and the belief that the potential to learn STEM skills are everywhere, but the opportunity to do it, unfortunately, isn’t. Seventy percent of America’s high school teachers assign homework to be completed online, but more than 5 million families with school-age kids do not have internet connectivity at home. Without home internet connectivity, success will be difficult, if not impossible, to achieve. That’s why Sprint started the 1Million Project where it will provide 1 million free devices and wireless service to high schools/districts for their low-income high school students who do not have home internet access.

Whether it’s across our communities, or across our business, Sprint is constantly looking for new, innovative ways to leverage STEM skills and capabilities. As a STEM leader, you’ve demonstrated the passion and commitment to promote the STEM skills to further enhance a global technology ecosystem. That’s why I’m extremely excited to have the opportunity to congratulate the 100 Women Leaders in STEM.

Hedy would be proud.

About Ismat Aziz

Ismat Aziz is Chief Human Resources Officer for Sprint and is responsible for all human resource initiatives including organizational performance and culture, compensation and benefits, staffing and employee relations, learning and development, and talent management. As a transformation leader, Ismat delivers the experience and drive to reimagining the business, redefine the culture, stimulate innovation and encourage a renewed entrepreneurial spirit at Sprint.

Before joining Sprint, Ismat served as CHRO for Sam’s Club. Previous experience includes senior vice president of human resources and chief diversity officer of ConAgra Foods in the U.S. as well as vice president human resources and communications/chief privacy officer of Constellation Brands.

Throughout her career, Ismat has gained extensive experience with mergers and acquisitions, strategy, process improvement, driving operational effectiveness and change management. Ismat has worked in multiple industries including retail, financial services, technology, pharmaceutical, mining and metals, spirits, manufacturing, and plastics.

Ismat earned a Masters of Business Administration from the Richard Ivey School of Business, University of Western Ontario and completed her undergraduate work at the University of Toronto. Ismat also holds certifications in Board Governance and HR internationally.

Women make the STEM world stronger.

We salute the 2017 honorees making an impact in STEM.

And we’re thrilled to see our Regional President of Enterprise, Nelly Pitocco among them. It’s leaders like her who inspire initiatives like the 1Million Project.

The future of STEM is brighter with leaders like Nelly.

Find out more: sprint.com/worksforbusiness

To learn more about the 1 Million Project, visit sprint.com/1millionproject
On behalf of The Boeing Company, I would like to extend my congratulations and thanks to the extraordinary women featured in this issue of 100 Women in STEM. Your contributions to the field of science and technology have truly been game changing, and I am honored to have the opportunity to share some thoughts about the impact that women have had on Boeing’s first century of success.

Women have worked to shape the history of The Boeing Company since our founding in 1916, when seamstress Rosie Farrar was hired by William Boeing to stitch together linen wings for the early B&W seaplanes. For the past 100 years, women have been on the frontlines of engineering, innovation and strategy development across the company, helping us push our technical boundaries and usher in a new age of aerospace.

At Boeing, we are committed to raising the percentage of women in STEM fields. Currently, one quarter of our executive council is made up of women. Boeing team members work with universities and schools across the globe to increase educational opportunities for all students, and to expose them to the wide array of STEM careers in aerospace. From Boeing-sponsored events and school visits to external partnerships with organizations like the Society of Women Engineers and Techbridge Girls, we are dedicated to working within our communities to help build a diverse workforce.

As head of Information Technology & Data Analytics (IT&DA) at Boeing, I see firsthand the importance of building a diverse and inclusive work environment—in fact, this is one of the most important areas of focus for the IT&DA organization, and for The Boeing Company as a whole. To create a successful team environment, we have to encourage diversity of thought and create a culture that supports it. We are a 100-year-old company; we didn’t get here by doing the same thing over and over for 100 years.

At Boeing, we’re proud of the work we’ve done so far, but we also know there’s a lot more to be done. That’s one of the reasons that I’m so thrilled to have Lakshmi Eleswarpu, who is featured in this year’s issue, as a part of the IT&DA team. As head of our Business & Supply Chain Systems organization, Lakshmi leads more than 900 information technology employees as they work to secure and enable the systems that help us run our business. Since joining Boeing, Lakshmi has played an incredible role in helping to drive thought leadership, increase Boeing’s competitive success and help us meet the needs of our customers.

In addition to her technical expertise, Lakshmi is a strong and passionate advocate for diversity and inclusion in the workplace, and works tirelessly to increase STEM opportunities for youth. She serves as a coach for students in the United States and abroad, and dedicates time to mentor students on both personal and professional levels. When Lakshmi joined Boeing, she brought with her diverse experiences from her previous roles and fresh insights that have made a real difference in how we work together and lead our teams. On every step of her journey, she has helped open the door for women in STEM even wider, and I know she will continue doing so at Boeing. I am pleased to have the opportunity to learn from Lakshmi as I work alongside her each day, and I am thrilled to see her recognized for her leadership, expertise and commitment to increasing educational opportunities in STEM.

Boeing is a global company with employees, customers, suppliers and stakeholders in every corner of the globe. Diversity of thought and the ongoing introduction of new ideas will be critical to our future success. We are committed to finding and retaining diverse talent that will unlock the innovation we need to compete in today’s rapidly evolving marketplace, and one of the most important things we can do is to ensure that our youth see themselves reflected in leadership. This is how we will grow and nurture the next generation of STEM talent.

Again, I would like to extend my congratulations to Lakshmi and the rest of this year’s honorees—thank you for the work you do day in and day out to advance the STEM field, work that I know will help influence Boeing’s next century of success.

Whether it’s a company or a community, when we include new faces and diverse voices we gain insight, acquire knowledge and broaden our understanding of the world. By tapping into the unique perspective and skills of people different from ourselves, we strengthen our common bonds as colleagues and neighbors.
Insurance, a conservative and change-averse industry, now finds itself at a crossroads. With rapidly evolving technologies changing the nature of the business, and a high proportion of the insurance workforce aging and immobile, stakeholders find themselves with an acute need for recruiting and nurturing top talent. This in turn presents an opportunity to change the face of the industry and empower women in their careers.

WHY FOCUS ON WOMEN IN THE INSURANCE INDUSTRY?

The importance of assessing the state of gender in the insurance industry cannot be underestimated, and efforts to achieve parity must be celebrated. What is the status for women, and what opportunities are afforded to continuously advance women? The answers require a review of the status quo and substantive discussion about how to gain more equity and leadership roles for women. This is not only an ethical imperative, but success will prove to be a competitive advantage.

Women in Insurance: Leading to Action, a white paper released by StemConnect in partnership with leading insurance companies, data is shared to address the status quo by setting the bar high to elevate and advance women across the insurance industry. Women have made great strides in the insurance sector, with more than 1.6 million women employed by the industry—the majority of its employment base. The problem lies in promotion to leadership positions, with only 8% of named executive officer seats, 10% of top insurance industry executive positions, and 17% of board seats being held by women. Insurance companies are stepping up with their boards, leaders, and champions to move the needle, yet, too many women remain at the entry level rather than be elevated into leadership, so we must focus on driving change for the future of women and girls—particularly women and girls of color.

The studies show that women in insurance take advantage of networking opportunities. There is a clear need for mentoring of women and for programs to develop, support, and encourage female leaders. Executive sponsorships in particular are desperately needed as these sponsors are the key advocates in advancement to upper leadership positions.

INDUSTRY VISION, INDUSTRY NEED

The goal of Women in Insurance: Leading to Action is to provide an overview of where the insurance industry is now—“women’s scorecard”—and where it’s headed in the future. We hope that this assessment will help all of us to move the needle in making the insurance industry an exciting and fulfilling place for women’s careers.

An Ernst & Young study has shown that 39% of insurance leaders surveyed say they are formally measuring progress, but only 8% have formal structured programs in place to develop strong careers for women. The data show an awareness of the lack of gender diversity in the workforce. The need for female STEM talent within the insurance industry is critical to the advancement of their workforces and, yes, market share. All of the studies show that companies with women participating in leadership are better off—even stock prices are higher for companies with women in their leadership teams and on their boards.

Women provide skills critical to the industry’s future. Supporting the recruitment of women for future jobs requiring tech, financial, and sales skills will build an employment base which serves as a competitive force to be reckoned with. We must ensure that more women are recruited into the field and mentored and sponsored up the ladder to drive equity in leadership.

IT TAKES ALL

As Carol Zacharias of QBE and Tanya Kochta of ACCORD have said, “We need a co-ed call to action.” Insurance executives—women and men alike—need to step up and work together. We need women to be drivers of growth and development, contributing to both their individual insurance companies and to our economy. The insurance industry must increase its mentoring, sponsorship, internship, and talent advancement efforts. Every study shows that women contribute broadly to insurance industry returns.

We have found many insurance industry talent initiatives to be applauded, and others which have been ignored. There are role models in every company. Mentors and sponsors are both men and women. Our recommendations include a clarion call to mentor and sponsor more interns, and promote their results. These efforts align with StemConnect’s Million Women Mentors (MWM) movement. How proud we all are that as of the release of this paper on October 24, 2017, MWM has hit a record two million mentor pledges!

In a September 3, 2017 Washington Post article by Jenna Mcgregor, she notes that 49 percent of Fortune 1,000 companies surveyed in a recent CEB study said they had launched a pay equity effort in the past two years. These steps are saluted. EY’s Women in Industry work advocates for gender parity as a strategic necessity as well as the need to drive change in gender diversity results. However, PricewaterhouseCooper, in its study of diversity and inclusion, said the insurance industry’s image is not positive among millennials because it is not doing enough to encourage gender diversity. Our hope is that we all work together to advance gender parity. We are proud that this insurance industry report sets benchmarks which will serve useful in building progress.

Credit is due to those working on advancing women. We salute many insurance companies and associations, and their initiatives. Of note are the Insurance Industry Charitable Foundation (IICF) and its Women in Insurance global conference series; the Business Insurance & CLM Women to Watch Awards and Leadership Conference; and the Digital Insurance Women in Insurance Leadership event.

Thanks to all the organizations providing important data, which is crucial for making a difference. We salute Saint Joseph’s University with its strong data showing women in leadership positions and total representation by functional area. St. Joseph’s analysis shows us that in the past three to four years, there has been a 35% increase in board representation and 66% increase in top executive positions held by women. Yet the differential at the top and lack of pay equity can’t be underestimated.

YOUR OPPORTUNITY

The insurance industry finds itself challenged to change by new technologies and evolving market needs. The existing workforce is generally older and less agile. What an opportunity—the industry finds that it must recruit and advance women, engaging them with a passion for the insurance business today and tomorrow! With young people excited about big tech and other brands, the insurance industry must remain competitive. Women and young girls want equity; they want support; they want life balance; they want a challenge; they want to contribute; and they care about the company and its communities. All of this has to be considered in retention and upward mobility programs—employees need a sense of “belonging.”

In this paper, we explore the demographics of women in insurance, typical career arcs, and barriers to promotion in leadership positions. We also track overall trends in industry wage opportunities, and in the sentiments of female employees and insurance leaders across the industry. Finally, we highlight the results of the most important studies and surveys on women in insurance, the efforts and initiatives already begun at a number of leading insurance organizations, and critical future opportunities and imperatives.

It is our hope that each of you will join this conversation and determine how you can best contribute to engaging collective efforts. Motivated companies and organizations must continue to work independently and together to address the gender gaps in our industry. The time is now to create a professional environment, which ensures equitable treatment and opportunities for women, and re-imagine the insurance industry so that it is prepared for the future.

Join us to tell the story, salute the progress, and push the envelope for women. We must see more women, particularly women of color, in important roles in the insurance industry.
Meg McCarthy is Executive Vice President, Operations and Technology at Aetna. She serves on the board of directors of the Financial Services Information Sharing and Analysis Center (FS-ISAC), First American Financial Corporation, VArmour and the Providence College Board of Trustees. In addition, Ms. McCarthy represents Aetna on the Council on Affordable Quality Healthcare (CAQH) where she serves on the executive, finance and nominating committees and she also sits on the World Economic Forum Gender Parity Council.

Ms. McCarthy has been recognized as one of Institutional Technology Reputation Magazine’s “Elite 8” and Computerworld’s Top 100 leaders. She serves on the board of directors of the Financial Services Information Sharing and Analysis Center (FS-ISAC), First American Financial Corporation, VArmour and the Providence College Board of Trustees. In addition, Ms. McCarthy represents Aetna on the Council on Affordable Quality Healthcare (CAQH) where she serves on the executive, finance and nominating committees and she also sits on the World Economic Forum Gender Parity Council.

Ms. McCarthy holds a bachelor’s degree from Providence College and a master’s degree in public health, hospital administration, from Yale University. Her military experience includes U.S. Navy Medical Services Corps, Lieutenant at Bethesda Naval Hospital, and U.S. Navy Reserves, Lieutenant Commander.

Aetna is one of the nation’s leading diversified health care benefits companies, serving an estimated 44.7 million people with information and resources to help them make better informed decisions about their health care. Aetna offers a broad range of traditional, voluntary and consumer-directed health insurance products and related services, including medical, pharmacy, dental, behavioral health, group life and disability plans, and medical management capabilities. Medicaid health care management services, workers’ compensation administrative services and health information technology products and services. Aetna’s customers include employer groups, individuals, college students, part-time and hourly workers, health plans, health care providers, governmental units, government-sponsored plans, labor groups and expatriates. For more information, see www.aetna.com and learn about how Aetna is helping to build a healthier world. @AetnaNews
Kate Curtin Lindsey is CEO of Alpha Corporation, a company established in 1979. In 2013, Kate took its helm after her husband's death to oversee the firm’s strategic direction/growth and hold majority ownership. Her day-to-day operational management of this leading ENR nationally ranked Top 50 PM/Top 100 CM firm draws upon her vast experience totaling more than 35 years and a solid base in corporate finance, mergers and acquisitions, inclusive of commercial property assets and not-for-profit educational institutions.

Initially working at Morgan Stanley & Co., Kate collaborated with a dream of Managing Directors who developed a long-range vision that resulted in the firm’s 20-year growth from 750 employees nationally to more than 48,000 worldwide. Moving onto Amvesco, Security Bank, N.A., Kate was appointed as Assistant Vice President in the Treasury Division. There, she managed, among other efforts, nearly 500 clients ranging in size from individual investors to large construction and real estate development firms. Kate then transitioned her career to serve as CFO for Georgetown Day School, The Hewitt School, and Sidwell Friends School. For these, Kate has overseen annual budgets that average $35 – 55 million and been instrumental in focusing master plan programs to ensure each renowned school has facilities that support rigorous, state-of-the-art curriculums.

Kate has served on numerous association boards and been a thought leader/speaker at select conferences. These include but are not limited to: the AIA Women in Architecture, Women Mentor Advisory and Entrepreneurship committees, NYSAS, NAIS, NBOA, Diversity Institute, ABOIS, AIGGW, and AllWNS. In 2008, she received NBOA’s “Ken White Distinguished Business Officer” award, and more recently, Enterprising Women magazine’s “Entreprising Women of the Year” award. Kate holds a Bachelor of Arts, History/Political Sciences from Rollins College and is a recent participant in a Harvard University Joint School of Design and School of Education LEFT Graduate program and New York Times International Schools for Tomorrow Symposium.

As the CEO of Alpha Corporation, a woman owned engineering firm located near Washington, DC, I am often asked about the reason more women are not civil and structural engineers and how the industry can encourage more students entering into colleges and universities across the country to choose this field. To find the answer, I have asked my engineers what the leading reasons so many of their female classmates who started their programs have not finished and frankly, the answers were surprising. The most frequent responses I received were twofold - the unfortunate lack of encouragement by their own college advisors who suggested that engineering was a “man’s field” and the discouragement of classmates who suggested it was not feminine enough and therefore they were not as supportive as they might be to see women succeed in this field as a major and consequently in this industry. I readily want to say that I think these old fashioned views are evaporating, and like other male dominated professions – medicine and law, the number of women who elect engineering will grow significantly in the years ahead.

I am an optimist and I do believe that this perception is changing – slowly, but it is changing. More and more women are going in to engineering now because they have been actively engaged in a variety of junior high and high school programs that have introduced them to the dynamics offered through robotics, physics, and engineering curriculums. These new programs, which challenge young people, have allowed students to actively use their math skills, creative energy, and problem-solving mindset to problem solve.

Where I live and work, as early as middle school, our encouragement, students are now participating on design teams for their local park renovations and athletic facility master planning programs – alongside seasoned politicians, professionals, and educators. Asking students to provide input to project designs is one of the fastest easiest ways to introduce them to civil and structural by offering them a seat at the table and a true voice in the decision making. One small success by a student in a local or even a national engineering firm incorporating their idea into the overall design, sparks real belief that what the student has to say has both legitimacy and credibility. And besides, who better than children to help shape their ideas have merit and matter. They become solution seekers and learn all aspects of what it takes to do a project and their interest is peaked. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens. These new and exciting STEM initiatives have begun to expose and encourage young children to see through a new lens.

So, looking at the long view, I believe there are five reasons that women should consider becoming engineers:

1. It is a career that allows someone to use both their analytical skills along with their creative skills.
2. It is a career that is always changing – no project is exactly like the one before or the one after so it stretches a person’s skills and makes them better or more organized thinkers.
3. It is a career that can genuinely be done equally as successfully by both men and women despite the current statistics of only 23.3% of all structural and civil engineers being women.
4. And there is a tangible product that one can look at years later with pride knowing that the work they produced went into the outcome that they see utilized daily.
5. And finally, it is a career that makes a difference – often in one’s own backyard - to a local community on a more national scale, and internationally.

What should we or as practice leaders be doing to support women in engineering – how can we professionally and personally become involved? There are a variety of ways – I want to offer two. First, active participation and engagement with our industry, and second, mentoring.

First and foremost is role-modeling- and by that I mean actively participating in a wide variety of regional and national association work. Recently I read an article which included statistics gathered on our industry – though dated from 2015 – I believe most of the numbers would be fairly close now. I will share with you some sobering facts. Despite the fact that approximately 17% of structural engineers are women, they represent only 9% of the membership of our professional organizations, and therefore do not generally rise to the leadership ranks of our leading organizations (by these women are leading, fewer women see the industry as a career path to senior leadership opportunities). More women are needed to join their local, regional, and national associations and therefore do not generally rise to the leadership ranks of our leading organizations. When no women are leading, fewer women see the industry as a career path to senior leadership opportunities.

Most women will tell you that they had to work longer and harder to gain the same visibility as their male counterparts. Mentoring, supporting, and encouraging young, aspirational women engineers who are more experienced, whether man or female, will go a long way to keeping smart, innovative, and thoughtful women engineers in this profession. I am happy to support internships and part time women who are balancing work/life issues, and high school and college students. Mentoring is a critical strategy to keep all engineers committed to the industry. And Lord knows there is enough work for everyone!
Margery Kraus, founder and executive chairman of APCO Worldwide, a global consulting firm headquartered in Washington, D.C., specializes in public affairs, communication and business consulting for major multinational clients. Ms. Kraus founded APCO in 1984 and transformed it from a company with one small Washington office to a multinational consulting firm in major cities throughout the Americas, Europe, Asia, the Middle East, and Africa.

Throughout the years, her approach has been to fuse the best local experiences with a global perspective, resulting in an international agency with a unique culture based on seamless teamwork. Ms. Kraus’ achievements have been recognized over the years through a number of prestigious awards, including the PRWeek Hall of Fame (2017); PR News’ PR People Hall of Fame (2015); and the Arthur W. Page Society’s Hall of Fame (2011), among others.

Margery Kraus
Founder and Executive Chairman
APCO Worldwide

APCO Worldwide is a global communications consultancy. We help the most innovative organizations adapt and thrive in this fast-moving, interconnected and complex world. We do this for all types of organizations, in all industries and in all situations. We partner with clients to guide them through a changing, complex global environment, equipping them to reach their business and societal goals. We bring our clients’ work to life creatively and digitally through diverse thinking and a campaign mentality that embraces a variety of integrated tactics to achieve success. Our work impacts bottom lines; creates and protects jobs; defines issues important to society; improves workplaces and communities; gains visibility for and gives voice to those who may not typically be heard; and much more. Simply put, our work is impactful, meaningful, and problem-solving or opportunity-creating. APCO is a majority employee- and women-owned business.

APCO has been committed to education in science, technology, engineering, and math (STEM), since its founding in 1984. The support of STEM is particularly central in the ethos of our founder and executive chairman, Margery Kraus, who began her career as a 12th grade civics teacher. With this background, the vital importance of quality education and access to education is truly woven into the fabric of APCO. Finding ways to support and promote STEM education is a priority for ourselves and our clients. In this relentlessly changing world, if we are not working to eliminate boundaries we will be left behind.

Worldwide more women graduate from universities than men, but women remain a minority in STEM fields. Over the last decade, American women have earned only about 35 percent of undergraduate STEM degrees. Even more distressing, the latest U.S. census revealed that only one in seven women with a STEM degree work in STEM-related jobs. We need to ensure that our employers, leaders and mentors provide the support and opportunities to encourage more women to become involved in STEM and more importantly, stay in the field. When we remove barriers that allow women to lift themselves up, we lift our corporations, our societies and our economies.

Our commitment to bridging this talent gap is real, and we must continue to make STEM education an action item in our collective business plans. APCO is proud to address the national challenge of attracting and retaining women to careers in the STEM field by partnering with impactful organizations such as Triangle Women in Science, Technology, Engineering, and Math. This is a prominent issue in North Carolina as the state is home to some of the world’s most innovative companies and research organizations requiring diverse STEM expertise. Although the region has many initiatives that focus on STEM-related activities, it lacked one unifying organization that brought together a cross-section of business and nonprofit organizations to address talent retention challenge at its highest level.

APCO is leading the effort to launch the Triangle Women in STEM initiative to focus on raising awareness of the challenge, encouraging females to stay in the field and creating new networking opportunities around STEM. APCO serves on the steering committee with companies such as IBM, Fidelity Investments, Credit Suisse and Duke University leading the communications strategy and branding committee to drive its profile in the market.

APCO recently organized a Triangle Women in STEM event that involved more than 200 STEM leaders in the Triangle region, and continues to provide guidance and leadership in working with the group on their messaging and market presence to establish the Triangle Women in STEM as a nationally recognized advocacy group. The purpose is to give these women in the Triangle a group to connect with and emulate. As part of our broader mission to educate and empower young women, APCO recently engaged in a multi-year partnership with the World Association of Girl Guides and Girl Scouts, which helps more than 10 million girls and young women in 145 countries realize their full potential as responsible citizens of the world. APCO helped the organization build corporate partnerships, develop compelling materials, report its progress more effectively and raise its external profile.

APCO’s support helped the organization gain access to and leverage important positioning opportunities including the Clinton Global Initiative, National Council on Volunteerism and Service and IAVE’s World Volunteer Conference.

APCO is committed to continue prioritizing women in the workforce and STEM fields through our hiring practices, partnerships, and client practices. We are on the leading edge of where the global economy is going through our work with innovative clients, and within those clients we see a tremendous opportunity to create more opportunities for women and girls in STEM.

APCO is honored to be recognized by STEMconnect® and join this important dialogue. We are proud to place a continued role in elevating the importance of STEM education and increasing access to ensure that every child has an opportunity, and both women and men must be equal partners in this endeavor. In the context of the administration’s recent $200 million commitment to funding STEM programs, if it is incumbent on us to heed this call and ensure that STEM education is available and accessible to this generation, and those that follow.
Natalie Schilling  
Vice President, Human Resources  
Arconic

Anna Hess, former Mohawk Rubber Company splicer, band builder and cutting machine operator from 1942 to 1945, spoke to 130 women at The Manufacturing Institute’s STEP Ahead Awards earlier this year about the impact “Rosie the Riveter” had on inspiring female talent. She shared how her mother’s willingness to join the workforce and her father’s openness influenced her own ability and desire to work outside the home.

During World War II, “Rosie the Riveter” represented the United States government’s efforts to encourage women to go to work to aid the war effort. The campaign inspired a surge of women in manufacturing – and from 1940 to 1945, the number of women in the American workforce increased from 27 percent to nearly 37 percent. To many, Rosie’s iconic image – sleeves rolled up, steely, determined gaze – not only represents women joining the workforce, but also women overcoming adversity in the workplace.

As Anna spoke, her own impact was evident. The hundreds of women (and men) in the audience were inspired to make a difference and empower a new generation to join the modern manufacturing workforce.

This matters. Women are still underrepresented in an industry that has so much to offer. And unleashing the potential of female talent will reap big rewards for families, industry and the country’s economy.

Outdated and often incorrect perceptions of manufacturing have impacted women’s ambition to join the ranks of manufacturers. A study from Deloitte and the Manufacturing Institute cited the perception of a male-favored culture as a key driver of women’s underrepresentation in the industry. There is a sense that historical gender bias excludes women from core managerial roles, such as production supervisors and operations managers, which are key to climbing the industry ladder. Compounding the issue, many people think of manufacturing jobs as dirty, unskilled, back-breaking labor. That’s not the case anymore.

Research shows that gender diversity benefits manufacturing by bringing an improved ability to innovate and overall increased profitability. At Arconic, we believe our business depends upon us including everyone, and including everyone equally.

There are a few steps manufacturers can make to improve their efforts to be a more inclusive and dynamic business:

- Increase visibility of women leaders. We cannot aspire to what we don’t see. Female role models need to be visible at all levels, with customers and colleagues, and as role models for women and men.
- Promote personal development. Women ranked opportunities for challenging and interesting assignments as a top motivator for staying in the manufacturing industry. Manufacturers investing in personal and professional career development will help keep women engaged, motivated and committed.
- And finally, showcase modern manufacturing. Manufacturing is a dynamic, high-tech industry that is moving the world forward as we innovate and develop products from medicines to airplanes.

At Arconic and Arconic Foundation, we’re dedicated to adding more talented women to the manufacturing workforce. In addition to our active employee resource group, the Arconic Women’s Network that has more than 50 chapters worldwide, there are a number of initiatives that support our commitment. One example is the STEP (Science, Technology, Engineering and Production) Forward program. The Manufacturing Institute, in partnership with Arconic Foundation, developed a networking series for women in manufacturing.

The purpose of this series is to provide women in the industry with an opportunity to hear from industry leaders, connect with their peers, and learn best practices they can bring back to their company. These networking events are held with manufacturers across the U.S. to discuss current strategies and develop new concepts for advancing and retaining female talent. It is a chance for women to connect with their peers and learn from each other’s successes.

Rosie the Riveter opened the door of opportunity for women in industry. Other women – and other companies – have worked hard to open doors. And now it’s up to us to define our own future, and seize the opportunity at our doorstep.

Natalie brings over 30 years of global human resources experience spanning multiple industries. In her current position since July 2014, she oversees HR for Arconic’s (formerly Alcoa) Corporate Resource Units. Previously she held the Chief Talent Officer role to include Talent Acquisition, Performance Management, Leadership Development, and Succession Planning. In December 2010, Ms. Schilling was appointed center of expertise, provided direction on total reward strategies, developed expatriate policies and programs for global mobility, and managed HR support for mergers, acquisitions and divestitures. She also served as Alcoa’s Compensation Manager during which she managed executive compensation.

Prior to joining Alcoa in 2003, Ms. Schilling served as Vice President of Human Resources for Alcoa’s Engineered Products and Solutions Group during which she supported all aspects of human resources in the company’s downstream business.

Prior to that, she served as Global Director of Compensation and Benefits during which she led Alcoa’s global compensation and benefits center of expertise, provided direction on total reward strategies, developed expatriate policies and programs for global mobility, and managed HR support for mergers, acquisitions and divestitures. She also served as Alcoa’s Compensation Manager during which she managed executive compensation.

Prior to Alcoa, Ms. Schilling served in human resources management roles at the former Unocal Corporation (Chevron) and Discovery Communications.

Ms. Schilling holds an Executive Master’s Degree in Human Resource Leadership from Rutgers University and a Bachelor of Science in Business Management from the University of Phoenix. She is currently a Board Trustee for the Manufacturing Institute.

Arconic creates breakthrough products that shape industries. Working in close partnership with our customers, we solve complex engineering challenges to transform the way we fly, drive, build and power. Through the ingenuity of our people and cutting-edge advanced manufacturing technologies, we deliver these products at a quality and efficiency that ensure customer success and shareholder value. For more information: www.arconic.com.
Anne Young
Area Vice President
Arthur J. Gallagher & Co.

Anne brings over 25 years of sales and management success. She has spent her career in the Technology and SaaS sector. Early on, Anne joined eFax/J2Global, where she was recruited to help build the then start-up, and was wildly successful, bringing on Fortune 50 and Fortune 100 companies as she built the Enterprise story at J2Global.JCOM

Anne was recruited to Avaya in 2010, where she was responsible for managing GE Globally and overseeing a team of 32 Regional Managers, engineers and consultants supporting GE across the globe. Anne owned ultimate responsibility for all Avaya and Avaya-partner sales to GE and managed C-Level relationships throughout GE globally.

Anne was recruited by the Chairman of the Board in 2012 to build the sales model as the Vice President of Sales at Sococo, where she had responsibility for growing revenue from the ground floor, building the Enterprise model, as well as the strategic go to market strategy with the Executive Team.

In 2015, Anne was recruited to Arthur J. Gallagher. Anne was an out of industry hire, as Gallagher was building a new sales model. Leveraging the talent of Gallagher’s Global Consultants, and expertise of Gallagher’s Practice Leaders, Anne’s responsibility includes building organic opportunities in all areas of Gallagher’s portfolio and managing relationships.

Anne fuels all she does with passion and attributes her success to the relationships she builds with her clients and vendors. She sits on The Advisory Board at Sococo, is the Michigan Chair for MillionWomenMentor/STEMConnector, where she helps build mentoring initiatives with corporate sponsors in STEM. Anne also shares the stage with Tom Hopkins, the #1 Sales Trainer of all time. She is invited to speak across the country, sharing her successes, the sales process and the importance of living each day with passion and persistence.

Ever since I was a young girl, I’ve been eager to learn and was what is known as a “scrapper”. Being the youngest of nine and growing up in a very small household, really taught me how to be a survivor. More importantly, it taught me the tremendous value of mentorship. I had it in me to succeed, and was very motivated to succeed. What I needed were people who believed in me that were in my circle to help guide, care for and mentor me. The word mentor in Webster’s Dictionary defines mentor as...a wise and trusted counselor or teacher, 2. an influential senior sponsor or supporter.

Mentorship is all about leading, learning and supporting. It begins and ends with trust. Mentors must build a relationship with their mentees. Mentors need to challenge and encourage their mentees and help them think through issues with asking questions, sometimes difficult questions and serve as a source of wisdom when they need it most.

I am passionate about Million Women Mentors and STEM, as my personal journey allowed me to flourish with many mentors in my young life and young professional life. Technology sales was a man’s world. I was able to grow and succeed with the guidance and belief of many mentors along my career. I was the only woman out of a team of 26 sales professionals, selling technology software. I know without a doubt, that without the wisdom, teaching and support of my mentors, I would not have been a part of that team. Not only was I apart of the team, I led it in sales revenue growth and every year. I had the confidence that was instilled in me through mentors, that those believed in me and took the time to help guide me. Mentors play such a critical role in the success of others. Today, STEM careers are starving for women, and because of the nature of the jobs and roles, women often don’t have the guidance and confidence to pursue a professional career in STEM. Mentoring in STEM gives the mentor an opportunity to give a long range view perspective on growth and development and helps the mentee see the destination without giving the details to get there. Encouragement and direction is what provides a successful relationship without the “how to” advice.

According to The STEM Gap to Innovation study, our science, technology, engineering and math (STEM) workforce is crucial to America’s innovative capacity and global competitiveness. Yet women are vastly underrepresented in STEM jobs and among STEM degree holders despite making up nearly half of the U.S. workforce and half of the college-educated workforce. That leaves an untapped opportunity to expand STEM employment in the United States, even though there is widespread agreement that the nation must do more to improve its competitiveness as women fill close to half of all jobs in the U.S. economy, they hold less than 25% of STEM jobs. Women are vastly underrepresented in STEM and among STEM undergraduate degrees, especially in engineering. There are many possible factors that contribute to the discrepancy of women and men in STEM jobs. Regardless of the causes, the findings of the report provides clear evidence of a need to encourage and support women in STEM.

An exciting part of the study reported that STEM workers earn significantly more than their non-STEM counterparts in private sector. The analysis shows that, all else being equal, women in STEM jobs earn 33 percent more than their female peers in other jobs.

Women now have unprecedented opportunities available to them. I truly believe that the problem is many women simply aren’t aware of how far they can go in tech engineering fields, and how attractive these positions can be.

Part of the industry’s issue is image-related. People still think of technology as a male oriented industry, and the perception, in turn, shapes reality. It’s vital that we are proactive in helping change the industry’s image and make women aware of the opportunities available in STEM.

How are we able to help change the industry’s image? Mentoring. Pure and simple. Guide, share and encourage young girls and women that there is incredible opportunity in STEM careers. It is all about building the awareness and confidence to equip these girls and women with the right tools and information so they have the knowledge to join the STEM revolution.
Melissa Arnoldi
Senior Executive Vice President, Technology & Operations
AT&T Communications

AT&T Inc. (NYSE:T) helps millions around the globe connect with leading entertainment, business, mobile and high-speed internet services. We offer the nation’s best data network (Nielsen Certified Data Network Score) and the best global coverage of any U.S. wireless provider. We’re one of the world’s largest providers of pay TV. We have TV customers in the U.S. and 11 Latin American countries. Nearly 3.5 million companies, from small to large businesses around the globe, turn to AT&T for our highly secure smart solutions.

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IT’S SIMPLE, OUR FUTURE DEPENDS ON STEM

If you’re not a technologist, you might not see it -- or you are. Whether it’s in agriculture, finance or healthcare, the ability to quickly adopt new technologies will make or break your business.

The world’s top drivers of new ideas and innovations, are now technologists. As we move toward a brighter future with new capabilities for societal evolution thanks to artificial intelligence, smart cities, self-driving cars and more -- technologists are the ones steering the ship.

Tech is experiencing a meteoric rise, with no signs of slowing down. But one problem remains.

There’s a surplus of jobs needed to make these game-changing technologies a reality and a shortage of skilled individuals who possess the knowledge and degrees needed to fill the open positions.

The Labor Department estimates there will be nearly 1 million engineering, software development and programming job openings in the U.S. by 2024. However, if something doesn’t change soon, these high-paying, quality jobs, are likely to go unfilled. The future of our country depends on how well we prepare our youth to step into these roles. To put it bluntly, developing a highly-educated workforce in the areas of STEM is the key to unlocking a better future.

It’s no secret that we have a long way to go in building the ranks of women and diverse technology leaders. We need a more diverse set of engineers, data scientists, and cyber security experts in order to create a robust and diverse STEM talent pipeline.

As the mother of two young daughters, I have the responsibility and privilege of inspiring them to embrace technology. I tell them that no matter what kind of career they want – from art, to dance, to media – they must understand technology to effectively communicate with the rest of the world and to be successful.

As Senior Executive Vice President of AT&T Technology & Operations, I’m responsible for the operations of AT&T’s Technology & Operations, I’m responsible for the operations of AT&T’s technology and global network. It’s my responsibility to not only ensure that our network is operating and functioning at a high-level, but that we’re constantly innovating to advance our network and technology.

One way to achieve this is by ensuring we have diversity of thought, perspective and experience in our workforce. And one thing women and people of color bring is that kind of diversity. They have experience dealing with adversity and embracing change – a key attribute to possess in the ever-changing field of technology.

However, having just one person who is different on a team is not enough. You have to build a critical mass of diversity – in gender, color and personal experience. You need to cultivate an environment where everyone has a voice and feels comfortable speaking their mind.

One of our core values centers on delivering the future first – so we’re very aware of the importance of a qualified, diverse workforce to innovate and deliver unique experiences. This is a top priority for AT&T and something I have always kept in mind while building my teams.

AT&T provides hundreds of millions of dollars to education initiatives and scholarships each year, including internships, job shadowing and community initiatives to help develop and recruit top STEM talent.

We also have numerous Employee Resource Groups (ERG), representing diverse groups of people, including the first women’s ERGs in the nation. These ERGs connect and inspire groups of people from all different backgrounds to achieve their personal and professional goals and positively change the community.

Through our internal and external STEM initiatives focused on current and potential future employees, we’ve started to make real progress.

We have more than 74,000 women at AT&T who are helping to transform the way we connect with our world. These women are executives, engineers, marketers, salespeople, finance leaders, attorneys and more. They not only encourage others, but they are mentors for the next generation of female leaders.

As of the end of 2016, 36% of AT&T managers were women, more than 18,000 AT&T women are in STEM jobs, and more than 1,100 women inventors are named on AT&T patents, with more than 5,000 patents filed by AT&T women. Since 1988, hundreds of recently hired college graduates have completed AT&T’s Leadership Development Program, and 44% of the participants have been women.

Our AT&T Aspire program supports organizations using technology to enhance learning experiences for students of diverse backgrounds with development training and corporate internships, where they can gain a broader view of the opportunities and careers available to them.

We’re also working to ensure our current employees have the same opportunity for advancement in technology fields by practicing the philosophy of inclusion by design. The goal is to create experiences where diverse groups of people who might not ordinarily interact with each other are able to network, tackle projects and get to know one another on a deeper level.

It’s also important to remember that individually we’re all capable of being a change agent for STEM. We can advocate for each other, learn more ourselves and talk with young girls, and boys, about a future in STEM.

There is still a ton of work to be done across all industries to improve in STEM. But I’m confident AT&T, and all of us, are up to the challenge.
Lynn Larsen is the Vice President and General Manager of BAE Systems Hawaii Shipyards. In this capacity, she leads the company’s ship maintenance and modernization activities at Joint Base Pearl Harbor-Hickam. She assumed the role in June 2012.

Lynn joined BAE Systems in September 2013, as a manager of programs at Norfolk Ship Repair. She later transferred to BAE Systems Southeast Shipyards in Mayport, Florida, as the director of operations, before moving to Hawaii.

Prior to pursuing a career in the private sector ship repair industry, Lynn served as a Surface Warfare Officer/Limited Duty Officer (LDO) in the U.S. Navy for 25 years, which includes tours on USS Simon Lake (AS 33), USS John F. Kennedy (CV 67), USS Barry (DDG 52), USS Leyte Gulf (CG 55) and the Strike Group 10 staff which was embarked on USS Harry S. Truman (CVN 75). She retired as a Lieutenant Commander (O-4).

Lynn is a certified Project Management Professional (PMP) and has 30 years of experience in US Navy Operational Maintenance. She has worked with combat systems and general ship repair across multiple platforms, completing three highly successful shore tours in Orlando, Florida and Norfolk, Virginia.

Throughout her 25 years in the United States Navy, I had the opportunity to be a “first” in many areas. For example, when I entered into the service, women were just being accepted into traditionally male dominated roles. By the time I left as a Lieutenant Commander, there were more females than males launching Tomahawk Land Attack Missiles on Guided Missile Destroyers (DDGs) as Fire Control Officers. In addition, by the end of my Naval career I had qualified to be a Force Tactical Action Officer (also known as a Battle Watch Captain) for an entire carrier strike group. I was one of the first women to do so. I was privileged to be a part of a unique group of women who helped break down barriers. We didn’t try to do it intentionally. Through our determination and commitment to the Navy, we just did.

While much of my success has been through personal drive and ambition, I know that I owe quite a bit of thanks to those who mentored and sponsored me along the way. As a young enlisted sailor, I was unsure of my skills and abilities. But I had superiors who recognized my potential and helped push me along a path of courageous advancement. When I was given the opportunity to apply for the Limited Duty Officer (LDO) program – a unique opportunity for enlisted sailors to become an officer without a college degree – I was hesitant. I didn’t feel I was good enough. My boss, an incredible man who himself was an LDO, encouraged me to do it. He even spent time after hours coaching me and helping me through the application process. It worked. I was picked up as a First Class Petty Officer, one of six individuals that year.

When it came time to leave the Navy, my transition to BAE Systems felt very natural. I was going to work for a company that had the same passion for the Navy and military personnel that I did. Working at our shipyards feels like “home” to me. I get to give back to an organization that’s close to my heart by repairing its vessels. Like me, several of the other General Managers (GMs) at our shipyards are retired from the military. It helps to be able to look at our customers and say, “We get it.”

And they know we do. We don’t try to do it intentionally. Through our determination and commitment to the Navy, we just did.

The leadership team that supports my business was one of six individuals that year.

When it came time to leave the Navy, my transition to BAE Systems felt very natural. I was going to work for a company that had the same passion for the Navy and military personnel that I did. Working at our shipyards feels like “home” to me. I get to give back to an organization that’s close to my heart by repairing its vessels. Like me, several of the other General Managers (GMs) at our shipyards are retired from the military. It helps to be able to look at our customers and say, “We get it.”

And they know we do. We don’t try to do it intentionally. Through our determination and commitment to the Navy, we just did.

Throughout my career progression with BAE Systems, I have had numerous mentors support me. When I took on the role as the head of our Hawaii shipyard, I was entering a position where transition from leader to leader wasn’t an option, as the previous GM had left the position a few months prior. In a way, I was thrown into the water with no life vest and only the hopes that I could swim. I could. And I did. When I needed to tread water for a bit, my fellow GMs were there to share experience and best practices. My boss was just a phone call away, and he always made time for me. The leadership team that supports my business was – and is – invaluable. They offer sound guidance and support at all times.

Because I have benefited so much from those who have taken the time to provide guidance and advocacy for me, I have made it a point to do the same for others around me. I look for the potential in team members, and I find ways for them to challenge themselves and take on roles that may originally seem too much of a stretch for them. I never tell an employee or colleague that they cannot do something. I want them to know that they can count on me as a champion for their growth. I strive to give my team the tools and training to succeed, but if they fail and need to course correct I am there to help with the solution. We have a saying in my business, “Ship Repair is hard and it is not the mistakes we make, but how as a team we correct our mistakes.” I firmly believe that.

I have tried to instill in my team that asking questions and being open to coaching is one of the best things they can do in their personal life and career. I learn something new every single day, because I’m not afraid to say, “I don’t know how to do this. Can you help me?” Not only does this type of mentality help lead to learning, it also opens up new relationships.

People see that you value them and their experience. They become committed to you as a leader, and to the overall mission of the business.

It is my hope that young women who are considering careers in male-dominated industries – particularly STEM fields – will not hold back. If you are passionate, pursue it – regardless of what it is. If you want to be a welder – do it. If you want to be an engineer – do it. If you want to be a programmer – do it. You are capable beyond your wildest dreams. And, there is no shortage of leaders who will be behind you every step of the way ready to be your mentor or sponsor. Count me as one of them. I can’t wait to see what you’ll accomplish.
Aimee Kennedy
Senior Vice President, Education and Philanthropy
Battelle

Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio, Battelle is the world’s largest nonprofit research and development organization, with over 22,000 employees at more than 60 locations globally. A 501(c)(3) charitable trust, Battelle was founded on industrialist Gordon Battelle’s vision that business and scientific interests can go hand-in-hand as forces for positive change. Today, Battelle manages the world’s leading national laboratories and maintains a robust and diverse contract research portfolio. Battelle’s mission includes a strong charitable commitment to community development and education. That’s why we support staff volunteer efforts; science, technology, engineering and mathematics (STEM) education programs; and philanthropic projects in the communities we serve.

Aimee is Battelle’s Senior Vice President of Education, and Philanthropy. She also serves as the President of Battelle Education. Aimee directs Battelle’s efforts to foster innovative educational environments that prepare students for tomorrow’s career and colleges environment. Metro Early College and the Metro Institute of Technology are two examples of excellent schools formed under Battelle’s STEM strategy.

In addition to directing Battelle’s national philanthropy portfolio, Aimee serves numerous Central Ohio boards including ROX: Ruling Our Experiences – a non-profit focused on empowering young women. She also serves in an advisory capacity for The Ohio State University’s College of Engineering and NASA’s Task Force on STEM Education.

Aimee was formerly the Principal/Chief Administrative Officer at Metro Early College High School, an Ohio STEM Learning Network school founded by Battelle. Before working at Metro, Aimee was a teacher and leader in Canton City Schools. Aimee earned her bachelor’s degree from Malone University in Communications, a master’s in Education from the University of Akron and completed her PhD at The Ohio State University.

GROWING A NEW GENERATION OF WOMEN IN STEM AT BATTELLE

Battelle’s founder, Gordon Battelle, believed that science has the power to change lives and improve society. Battelle strives to achieve this vision every day as our scientists and engineers solve the world’s biggest problems.

Throughout Battelle’s history, women have played a tremendous role. While we were founded with the will of Gordon Battelle, it was Gordon’s mother Annie, whose estate contributed a majority of the funding that started our company more than 90 years ago.

The impact of women is just as significant today. Advances in science and technology come from large, diverse teams. At Battelle many of those teams are led by women. To name a few, our work in cleaning up pollution with microbes is led by Dr. Kate Kuchyrz. Stephanie Domas leads Battelle’s work on securing medical devices against cyber-attack. Dr. Amy Heinz was named our Inventor of the Year in 2016. Through out Battelle, you’ll find many examples of women with impactful, groundbreaking contributions to STEM.

Our history isn’t just about doing science; it’s also about inspiring the next generation of STEM innovators. Thanks to Annie and Gordon Battelle, education is a founding piece of our enduring mission.

In 2006, we helped build Metro Early College High School on Ohio State University’s campus. The school is regarded today as one of the country’s best; hundreds of visitors tour each year. One hundred percent of students graduate and enroll in college or the military. No student has ever been turned away for low test scores.

Unlike many STEM programs, Metro does not struggle to recruit girls. Researchers from SRI and George Washington University recently visited the school and found girls made up more than 50% of the school’s enrollment. Their full report is available here.

Watching the success of Metro, including the success of girls at the school, it became clear to us that STEM education should be company’s strategic focus for philanthropy.

That support for STEM goes far beyond one school. In the past year with Battelle’s support, KIPP Columbus began construction of a state-of-the-art environment.

We also manage the Ohio STEM Learning Network, a coalition of more than 40 schools who have earned designation from the Ohio Department of Education as an official Ohio STEM School. This past school year, the network launched its first essay contest. The high school winner was Erica Barnes, today a senior at National Inventors Hall of Fame STEM High School in Akron. As Erica told us: “I want to be a role model and inspire young, black girls who enjoy science and want to build and expand their knowledge.”

This commitment to growing the STEM success of girls runs through our other work as well. In Tennessee, our Tennessee STEM Innovation Network have asked Brandi for something. Our national network of STEM networks, STEMx, heard from the Million Women Mentors program just this year about that organization’s growing impact.

Battelle believes that every student deserves access to a quality STEM education. STEM first stood for science, technology, engineering, and math, but after a decade of funding STEM in central Ohio, we see just how much more STEM can mean.

In schools, clubs, and events across the country, STEM education offers a 21st century approach focused on critical thinking and problem solving. These are the skills every student needs for college and career.

This passion extends far beyond schools. Last year, Battelle directly supported 68 different local organizations. From COSI to the Columbus Museum of Art, the organization supports Columbus wherever kids get excited and engaged. Battelle has supported after-school experiences with community gardens, high altitude balloons, and the performing arts.

We know that to increase the number of women in STEM fields, we need to provide multiple ways for girls and young women to have positive STEM experiences. Those experiences can happen in school or out of school, and can take place in chemistry class or in the Boys and Girls Club. What matters is that they happen.

Battelle’s philosophy is simple: To solve the problems of tomorrow, start with the students of today.
Ingrid Ellerbe
Senior Vice President, Programs and Partnerships
Base 11

Base 11 is a nonprofit workforce and entrepreneur development company on a mission to solve one of the country’s biggest problems: the growing science, technology, engineering, and mathematics (STEM) talent crisis, further fueled by the underrepresentation of women and ethnic minorities. In collaboration with world-class partners from industry, academia and philanthropy, the Base 11 STEM Accelerator model transforms high-potential, low-resource college and high school students into the STEM talent that industry so desperately needs.

Base 11 Innovation Centers feature MIT-originated Fab Labs, and integrate hands-on, project-based learning designed to set students on a direct pathway to a four-year STEM degree and/or a well-paid STEM job. In the past two years we’ve established innovation centers on university and community college campuses in the San Francisco Bay Area; Orange County, California; and Phoenix, Arizona.

Ingrid Ellerbe serves as SVP of Partner and Program Engagement, spearheading the design and implementation of the company’s STEM Accelerator Programs in collaboration with the Base 11 community college, university and corporate partner network. Driven by results, Ingrid leads the charge to empower high-potential, low-resource students with the access, resources and training needed to become the skilled STEM workforce and entrepreneurs our country so desperately needs.

A longtime education advocate, Ingrid’s experience includes 30 years in the K-16 education space in key roles ranging from business development to operations, marketing to strategic planning, and management to leadership development. Little did she know that when she began her career decades ago at a then small but growing math company, which has remained a household staple for math education, that she was well on the road to impacting millions of students in their pursuit of establishing a firm foundation for future STEM success. From that foundation and through her years working with school administrators, educators and students, who have targeted critical thinking and problem solving skills, she has forged a seat at the table of the early technologists who paved the way for what has become a battle cry for the workforce of the future.

Prior to joining Base 11, she served as a C-suite executive at successful and innovative education and education technology firms in the public, private and non-profit sectors including start-ups, mid-sized, and large for-profit corporations. In those roles she maintained a singular focus of excellence for all.

Her guiding principle has always been to provide equity and access to quality programs to ensure that all students can achieve high standards. Ingrid serves on the national board of the NAACP Foundation.

María Hernandez was raised in East Los Angeles by immigrant parents who had little formal education, and in a neighborhood where the closest thing to an engineer was a construction worker. As a community college student, she struggled to keep up with peers who came from better high schools, but she never gave up. She started driving over 100 miles roundtrip on Saturdays to participate in an academic internship at the University of California, Irvine, where she learned skills including programming Raspberry Pi and using 3D printers. María’s experience won’t end there. She is one of the most plausible examples of paying it forward becoming a Base 11 ambassador and role model for the “art of the possible.”

Alina Rai was born in Nepal to parents who wanted her to grow into a traditionally female role. Her entire family was shocked and confused when she announced she wanted to become an aerospace engineer and then, while still completing her associate’s degree, was accepted into a paid summer engineering program at Caltech. She was the only woman in her cohort that summer, and yet she was surrounded by so much support and encouragement that she said she’d never felt more empowered as a woman in a STEM field. Watching Alina grow in her confidence from the day she stepped into the Caltech Aerospace Mentorship Program to the culminating presentation of her capstone project was similar to witnessing a butterfly emerge from a cocoon.

Divon Pleasant stood out as an applicant for the workforce development initiative underway in the San Francisco Bay Area. Coming out of high school he had to choose between being able to survive with what we think of as creature comforts or continuing his education to enhance his employment options. Fortunately, for the Fortune 500 company he works for now, he chose the latter. Divon is well on his way to his original dream of becoming a software engineer. In his apprenticeship, his employers cite his strong communication skills, ability to pick up new responsibilities with minimal supervision and ability to grasp new learning quickly. In addition to his technical skills, these are all representative needs of today’s STEM 2.0 employee.

These are just a few of the incredibly dedicated and inspiring young men and women whom I’ve had the privilege of knowing through Base 11. I met them as applicants – each one of them unrelentingly dedicated to being in the programs. Over the months, I watched them flourish as they gained skills through experiential, project-based learning – both hard skills in engineering and technology, as well as those increasingly important workplace skills like collaboration and design thinking.

At the end of their programs, when I watched them receive their certificates of completion which they earned not without a few setbacks and tears along the way, I noticed them all standing a little taller.

I truly believe these students are ready to become the STEM leaders of the 21st century, bringing with them a rich diversity of background, experience and vision that will enable them to bring to fruition a future that my generation can only imagine.

At Base 11, we are putting high-potential, low-resource community college students like Alina, María and Divon onto direct pathways to STEM success every day, whether that means continuing on to earn a four-year STEM degree, launching their own start-up, or landing a well-paid STEM job. In doing so, we know we are helping to grow and strengthen a middle class that is made up of all Americans.

We do so by connecting the dots between employers, academia and philanthropists – whether it’s reverse-engineering a curriculum to fill a specific talent gap for a major employer, or providing short-term “innovation challenges” from employers in one of our three Base 11 Innovation Centers featuring an MIT-originated Fab Lab. We appreciate that there are many kinds of STEM success, and that all of them improve the lives of the individual, their community and our country.

At Base 11, we believe that each of these young people will be multipliers – inspiring and improving those around them, not only as role models but as mentors and leaders. It is because of them that I know the future is bright.
Barbara Rusinko
President, Bechtel Nuclear, Security & Environmental
Bechtel Group, Inc.

Barbara Rusinko is president of Bechtel Nuclear, Security & Environmental, Inc. (NS&E), one of four business units within the global Bechtel organization. She was elected a senior vice president of Bechtel Group, Inc. in 2012. In her 31 years at Bechtel, Barbara has held a variety of leadership and operations roles. Barbara served as senior project manager on a refinery in Map Ta Phut, Thailand, and for the unprecedented $8 billion Queensland Curtis LNG plant in Queensland, Australia. Barbara is a registered professional engineer with a bachelor’s degree in mechanical engineering from the University of South Carolina and a master’s degree in engineering from the University of Alabama-Huntsville. She serves on the corporate partnership council of the Society of Women Engineers. In 2016, she earned that organization’s Global Leadership Award “for her rise from engineering intern to the top-ranked woman at Bechtel; for demonstrating global leadership and uncommon technical acumen; and for being a shining example and inspiration.”

For years, women have been challenging the perceptions that STEM subjects are the preserve of men. It’s a battle that is far from over. For those of us who have had the good fortune to have exciting careers in STEM fields, the responsibility to change this perception weighs heavily. What a wasted opportunity for human-kind if 50 percent of our population is locked out of imagining, designing, and creating the world we and future generations will live in! The world needs more female role models to demonstrate to young girls that the future is in their hands.

I was struck recently at the launch of a Women in Nuclear branch in Wales by the amount of work that is being done to address this “perception” problem at all levels throughout the entire community: virtual reality games for elementary school children, one-on-one mentoring for young professional women looking to “get ahead” in their careers, apprenticeships for high school students with travel and hands-on engineering projects.

I also see firsthand the incredible work that is being done by the Society of Women Engineers (SWE). For example, a day of SWE’s annual conference is dedicated to invent! It Build It, a program that helps middle and high school girls explore how their STEM studies apply to a diverse mix of careers. The nonprofit also connects with K-12 girls and their parents through SWE Next, which tackles engineering-related community improvement projects or organizes teams for after-school activities, such as the FIRST® robotics programs.

Initiatives like the Future City Competition also help to bring STEM subjects to life. This year’s competition asked middle school students to design and build cities that addresses the needs of older generations. I can’t think of a more decent and fulfilling job. The key is finding up imaginations and demonstrating the practical outcomes of STEM and the exciting careers that use these skills.

That is why I’m so excited about Dream Big Engineer your World. Sponsored in part by Bechtel, this giant-screen film tells memorable stories about engineers and how they use their ingenuity and skills to make the world a better place. More than half of those spotlighted in the production are women.

For example, there’s Menzer Pelihvan, who lived through a devastating earthquake in Turkey and now works to ensure the safety of high-rises in San Francisco and small villages in Nepal. Audiences also watch Avery Bang and her team at the nonprofit Bridges to Prosperity as they build a footbridge in Haiti. The simple structure will help children cross a river to get to school while giving their parents more economic opportunities. Finally, viewers follow along as Angelica Hernández, now a mechanical engineer in Arizona, shares her high school robotics team’s come-from-behind victory at a competition.

Once the lights go up in the theater, girls get a chance to follow in the footsteps of Menzer, Avery, and Angelica. Many of the screenings are accompanied by hands-on learning activities, often guided by local engineers.

Since the February 2017 premiere of Dream Big, more than 1 million people in 15 countries have seen the film; half of those viewers are young people under 17. The early feedback has been encouraging. Audiences rated the film 8.6 out of 10, while critics described the film as doing “an epic job of inspiring young viewers” and offering “a fresh perspective on what it means to be an engineer.” The Giant Screen Cinema Association honored Dream Big with three awards, including Best Film of the Year.

Even more important, the film is resonating with its primary audience: elementary and middle school students. In pre- and post-survey surveys, the percentage of young viewers who wanted to become an engineer increased 24 percent. Respondents who saw a connection between their own interests and engineering increased by 35 percent.

At Bechtel, we are incredibly proud of the achievements of our women engineers. On Crossrail, Europe’s largest construction project, 40 percent of the engineers are women. Two of my colleagues are leaders in expanding Sydney’s metro system. We have a mother-daughter team working together at one of Great Britain’s nuclear sites. Our Women@Bechtel organization is campaigning inside and outside the company to connect with K-12 girls and their parents through SWE Next, which tackles engineering-related community improvement projects or organizes teams for after-school activities, such as the FIRST® robotics programs.

How do we ensure there are more women leading the major engineering projects around the world, staking out company boards, and making the big decisions that shape the culture of their organizations? What can we do to increase the number of women solving some of the biggest problems facing humanity: climate change, growing energy needs, lifting communities out of poverty, and making the world a safer, better, more secure place for future generations?

The answer lies with all of us. We need to keep chipping away at the perceptions — in homes, schools, media, and public life — that turn girls off STEM. This will be a big step forward in giving girls the ambition and the tools to Dream Big.
Karen L. Daniel
Member of Board of Directors and Chief Financial Officer
Black & Veatch

Black & Veatch - A leading engineering, consulting and construction company specializing in Power, Oil & Gas, Telecommunications, Water and Government projects is an employee-owned company with more than 100 offices worldwide. Black & Veatch is recognized as a global leader in safety, innovative client solutions, career development and profitable growth.

For more than 100 years, Black & Veatch has committed itself to growing a collaborative team across the globe and providing innovative solutions to the world’s most important needs. Our continued success is due to the Vision, Mission and Core Values we all hold deeply. Building a World of Difference.

Karen Daniel is a Board member, CFO and President of the Global Finance & Technology Solutions Division for Black & Veatch, a global leader in engineering, consulting and construction services for Energy, Water and Telecommunication markets. Ms. Daniel has been CFO and Board member since 1999 and 2006, respectively.

As CFO, she provides leadership in the following areas: financial strategies, talent development, business practices, IT and business performance and relationships with key financial partners. Ms. Daniel is Chair of the Investment Review Board - M&A; Advanced Executive Business Acumen (aEBA) Program - Global Training including growth strategies, risk management and shareholder return.

Ms. Daniel sits in the board of directors of Snap-on Incorporated, the Greater Kansas City Chamber of Commerce. In the past, she has been an active board member of KC STEM Alliance ecosystem National initiative - programs for K-12 students. She was Vice Chair of President Obama’s Advisory Council on Doing Business in Africa, Karen led the $80 million restoration of Liberty Memorial World War I monument. Karen has a BS in Accounting from Northwest Missouri State University and a master’s degree in accounting from University of Missouri at Kansas City.

SERVE, TEACH, ENGAGE AND MENTOR (STEM)

Science, technology, engineering and math (STEM) disciplines are at the forefront of solving complex problems, shaping our communities and importantly, offering career opportunities across multiple sectors and future generations. While that seems fairly obvious, it isn’t so obvious to many young girls and children in underserved communities. The overlooked, challenged and untapped desperately need leaders and especially women to lead the way for this precious talent to achieve their potential and take their rightful place in the workforce and community.

My career has benefited from strong family support, proficiency in math and leaders willing to serve as mentors. Along my journey, I’ve committed to be an active proponent of quality education for all; support of programs that provide skill development in STEM disciplines; and a mentor to co-workers, women and children.

Life significantly changed for me when I had the good fortune to join B&V, a global engineering and construction company. Today, we have 11,500 professionals with a mix of gender, race and ethnicity who are inspired by our mission of Building a World of Difference and core values that represent a culture of diversity and inclusion. Our projects provide critical human infrastructure and are heavily influenced by the STEM disciplines.

Based on Global Infrastructure Hub, the world has infrastructure needs in excess of $90 trillion for much needed upgrades and new global critical infrastructure systems by 2040. Of this spend, B&V is addressing power, water and telecommunications systems that support our way of life. In the past two years alone, drought cycles imperiled aging water systems and super storms devastated the resilience of our power grids. Many parts of the developing world toll in brownouts or no power at all, while conflict-driven migrations challenge both the socio-economics of host nations but also the critical systems that move, connect and feed their people. We are acutely aware that the significance of engineers whose backgrounds reflect the communities they serve has never been higher. These facts highlight the need for workers with skill in STEM disciplines.

At B&V, a network and support system to empower and engage diverse groups of professionals across the globe are in place. There is a pipeline of talent through recruiting activities to universities, professional associations and STEM programs focused at drawing women and minorities into the field. Diversity and inclusion are emphasized for professionals at all levels. Attention is given to career development opportunities for under-represented talent pools through accelerated development and succession planning.

Retaining and attracting engineers are complementary strategies foundational to our mission. STEM is at the center of our philanthropic efforts at home and abroad, to stoke young people’s passions for problem solving where they learn and play. In suburban Kansas City, our company joined with the Museum of Parliament as its Global STEM Partner, creating opportunities for interactive, STEM-based experiences. The partnership creates awareness of global career paths in engineering and science.

B&V is a member of WISE, which enables and energizes people to increase the participation, contribution and success of women in the United Kingdom’s STEM workforce, from classroom to boardroom. We are also an active partner in Future City, a project-based learning experience for middle school students, and we mentor FIRST Robotics teams, helping students compete in an international high school robotics contest that fosters project management and communication skills. We also partnered with Major League Soccer club Sporting Kansas City to create unique STEM opportunities for middle school students in underserved communities.

Advocating for STEM education, particularly among women and minorities, is a personal passion. In 2015, I enjoyed the opportunity to participate in national efforts to improve STEM curricula and access to programs through the STEM alliance and ecosystem. Being responsible for our company’s growth in Sub-Saharan Africa and a member of President Obama’s Advisory Council on Doing Business in Africa, I witnessed firsthand the criticality of STEM disciplines to global economic growth, developing a skilled workforce and ultimately, prosperity and inclusion in emerging markets. In South Africa, B&V professionals sat side-by-side with engineers and construction workers to transfer knowledge and develop talent.

Back home in Kansas City, as chair the Greater Kansas City Chamber of Commerce, we are in the process of implementing nationally recognized diversity and inclusion best practices for our 2,200 member-based companies. I cherish the opportunities to mentor young people from diverse backgrounds, underscore the value of STEM careers and fiercely advocate for education’s role as a game-changer for at-risk youth. Looking around our community, it’s a joy to see a growing group of STEM professionals that I’ve had the pleasure to work with and mentor.

I would like to recognize and thank all of the women mentoring others; it’s making a huge difference. However, there’s more to get done. Recognizing the impact women mentors had on my professional and personal life, it’s a must to do the same for others. I’ve been guided by a family of public servants and an anonymous quote grounds me in how real leadership impacts family, business and community - “If serving is beneficial to you then leadership is beyond you.”
Lakshmi Eleswarpu
Vice President, Business & Supply Chain Systems
The Boeing Company

Boeing is the world’s largest aerospace company and leading manufacturer of commercial jetliners, defense, space and security systems, and service provider of aftermarket support. As America’s biggest manufacturing exporter, the company supports airlines and U.S. and allied government customers in more than 150 countries. Boeing products and tailored services include commercial and military aircraft, satellites, weapons, electronic and defense systems, launch systems, advanced information and communication systems, and performance-based logistics and training.

Boeing has a long tradition of aerospace leadership and innovation. The company continues to expand its product line and services to meet emerging customer needs. Its broad range of capabilities includes creating new, more efficient members of its commercial airplane family; designing, building and integrating military platforms and defense systems; creating advanced technology solutions; and arranging innovative financing and service options for customers.

Eleswarpu also served in The Coca-Cola Company where she led global engineering and operations at British Telecom, Hewlett Packard and Procter & Gamble companies.

Lakshmi Eleswarpu leads Business & Supply Chain Systems and is driving Boeing’s second century strategy of systems and applications in the global supply chain, supplier management and corporate functions. She is responsible for Enterprise Supply Chain Systems and Corporate Business Systems (Finance, Human Resources, Legal, Government Relations, Boeing Capital Corporation, International Business, and Shared Services Group) across Boeing Commercial Airplanes, Boeing Defense, Space & Security; and Boeing Global Services business units.

HOW HAS SMARTER, MORE EFFICIENT TECHNOLOGY BEEN A DISRUPTOR IN YOUR WORK?

Technology has transformed the way companies do business at an exponential pace, and it continues to break through the boundaries of the art of the possible. We are focused on machine learning, artificial intelligence and predictive analytics to help drive business with agility, while ensuring first-time quality in everything we do. Technology is enhancing visibility and providing actionable insight as we innovate with speed and creativity.

The application of technology at Boeing is amazing. From virtual reality for flight simulation to big data analysis for predictive maintenance, technology enables unprecedented levels of safety of our aircraft and passengers. We use emerging technologies to shine light on doors that we may not have seen before, and to potentially unlock answers to problems we have yet to discover, transforming the era of reactive to proactive, and yes—groundbreaking.

HOW IS CHANGING TECHNOLOGY DRIVING THE NEED FOR STEM EDUCATION AND TALENT?

People are connected globally in ways that were not imaginable even a decade or two ago. Instantaneous communication, social media and affordable, efficient and safe air travel has made the world seem smaller.

To put it into perspective, it could be viewed that STEM education and talent drive the evolution of technology.Ingenuity and creativity flourish through inspiration as we aspire to achieve what may seem impossible. That level of thinking is born, developed and utilized to drive the way technology is architected and employed across several industries today. STEM is essential to driving innovation to deliver outstanding business results and excellent value to our customers.

While STEM is represented by science, technology, engineering and mathematics, it is more than that. We have a merging of the minds and a foundation on diversity of thought, leading to creativity and innovation.

Boeing comprises one of the largest communities of engineers and technologists. The talent and expertise of our technical pool is paramount and critical, as people are our greatest asset. We are pushing the boundaries of innovation in aviation, defense, space and satellite technologies.

WHAT IS MOST REWARDING ABOUT THE MENTORING EXPERIENCE? WHY IS MENTORING SO IMPORTANT?

Mentorship is very important, as I truly believe we all rise together by lifting others. I was fortunate in having many people who influenced me in my life. First and foremost, my parents taught me about integrity, the value of an outstanding work ethic and education, and that kindness should be inherent in all that I do.

Throughout my life, I have strived to be curious and to learn from those around me, and to take opportunities to coach and help others, especially as I have gained experience and expertise in my career.

We all need a mentor to whom we can relate, so we can leverage that bond to find open windows of opportunities and unlock doors of challenges. We help our mentees springboard and aim higher and farther from the lessons learned. We teach them to overcome barriers and head down paths that may be less traveled, but help them to achieve their dreams.

A situation that resonated with me is the awesome sense of connection, as I mentored high school students from Atlanta. The curiosity and energy was boundless as their futures shined like beacons before them. It was fascinating to listen to them speak about their challenges and their aspirations, even as I tried to see what I could do to make their paths easier.

In addition, people who inspire me are those who have served our country. As a result, I have made an effort to mentor, recruit and hire veterans. We must never underestimate or forget the sacrifices that veterans and their families have made to keep us safe and to defend our great nation.

WHAT CAN OTHERS DO TO HELP THE NEXT GENERATION ELEVATE THEIR CAREERS AND OPPORTUNITIES WITHIN STEM?

STEM is about caring and compassion and having the capability to touch others in ways that help them grow and evolve as they achieve their dreams and change the world.

So, first and foremost, get involved! Get involved as a teacher and even more so as a student! We need to continue to talk about and recognize the need for STEM in communities and partnering industries, and put actions to words. We should encourage our youth to be critical thinkers and to solve problems creatively.

We need to help their natural curiosity grow and flourish. The next generation is growing up with technology so it ought to be second nature for them to think analytically and with agility.

We are all in a position to contribute to the success of others, and it is of the utmost importance that we never forget what it takes to break through that glass ceiling, while also ensuring that we motivate and remind others to do the same.

WHAT IS THE BIGGEST CHALLENGE IN BRINGING IN TOP TALENT?

We need to identify and encourage top talent, and bring it in quickly and with purpose. The challenge is not just attracting top talent, but retaining top talent, due to the innumerable options everywhere. That means providing a career path, growth and learning opportunities, and helping employees feel the value that they bring to a company. At Boeing, I see people who have worked here for many years with as much spark and excitement as those who are just walking in the doors now.

EXPERIENCE? WHY IS MENTORING SO IMPORTANT?
Kathleen Martinez
Sr. Director National Strategic Relations & Initiatives
Office of Diversity & Inclusion
BP America Inc.

BP is a leading producer of oil and gas, providing fuel for transportation, energy for heat and light, lubricants to keep engines moving, and the petrochemicals products used to make everyday items. With global demand for energy projected to grow by 30 percent over the next 20 years, investing in STEM education is necessary for BP’s growth and to foster the talent needed to advance innovation in the energy industry.

For more than six decades, BP has supported STEM education initiatives across America. BP has donated nearly $70 million to U.S. STEM programs over the past five years alone, which reflects its broader commitment to expanding economic opportunity, developing a highly skilled workforce, and inspiring the next generation of innovators. The company’s efforts focus on teacher training and development, sponsoring student programs that nurture STEM learning, and encouraging employees to volunteer as mentors in their communities.

Martinez plays a central role in the advancement of BP America’s national external affairs efforts. Her responsibilities include leading key strategic relationships and oversight of the company’s U.S. commitment to Science, Technology, Engineering, and Mathematics (STEM) education, and veteran outreach efforts.

Martinez’s background includes more than 20 years of experience in public relations, corporate social responsibility, marketing and philanthropy, where she has demonstrated continued success in leadership, strategy development, community engagement and program execution.

Prior to joining BP in 2012, Martinez held a variety of leadership roles, including vice president of charitable giving for BBVA Compass, vice president of community affairs for the Wachovia-Wells Fargo Foundation, national multicultural marketing manager for Southwest Airlines, and press secretary to former U.S. Rep. Silvestre Reyes in Washington, D.C.

As global demand for energy continues to rise, the fuels mix is shifting toward lower-carbon sources. Producing the energy the world needs and advancing this transition to a cleaner energy mix will require cutting-edge innovation and the minds of the brightest scientists and engineers to create it. As such, it is vital that the energy industry continues to attract and retain top talent, particularly those with STEM backgrounds.

Almost two-thirds of BP’s current U.S.-based employees work in STEM-related roles, while more than half of all new graduate hires over the next decade will require a STEM degree. From engineers and geologists, to computer scientists and offshore drillers, these careers in the energy industry will provide a pathway to prosperity with the average salary exceeding $90,000 per year.

It’s simple: The global economy relies on STEM talent, and the need for STEM talent will continue to grow. The challenge for many companies like BP is the availability of that talent both today and in the future.

At BP, we invest nearly $50 million per year in STEM programs globally. And in the U.S. alone, BP has invested more than $70 million in STEM education over the past five years. We have focused our efforts on teacher training and development, student programs that inspire STEM learning, and empowering our employees to make a strong impact in STEM in their local communities.

BP understands that it will take a widespread, strategic effort to ensure that every student has access to a strong STEM education. It will take the collective action of companies, nonprofits, parents, policy makers and educators to enrich a young person’s experience with STEM in a distinctive way that inspires and motivates them to pursue a STEM career.

For BP working to increase student success in STEM-related fields is of the utmost importance. But despite the fact that much progress has been made, a lack of exposure to STEM disciplines puts this career opportunity out of reach for too many American children — especially those from economically disadvantaged and minority backgrounds.

Science and math teachers are critical to ensuring students’ success, and the United States is currently facing a significant teacher shortage. According to a 2016 study, U.S. classrooms were short about 60,000 teachers in 2015, and further shortages could increase to more than 100,000 teachers by 2018 — and remain close to that level in the years ahead.

BP supports programs — such as the Energy Teacher Resource — that help equip and support teachers in the areas of math and science. Additionally, BP employee volunteers develop strategic partnerships with schools in the communities where they live and work to help bring to life STEM lessons that are taught in the classroom, and apply them to real-world and workplace challenges.

While supporting existing teachers is of the utmost importance, BP understands that if the shortage of qualified teachers continues, our students will not be equipped with a solid foundation in STEM, which will limit their ability to pursue STEM careers. Unfortunately, the teacher shortage disproportionately impacts economically disadvantaged areas and many students of color, putting them at a further disadvantage.

This issue is a business and economic imperative, and it will impact America’s ability to cultivate a strong and competitive workforce for the future.

I’m proud to say that BP is working with the national nonprofit organization Teach to help change the perception of the teaching profession and strengthen the teacher pipeline. We are also focused on increasing the number of math and science teachers and teachers of color. Because we all know that you can’t be what you can’t see.

BP is committed to attracting, motivating, developing and retaining the best talent from the diversity the world offers. Our ability to be competitive and thrive globally depends on it.

We believe diversity breeds innovation, and in today’s rapidly changing world, students from all backgrounds must be prepared and equipped to help solve the many challenges we have yet to face. Our hope is that we can help make a difference.
Lynne Marie Finn
President & Chief Executive Officer
Broadleaf Results, Inc.

Broadleaf provides total talent management through managed service programs, recruitment process outsourcing, independent contractor compliance, statement of work management, and vendor management systems. Our consultative approach offers corporations complete, end-to-end solutions for direct and contingent talent acquisition under one roof. With decades of experience, we blend proven strategy, targeted solutions, and leading-edge analytics to deliver sustainable business results.

Finn is also a Vice Chair of the board of Women Presidents’ Educational Organization (WPEO), serves on the finance committee for the Women’s Business Enterprise National Council (WBENC) and on a regional advisory council for the Federal Reserve Bank of New York. She also serves on the Foundation Board of the Committee of 200 (C200), an organization of the world’s most successful women entrepreneurs and corporate innovators.

Recent recognition includes being named to Staffing Industry Analysts’ (SIA’s) 2017 Top 100 People in Staffing, and HRO Today’s 2016 Superstars Directory. Also in 2017, Finn was recognized by WBENC as one of 25 Women of Distinction. Finn received her law degree from Georgetown University Law Center, where she was Executive Editor of Law and Policy in International Business, and graduated magna cum laude from SUNY at Buffalo.

TOMORROW’S SKILLS: STEM EDUCATION SHAPES THE FUTURE AGAIN

Moments of technological advancement punctuate history. Inspiration, after all, comes in many forms. In the 20th century, children watched as momentous achievements were made possible by science, technology, engineering, and mathematics. These moments captured youthful interest, sparked learning, and catalyzed the nation to greatness.

- Orville and Wilbur take brief flight for the first time in 1903, capturing headlines.
- Insulin is isolated in 1921, saving countless future lives.
- In 1936, the Hoover—originally Boulder—Dam is completed.
- The Golden Gate Bridge finishes construction to much fanfare in 1937.
- In 1957, Sputnik’s launch prompts the U.S. to put first person on the moon.
- 1967 witnesses the first successful heart transplant.
- The Internet is born in 1983.
- In 1996, Dolly the cloned sheep baaahs into existence.

These events and many others brought generations of youth to STEM studies because they wanted to be part of these game-changing advancements. Even in entertainment, space travel and science anchored popular culture through books, TV shows, and movies. In droves, children took up the reigns and answered the call. Ultimately, they wanted to contribute. They wanted to change lives... and to save them.

Fast-forward to the 21st century, and advancements are being made at a blistering pace. So much so that they are rarely heralded by media long enough to capture public interest or imagination before the next new thing comes along. Children are inspired less frequently by STEM advancements in a culture that is increasingly fickle about innovation. That term itself—innovation—is now more a buzzword than it is a motivation for creativity.

Absent the monumental and highly publicized advancements of the 2000s, how do we motivate our children to take up STEM studies and careers?

In the 1990s, we educated children about education. Public service announcements like The More You Know sought to generally whet children’s appetites for learning. While these efforts resonate and remain important today, we must be more strategic. Understanding that STEM talent today is often imported into the U.S. from international education systems, we must reach Generation Z through thoughtful campaigns that inspire. The responsibility lies with communities and corporations alike. Creativity and resources are needed to showcase the excitement and emotion that surround STEM pursuits, and localizing efforts to reflect regional cultures and successes is important. As communities work to find ways to improve our public education system to more effectively prepare our children, corporations must do the same. Corporations need to determine the manner in which they can effectively inspire the future workforce to enter STEM fields.

Partnerships with local educational institutions are a viable, proven option. Apprenticeships or internships may help students connect with STEM. Hosting fieldtrips or inviting companies to visit classrooms may help younger students realize the manner in which science, technology, engineering, and/or mathematics impact lives, where appropriate. Relationships with museums and science centers must be forged and supported. After all, students need to be encouraged from a young age to pursue STEM careers.

For instance, several industries routinely contribute to STEM advancements in the Buffalo-Niagara, New York region. A vibrant bioinformatics and life sciences community drives change each day. A powerful and life-saving medical corridor is anchored by educational and research campuses, as well as medical facilities. Buffalo is also quickly growing as a renowned incubator for start-ups and emerging businesses; many of these firms’ foundational concepts lie in STEM-based research or principles.

The impact that these largely STEM businesses and research cultures have on the Buffalo-Niagara region has been transformative. These advancements in STEM pursuits can economically revitalize cities and regions. Repeated on a larger scale, they can fuel a nation.
Menexia Tsoubeli
Vice President, R&D, Campbell Fresh
Campbell Soup Company

Campbell Soup Company is driven and inspired by our Purpose, “Real food that matters for life’s moments.” We make a range of high-quality soups and simple meals, beverages, snacks and packaged fresh foods. For generations, people have trusted Campbell to provide authentic, flavorful and readily available foods and beverages that connect them to each other, to warm memories and to what’s important today. Led by our iconic Campbell’s brand, our portfolio includes Pepperidge Farm, Bolthouse Farms, Arnott’s, V8 Swanson, Pace, Prego, Plum, Royal Dansk, Kjeldsens and Garden Fresh Gourmet. Founded in 1869, Campbell has a heritage of giving back and acting as a good steward of the planet’s natural resources. The company is a member of the Standard & Poor’s 500 and the Dow Jones Sustainability Indexes.

Experiential learning spans so much of what we do in R&D at Campbell. It’s truly the backbone and framework of our efforts, from designing products to developing our talent to reaching out to others interested in gaining hands-on experiences in the food and beverage industry.

As a company that puts our consumers first, Campbell is always interacting with consumers. We spend time with them in their homes, we join them on trips to the grocery store, and we talk with them to understand how they lead their lives, what they wish they had in their kitchens, and what else would give them the best experiences. Then we work with them to co-create and co-design the taste and function of the real foods we develop to fit their needs and desires.

We also ensure our employees have unique short-term rotations and other opportunities to learn – from consumers, from our own businesses and functions, and from external initiatives that are relevant to our Purpose to deliver “real food that matters for life’s moments.”

Further, through our highly-developed internship and co-op programs, we regularly recruit students interested in process engineering, food science, and other scientific careers to learn through real-life, hands-on experiences. In my division alone, Campbell Fresh, we typically have two or three students working each year. And our team particularly enjoys bringing in students from local high schools to experience a “day in the life” of the product design process, engaging and exposing them to career-focused experiential learning while inspiring them to pursue careers in STEM fields.

Mentoring and sponsorships are also dimensions of learning. Helping others achieve their goals is a way of living – indeed, a passion -- for me. Because it’s important to take it upon ourselves to become active sponsors, I’m always looking for ways to help open doors and create opportunities for promising colleagues. I try to serve as a role model, and at any given time, I’m also mentoring two or three colleagues, particularly women, at the beginning or middle of their careers.

Recently, through our Women of Campbell affinity group, we created “Be Real” mentoring circles to mentor the next generation of women leaders. I’m fortunate to be leading a circle of six women in diverse functions from across our Campbell Fresh, Pepperidge Farm, and Canadian businesses. I’m helping them build their own mission statements, network, share, learn, brainstorm, and have a sounding board as they strategically manage their careers.

Women in technical fields in particular face a lot of biases, and they need role models and opportunities from an early age to feel confident enough to break perceptions and realize they can have a wonderful career and make big impacts in a STEM profession. I’m grateful to have received mentoring, sponsorship, and other support throughout my career, and now it’s an honor to pay it forward and do my best to help others along my path. When we do that, we end up richer in many ways, and I find we learn even more from others than they learn from us.

Dr. Menexia Tsoubeli joined the Campbell Soup Company in June 1999. During this time, she has held several positions of increasing responsibility including innovation and core business positions. She also represents Campbell on the STEM Innovation Task Force, leads the STEM Career Accelerator program and is the Chair of Women of Campbell for R&D.

Menexia was most recently appointed Vice President - R&D Campbell Fresh, an entrepreneurial organization with high growth objectives. She currently reports to Ed Carolan, Senior Vice President & President Campbell Fresh.

During Menexia’s 15+ years of progressive leadership in Research and Development she has a strong record in leading R&D teams and programs of high complexity and ambiguity. Also, effective in team management with a track record for building high performing teams. She is successful in building partnerships with the business, key functional areas and external partners. Menexia has extensive experience on Innovation, Strategy and Commercialization.

Menexia started her career as a Research Scientist working for the US Army Natick Labs, in Natick, Massachusetts. Menexia earned her Ph.D in Food Science and a M.S. in Food Science and Nutrition from the University of Minnesota and a B.S. in Chemical Engineering from the National Technical University of Athens, Greece. She has been a member of the American Institute of Food Technologists since 1989 and is on the External Advisory Board for the Chemical Engineering Department at Rutgers University.
Jill L Zullo, PhD
Vice President, BioIndustrials, North America
Cargill

Cargill provides food, agriculture, financial and industrial products and services to the world. Together with farmers, customers, governments and communities, we help people thrive by applying our insights and 150 years of experience. We have 155,000 employees in 70 countries who are committed to feeding the world in a responsible way, reducing environmental impact and improving the communities where we live and work. For more information, visit Cargill.com and our News Center.

For as long as I can remember, I’ve been the S in STEM. As the daughter of a chemist and a nurse, my siblings and I grew up immersed in science. We learned the scientific method and critical thinking skills around the dinner table, listening to our parents describe the challenges of their respective careers. Those early conversations sparked my imagination, ignited my passion for science, and ultimately, led to my career at Cargill. They also underlie my commitment to STEM education.

While I was fortunate to grow up surrounded by science, too many young children lack access to the kind of high quality STEM learning opportunities my siblings and I enjoyed. Yet research tells us that children are most receptive to science and technology in early elementary grades. According to Anthony Murphy, executive director of the National Center for STEM Elementary Education, by fourth grade, a third of all students – boys and girls alike – are no longer interested in science. By eighth grade, that number jumps to nearly 50 percent. Perhaps most alarming, the U.S. Department of Education reports just 16 percent of American high school seniors are proficient in math and interested in a STEM career.

As a former leader in Cargill’s research division and now a leader for the bioindustrial business, those statistics are frightening. Cargill has built a segment of its bioindustrial business using butane of corn and soybeans instead of barrels of oil to create adhesives, lubricants, paints and more. We’ve made huge advances in this arena, opening the doors to seemingly unlimited opportunities to replace petroleum-based products with sustainable bioindustrial systems made from renewable resources. But to bring this vision to life, we’re going to need a new generation of STEM-professionals. It’s not just my division of Cargill that sees the potential for phenomenal job growth. The U.S. Bureau of Labor Statistics predicts STEM employment will grow by 13 percent from 2012 to 2022.

To achieve the workforce we need, we must think differently. One way I’ve found to ignite kids’ interest and demonstrate the possibilities available through STEM learning is by organizing science fairs at my local elementary school in Eddyville, Iowa, where we regularly invited students to tour and talk with our engineers and chemists, allowing young scholars to see first-hand what these professionals do in their life’s work. To this day, I welcome opportunities to bring young people into our facilities and show them the myriad of opportunities available to those who choose a career in science.

As leaders in STEM, I also believe it is critical that we reach out to young scholars in the communities where we live. One way I’ve found to ignite kids’ interest and demonstrate the possibilities available through STEM learning is by organizing science fairs at my local elementary school in Eddyville, Iowa, where we regularly invited students to tour and talk with our engineers and chemists, allowing young scholars to see first-hand what these professionals do in their life’s work. To this day, I welcome opportunities to bring young people into our facilities and show them the myriad of opportunities available to those who choose a career in science.

The wonder that the elementary students find in early experimentation and inquiry brings me full circle, back to my own early science education. I still remember how my dad mesmerized my first grade class with a science experiment that looked like magic. That’s what I want to do as well, introduce the next generation of STEM professionals to the wonders of science. I challenge all of you to reach out to your own local students, to engage with hundreds of students and show them the vast ways that science can be applied to solve real-world problems and answer questions.

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Jacqueline Hinman
Chairman and Chief Executive Officer
CH2M

CH2M leads the professional services industry delivering sustainable solutions benefiting communities and economies around the world. As the only company on the Fortune 500 company delivering sustainable solutions in the development of iconic infrastructure and industrial operations around the world, CH2M provides professional expertise, volunteerism and financial resources supporting STEM education and development to students and teachers.

As Chairman of the Board and CEO, Jacqueline Hinman has dedicated her career to the advancement of science, technology, engineering and mathematics (STEM) programs. CH2M is a proud champion of STEM education and the company’s commitment to advancing STEM is evidenced by tax-deductible contributions exceeding $1 million annually in support of STEM education and sustainable communities. CH2M employees also volunteer to support STEM education and sustainable communities in organizations around the world, as well as the Engineers Without Borders, Water For People, and Bridges to Prosperity.

With more than 30 years of experience, Jacqueline Hinman is Chairman and CEO of CH2M, a purpose-driven Fortune 500 company delivering sustainable solutions in the development of iconic infrastructure and industrial operations around the world. Hinman is recognized as one of the top businesswomen in the country and has received many honors, including World Denver’s Medal Award for global leadership in sustainability and corporate citizenship, the Women Leading Change Award, the Engineering and Economic Forum Global Advisory Council on Infrastructure, the McKeeby’s Global Infrastructure Initiative, the Business Council and the Catalyst Europe Advisory Board. Throughout her career, Hinman has been recognized with many awards, including World Denver’s Women Leading Change Award, the Engineering and Construction Capital Management Association’s Life-time Achievement Award, the Construction Management Leadership Association of America’s Global Leadership Award, the University of Denver International Bridge Builders Award and the Conference of Minority Transportation Officials’ “Women Who Move the Nation.”

WHAT IS YOUR COMPANY’S STRATEGY FOR CONNECTING DIVERSITY INITIATIVES WITH STEM INITIATIVES? IS THIS A PART OF YOUR COMPREHENSIVE STRATEGY?

Investing in diversity and STEM pays off in our future workforce and business success, and we believe we have a role to play in creating and nurturing that workforce from an early age. As part of our diversity recruitment strategy, we have teamed with another strategic nonprofit partner, Girls Inc. of Metro Denver, to provide STEM mentoring and educational programs for girls from diverse backgrounds. In the UK, we’ve teamed with Social Mobility Foundation to offer an engineering residential program, bringing 20 high school students to our London office for a week of mentoring, project work, competitions and networking. In the United States, we have a role to play in creating and nurturing that workforce from an early age.

WHAT IS YOUR ADVICE TO THOSE INVOLVED IN PROMOTING STEM EDUCATION?

By guiding, advising and coaching young people interested in STEM, we are developing and strengthening future leaders who will change the world.

Are you a mentor, and what is your view of mentorship? Did someone mentor you?

I am a strong advocate for mentoring. Thanks to a diverse group of mentors, I am the proud CEO of a Fortune 500 company. My mentors gave me the strength to stretch beyond my capabilities and provide guidance to strengthen my skills. In my current role, I continue to pay it forward by mentoring women and girls both inside and outside of my company. We invest in mentoring programs and employee network groups, and I encourage my employees’ participation in professional associations. I believe everyone should build their own personal board of directors, seeking mentorship from a diversity of perspectives and experience levels. I advise people to seek out mentors who are not only at higher levels, but also peers and those earlier in their career journeys—both inside and outside the industry.

HOW CAN WE LEVERAGE MENTORSHIPS AND APPRENTICESHIPS TO BUILD, FOCUS AND STRENGTHEN THE STEM PIPELINE?

The STEM skills gap affects CH2M’s ability to attract, recruit and retain the best talent to deliver the toughest projects in infrastructure, energy and industrial solutions around the world. Another challenge is the number of engineers and other STEM professionals who are nearing retirement age. As a nation, we need to increase the number of qualified engineers by about 26 percent.

We have to get students early, in middle school, and bring engineering and science home for them—for example, we explain how their favorite computer game, mobile device or sports park was designed by an engineer or a construction manager. Connecting their real life to a STEM career is important, so we provide opportunities for students to apply their classroom skills on practical tasks and real-world projects. Aligning STEM professionals work directly with our employees and collaborate with other students, whether it’s spending a week in our London office and touring our project sites (through the Social Mobility Foundation); designing and installing a green stormwater project with CH2M engineers and The Nature Conservancy; girls being mentored through the Girls Inc. Eurekak program; or college interns spending their summer in a CH2M office or on a project site.

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Yvette Kanouff  
Senior Vice President/General Manager Service Provider Business  
Cisco Systems, Inc.

Cisco (NASDAQ: CSCO) is the worldwide technology leader that has been making the Internet work since 1984. Our people, products, and partners help society securely connect and seize tomorrow’s digital opportunity today. Discover more at newsroom.cisco.com and follow us on Twitter at @Cisco.

Kanouff brings more than 20 years of service provider, media, and software experience to Cisco. Prior to joining Cisco, she was EVP Corporate Engineering and Technology at Cablevision. Previously, she was President of SeaChange International. Earlier in her career, she served as Director of Interactive Technologies at Time Warner Cable, and she began her career in digital signal processing technologies at Lockheed Martin. Kanouff has a bachelor’s and a master’s degree in mathematics.

Kanouff won an Emmy for her work on video-on-demand, and holds several patents on VOD-related digital technologies. She has been honored numerous times for her work in moving the industry toward web-centric, open standards-based solutions and architectures.

LETS MAKE STEM COOL!  
With only one in four graduating high school students in the U.S. expressing an interest in pursuing a STEM (Science, Technology, Engineering, and Math) career, STEM is an area that needs renewed focus. The U.S. is becoming dependent on foreign workers to fill STEM jobs, according to recent studies. It’s clear that we need to focus our efforts on getting more kids, particularly women and minorities, interested in pursuing STEM at a young age.

How do we make STEM cool? I feel the issue is that much of our youth does not know what they can do with math. And children get lost in math-related topics in middle school. As a society, we need to help educators make math and science more relevant to kids in middle and high school and get them excited about STEM.

And, we need to find ways to get college students to commit to STEM and help them get jobs in STEM after they graduate.

HOW WE CAN HELP  
We, as educators and business leaders in the STEM field, need to work together and find ways to ignite a passion for STEM in young people.

When kids get their hands on exciting projects, it can inspire them to learn, to get excited, and to begin a potential career passion. Stats about how people learn show that about 5% learn by hearing about something, 10% by reading about it, 30% by seeing a demonstration, and 75% learn by doing it for themselves. If we can find ways to allow students to do hands-on projects in real-world situations, we can make a difference. For businesses, that means demonstrating the connection between STEM learning and jobs. It means showing young people that STEM education gives them the broad training and critical thinking skills they need to develop meaningful, interesting careers, so they can do the things that matter to them – protect the environment, develop the latest technology to change the world, or care for the weak and vulnerable in our society. And it means supporting initiatives designed to encourage children and youth to keep up their interest in science as they grow older.

Many young kids wish to be a firefighter or police officer when they grow up – they can easily visualize that job. Why can’t we visualize a game designer, a computer architect, a bridge builder, a pattern recognition mathematician, and many more. The most complex math can be explained, if we take the time to describe how this current Algebra class is a critical step to so many fun jobs.

CALL TO ACTION  
I ask all of my colleagues in our various and diverse businesses, to think of how we can create more simplified, engaging, and value for the people and organizations ready to realize the potential of connected people, processes, data, and things.

Read more at: 10 Reasons to Hire Cisco Networking Academy Talent  

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Tara Carcillo
President and Chief Executive Officer
The Clearing, Inc.

The Clearing, Inc. is a management consulting firm that provides solutions for public, private, and social sector organizations when their growth has slowed, when the same rules no longer apply, when their teams are not functioning at the highest levels, or when complexity becomes overwhelming.

The Clearing specializes in strategy, organizational development, change management, and leadership development. We help organizations resolve highly complex challenges, prioritize the fewest, most important initiatives to tackle regardless of conflicting needs, and make informed decisions in the context of an agreed upon mission, vision, and strategy.

Our experienced consultants bring a powerful blend of analytic and creative skills from diverse fields, including change management, finance, engineering, communications, education, policy, design, and corporate leadership. Learn more by visiting www.theclearing.com.

Tara Carcillo is President and CEO of The Clearing, Inc., a Washington, D.C.-based management consulting firm. She is the co-creator of MeetPRIMES.com, a website that offers straightforward tutorials on how to engage, motivate, and lead others in meetings using powerful, proven techniques.

Tara has spent nearly 20 years guiding, designing, and advising on enterprise transformation, systems design and modeling, leadership development, and instructional design. She received her Bachelor of Science in Biology from Washington College and holds a Master of Arts in Whole Systems Design and Organizational Systems Renewal from Antioch University. Tara is a thought leader, a leadership coach, a consultant and a speaker.

As a LEADERSHIP COACH: Tara has helped guide and advise leaders in the Department of Defense, numerous Federal Civilian Agencies, state and local governments, non-governmental organizations, and the private sector.

As a CONSULTANT: Tara has devoted her career to developing and leading enterprise transformation, systems design and modeling, and instructional design for clients. Tara Carcillo brings persuasive and comprehensive expertise to her work that is grounded in systems design principles.

As a SPEAKER: Tara speaks to businesses and organizations across the country on a wide range of topics regarding professional growth, change management, and systems design. She regularly speaks at regional and national conferences.

DESIGN THINKING: AN EFFECTIVE TECHNIQUE FOR SOLVING TODAY’S CHALLENGES

Tackling today’s problems demands integrating social and technical skills to reduce complexity, speed up decision-making, and increase innovation. As the complexity of a problem increases, so does the demand for diverse perspectives required to understand and solve the problem. As a result, more organizations and leaders are applying design principles to the way they engage and think about projects.

This thinking may have originated in the design world, but it has evolved over time and encompasses much more than just aesthetics. Too often our thinking and reference point for design are attributed solely to the arts, when in fact these principles are being used across math, science, and engineering.

Nigel Cross, author of Designing Ways of Knowing, said, “Everyone can—and does—design. We all design when we plan for something new to happen, whether that might be a new version of a recipe, a new arrangement of the living room furniture, or a new lay out of a personal web page. (…) So design thinking is something inherent within human cognition; it is a key part of what makes us human.”

Design thinking allows us to create liberating structures and systems through a method of problem solving that will drive our economy and our society into the next period of success and development. As a community, we have an opportunity to lean on cross-sector partnerships and state, local, and regional growth and resilience.

My company, The Clearing, stepped into the STEM talent conversation simply by asking, “How might we invest and see a return that has the potential to multiply beyond the walls of the company?” A fundamental design question that demands curiosity, resourcefulness, and an openness to discovering small changes that make a big impact on the community problems at hand.

The Clearing enters this realm offering core methods and tools that enable diverse groups to solve complex problems. We are committed to standing alongside leaders who are taking on causes that matter and living to their fullest potential. Together, we can realize results that impact regions, organizations, and teams.

As a result of this stance we have developed partnerships and participative problem solving tools with and for our clients that are essential to:
• integrating unmanned aerial surveillance into all hazards response;
• the process of claims and customer experience at the Social Security Administration;
• ensuring secure cloud services are available across the federal government;
• accounting for fallen U.S. service members lost in the line of duty during past conflicts;
• building the leadership and company culture that small, innovative technology entrepreneurs require in order to scale and embed their solutions across the globe.

We believe in the right balance of social and technical solutions. Most technological innovations require the right application of human touch to ensure the intent behind the design of any product or service is being met.

We begin and end with the humans engaged in enabling growth. We look forward to sharing and learning new ways to engage in powerful, collaborative problem solving across students and professionals who are passionate about making a difference and taking on our nation’s toughest challenges.
Julie Holzrichter has served as Chief Operating Officer of CME Group since 2014. She is responsible for leading CME Group’s operations around the world, including its Global Command Center, which is the first point of contact for customers anywhere in the world, including its Global Command Center, as well as its Global Customer Service. Julie Holzrichter is a leading voice on regulatory issues affecting CME Group and its customers. She is responsible for leading CME Group’s operations around the world, including its Global Command Center, which is the first point of contact for customers anywhere in the world.

CME Group is the world’s leading derivatives marketplace, providing products and services for businesses and institutions around the world. CME Group’s products and services ensure that businesses around the world can effectively manage risk and achieve growth. Through its exchanges, CME Group offers the widest range of financial, physical, and over-the-counter products and services, including futures and options based on interest rates, equity indexes, foreign exchange, energy, agricultural products and metals. CME Group provides electronic trading globally on its Globex platform. The company also offers clearing and settlement services across asset classes for exchange-traded and over-the-counter derivatives. CME Clearing, CME Group’s clearinghouse, processes more than 50% of the world’s trades and provides the physical delivery of metals and agricultural products. CME Group provides electronic trading globally on its Globex platform, the company also offers clearing and settlement services across asset classes for exchange-traded and over-the-counter derivatives. CME Clearing, CME Group’s clearinghouse, processes more than 50% of the world’s trades and provides the physical delivery of metals and agricultural products.

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Myrna Soto is Corporate SVP & GCISO (Global Chief Information Security Officer) at Comcast. In her role, Myrna is responsible for all security & technology risk management for the Enterprise. She is responsible for aligning security initiatives with enterprise programs and business objectives to ensure information assets and technologies are adequately protected across the entire corporation. She works closely with the all the technology, product and security teams across the organization, including Comcast Cable, NBCUniversal, Comcast Spectacor, and Comcast Platform Services. Her focus is to develop and maintain the highest standards of Cyber Security, Network Infrastructure Security, Product Security, Data Security, Security Operations, Security Policy, and Enterprise Risk. Her team protects the interests of Comcast’s customers, employees, critical technology assets, company brands and other critical stakehold-
ers. Her scope of responsibility includes over 50 business lines within the Comcast Portfolio. Myrna is also the Executive Champion for the Hispanic Affinity Group at Comcast, “Unidos.”

Myrna joined Comcast in September of 2009 after earning more than 20 years of focused Information Technology, Security experience and accolades within a variety of industries, including: financial services, hospitality, Insurance/Risk Management and gaming/entertainment. In 2009 she joined Comcast as, SVP & CISO (Chief Infrastructure & Information Security Officer for Comcast Cable and held the posi-
tion until August 2015. In that role, she was responsible for Enterprise Information and Infrastructure Security strategy and operations for Comcast Cable as well as several other business assets within Comcast Corp.

Myrna holds a bachelor’s degree from Florida International University; a Master of Science degree in Industrial Psychology; and a Master of Business Admin-
istration degree from Nova Southeastern University. Myrna also holds a Master Certification in Project Management from George Washington University. She also is the recipient of the 2015 CSO Compass Award and was named Information Security Executive of the Year in 2013 by ISE. CNET also named her one of the top 20 Most Influential Technology Latinas in 2014. She was recognized by 50 Magazine as the Top 10 Power Players for Women in Security in 2015, and named to the Top 100 CISOs list by HotChips. Most recently she was named to Fortune Magazine’s List of 50 Most Pow-

ful Latinas and recognized by MultiChannel News as a 2017 Wonder Woman.

She is an Executive Management Committee Board Member (Vice President) of HITEC (Hispanic IT Execu-
tive Council), a Member of the Board of Directors for CMS Energy & Consumers Energy (NYSE:CMS) and a Member of the Board of Directors for Spirit Airlines (NASDAQ:SAVE). She serves on the Compensation Committee, Security, Safety and Operations Commit-
tee for Spirit Airlines. As well as the Audit Committee and Governance/Public Policy Committee for CMS.

**STEM AND THE FUTURE OF INFORMATION SECURITY**

We often talk about the importance of Science Techn-
ology, Engineering and Math (STEM) education in the future, referencing the projected growth in technical fields, and the importance of training the workforce for tomorrow. But in the world of information security, the future is now, and the importance of great STEM pro-
grams at every level of education is critical. ISACA, an independent association that works with information security professionals, estimated that the world will face a global shortage of 2 million cyber-
security professionals by 2019. The organization also noted that more than 53 percent of organizations today experience long delays in hiring qualified secu-

rity professionals to fill important roles.

At Comcast, we’ve been fortunate to attract and retain the world-class cybersecurity talent we need to keep pace with the ever-evolving threat landscape, but I worry every day about how the global workforce will keep pace with a field that will only continue to grow in size and importance. And from my discussions with other CISOs across the country and around the world, this is one of the top concerns in our industry.

As with so many things in the technology space, cre-
ating great cybersecurity talent starts with nurturing a love and fascination with STEM subjects from an early age, fostering that fascination through all levels of schooling, and ensuring that bright students in these subjects understand how they can apply their talents to a rewarding and fast-growing field.

This is what makes groups like STEMConnector so impor-
tant, and why I’m so honored to be recognized as one of the Corporate Women Leaders in STEM. What STEM-
Connector realizes, and what I try to impart to every-
one I work with, is that we all have a role to play in inspiring and encouraging tomorrow’s technology leaders.

That role can be as simple as having an encouraging conversation with a high-school student, or as involved as participating in an ongoing program like the FIRST Robotics Competition, which Comcast proudly sup-
ports. The only thing we can’t afford to do is nothing. I feel particularly fortunate to work for a company that shares my passion for STEM education, as well as my particular interest in making sure those opportunities are available to women and people of color.

Comcast demonstrates its commitment to STEM in a number of ways but two stand out to me as powerful ways to advance STEM education and foster the kind of education and mentorship that will create a new generation of inspirational technology leaders. I’ve already spoken about the FIRST Robotics Competi-
tion, but it bears repeating because the competition is such an amazing tool – not just for getting young peo-
ple engaged in STEM education – but also for encour-
aging the kind of hard work and creative problem solving that is so essential to success in the technology workforce. We sponsored 40 FIRST teams around the country in 2017, with dozens of Comcast employees serving as mentors.

Along the same lines, Comcast’s longtime commit-
tment to the Boys & Girls Clubs of America provides us with a great opportunity – working with a tremendous partner – to help support targeted STEM opportunities aimed at giving kids the tools they need to excel.

**WOMEN AND THE FUTURE OF CYBERSECURITY**

If we’re going to increase the number of talented security professionals, we won’t be able to do it with only a fraction of the population. The greatest oppor-
tunity for growth in the technological workforce lies in getting more women and people of color involved in STEM, from an early age, through every level of school-
ing and into the professional sphere.

Cybersecurity particularity is an area where women are already excelling and where the growth of strong female leaders in senior roles can serve to inspire more young women to take an interest and get involved. At Comcast, I’m proud to work with a number of powerful women in cybersecurity, including my colleague Nac-
pur Davis, who is CISO for Comcast Cable. Kyle Wade,

Vice President of Information Security Comcast Corporate, Cathy Rees, Vice President Information Security Comcast Cable and many other incredibly talented women.

I’m committed to doing my part to serve as a resource to other women and people of color to encourage them to get involved in STEM early and stay involved as they progress through life. We all take a piece of that responsibility, the future looks incredibly bright.
Laura Barrowman
Chief Technology Officer
Credit Suisse

Credit Suisse AG is one of the world’s leading financial services providers and is part of the Credit Suisse group of companies (referred to here as “Credit Suisse”). As an integrated bank, Credit Suisse offers clients its combined expertise in the areas of private banking, investment banking and asset management. Credit Suisse provides advisory services, comprehensive solutions and innovative products to companies, institutional clients and high-net-worth private clients globally as well as to retail clients in Switzerland. Credit Suisse is headquartered in Zurich and operates in over 50 countries worldwide. The group employs approximately 46,230 people. The registered shares (CSGN) of Credit Suisse’s parent company, Credit Suisse Group AG, are listed in Switzerland and in the form of American Depositary Shares (CS), in New York. Further information about Credit Suisse can be found at www.credit-suisse.com.

Laura Barrowman is the Group Chief Technology Officer (Globally), CISO, Head of UK IT (UK & Ireland) and the Senior Manager for UK Entities (CTO, Group CIO and CISO) at Credit Suisse, based in London. She has earned her spot as the top technology officer of an international financial firm. She champions and enables the advance-ment of fellow females through her leadership of women’s groups at Credit Suisse, such as the IT Women’s Council. The Council has recently aligned with STEMconnector to encourage the proliferation of STEM programming for young girls globally – and Laura is the “Executive Champion” for STEMconnector’s Million Women Mentors European expansion. She is unwavering in her mission to expand the pipeline of women in tech.

THE TECH GENDER GAP: HOW DO WE STEM THE TIDE?
There are numerous opportunities and challenges in closing gaps in science, technology, engineering and mathematics (STEM) education and careers. Leading work on these issues is STEMconnector, a consortium of more than 160 organizations, and Credit Suisse was recently honored to host a panel debate and reception in London for the group’s Global STEM Talent Summit.

It is exciting to be part of the STEM movement to positively impact change. For Credit Suisse, we believe increasing the diversity of our global workforce is an important commitment. It provides a better understanding of client expectations, cultural backgrounds and regional markets, as well as opening up a broader range of business opportunities. The research conducted by the Bank and others is clear: companies with a diverse workforce, including having women in senior management roles, perform better than those that do not.

The decision of our senior leadership to sponsor STEMconnector -- and its Million Women Mentors partner initiative -- is the realization of a dream for me. It’s a clear commitment to inspiring future female technologists and growing our pipeline – especially as the need for workers in the technology space will grow across all industries.

During my 23-year tenure at CS, I’ve always been keenly aware of the limited number of females working alongside me in technology roles in positions of leadership. And I’ve been passionately dedicated to increasing our numbers.

We’ve made steady progress against this target as a Bank by: building on initiatives to improve gender equality across the organization; increasing mentorship and sponsorship of women; and through a myriad of career advancement courses and offerings. We also launched the highly successful Real Returns program in 2014 that gives talented and experienced professionals who have taken an extended career break the opportunity to transition back into the workplace through a structured program. Our parental leave and flexible working programs also help us to retain female technologists.

But all of the research shows that to truly affect positive change, we must start much earlier. Girls need positive role models in their schools and in life so that they can see a path forward to fulfilling STEM careers.

I have always been fortunate to have powerful female role models around me during my life’s journey. Both personally and professionally, I have been surrounded by women who have inspired and encouraged me to reach beyond the limits that I have set for myself -- and I strive to achieve more.

As a mother to a teenage daughter with a fierce independent streak, I am proud that she is showing no signs of needing to march to someone else’s drumbeat. My hope is that she, and her friends, will go on to fulfill their potential in their chosen fields.

It’s through finding interesting work and having strong role models that females will be propelled to become future technologists, to reach my level and beyond.

I can’t lie and say that every day of my career has been an exciting one. But I have always had good advocates in the workplace that have inspired and encouraged my success. And while it’s surprising for most people to hear, my gender has not held me back nor propelled me forward. It was my work ethic and interest in my work that did.

Now and in the future, the number of STEM jobs in finance, and across all industries, will continue to grow and outpace the supply of trained workers to fill them. And this is especially true if the goal is to have better gender balance in the workplace. We know that it will take a whole ecosystem to resolve the shortfall – and Credit Suisse is committed to doing its part.
Jennifer Rumsey
Vice President and Chief Technical Officer
Cummins Inc.

Cummins Inc., a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service diesel and natural gas engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana, USA, Cummins currently employs approximately 55,400 people worldwide and serves customers in approximately 190 countries and territories through a network of approximately 600 company-owned and independent distributor locations and approximately 7,400 dealer locations. Cummins earned $1.39 billion on sales of $17.5 billion in 2016. Press releases can be found on the Web at www.cummins.com. Follow Cummins on Twitter at www.twitter.com/cummins and on YouTube at www.youtube.com/cumminsinc.

Growing up in Columbus, Indiana – home to Cummins Inc.’s headquarters – Jennifer Rumsey, VP and Chief Technical Officer, knew a number of Cummins engineers. She even interned at Cummins before her freshman year of college. “I decided I wanted to study engineering because it opened up career opportunities, and I would cultivate a broad base of knowledge,” Rumsey explained. “Through my experiences as an intern, I found a passion for research and development; complex systems and problem solving.”

Rumsey furthered these skills upon graduation from Purdue University in West Lafayette, Indiana. With her bachelor’s degree in mechanical engineering under her belt, she went to school for her master’s degree at Massachusetts Institute of Technology.

In the year 2000, after spending a couple of years doing fuel processing research and development for fuel cell start-up in Boston, Rumsey and her husband made a joint decision to move back to Indiana. Cummins attracted her because of the variety of opportunities within a single company. She also felt that the work she did at Cummins would make a difference to Cummins engineers, customers, their businesses, and the environment. “It was one of just two women who raised her hand when asked if they were interested in pursuing a STEM career.”

Today, after working in several of Cummins’ business segments in roles across the product lifecycle, Jennifer leads the global engineering organization comprised of more than 7,000 engineers globally and many other professional and support staff.

As a woman and an engineer, I acutely aware that fewer women pursue careers in STEM fields than men. I have witnessed it throughout my time in school and as a professional. In graduate school, there were times I was one of just a few women in my classes. I had a graduate-level controls class at MIT where I was one of two women in a class of 50 people. Even at my company, where diversity and inclusion are part of our core values and receive significant focus, it is not uncommon for me to be the only woman in the room at meetings and customer visits.

Women make up approximately 20 percent of engineers graduating in the United States and globally, the percentage is even smaller. Careers in STEM fields are often not even considered by younger female students.

Though I’ve long been passionate about this topic, it was when I was asked to speak to one of my daughter’s classes that this issue – the lack of girls pursuing STEM fields – really hit home for me. My daughter, in sixth grade at the time, was one of just two girls who raised her hand when asked who was considering a STEM career. Without awareness of the potential of these career paths and opportunities early, these numbers are unlikely to improve. As my daughters entered middle school and joined a robotics team, again I felt disappointed that the team was disproportionately boys.

Why do I feel so strongly that we need to help increase the number of girls and women who pursue STEM careers, especially engineering careers?

The world needs more engineers, and we need the best men and women to pursue these careers. Our world is facing some significant challenges – and in our industry, that means some of the biggest technical changes and challenges in our lifetimes. These changes have two primary drivers: an evolution of technologies and emerging technologies’ performance and cost improving, and a regulatory environment focused on reducing criteria pollutants, CO2, noise, water and other environmental impacts. This technology change represents a challenge for Cummins, our competitors, and our customers. It is also a huge opportunity. Cummins is positioning ourselves for future growth and harnessing current and future technologies to deliver a broad range of power solutions to our customers, and we need the brightest minds on our team. These challenges create opportunities for individuals pursuing STEM careers to have interesting and rewarding career opportunities where he or she can make a real impact.

Energy diversity is key to the future as the world population grows. There is not a one-size-fits-all, perfect fuel source. In fact, a single power solution is not viable – we need many solutions to power a sustainable world. As chief technical officer at Cummins, I believe there is a place for a wide-range of technologies from diesel, to natural gas, to electric and hybrid. Engineers are critical to the innovation and dependability of these systems.

Take for example, diesel. Technology advancements are having a positive impact on diesel engines and we will continue to innovate in this space, making our engines cleaner, more efficient and more reliable. In fact, we’ve reduced NOx and PM by more than 90 percent over the past 20 years to nearly zero. We expect diesel to remain a significant fuel in many of our markets for years to come.

We also are making innovations in our natural gas products and electrified power solutions. This is tremendously exciting work, and it is work that makes a difference.

I joined Cummins after two years at a startup where I was working long hours for something that could take years, maybe even decades, to actually be produced and impact society. Cummins attracted me because of the variety of opportunities all within a single company and because the core values of the company resonated with my own values. I knew the work I would do at Cummins – and as an engineer at a large, global company – would make a difference.

In Cummins history I am the company’s first female VP and Chief Technical Officer, an uncommon for me to be the only woman in the room at meetings and customer visits. In my company, where diversity and inclusion are part of our core values and receive significant focus, it is not uncommon for me to be the only woman in the room at meetings and customer visits.

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My passion for STEM work started in 2000, when Shell Oil company was getting ready to implement a new global Information & Technology infrastructure. I was working in Human Resources for the IT division. More than 10k computers were going to either be destroyed or recycled. I happen to be on the diversity council and worked with the division’s president, Gaurdie Barnett, he was a very progressive thinker. I asked the question why not recycle or donate the equipment. Both he and my immediate boss, Paul Reinhard, best mentor ever, said “go figure it out.” I did. We donated over 3k computers to the local school system that the Shell Oil Foundation had relationships with then before we knew it we were placing computers in Los Angeles, Chicago and Montana. Next thing I know the CEO for Shell (Steve Miller) at the time and Chairman of the Board (Mark Moody Stuart) want to role the program out internationally. So I moved to Corporate Affairs and worked with our foundation, community social responsibility, legal and chief information officers to make it happen. It was fun and exciting and the Shell Digital Divide Initiative (SDDI) was born. We received a number of accolades ranging from the Prince William Foundation to the United Nations. This piece of work launched me into a quest, much like Don Xijote, of a lifetime to close the digital gap.

For over 16 years now I have been involved with the development and implementation of STEM programs, I have seen some succeed and super exceed the expectation of leadership but have also seen some fail miserably. There are several factors that cause some programs to be more successful than others and my hope in this short essay is to outline the steps for success.

Factors that result in success include:

- Clearly define the parameters of success for your organization
- Make sure there is not just a champion but an executive sponsor who will see the initiative through
- Do not have a standalone approach make sure that you initiative is linked to other critical systems within the company, (i.e. if your plans are to grow female talent through diversity outreach with non-profits link those efforts to your Talent Management systems and Workforce planning strategies)
- Have a trackable and measurable process in place too often companies give money to programs or sign off on projects that look good on the surface but do not have long term or sustainable impact
- Make sure you have the right people on the team. If you are looking to impact talent growth than make sure someone from HR connected to workforce planning or Leadership Development are part of the team.
- Allocate a budget and resources commensurate to the impact you want to have.
- Don’t just give money to a program look at what in-kind resources or leadership skills you can bring to the table to negotiate a strong partnership.

Finally, as you launch your efforts, keep the end game/goal in mind.
Florence Hu-Aubigny is an R&D Senior Vice President at Dassault Systèmes, responsible for the 3DEXPERIENCE Platform. She joined the company in 1991, as a new graduate from SUPMECA, a French engineering school. She then went on to complete a Master’s Degree in Automated Production Management from Ecole Normale Supérieure Paris-Saclay, France. Throughout her career at Dassault Systèmes, she has inspired major technological innovations in the 3D field such as feature-based modeling, functional modeling & knowledge capture & reuse technologies.

In 2006, under her leadership, the introduction of the 3DSWYM brand with its 3D content website and applications portfolio is for Dassault Systèmes the first move to the internet, allowing the company to reach new types of users, beyond engineering communities.

In 2009, she is responsible for developing the Dassault Systèmes social innovation applications (3DSWYM, ENOVIA) to facilitate real-time collaboration between large projects’ stakeholders, whatever their disciplines, using a structured and unstructured approach. She becomes R&D Vice-President for ENOVIA and heads an international team of several hundred engineers, in France, in United States and in India.

Since 2011, her role is at the heart of Dassault Systèmes transformation and long-term strategy by defining and delivering the 3DEXPERIENCE Platform, a business experience platform available on the cloud and on premises, and whose purpose is to enable 3DS’ customers to create experiences for their ultimate customers or consumers.

In 2016, she received an honorific recognition from the French government as knight of the National Order of Merit for her proactive commitment to technological innovation and her part in promoting France’s industrial prowess worldwide, always with a great deal of humility.

Through her continuous commitment, leadership and creative way of thinking, she embodies the new Dassault Systèmes.

FROM DESIGN THINKING TO EXPERIENCE THINKING
People no longer just want 3D products. They expect unique, personalized experiences.

An experience is not an extension of the product. It is fundamentally a different way for brands to engage at the emotional level with their customers: “An experience is a memorable event that engages each and every person in an inherently personal way and thereby creates a memory” says B. Joseph Pine II, co-author of The Experience Economy.

Apple was a pioneer in 2011: Apple has impressively wowed and wowed its customers with an ecosystem that takes absolutely everything into account, from design-leading devices to personalized service and support delivered in the coffee-bar atmosphere of its Apple Stores. The result is an experience so seamless and palatable that consumers are willing to pay substantial premiums just to own Apple’s products and subscribe to its services.

Welcome to the Age of Experience, where products go beyond their physical characteristics while integrating experiences to create a true relationship, a bond of loyalty between the customer and the brand. A successful experience is built over time as a brand’s promise and emotions are constantly reinforced through each step of the customer journey from initial product and brand awareness, to the buying experience, the product usage experience & the ownership experience.

In this context, design has moved from designing a product to designing experience.

Design thinking is being replaced by Experience thinking.

The Experience thinking is a holistic approach to cover the entire experience-creation process, all along the customer journey and relies on design, science & social collaboration.

DESIGN
The challenge of designers is not only to imagine the products but also to bring to life unique, compelling, meaningful and sustainable experiences in each step of the customer journey.

The adoption of new paradigms is required to invent & deliver disruptive emotional experiences.

- The new paradigm can be new technologies. Designers have to define how to engage and establish the connection with the customers thanks to a memorable environment.
- The democratization of virtual reality with 3D as universal media offers the opportunity to extend the real world with experiences in the virtual world, for example for service, support, marketing & sales experience with the immersive virtual reality showrooms or 3D products configurators.

- If also can be new business models. Connected products offer the opportunity to propose and provide services to the customers in their daily life. Once again, the experience of the service has to be emotional and deal with real critical customers’ challenges & expectations: for example health services, predictive car maintenance... all of them leading to the potential introduction of additional business models.

SCIENCE
First, designers have to define not only the shape, the style of the product but also the necessary behaviors to deliver the expected experiences. Designers use theoretical, mathematical & physical models, to give life to shape in the virtual world and mimic the real world.

They design, simulate & validate virtual products, buildings, systems, to match user expectations in the real world, including emotional ones.

In addition to that, models in virtual world have to be continuously improved, learning from the real world, leveraging data patrimony & big data technologies: data related to the usage of experiences by the customers are systematically captured providing designers with real time insights, predictive, prescriptive, cognitive analytics and facilitating decision making with experimental and validations.

SOCIAL COLLABORATION
Design in the Age of Experience is intensively co-creative and participative. Designers have to collaborate with a wide range of diverse communities, inside the company, manufacturing, marketing, sales and outside the company involving universities, innovation labs, new generation of partners. The challenge is to build an agile and qualified eco-system of service providers leveraging multi-disciplinary worldwide marketplaces.

As an example, in the manufacturing world, mass customization & complex design lead industry to leverage 3DPrinting Marketplace, as an innovative solution for prototypes & small series cost effective production.

In the new experience thinking paradigm, customers are moving from traditional value chain to a value network that directly connects engineering, production, distribution, marketing, customer service, etc., a value network where not only engineering disciplines, but the entire extended enterprise contributes to creating value for topline results.

Experience thinking definitely requires a new generation of business platform to connect the dots, people to people, people to data & data to data and compass the entire world, virtual & real.

Such platform relies on cloud, mobile, social & big data technologies in order to break down traditional organizational data silos and brings people, ideas & knowledge together to foster experience-centered innovation.

The 3DEXPERIENCE Platform delivered by Dassault Systèmes is a business experience platform to enable our customers to create delightful and memorable EXPERIENCES for their ultimate customers or consumers.
Karen Mazer  
Principal  
Deloitte Consulting LLP

Deloitte provides audit & assurance, consulting, financial advisory, risk advisory, tax and related services to public and private clients spanning multiple industries. Deloitte serves four out of five Fortune Global 500® companies through a globally connected network of member firms in more than 150 countries and territories. Deloitte’s professionals make an impact that matters, please connect with us on Facebook, LinkedIn, or Twitter.

Karen Mazer is a principal in Deloitte Consulting, and the co-founder and leader of Deloitte’s U.S. CIO Program, responsible for working with Deloitte’s most significant clients to support their CIO’s leadership and leverage Deloitte’s Technology Services for maximum impact. Karen is also the Operate leader for the U.S. Consulting practice, driving our strategy around Managed Services to provide end-to-end solutions across the Advise, Implement, and Operate spectrum for our client’s business issues.

Throughout her career, Karen has specialized in serving Consumer and Industrial Products clients, with a focus on CIO Advisory Services, and large scale transformation efforts, enabled by technology. She has held a number of management roles and served on Deloitte’s U.S. and Canadian board of directors. Her roles have included managing principal of the U.S. Industry program, U.S. Oracle service line leader, managing director of the Philadelphia area consulting practice, central Atlantic regional manufacturing lead, the central Atlantic regional Women’s initiative/diversity champion, and global service line leader for the Enterprise Applications practice (SAP, Oracle, PeopleSoft, and Booz), where she had global responsibility for the development, deployment and support of our methods and tools. She has also served on the U.S. executive committee and the U.S. operating group.

Karen joined Deloitte in 1989 in the Boston office, after graduating with her Master of Science in management from the MIT Sloan School. She has her Bachelor of Science in economics from the Wharton School at the University of Pennsylvania, where she majored in decision sciences and organizational behavior. Prior to Deloitte, she worked as a for a global technology consulting firm, implementing large-scale custom systems.

I took my first computer programming class in 1979. My teacher noticed that programming came easily to me, and suggested that “the computer field would be a great career opportunity, especially for a woman.” I quickly dismissed his advice in favor of a psychology major. As luck would have it, during my freshman year, I stumbled into an incredible course in Decision Sciences. I was immediately captivated by the notion of understanding the bias in human cognitive processes and using technology to improve decision making. I changed majors yet felt reluctant to embrace a career in STEM.

Why was I so hesitant? I had limited exposure to what a technology career could be and viewed it as a solitary and lonely life, where the nerdy kids sat at a desk and wrote code, and watched Science Fiction in their spare time. I didn’t know anyone in the field, let alone women. The technical classes at school were filled with, and largely taught by, men. Yet I was also practical, and there were great jobs available to people with my skills.

When I began my career, I was truly fortunate that I was surrounded by several bright, inspiring women, who nudged me to continue to invest in my technical skills. And while I listened to their advice, I couldn’t see it as a long-term destination. In my early days at Deloitte, I hid my technical background. I wanted to solve “business” problems, and I didn’t fully appreciate the true value of my skills. The structured logic that I needed for programming was relevant for all sorts of problem solving. Understanding both business and technology allowed me to have conversations with all of my clients, often serving as the translator. Knowing how to run big, messy transformation programs gave me insight into how to drive change in an organization.

I am not sure exactly when the breakthrough happened. It may have been when I was asked to lead the Technology work for a client’s major transformation initiative in 2000, or perhaps, when I took on the leadership role for our Oracle Services practice a few years later. Either way, I now proudly and officially consider myself a technologist. And while that may have been 20 years in the making, it took only a few minutes more before I became a sponsor and champion of women in technology.

Today, technology IS business, and the tech kids are the cool kids. They are out in front, innovating beyond one’s wildest dreams, driving change once thought impossible, solving the world’s hardest problems. Yet in a world where 57% of the workforce is female, only 25% have chosen a career in tech. Is it possible that the same thing that held me back is still true today? And what can I personally do about it?

During my time with the firm, I have had the privilege of playing numerous leadership roles. I currently lead our National Industry Program to name a few. I have served on our U.S. Executive Committee, and the U.S. and Canadian board of directors. All of these incredible opportunities give me a platform not only to drive big impact with our clients and in our firm, but also to champion women in technology, and allow me to give back and nurture the generations behind me.

Deloitte has 20,000 people in our U.S. technology practice, with over 30% being women. I am proud to be a role model for these women, and to lean in on all that we do to attract and retain the best. Whether that means personally mentoring women at all levels, to leading women-focused recruiting efforts for more senior technologists, to actively participating in our Women in Tech events, to ‘meet ups’ at Deloitte University, to speaking on campus to women who might be interested in a career with Deloitte, I will always push our firm to do more, be a strong voice and advocate for our people, and never let external statistics and difficult odds be an excuse for us.

In my role as Deloitte’s CIO Program leader, we have several forums where we convene CIOs and technology leaders. In our very first CIO leadership academy, we were approached by the female participants who noticed that 30% of the group was female, an unusual circumstance for them. They asked if we could set up some time for them to network. We immediately accommodated, and since then, we embed a female networking element to all of our forums. I’m thrilled that we can offer something really special and enriching to these incredible, accomplished women - the beginning of new peer networks, friendships, and support systems that extend well beyond the moment. My 40th high school reunion is only 3 years away, and I often think of that teacher who gave me the best career advice I tried hard not to follow. Through amazing organizations like STEMCconnector, and Girls Who Code, with great partnerships from firms like Deloitte, I hope that more women will continue to enter this incredible profession, and be at the forefront of solving the hardest, most interesting problems in the world with their technical skills. And I hope that I helped in some small way.
Joanne Zimolzak
Partner
Dentons

Driven to provide clients a competitive edge, and connected to the communities where its clients want to do business, Dentons knows that understanding local cultures is crucial to successfully completing a deal, resolving a dispute or solving a business challenge.

Now the world’s largest law firm, Dentons’ global team builds agile, tailored solutions to meet the local, national and global needs of private and public clients of any size in more than 146 locations serving 60+ countries. Clients benefit from access to top legal talent with experience in 24 sectors and 40 practices.

Joanne Zimolzak’s diverse practice focuses primarily on complex business litigation. Her experience also extends to assisting companies with regulatory compliance, internal investigations, and fraud reporting.

Joanne has had extensive experience handling a wide range of complex civil litigation matters before state and federal courts throughout the country, both at the trial and appellate levels. The representation of multinational insurance carriers is a particular focus of Joanne’s business litigation practice. Her experience includes representing insurance companies in all types of coverage disputes, with emphasis on matters involving bad faith allegations and significant potential exposures. Joanne also routinely provides counseling to insurers concerning coverage and risk management issues and other aspects of their business, including emerging liability risks, new product development, and regulatory compliance. She has authored numerous articles and publications and is a frequent speaker at seminars on insurance-related topics.

Joanne also has extensive experience assisting government contractors with obtaining and/or successfully preventing the release of sensitive business information under federal and state Freedom of Information Act provisions. She also has particular experience in procurement fraud matters and in conducting related internal investigations. Since the passage of the Patient Protection and Affordable Care Act (ACA), Joanne has worked to assist health care industry clients in developing proactive compliance strategies, avoiding violations of federal and state laws and regulations, and defending their interests in audits and investigations.

In addition to her role as practitioner, Joanne serves as the managing partner for Dentons’ Washington, DC office. In this position, she manages the operations of the office and spearheads plans for the office’s strategic growth.

MENTORING AND SPONSORSHIPS

Over the course of Joanne’s career she has mentored numerous lawyers and students. More recent examples include her mentorship of two diverse associates in her office.

The first is a diverse litigation associate whom she actively played a role in recruiting to Dentons. When he arrived, he asked for Joanne to serve as his mentor, and she gladly accepted. During a discussion about his yearly evaluation, she noticed that it was light on partner connections. To improve that for the following year, she worked with him on a plan that outlined steps he could take to raise his profile inside and outside the Firm. She also advised him on opportunities for advancement and on how to be strategic when volunteering himself for those opportunities. She has also helped that associate make connections with other Dentons partners by introducing them at conferences and events. Part of his plan included being recognized by a publication; she supported him with a nomination that resulted in him being named to a “40 Under 40” list in his area of law. As a result of Joanne’s mentorship, that associate is in a much better position this year because of the experiences he has had over the past 12 months.

Joanne also has mentored another diverse female associate who joined Dentons a little over a year ago, as a result of a team moving with a partner who was also joining. Recognizing this, Joanne reached out to that associate and extended invitations to events that would help integrate her into the Washington, DC office. Joanne later learned that the transition had been difficult on the associate, and Joanne’s efforts were instrumental in keeping this associate at the Firm.

These two examples are good testaments to how much Joanne cares about the associates in her office and goes out of her way to make sure they all feel welcome and included.

Joanne also continues to mentor younger lawyers who have chosen to leave Dentons to pursue other paths. Last year a former associate, who is now a deputy general counsel at a large trade association, recognized Joanne during an interview as a person who had helped her develop the confidence and skills she needed to move into a new role. Even though the associate left Dentons, Joanne continued to mentor her through career choices, and made connections that led to her securing new roles.

Joanne also serves as a mentor outside Dentons. For the past 15 years, she has partnered with Georgetown Law to mentor students through the school’s Women of Color collective program. She has mentored 15 students by providing feedback on resumes and cover letters, setting up mock interviews and providing career planning and advice. She has stayed in touch with and continued to mentor many of those students. Joanne has also served as a mentor with the Women’s Bar Association of DC.

Joanne desires to be a “mentor for life” and has done so with many of the individuals who have worked with her. Colleagues frequently note one of Joanne’s most admirable traits: She is an incredible advocate for the younger lawyers in the office. She cares deeply about everybody in the office and wants to see them succeed—regardless of their title or position. Her actions create an environment where people feel welcome and safe coming to her for advice.
Camisie McAdams
Director, STEM Curriculum
Discovery Education

Discovery Education is the global leader in standards-based digital content for K-12, transforming teaching and learning with award-winning digital textbooks, multimedia content, professional development, and the largest professional learning community of its kind. Serving 4.5 million educators and over 50 million students, Discovery Education’s services are in half of U.S. classrooms, 50 percent of all primary schools in the UK, and more than 50 countries. Discovery Education partners with districts, states, and like-minded organizations to capture the imaginations of students, empower educators, and transform classrooms with customized, high-quality digital content on any device. A winner of the Presidential Award for Excellence in Math and Science Education and the Paperless Classroom Award from Gartner, Discovery Education is powered by Discovery Communications. Explore the future of education at DiscoveryEducation.com.

Camisie McAdams is the Director of STEM Curriculum at Discovery Education. With an education career spanning public education, policy, not-for-profit, and for-profit organizations, Camisie McAdams has developed deep, cross-sector expertise in engaging today’s learners in STEM to help solve tomorrow’s greatest challenges. In her current role, Camisie is leading the design and development of a first-of-its-kind K-8 STEM digital curriculum based on the UN Sustainable Development Goals and Global Grand Challenges of Engineering, Discovery Education STEM Connect.

Prior to her tenure at Discovery Education, Camisie was a Partner of Academic Strategy at TNTP (The New Teacher Project), where she oversaw a million-dollar project on school turnaround that resulted in 60% of the schools exiting priority status in just 18 months. At TNTP, Camisie also helped lead the design, launch and implementation of a new diagnostic tool focused on math instructional practices.

Camisie served in the Obama Administration from 2012-2015 as the Deputy Director for STEM at the US Department of Education, where she led both Department-wide and inter-agency efforts to align and coordinate to increase opportunities for STEM education. She was one of the primary contributors to the Committee on STEM Education’s (run via the White House Office of Science and Technology Policy) 5-year strategic plan for STEM education.

From 2011-2012, Camisie was the Director of STEM for DC Public Schools, creating a vision for STEM education for the district, and leading the launch and implementation of the Common Core state standards for mathematics from K-12, serving over 100 schools and over 45,000 students. Prior to her leadership with DC Public Schools, Camisie served as an Albert Einstein Distinguished Educator Fellow at the National Science Foundation, where she worked in the Directorate for Computer and Information Science and Engineering seeking out opportunities to broaden participation in computer science education from elementary through graduate school.

Camisie has over a decade of experience teaching math, science, and literacy in New York City Public Schools and in the Oakland Unified School District (CA), including serving as a founding team member and instructional leader in a small public school in the South Bronx. Prior to leaving the classroom in 2009, Camisie won several teaching awards, including the Presidential Award for Excellence in Mathematics Teaching for the state of New York in 2009 and the Fund for Teachers Research Award in 2008.

BRINGING THE EXPERIENTIAL LEARNING EXPERIENCES TO ALL

Growing up as the daughter of two scientists, experiential learning was in my blood. My dad, a hydrologist/geologist, would encourage the family to “go out and grab that rock!” while my mom, a scientist and teacher with a background in biology and botany, encouraged us not to worry about getting messy as we explored the backyard, the garden, or even the streets in our neighborhood. In my home, the world around us was to be explored, not merely observed.

I am eternally grateful to my parents for their efforts to instill within me a love of experiential learning. Throughout my life, my desire to seek out and connect with the world around me has been a driving force. In my current role as Director of STEM Curriculum at Discovery Education, it is my goal to create engaging high-quality STEM resources that empower educators to build exciting digital learning environments that bring immersive, experiential learning opportunities to students worldwide.

Inspiring this effort is a wonderful little girl named Sasha. I met while tutoring in West Oakland. Sasha told me during our first meeting that she hated math and science. This blew my mind – at that age I was cooking up experiments in my basement and tracking constellations every night to set out to change her mind. We went to the Exploratorium, the Berkeley marina, did water testing, played math games. I wanted her to experience science and math the ways I did while growing up - in context, with meaning, as a way to solve problems. While Sasha eventually came around to appreciate math and science, she inspired me to teach with a passion that others might also embrace.

Early in my teaching career in Oakland I found that project based learning is one of the best ways to engage students in STEM. Through grants, my students were soon visiting the wilds of Northern California and experiencing the curriculum standards in action. Data informed my classroom instruction, but the numbers and data can’t tell the whole story. I learned that developing relationships with my students helped me better understand their needs and create new strategies to inspire them.

A key to building relationships with students who have a different background than your own is to deeply understand and appreciate their identity. I went back to experiencing the curriculum for ways to engage students through the lens of identity as I grappled with inequity in the systems of public education. To push for more holistic and authentic forms of teaching, learning and instruction, I took up increasingly challenging leadership roles. As a school leader, I encouraged colleagues to use data to shape our strategy so our most struggling students had extra support, but ensured that constant learning curve of the classroom, so I turned to teaching high school in New York City. While also working with a coalition to create performance based assessments, I listened as STEM became a buzz word and began to think about ways policy impacts the day-to-day life of teachers and students. I wanted to help shape policy and move STEM and experiential learning beyond the buzzwords.

I accepted a fellowship at the National Science Foundation where I gained my first exposure to policy and then was able to apply it immediately as the Director of STEM for DC Public Schools (DCPSS) the following year. Ultimately my greatest policy learning came with appointment as the Deputy Director of STEM at the US Department of Education, serving with former Secretary Arne Duncan. My role allowed me to provide guidance across the federal government, and helped move forward policies that deepened STEM and experiential education experiences in thousands of communities.

Twenty years after meeting Sasha in Oakland, I am now developing dynamic digital STEM content for Discovery Education. As I go about my work, I hold the interactions I’ve had with all my students close to my heart. I want kids to experience, and reflect upon, the world around them, and I want all students to grow to love math, science, and STEM.

I strongly believe the key to nurturing a lifelong love of these subjects lies in engaging students. For Sasha, getting out of the classroom was key to her growth and development. But today’s students aren’t the only ones who benefit from engaging learning environments that mirror their lives outside the classroom. To grow students’ love of STEM and scale experiential learning opportunities, educators can integrate high-quality digital STEM content, like the kind I am proud to help create at Discovery Education, into classroom instruction. Feeding content and activities into Discovery Education’s STEM curriculum and experiential learning beyond the buzzwords.

The lesson my parents taught me as a child, that the world is to be explored and not observed, is more true now than ever. I am proud to be a part of the wonderful team at Discovery Education dedicated to bringing immersive digital experiences into STEM classrooms around the globe. There are a lot of Sashas out there, and I look forward to bringing experiential learning opportunities to them all.
One of the greatest opportunities we have in technology is to create a future that makes work and life better for everyone. As technology becomes even more ingrained in our day-to-day lives, advances in artificial intelligence (AI) and machine learning are critical parts of our future infrastructure.

Ensuring that the research and development of those systems does not replicate unconscious biases is one of the most important tasks ahead of us. Today, AI systems are already having a significant impact on many people’s lives, in the form of automated vehicle systems, personalized online experiences, and even decisions-support systems recommending who gets a loan or a job, or who gets paired. Eventually AI and machine learning will be even more a part of how we get things done at home and at work.

It is imperative that we prevent unconscious biases from being built into systems that will help us operate our world. At The Walt Disney Company, we anticipate AI and machine learning playing a major role in helping us delight and connect with our guests. For example, our cast members focus on creating magical experiences for every guest. We want all of the systems that help us tell stories to reflect our company’s values and be inclusive of our global audience.

Because AI systems are built on data and execute based on the predominant, available data, we should be very intentional in how we approach data. Are we using research that is inclusive in methods, audience and setting? And are we thinking about all the possible interpretations and implications of the data? Is the data we’re using, whether it is scientific or market research, based on a diverse audience and applicable to our global audience?

Being intentional with our innovation often requires a perspective informed by a multidisciplinary approach as well as having diverse team members who are focused on inclusion as one of the questions they need to consider for each project.

Inclusion for our future includes many different questions about race, ethnicity and nationality as well as socioeconomic measures, language and gender. If the data we use doesn’t address our varied backgrounds, then the systems may not execute in a way that is inclusive.

One example is the connection systems can make between information from the user and categories. With voice recognition, does the system assume gender or age? If so, how can we account for the complete range of vocal tones that may not correlate to gender? Including a process for gathering more information or removing gender assumptions altogether could resolve the question. We need to ensure that personalized content and product offerings are inclusive and help deliver memorable moments for everyone.

I’m inspired by the work that my colleagues as well as schools, organizations and companies are doing to make inclusion a part of our educational and development processes.

There are several things that I believe will help us move forward and build teams that will develop inclusive systems.

Inclusive systems will be built by inclusive teams. Encouraging more students from varied backgrounds to pursue technology careers is key. For example, Disney recently piloted a program to help motivated, women in non-technical roles make the move to technology-based careers.

In addition, we can broaden our definitions of which technology students and professionals are a good fit for our teams and programs. Through the process of creating a workplace that embraces different ways of thinking and relating, we challenge unconscious biases that limit our creativity. We also retain the next generation of technical leaders, who can in turn attract diverse talent, in a virtuous cycle.

Once they are working on the next generation of innovation, our teams’ knowledge and perspectives can be brought to bear to make each leap forward in a way that represents all of us. On our teams, we must continue to make inclusion a priority as they develop new technologies and products. By asking the questions to test whether innovative solutions work with multiple audiences and in diverse settings, today’s technology teams can eliminate issues for years to come.

The good news is that there are many examples of how being inclusive in design and innovation has been the right thing to do and contributed to business success. Using such examples as teaching and development opportunities will help professionals in technology fields embrace the many benefits of inclusive thinking and diverse teams.

I’m proud to work with colleagues who value the importance of diversity and inclusion for our work. We are excited to contribute to innovations that will delight people around the world and can be a part of making the future brighter for everyone.
Amy Brandt
President and Chief Operating Officer
Docutech

Docutech offers a wide range of document technology solutions for mortgage, home equity, and consumer lending from document generation to eDelivery, eSign, eClose, and print fulfillment. The company sets the standard in providing market-proven technology and unrivaled customer service to the financial industry.

ConformX™, Docutech’s flagship product, is a web-based dynamic document generation engine. Instead of a static library of forms, ConformX™ utilizes a global library of data-driven documents that are generated based upon loan level criteria seamlessly integrated with the lender’s loan origination system.

In 2017, Docutech introduced SoLar™, a mobile-capable eSignature solution. The platform enables borrowers to sign loan documents from their smartphones, tablets, and computers using a friendly and intuitive interface, while also giving lenders an auditable platform with the industry’s most trusted eVault. Most recently, the company also introduced its SoleXM® eSigning solution, integrating with SimpliSign to provide a seamless eSigning solution for agents, lenders and borrowers and helping to progress the industry closer to a truly Digital Mortgage age.

LEVERAGING STEM TO TRANSFORM A PAPER-BASED INDUSTRY INTO DIGITAL

Every corner of the financial industry is embracing the transformation to digital, and loan origination and servicing is no different. As a result, today’s complex consumer base not only expects, but demands to be able to conduct their financial business at any time of the day on their phone, tablet, or computer. By playing into consumers’ comfort zone and providing a more digitally focused approach to mortgage, lenders can not only simplify the historically tedious process for borrowers but also provide them with a greater sense of knowledge and empowerment as their loan progresses. However, on top of actively working to address these evolving consumer needs, banks and lenders across the country are also trying to optimize their own processes and reduce costs, while at the same time juggling a vast array of regulatory guidelines and laws.

For the lending industry, whether it is a mortgage, home equity line of credit, or auto or student loan, this is pushing organizations to transform a workflow that has traditionally required reams of paper into one that can operate natively in a digital framework by facilitating loan documents in a real-time, streamlined, and paperless environment.

This means every financial services organization, and the vendors that support them, now requires STEM-oriented roles as the very foundation of the business. These banks, credit unions, and lenders are not only buying products, but managing systems that solve for improving the borrower experience as well as optimizing operational efficiency, compliance, implementation, and integration into other core technologies.

This demand for STEM-focused roles in the financial services industry will only grow. As an example, in response to the need for more mobile-based options in the mortgage lending business, our company has developed a mobile-capable eSignature and eClosing solution.

Building these types of innovations requires a blend of software, hardware, engineering and creative skills. And the demand is equally high for the tech firms developing the tools and the financial institutions themselves. More and more, banks, credit unions and lenders need bright, insightful, problem-solving staff that not only understand banking, but also have the skills and ingenuity to build, use and configure digital banking tools.

So where will this talent come from? Most of today’s bankers and lenders do not come from a tech background. In fact, a recent National Clearing Corporation (DTCC), “today, two-thirds of jobs in banking and finance require substantial math and technology skills, and over the next 10 years those types of positions will generate more than three-quarters of the projected job growth.”

What’s more is that both STEM fields and financial services have traditionally struggled with including women and minorities. Research from the National Science Foundation states that women comprise only about one third of STEM college graduates, and Black and Hispanic students combined account for less than 10 percent.

The solution can only come through multi-pronged approaches – concerted efforts in college and training programs, additional support for STEM-oriented training on the job and embracing innovative R&D and incorporating APIs.

Financial institutions need digital tools that work across multiple platforms—web and mobile. It is our responsibility to train the leaders who will continue to develop the tools that help lenders meet their customers where they are while quickly and efficiently delivering loan origination and servicing documents in a digital environment.

Amy Brandt is the president and chief operating officer of Docutech, the leading provider of compliance and documentation technology for the mortgage, home equity and consumer lending industry. Founded in 1991 and headquartered in Idaho Falls, Idaho and Scottsdale, Ariz., Docutech offers a wide range of document technology solutions from document generation to eDelivery, eSign, eClose, and print fulfillment and sets the standard in providing market-proven technology and unrivaled customer service to the financial industry.

A highly accomplished entrepreneur and senior executive, Brandt brings over 20 years of success within the mortgage, software, tech, aerospace and financial services industries to her role at Docutech. As president and COO, Brandt leads all aspects of daily operations, including sales, customer support and product development out of the company’s Scottsdale, Arizona office.

Before Joining Docutech, Brandt was the president of eDeliveries and corporate technology at New Penn Financial, where she oversaw all origination channels, including direct to consumer products, third party originations, retail and joint venture. Prior to that, Amy served as chief operations officer of Prospect Mortgage, where she enhanced day-to-day operations, resulting in a 45% reduction in operational costs. Before her time at Prospect, Amy was tenured as president and CEO at Vantiunm, where she was able to grow assets under management from $500 million to more than $4 billion while overseeing the acquisition of two companies.

In addition to her executive career, Brandt currently serves as a board member of Sun to Water Technologies and a Scholar Rescue Fund board member with the Institute of International Education. She earned a JD from Arizona State University College of Law and a BA in political science from the University of Southern California.
Alexa A. Dembek  
Chief Technology and Sustainability Officer, Specialty Products Division  
DowDuPont

DowDuPont Specialty Products, a division of DowDuPont (NYSE: DOW), is a global innovation leader with technology-based materials, ingredients and solutions that help transform industries and everyday life. Our employees apply diverse science and expertise to help customers advance their best ideas and deliver essential innovations in key markets including electronics, transportation, building and construction, health and wellness, food and worker safety. DowDuPont intends to separate the Specialty Products division into an independent, publicly traded company. More information can be found www.dow-dupont.com.

Alexa A. Dembek is Chief Technology and Sustainability Officer for the Specialty Products Division of DowDuPont. Alexa leads alignment of business strategy, innovation strategy and portfolio choices to increase the speed and scale of impact from science-based innovation investment across our company.

As the Chief Technology and Sustainability Officer for the Specialty Products Division of DowDuPont, I lead alignment of business strategy, innovation strategy and portfolio choices to increase the speed and scale of impact from science-based innovation investment across our company.

Science and technology are critical enablers for growth across all DuPont business segments. They draw on our rich mix of deep scientific and engineering disciplines, expert value chain knowledge and leadership, and extensive partnerships and collaboration to address significant market opportunities, to advance new technologies, and to create valuable new outcomes for our customers. Our overarching mission is to apply leading-edge science to transform ideas into innovations that protect, preserve and enrich our world.

At DuPont, we focus on three key STEM areas to drive our mission of innovation-driven growth: collaboration, leadership development and community outreach.

Industries and markets are evolving and the way we communicate with each other is moving at a dramatically increasing pace. The need for collaboration and for our capabilities to change and adapt has never been more important. To that end, we actively collaborate with our STEM partners across the world, which include universities, customers, value chain partners and key industry stakeholders. An example of such collaboration is the DuPont Young Professor program, which is designed to build a foundation for research partnerships between DuPont and emerging university leaders that are pursuing promising research programs in key fields of interest to our businesses. This program helps promising young and untethered research faculty bridge the academic-industry gap. Since 1991, we have provided over $50 million in grants to more than 700 young professors around the world. In addition, the program supports DuPont’s strategic goal of broadening and extending its STEM talent internally through the advancement of emerging science that originates from inside the company as well as partnering with world class external capabilities.

Building and nurturing a pipeline of STEM talent is one of the current focus areas for DuPont. One of our core relationships with universities helps us hire new STEM talent, and we strive to create, promote and support a diverse and inclusive culture to help our talent thrive. We develop our STEM talent internally with various formal and informal programs, including mentoring, on-the-job training, conferences, and technical leadership development workshops. I am personally committed to developing our STEM talent, and I mentor a diverse workforce, including under-represented and emerging minorities. I strongly encourage scientists and engineers to collaborate and learn from business counterparts at every stage of the innovation process to ensure that research is being translated into innovations that deliver value for our customers.

Finally, DuPont is committed to inspiring the next generation of STEM talent through community outreach. We do this by emphasizing STEM education programs and science literacy, supporting the teaching profession at all levels and promoting hands-on, inquiry-based learning from elementary to post-doctoral education. Our employees are active in volunteerism through a range of partner programs including FIRST Robotics, Odyssey of the Mind, the Junior FIRST Lego League and the National Science Olympiad. As an example, our FIRST Robotics team, Miracle Workerz, was honored to receive the Chairman’s Award, reflecting their commitment to spread science and technology and serve as a role model to others. Additionally, DuPont participates in state and local organizations that support STEM education, including the Delaware Business STEM Council, State Governors Councils on STEM, Achieve, STEMConnector® and the U.S. Conference of Mayors.

We need children of every age to see the role they have in solving the challenges of today and tomorrow and how important a strong STEM education is for our world.

My passion for science-based innovation that contributes to business growth is a consistent theme throughout my career, whether protecting lives with Kevlar® or making automobiles more fuel efficient through lightweighting. I’m excited to know that our collaborative work creates sustainable, innovative, market-driven solutions to solve some of the world’s biggest challenges. Our business strategies inform our innovation platforms and pipeline choices, helping to define where we play, how we compete and the capabilities and management systems we need to win. These skills are all rooted in STEM, not just for us, but for society, where our solutions are applied in real world applications.

The importance of innovation to tackle challenges like protection and sustainable development, improved nutrition and health, connectivity and functionality are just a few of the key areas we are focused on. STEM capabilities build the foundation for our future, make a difference in talent and help us identify what needs to happen to be successful—it prepares us to make choices, to deliver, and to define our culture. We can only succeed with the talent that brings it to life. I value learning behaviors, especially demonstrating curiosity. Learning will continue to be a key competitive advantage in the future and STEM is at its core.

Working side-by-side with our customers and our employees, I’ve seen the life-affirming difference that innovation can make in people’s lives. Moving forward, our responsibility here is to prepare the most pressing challenges for the benefit of all stakeholders. The future belongs to those who can fluently and passionately speak the language of STEM.
Astrid Mozes
Vice President, Power and Motion Controls
Eaton

Since joining Eaton in 1990, Mozes has held a number of positions where she has made remarkable contributions to the company’s growth and success.

She became president – Hydraulics Business EMEA in Dec 2010. Prior to the current role, she moved to the CTO function for hydraulics in October, 2014.

Mozes was educated in Sweden and speaks six languages. She holds a bachelor’s and master’s degree in mechanical engineering from The Royal Institute of Technology in Stockholm, Sweden.

Eaton is a power management company with 2016 sales of $19.7 billion. Eaton provides energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably.

Eaton is dedicated to improving the quality of life and the environment through the use of power management technologies and services. Eaton has approximately 95,000 employees and sells products to customers in more than 175 countries. For more information, visit Eaton.com.

Women are 50 percent of the labor force but only 20 to 25 percent of young women are interested in STEM careers. Between now and 2025 we are facing a gap of two million STEM candidates to fill the STEM jobs that will be available. Women have tremendous opportunity to fill that gap. This is an area I am passionate about – motivating girls and young women early to consider careers in STEM fields, particularly engineering.

We have to encourage girls and young women toward STEM careers much earlier than we typically have done. Companies like mine have a lot of visibility in colleges with students who have already started on the STEM path. But not enough companies engage with students in grades K through 12. It is around grades five, six and seven that girls and boys are starting to think about their careers. And at those ages girls are more open to thinking broadly about what they can do.

Several years ago I volunteered at the high school level as part of a program to talk with young women about careers in my industry. I thought very hard about how I could capture their attention by talking about some of the “cool” things we do in hydraulics and the world’s problems we are trying to solve. It worked – I had everyone’s attention in three out of the four group settings that were structured. However, the fourth, unstructured, group allowed students to ask open-ended questions.

That group was an eye-opener for me. Those students came in prepared to not participate at all. So we started engaging with them individually to get them to open up about their interests. I remember one girl who was particularly determined not to speak up. Two years later I ran into her at a coffee shop and she asked if I remembered her – I did. She went on to tell me that she attended St. Thomas University and was in a medical-technical field of study. That day she had to courage to speak up about her passion in a way she was unable to do while in high school.

That experience made me think. If we talk to girls well before high school, they will be much more open to careers they have never been exposed to before. Reaching both parents and students at younger ages to get them interested is one key to getting more women into STEM careers. In my business, we have an open house for families and children to show them what Eaton engineers do in the field of Hydraulics. We also sponsor robotics clubs in middle school and high school to give kids hands-on experiences. These activities take time and effort, but we see results.

Once young women decide on STEM fields, new issues can arise around encouraging them to stay. I see some young women who don’t have enough confidence in their own abilities, sometimes afraid to take a risk on trying something new. The result is their opportunities for advancement slow down. I believe this is an issue we can resolve through more mentorship and guidance.

I have had four mentors who were there for me at specific times in my life and career. First was my mom. She was a successful business person and influenced me to believe I could do anything I wanted to do. And, if not for my uncle, I might not have become an engineer. He showed me the career possibilities for someone like me who loved math. That set me on my path.

In university, I had a professor from Estonia who was my mentor and steward. There were only two women in my class who graduated with an engineering degree. Pridi was always there for me when I stumbled or had doubts. A professor at the Royal Institute of Technology in Stockholm, he has had a significant influence in helping me believe everything is possible. I have had another mentor at Eaton – Bill Ross. He has encouraged me to raise my hand and try new things. There are times when we all need a person in our lives who pushes us and says, “You go, girl!”

Now it is my turn. There are several young women I am encouraging in their pursuit of engineering careers. A young woman engineer in my group right now is unsure about what she wants to do next. I am encouraging her to unleash her desire and building her confidence to fight for her opportunity.

Another young woman in the robotics club Eaton sponsors has tremendous potential and was accepted to the Massachusetts Institute of Technology. When I explained how engineers collaborate and work in teams, that we’re exposed to customers, and we solve problems – her eyes lit up. Somehow we fail to communicate what engineering is all about. We need to tell young women that engineers have an opportunity to change the world.

If we want to close that predicted two million person talent gap in the next ten years, we need a greater percentage of women stepping into STEM careers. We need to encourage a passion for our fields at a much younger age. We must raise the visibility of women in STEM. And we have to mentor young women with the courage to step forward.
Jeanette Hernandez Prenger leads one of the Top 100 Corporate Women Leaders in STEM. She is the founder, CEO and president of ECCO Select. Jeanette Hernandez Prenger has charted a path as a business leader and entrepreneur who is dedicated to providing the right technology talent and solutions for you.

ECCO Select provides people, process and technology solutions for our clients’ needs. We’re a talent acquisition + advisory consulting company, and the talent behind the technology. That sounds simple enough, but providing the caliber of IT experts and the breadth of consulting our clients demand takes a skillful approach. Founded in 1995, ECCO Select is proud to serve both the commercial and government sector harnessing the power of our people to enhance the power of technology for our clients.

We’re proud to be a minority- and woman-owned business, but it’s our people and our work that truly set us apart. It experts on demand, strategic business process consulting, software development, training, program management, cyber security—whatever your needs, ECCO Select is committed to providing the right technology talent and solutions for you.

Jeanette started her career as a software developer and was promoted into various management positions during her experience at leading companies. She began working at Waddell & Reed, and was promoted into various management positions during her experience at leading companies. She began working at Waddell & Reed, and was promoted into various management positions during her experience at leading companies. She began working at Waddell & Reed, and was promoted into various management positions during her experience at leading companies.

Jeanette has always been my role model. An immigrant with a limited education and a very heavy accent, she’s always inspired me by the way she goes after what she wants. I’ve seen the way she leveraged her own strengths to overcome what others would perceive as weakness. She instilled in me a strong work ethic, good values and the confidence I could be anything I wanted to be. She was always my rock, and because of her and my father, I was able to build a career with the support they provided.

For my friends and colleagues who are thinking about taking the plunge — or recently did — I offer a few tips from lessons I’ve learned along the way.

Keep good people close.

My mother has always been my role model. An immigrant with a limited education and a very heavy accent, she’s always inspired me by the way she goes after what she wants. I’ve seen the way she leveraged her own strengths to overcome what others would perceive as weakness. She instilled in me a strong work ethic, good values and the confidence I could be anything I wanted to be. She was always my rock, and because of her and my father, I was able to build a career with the support they provided.

Find those people in your life who inspire you, who motivate you to keep following your dream. Lisa Morales-Helle, is the executive director and cofounder of the New York Fashion Tech Lab. She suggests building your “good old girls” network:

“I really just refers to making sure you support other equally impressive women, even when it doesn’t directly benefit you. The rising tide raises all ships, and we owe it to each other to help others recognize the best and brightest among us. Recommend others for panels, jobs, consulting work, investments, or partnerships, not because we are women, but because we are major contributors, and more people should know it.”

As founder, CEO and president of ECCO Select, Jeanette Hernandez Prenger leads one of the top 50 Hispanic businesses in the United States, which comprises 38 percent of the business population. And since 2007, women-owned businesses grew five times faster than the national average.

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EXPAND YOUR PERSPECTIVE

Nothing great has ever been achieved by playing it safe. Becoming the next successful female entrepreneur takes courage, determination and a lot of moxie.

When I first started ECCO Select, I wasn’t sure where I was going to find my first customer. I decided to call up one of my former employers and asked him to review my business plan. He was excited about the value proposition and asked how I could help them modernize their legacy systems. After discussing several options, he asked if I’d be willing to come back and lead the effort to update those systems. As a result, I was my first employee. Within a year, we had 12 consultants working on projects throughout his organization.

NOW, GO GET STARTED

Women still have a lot of ground to gain in the business world, but the tide is starting to turn. I’m proud of the team we’ve created at ECCO, and I’m excited to help more women (and men) achieve their dream of entrepreneurship.

Since launching my business, I’ve realized it all comes down to the fundamentals: Believe in yourself, Keep an open mind. Be willing to learn. And above all, deliver.
Rhonda Vetere is the Chief Technology Officer of The Estée Lauder Companies. In this role since 2013, she is responsible for the Company’s global technology, including and outsourcing infrastructure, strategy, mobility, enterprise architecture and security. During her career, she has had successful mergers, and her ability to consistently deliver results has earned her 6 industry nominations for excellence. In her downtime, she trains to participate in triathlons, half-marathons, and Ironman. A dynamic leader both at work and play, Vetere trains to lead by example and incorporate these traits into my community.

The Estée Lauder Companies has a dedicated team focused on the topic of STEM and how to best engage our colleagues. In this day and age, the key to smart STEM investments is to build a pipeline of STEM advocates, develop a career path framework for it, and show a return on investment.

In order to foster STEM education, we must encourage leaders to take equal interest in promoting it by investing dollars, resources and time to provide mentorships and guidance to students of all ages, and to encourage an entrepreneurial spirit and innovative way of thinking. In the US, continuing to be at the top of global innovation requires that we develop robust education programs across all elementary, junior high, high school and college curriculums to “seed feed” the industry’s career needs. In addition, the top Fortune 500 companies should set aside two percent of their budget on innovation. If we intend to use private or public partnerships to help tackle these challenges, I think we would benefit from a holistic approach with all sectors involved – and not just one area.

There should be a clear career path framework tied to a college curriculum. The way we teach technology topics today does not support a clear academic future or career path. Encouraging students to continue their study of STEM subjects is essential to generating genuine excitement within – and outside of – the classroom for today’s generation. Providing mentorships, especially to encourage women and minorities to embrace STEM development, is also necessary. Equally as important is leveraging CIOs and CTOs in a cross-functional STEM that promotes an industry “community.”

It takes understanding and commitment: two key traits for leaders today to advance STEM education. I try to lead by example and incorporate these traits into my professional as well as personal life as I serve on Dean’s Councils to help colleges map out a curriculum for STEM in BA and Master’s Degrees.

I believe wholeheartedly in mentorships, both inside and outside the workplace. I was mentored early on in my career and continue to have mentors. In order to strengthen the STEM pipeline, we must leverage these mentorships and my recommendation is the creation of a CIO advisory board across the industry that is anchored into “STEM Connector,” so we can all network across different industries. It is critical that we learn from each other.

The STEM initiative that The Estée Lauder Companies has supported that makes me most proud is their sponsorship of the woman’s prize for the “Dream it. Code it. Win it!” contest. This is a contest put together by Tradegreen Inc. and The MIT Enterprise Forum of New York. The student coding competition rewards and promotes creativity, diversity and literacy in the field of computer science. There isn’t a week that goes by that I don’t get asked – “how did you get into this field as a woman?” I believe the future success of STEM will depend on tripling the pipeline of students and engaging women and young millennials. These two groups should find several mentors across different industries and leverage the academic system to forge connections. We don’t want young talent to be steered away from STEM because it doesn’t appear slick. By engaging the diverse communities that currently make up some of the top CIO/CTO roles, we will help to promote the future of STEM careers. Currently, The Estée Lauder Companies has a dedicated team focused on the topic of STEM and how to best engage our colleagues.
Carolyn Slaski is Americas Vice Chair — Talent at EY. She leads EY’s efforts to deliver an exceptional experience to each of the organization’s 70,000 people in the Americas. Carolyn leverages her understanding of the issues facing EY’s clients and partners and teams to deliver strategies that support EY’s momentum in the market, attract top talent, and increase the engagement and retention of its people.

Carolyn formerly served as the Northeast Region Assurance Managing Partner. Prior to this, she was the first female Office Managing Partner and Market Segment Leader for EY’s Metro Park, NJ office. Carolyn has served as coordinating partner for several SEC registrants and large, New York-based clients. She spent three years in EY’s Frankfurt, Germany office, serving Fortune 500 companies with global presence.

A NEW KIND OF TALENT FOR TODAY’S WORKING WORLD

There’s no question we are living in an era of unprecedented change. Innovation across every industry is disrupting the way we work and live, both in and outside of the workplace. Now more than ever, it is critical for business leaders to invest in and develop a new kind of talent.

For some industries, technological advance means software and machinery will be taking the place of people. No amount of training will make workers competitive with machines when it comes to routine and repetitive tasks. And it’s likely that machines will continue to become faster and more efficient, making automation all the more attractive. This trend is reaching service companies like EY too. We can – and we will – automate a lot of our processes and the number crunching behind big data analysis.

But, at the end of the day, we are in the people business. We have one of the best and brightest workforce on the planet, and one of the most important sources of the value they bring to EY is their ingenuity. We can’t automate things like creative problem solving, team leadership, or client relationship management. We’re embracing automation at EY because we believe that advances in AI and robotics won’t result in fewer employees – they will result in our employees’ ability to reduce the time they spend in front of Excel spreadsheets. This, in turn, will give our people more time to enact our purpose: building a better working world.

We want our people to focus on more meaningful work, asking better questions that lead to more valuable conversations with clients and deliver better results. And we know our people are excited and energized by more time spent on strategy and less time spent in the tactics. Embracing this kind of shift enhances our peoples’ career value by giving them more time to take on new challenges, focus on higher-order thinking, develop future-focused skills, and maximize their overall contribution to the firm and to the working world.

It used to be enough for our people to be technically skilled in one area, and at EY this meant hard skills in audit, tax, advisory or transaction services. Now we’re seeing that simply having technical skill is not enough, because the way we do business is changing. Our people need digital skills like web development, project management and digital media management. They need emerging skills around digital technology and innovation. Our people need soft skills like relationship management, empathy, curiosity and good judgment.

They need STEM skills like problem solving, analytical thinking and the ability to work independently. Cutting edge technological advancements will not change the fact that we need people in this business because no machine can replicate the human edge.

All of this means we need to rethink how we recruit and train our people. We need to look for candidates with academic backgrounds in STEM. We need to provide ample opportunities for on-the-job training and educate our people on the importance of lifelong learning. In particular, we need to develop more Internet-accessible learning tools to get new skills to people cheaper and quicker. We’ll always need dynamic leaders with traditional business backgrounds and skills in accounting, finance and supply chain, for example. We need to seek candidates with mindsets that will allow them to analyze, innovate, think and act globally, regardless of their domain expertise or background.

Our people are at the heart of our organization, and no matter what disruptions we see in the world around us, we are laser-focused on creating exceptional experiences for them. We believe that regardless of job title, every person can be prepared for the future of work by demonstrating agility and having the courage to lead. At EY, we know that our business agenda is driven by our people who are navigating the changing workforce. By helping them to thrive in an environment defined by disruption, we are helping each person build a better working world every day.
Tami Bonnell  
Chief Executive Officer  
EXIT Realty Corp. International

EXIT Realty believes in building strong real estate agents and offices, and helping them become successful. Most companies focus on numbers and not individuals. EXIT believes that working first to strengthen each agent makes the team more productive and successful. This is accomplished in five ways: 1) EXIT provides the tools for each agent, rookie or veteran, to become thoroughly trained in successful real estate sales; 2) EXIT helps each agent brand themselves then shows them how to market their brand to get more leads; 3) EXIT seeks out the latest technology tools available then teaches each agent how to use them; 4) EXIT has built a team that is supportive and fun, encouraging each other much like a good family would do and 5) EXIT then exposes its agents to a plan to make over 100%, to build their own business with passive and residual income to create retirement security.

EXIT Realty Corp. International’s CEO, Tami Bonnell, is an internationally renowned leader in the real estate industry and was instrumental in building three major brands. Among her many achievements, she was recognized by real estate trendwatcher, Stefan Swanepoel, as one of the 200 most powerful and influential people in residential real estate, among the top 20 corporate executives and among the top 10 women leaders.

Ms Bonnell has been a featured speaker at the National Association of REALTORS® convention and the RISMedia’s Leadership Conference and the RSMedia’s Leadership Conference. She was named to the National Association of Women in Real Estate Business’ Diversity and Inclusion Leadership Council and she was named a Finalist in the category of Best Executive in a Service Business by the Stevies® Awards for Women In Business, the world’s premier awards for women in the workplace.

Ms Bonnell is a 30-plus-year veteran of the real estate industry and joined EXIT Realty in 1999. She was appointed Chief Executive Officer in 2012. She is a wife, mother of three and grandmother of three. In her spare time she is a martial artist, coach, judge and referee.

EXIT Realty seeks out the latest technology tools available in real estate and then teaches each agent how to use them. Technology is only beneficial to a real estate agent if the user is trained on how to use it effectively and then applies it to increase their business. The company’s public-facing website and comprehensive company intranet are adaptive to meet the increasing demands of agents and the public. The company offers paperless solutions, text capture for listings, a secure central database to manage commissions, on-demand training and more.

Corporate Website - EXITRealty.com features a comprehensive and easy-to-use home search. Leads generated from exitrealty.com on EXIT listings are emailed directly to the listing agent. Leads on properties listed by other companies are emailed to an EXIT brokerage determined by a detailed algorithm as the best one able to help the customer. All of EXIT’s technology is accessible on any mobile device.

Memo (Managing Exit’s Momentum Online) - MEMO, developed and built by EXIT Realty Corp. International is the company’s central database and the secure, online engine behind the company’s unique business model. The EXIT Formula, MEMO tracks every EXIT listing and transaction, every closing, every region, brokerage and agent and every sponsorship (through retirement and death) across the U.S. and Canada. MEMO feeds appropriate information to the Resource Center, exitrealty.com and select third party sources to ensure data integrity.

Exit’s Resource Center - Much more than a warehouse of marketing and administrative resources, the Resource Center is the private member’s area of exitrealty.com accessible only to EXIT agents. In the information hub of EXIT Realty, agents can access all of EXIT’s royalty-free resources as well as fresh content, best practices, and training resources. In the Resource Center, agents can view their own production and the production of the people they’ve sponsored into the company regardless of where the person sponsored is located across the continent.

Free Monthly Webinars, Techninars and Conference Calls - Free training is provided by way of monthly webinars, techninars and conference calls hosted by a variety of EXIT’s top-producing trainers and leaders. These valuable sessions provide best practices, tips and techniques and recordings are available on-demand in the Media Library section of the Resource Center.

EXIT Realty’s Expert Marketing Suite™ - With EXIT Realty’s Expert Marketing Suite™, agents have the technology they need to maximize their listing’s exposure and generate and capture leads. Included as a benefit of EXIT membership at no additional cost, this suite includes a customizable, branded and unbranded virtual tour which is syndicated to popular real estate portals, a downloadable flyer, a custom website created exclusively for every eligible EXIT Realty listing with its own unique web address, a photo gallery, virtual tour and lead generation technology built-in, and more. EXIT Realty has also provided a marketing video to show prospective sellers how this technology will position their home above the competition (www.exitrealty.com/dms).

Every EXIT agent has access to the Expert Marketing Suite™ when their brokerage has completed the MLS paperwork to allow EXIT to import IDX data.

Smart Sign™ Geolocation Lead Generation Technology - Imagine a buyer who sees any EXIT lawn sign in North America texting EXIT to 85377 and instantly receiving property details on their mobile phone. Imagine technology smart enough to know which listing it is and instantly notifying the listing agent on his or her mobile device that this occurred. EXIT Realty’s geolocation Smart Sign™ technology works much like a car’s GPS system and is part of the Expert Marketing Suite™.

Mobile Business Card™ - An EXIT Realty agent can get his or her contact information directly into the palm of a prospect’s hand by using EXIT’s Mobile Business Card™ technology. He or she chooses a vanity code which prospects can text to 85377 to receive the agent’s Mobile Business Card™ on their smartphone. The system notifies the agent when someone has requested their MBC and delivers their mobile number right to the agent’s phone.

Today’s agents and consumers are used to living online. They want what they want when they want it. Delivered in a way that is comfortable, easy and familiar to them. To that end, EXIT Realty believes that technology should be high tech and high touch. The company innovates and builds for the human behind the device, not for the device itself.
Catherine Monson
Chief Executive Officer
FASTSIGNS International, Inc.

FastSIGNS International, Inc. is the largest sign and visual communications franchisor in North America, and is the worldwide franchisor of more than 660 independently owned and operated FASTSIGNS® centers in eight countries including the U.S., Canada, England, Saudi Arabia, United Arab Emirates, Grand Cayman, Mexico and Australia (where centers operate as SIGNWAVE®).

FastSIGNS is a sign, graphics and visual communications partner that provides comprehensive solutions to help customers of all sizes across all industries meet their business objectives and increase their business visibility through the use of all types of visual communications solutions including vehicle and floor graphics, point of purchase and digital signage, labels and decals, architectural and interior décor signs, printing, promotional products and wearables, mobile marketing and other related marketing services. For more information or to find a FASTSIGNS location, visit www.fastsigns.com.

Catherine Monson became CEO of FastSIGNS International, Inc. in 2009, bringing a comprehensive background in management and business leadership, as well more than 30 years of franchising and digital printing experience. Monson is known for her mentoring leadership style, always concerned about people on both a business and personal level. She strives to develop personal relationships with the franchisees in the 660 FastSIGNS® locations worldwide, as well as the 100+ employees that comprise the FastSIGNS International corporate team. Since joining FastSIGNS, Catherine has been on a mission to advance the brand from that of just a sign and banner provider to a visual ideas and comprehensive solutions provider for all kinds of businesses.

In 2009, Catherine received the International Franchise Association’s (IFA) Bonny LeVine Award in recognition of her contributions to the growth of the franchising industry and in 2010, the Dallas Business Journal named her a top Women Industry Leader in the Dallas Metroplex. In 2012, Catherine appeared on the Emmy Award-winning series Undercover Boss to learn new ways to advance the FastSIGNS brand. In 2015, she received the International Franchise Association’s (IFA) First Franchise Action Network FAN of the Year award for her advocacy work in the franchising community. In 2016, she was selected as a Snowstrom Society Inductee for her contributions to the printing and graphic communications industry and was also honored with the 2016 Leadership Award from the Women That Soar organization. Catherine currently serves on the Board of Directors of the IFA and was elected Secretary in 2017. Additionally, she serves on the Board of Directors for two franchise companies – The Learning Experience® and Brain Balance – and a global visual communications industry association, Idealliance.

Finding and developing employees in science, technology, engineering and math (STEM) fields should be a top priority for every company, even if their products or services don’t directly fall into one of these fields, as high achievers never stop learning. In the visual communications industry, employees need STEM-related knowledge and skills to enable them to maximize their role in helping businesses and organizations communicate their message in the most effective way.

FastSIGNS® is both a manufacturer and a visual ideas company. Our sign and graphic experts need to be able to think creatively and critically to help solve customers’ various visual communications challenges with the right types of signs, materials, messaging, etc. FastSIGNS® provides graphic design services and the design of the sign is important, it is not really where the process begins. We need a diverse workforce that balances creative-minded and analytical professionals so that the right questions are asked about the need the sign is trying to meet even before the graphic design begins. FastSIGNS franchise centers need sales professionals, customer service professionals, graphic designers, operation managers, sign manufacturing and installation professionals; each of these roles requires skilled and motivated individuals who can think outside of the box, communicate verbally and in writing, apply unique strategies and adapt to ever-changing technology.

Careers at FastSIGNS® are very hands-on. Whether it’s going to a customer’s location to conduct a site survey, testing different sign substrates and inks, applying graphics to walls, windows and floors, designing digital signage content or wrapping vehicles, FastSIGNS® professionals wear a lot of hats and every day is different. Continued education and training is always needed to develop a team of dedicated, diverse and high performing professionals.

When Gary Salomon and Bob Schnaubaum founded FastSIGNS® in 1980, the business model focused on the new technology of that time—using a computerized system to precision-cut vinyl to produce high quality signs in a short period of time. This technology changed the landscape of the sign industry forever. Today, it’s all about digital technologies. With advanced equipment such UV printers, digital cutters and LED technology, FastSIGNS® capabilities are extensive, allowing us print directly on a wide range of materials including glass, wood, aluminum, fabrics and more, as well as... In 2012, we rebranded to better communicate our expanded products and services. Examples include wall, floor and vehicle graphics, imaged glass, promotional products, wide-format graphics, and digital signage equipment and content.

Conventional signs and graphics continue to be the mainstay, but digital signage is playing an increasing and complementary role. Businesses are using digital signage to communicate multiple messages in one location in a variety ways including exterior LED signs, a single internal display or stand-alone kiosk, a video wall, interactive touchscreen displays and digital wayfinding and directory systems. Digital signage involves motion graphics, screen resolution and video encoding specifications. FastSIGNS’ visual communications experts have expanded their learning and skill sets to sell these digital solutions as well as create and manage the content.

In addition to digital signage, virtual reality and artificial intelligence are beginning to be incorporated into visual communications to engage viewers. In 2015, FastSIGNS added 3M Visual Attention Software to its design service offering, which uses scientific analysis and data to measure the visibility and effectiveness through a first glance measurement of sign designs and placements. Using software solutions such as Spike by IkekGPS and SpaceView, FastSIGNS professionals can present customers a virtual preview of proposed new signs and graphics in their location (using a desktop, tablet or smartphone) to help ensure the solutions are effective.

Regardless of the industry, staying aware of the latest trends and technology is crucial for any business leader. Organizations that I’m involved in such as the International Franchise Association, Brain Balance Achievement Centers, The Learning Experience and Idealliance are great ways to educate, share and collaborate with other leaders and the community.

My personal philosophy is that anyone can achieve their goals by studying and applying these five common characteristics of highly successful people: positive mental attitude; goal directed behavior; self-motivation; perseverance; a sense of urgency and never stopping learning. The best news is that all of these traits are learned skills. These are not traits that one has to be born with; these are skills that can be developed and improved, yielding greater results and success for anyone who works to improve through these skills.
Tracci L. Schultz
Vice President
FedEx Services IT

With extensive coverage throughout the U.S. (including Alaska and Hawaii), Canada, Mexico, and Puerto Rico as well as service to the U.S. Virgin islands, FedEx Freight provides less-than-truckload (LTL) choices based on customers’ shipping needs.

Promoted to VP, IT in July 2014, Tracci relocated to Dallas and joined the FedEx Office IT team. She had the privilege of working alongside a highly energized, innovative team who strives to enable the FedEx Office mission of connecting people and possibilities around the world by growing our creative print, business services and retail shipping value proposition.

Tracci recently returned to Memphis as the VP of FedEx Freight IT where she is leading her team through the largest IT transformation initiative in the history of FedEx Freight.

Tracci enjoys spending time at the lake with her husband, Mark and their three wonderful children, Amanda, Dalton and Dillon. And most recently, enjoys spending time with her first grandchild, Easton.

As a young girl growing up in the south, I was encouraged by my parents to think big, be bold, and take risks. However, my middle and high school teachers let me know there would be jobs for men, yet different jobs for women. As a result, I went through my high school years unsure of my future. It wasn’t until I joined the workforce that I realized not only did these perceived barriers to entry not exist, but that women were, in fact, valued and held very influential positions in STEM related fields. I was encouraged to see that opportunities were before me for the taking. This empowered me in ways that transformed my way of thinking, my career choices, and continues to motivate me each and every day.

In fact, every job in the market place requires a disciplined focus on execution, technical aptitude, logical reasoning abilities, and teamwork. I would offer that these skills are developed in all STEM related disciplines, and therefore position prospective employees quite well in the marketplace. The ability to innovate, to problem solve in new ways, and to collaborate at heightened levels are important traits that everyone company aspires to see across their organization. I see these qualities in young women coming out of college with a STEM related education. These women are unconstrained in their thinking, energetic in their approach, and committed in their execution of work.

Most importantly, I see how they feel equal in value to those around them. Their work and merits stand on their own, regardless of their gender.

While there are numerous studies highlighting the inequities of females in STEM related fields, leadership positions, and executive positions, I am a firm believer that positive changes are underway. The importance of women in labs, leadership positions, and boardrooms is being realized across corporate America. Diversity and inclusion is fundamental to the success of every company, and as leaders, we value diversity of thought and experiences. We understand that it is through diversity that we truly reach our highest potential as teams, organizations, and companies.

As a technology leader in one of Fortune’s Most Admired Companies in the world, I have led technical teams responsible for the design and development of highly complex automated sortation systems, fedex.com applications, new product and service offerings, innovative solutions across our retail network, and am currently leading one of the largest technology transformations in FedEx Freight history. I proudly represent the unlimited potential of females in STEM related professions and am committed to paving the way for others, just as those before me have.

An important aspect of paving the way is through mentorship. I have been enriched by both male and female mentors who have provided me with honest, constructive feedback throughout my career. They have listened to my concerns, guided me into unknown territories of growth and development, watched me fail, coached me back up, and then proudly watched as I matured as a leader. Their support, encouragement, and on-going feedback provided me with a sense of purpose and confidence that helped me overcome many challenges along the way. In turn, I am committed to providing the same support to others, and I take great pride as I watch them achieve their goals, both personally and professionally. As a mentor, there is nothing more exciting than to see someone achieve a goal, master a new skill, or simply acknowledge their personal value. The benefits of mentoring are two fold in that the mentee and mentor truly benefit from one another. For me, mentoring is the most important gift I can offer to others.

When I look back on my journey in life, I often wonder how my middle and high school teachers would feel knowing that their words, actions, and inactions were unconstrained in their thinking, energetic in their approach, and committed in their execution of work.

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Irene Rosenthal
Chief Executive Officer and Founder
Footsteps2Brilliance, Inc.

Footsteps2Brilliance® is the breakthrough early learning solution that helps all children become proficient readers by 3rd grade. Our device-agnostic Mobile Technology Platform allows school districts to leverage the mobile devices that parents already own to scale early literacy citywide. The comprehensive Footsteps2Brilliance curriculum contains over 1,000 interactive books, songs, and games that can be read in either English or Spanish. We have won numerous awards for using game-based methodology to engage students and inspire a love of learning. Footsteps2Brilliance has the most flexible licensing model in the industry. Our Model Innovation City™ license allows school districts to provide unlimited access to all pre-K through 3rd grade children who live within their jurisdiction even before they enroll in their schools. By using parents’ mobile devices, Footsteps2Brilliance empowers the playing field for all families, no matter their economic status. Footsteps2Brilliance users show measurable results in vocabulary acquisition, critical thinking, comprehension, reading, and writing.

Irene began her career as a teacher, during which time she designed curriculum and authored textbooks. In her capacity as a lawyer, she has served as General Counsel to the Government Operations Committee of the U.S. House of Representatives, and as an Assistant United States Attorney in the District of Columbia. She also served as General Counsel to the Software Publishers Association (now SIIA) and Special Assistant to the Council of Chief State School Officers (CCSSO). Irene received her J.D. from Georgetown University and her B.A. from Wesleyan University in Middletown, Conn.

LEVERAGING MOBILE TECHNOLOGY TO ELIMINATE THE ACHIEVEMENT GAP
(Adapted from a White Paper Created for Footsteps2Brilliance, Inc. by eSchool News.)

By the time a child from an underserved family starts kindergarten, she will likely have heard 30 million fewer words than a student from a more affluent background, according to a 1995 study by Betty Hart and Todd Risley. It’s a huge gap that pulls these children at a significant disadvantage before they even walk through the school doors. Indeed, according to a 1996 study from the National Center for Education Statistics, 46 percent of children in the United States enter kindergarten at risk of failure and a stunning 88 percent of these never catch up. The advent of mobile technology is helping to close this achievement gap by leveraging the mobile phones and tablets that parents already own. By distributing a comprehensive, game-based curriculum free of charge to parents of toddlers, educators can reach children during the critical stage of brain development, from birth to third grade, and provide them with the literacy and foundational skills necessary for academic and lifelong success.

Created by a team of professional educators, Footsteps2Brilliance is a digital literacy application that breaks down the wall between home and school by encouraging literacy anytime and anywhere. Accessible via any mobile device or computer—online or offline—the program utilizes digital books, games, and music to create an interactive platform that can be used by parents, teachers, and children working on their own. Results have been impressive, with preschool students in Napa County, for example, showing a 250 percent increase in proficiency on the Expressive Vocabulary Test (EVT) after just seven months of using the program.

While Footsteps2Brilliance is certainly not the first program to promote early childhood literacy, its goals are broader and more ambitious than other initiatives. Underlying the program’s approach is the premise that the foundation of academic success must be built through the efforts of the entire community—not just schools. “Model Innovation Cities” is the term used by Footsteps2Brilliance to describe a partnership of schools, parents, local government businesses, and social organizations working together to address the challenge. To support these partnerships, Footsteps2Brilliance employs an unusual licensing model that allows everyone in a community—to be it a county, city, or zip code—to download and use the literacy solution on their mobile devices. The concept of a Model Innovation City helps to engage families with children who are still too young for school—resonates with many school superintendents who are seeing a rise in both poverty rates and the number of non-English-speaking immigrants in their districts.

“Normally, programs like this don’t reach kids who are not yet in school, which is where the achievement gap starts,” said Dr. Barbara Nemko, Napa County Superintendent of Schools, which launched a county-wide initiative with Footsteps2Brilliance. “These kids come to school with a two-year achievement gap. To be able to do this county-wide and offer it to every family with a preschool child is so powerful in terms of where these children will be when they get to kindergarten.”

Napa County is typical of the kind of demographic changes occurring in school districts nationwide. While 50 percent of the county’s K-12 students are Hispanic, the percentage of preschool children who are Hispanic is much higher: 80 percent or more. “We have so many children who don’t speak English and are not read to because many of their parents cannot read in Spanish,” explained Nemko.

On the other side of the country, in the outskirts of Boston, Revere Public Schools has a different demographic but faces similar challenges. Of the 7,200 students in the district’s 11 schools, 78 percent qualify for a reduced-price lunch, 58 percent are nonwhite, and about 50 percent don’t speak English as their first language. “Revere is considered a ‘Gateway City’ because first-generation folks usually settle here,” said Dr. Paul Dakin, Revere’s superintendent. “The first day children walk into the Revere Public Schools kindergarten classes, the achievement gap exists,” said Dakin. “Our goal with Footsteps2Brilliance is for the gap not to be as wide.”

Since preschoolers represent a large part of Footsteps2Brilliance’s target audience, the program is deliberately designed for use by parents and children outside formal educational settings. Unlike many apps that operate only on a specific operating system, for example, Footsteps2Brilliance is device agnostic: It will work on any computer or mobile device, be it a tablet or a smartphone.

Results of state and third-party testing are what’s earning Footsteps2Brilliance nationwide credibility. In 2014, Mooresville Graded School District, which was in its second full year using the program, ranked number one in North Carolina in 3rd grade reading, even though it ranks 102nd out of 115 districts in funding. Programs like these give superintendents hope that school districts—working in conjunction with their communities—can indeed erase the achievement gap that threatens the future of millions of poor and first-generation immigrant children.
Marcy Klevorn
Executive Vice President and President, Mobility
Ford Motor Company

Ford Motor Company is a global company based in Dearborn, Michigan. The company designs, manufactures, markets and services a full line of Ford cars, trucks, SUVs, electrified vehicles and Lincoln luxury vehicles, provides financial services through Ford Motor Credit Company and is pursuing leadership positions in electrification, autonomous vehicles and mobility solutions. Ford employs approximately 203,000 people worldwide. For more information regarding Ford, its products and Ford Motor Credit Company, please visit www.corporate.ford.com.

Through a variety of STEAM initiatives, Ford is investing in the next generation of automakers and autoshapers—engineers, technicians, scientists, designers and innovators—to ensure a brighter future for our nation, our communities and our company.

Marcy Klevorn is executive vice president and president of Mobility, Ford Motor Company, effective June 1, 2017. In this role, she is responsible for overseeing Ford Smart Mobility LLC, which was formed last year to accelerate the company’s plans to design, build, grow and invest in emerging mobility services, as well as Information Technology and Global Data, Insight and Analytics. She reports to Jim Hackett, Ford president and CEO.

Previously, Klevorn was group vice president, Information Technology, Chief Information Officer, a position to which she was named in January 2015 when she also was elected a Ford Motor Company officer. In this role, she has overseen the complete transformation of the company’s IT tools and talent to put Ford in the forefront of technology companies globally.

Klevorn has spent her entire Ford career in IT, serving in a variety of positions in The Americas, Ford of Europe and Ford Credit.

She joined Ford in 1983 in Telecommunications Services and worked at various positions within Ford IT and Ford Credit through 2004. In 2005, she was appointed Product Lifecycle Management global director and implemented process changes in data and information management across product creation.

In 2006, as Enterprise Defragmentation director, Klevorn led the strategy and implementation of infrastructure defragmentation, data center consolidation and overall systems management at Ford. From May 2006 through September 2011, she led Ford IT Operations.

From September 2011 through September 2013, Klevorn served as IT Director for Ford of Europe, and was a member of the Ford of Europe Operating Committee. She then was named Director, Office of the CIO, responsible for managing Ford’s global IT business applications, architecture, data centers, web-hosting requirements, engineering and infrastructure services.

Klevorn holds seats on the boards of Lawrence Technological University and Pivotal, a cloud-based software technology leader. She was born in 1959 and earned a bachelor’s degree in business from the University of Michigan, Stephen M. Ross School of Business, Ann Arbor, Michigan.

Ford Motor Company was founded on innovation supported by the principles of STEAM (science, technology, engineering, arts and math) and driven by Henry Ford’s vision that making transportation available to everyone - opening the highways to all mankind - was liberating. Mobility then, as today, equals freedom. To achieve that vision, Henry created an entire eco-system to address the challenges resulting from our company’s rapid growth.

As thousands of workers came to Dearborn and the surrounding Detroit area, he provided housing, sanitation and education to prevent illness and ensure a reliable and committed workforce. He paid wages that allowed workers to buy what they built. Henry Ford was adept at thinking beyond the vehicle he sold, beyond the moving assembly line, to the social implications of his work in the larger ecosystem.

Over the years, our work seemed to get simpler. We were able to focus on delivering a great product to a happy customer while contributing to our communities. As we move toward a future of smart vehicles in a smart world, however, we need to be able to see the bigger picture again and understand the complexities within the broader ecosystem all while the world around us is being disrupted.

The disruption we are facing now is brought on by four mega trends: urbanization, growth of the middle class, air quality, and changing customer attitudes. With estimates of nearly 4 billion vehicles on the road by mid-century and more than 60 percent of the world’s population expected to live in cities, global gridlock will wreak havoc on our daily lives. Individual mobility is not the only part of mobility being disrupted. Commercial mobility is also affected. With the advent of online shopping and just-in-time inventories, already today, one-fifth of urban congestion is related to delivery vehicles. And the delivery of goods and services is expected to climb by as much as 40 percent by mid-century.

This is a world we have not faced before and the pace of change has never been faster. In fact, right now, at this moment while you read this essay, this the slowest pace of change for the rest of our lives.

This is all the more reason why I’m excited about Ford Motor Company’s support for STEAM initiatives. We believe strong STEAM capabilities will help future generations have the skills and the mindset to deal with ambiguity, be comfortable with the unknown, and thrive in times of disruption. They will be the innovators envisioning the future.

When I look to the future, I don’t see smog-filled cities with hours-long gridlock. I see the City of Tomorrow where vehicles and cities are equally “smart” and communicate with each other to improve our quality of life. It’s a city in which commutes are predictable, safe, and seamless. Public transportation is convenient and accessible. People share rides and they use their time during those rides to consume all new services. There are more pedestrians and cyclists. New delivery models make the transportation of goods and services more reliable, economical, and less disruptive.

Most importantly, the air is cleaner and environmental impact on the earth is drastically reduced. The city is optimized for everybody.

To help deliver this future, we need innovators inside and outside of Ford to help. That is where our support of STEAM comes in. Building our young people’s capabilities in science technology, engineering, art and math will encourage this next generation of innovators to build the future together and ensure our sustained impact on society.

The challenges that face us as a global community can seem daunting, but together we can build the City of Tomorrow. Look no further than Henry Ford. He knew how to do this, how to think beyond the product to the bigger picture. I am confident that, just like Henry Ford changed the world in ways well beyond the automobile itself and made history, together we can continue that change and make history again.
Kunkun Callaghan
Vice President, Single Family IT Delivery
Freddie Mac

Freddie Mac makes home possible for millions of families and individuals by providing mortgage capital to lenders. Since our creation by Congress in 1970, we’ve made housing more accessible and affordable for homebuyers and renters in communities nationwide. We are building a better housing finance system for homeowners, renters, lenders and taxpayers. Learn more at FreddieMac.com, Twitter @FreddieMac and Freddie Mac’s blog.

Ms. Callaghan actively fosters corporate culture change through a variety of leadership roles with Employee Resource Groups (ERGs), mentor programs for Women’s networks and college recruiting programs. These include prior Chair for the Freddie Mac ASIAN Employee Resource Group, and Chair of Women in Technology Leadership awards.

Prior to her work at Freddie Mac, Ms. Callaghan worked in consulting organizations, supporting product development in the military, financial and telecommunications domains. She has her Bachelors in Information Systems from University of Maryland and her Masters from Johns Hopkins University.

Kunkun Callaghan is Vice President of Single-Family IT Delivery at Freddie Mac. She leads large-scale development programs in support of strategic corporate initiatives. These strategic efforts are focused around four key Freddie Mac programs: Single Security, Investor Reporting Change, Loan Advisor Suite and Credit Risk Transfer. These programs are intended to provide essential market liquidity, promote responsible lending and support the back-office operations of Freddie Mac’s corporate initiatives.

Although Freddie Mac is primarily known as a financial institution, technology is a strategic enabler for our business. Employee programs, tools and technology that benefit the enterprise, customers, employees and our business partners. Our technology enhances the services we offer to our customers and improves employee productivity and performance, making work more effective and fulfilling.

A 2011 report by the U.S. Department of Commerce revealed that women remain underrepresented in the fields of Science, Technology, Engineering and Mathematics. Women represent only 27% of computer science jobs. Less than 20% of bachelor’s degrees in computer sciences go to women, even though female graduates hold 60% of all bachelor’s degrees.

More and more, innovative technology solutions are influencing and driving business requirements, and it’s rate continues to expand. We understand that STEM education is critical to prepare young women for the workforce today and in the future. Women fill nearly half of all jobs in the U.S. economy, but hold less than 25% of STEM jobs.

At Freddie Mac, we believe we have an obligation to ensure our current and future workforce comprises diverse and talented young women who are positioned to succeed. Today, more women make up nearly half of our employees, and their contributions are vital in supporting our business.

We place tremendous focus on recruiting and retaining initiatives, keeping diversity top-of-mind through our Employee Resource Groups.

RECRUITING AND RETAINING

As a technology leader in the financial industry, it’s critical to me that we identify and hire technology top performers. We approach this from several angles:

• We cultivate strong relationships with STEM programs at a number of colleges. We promote our Technology Analyst program, which typically brings 40-50 college graduates into our IT team every year.

• Our college intern program strengthens our relationship with STEM programs by offering students on-the-job experience that advances their education, and provides a pipeline of talent into our Technology Analyst program.

• In support of our diversity values, Freddie Mac is a longstanding partner of the Year Up program, which provides urban young adults with technology skills and work experience to launch a meaningful career. Given the significant need for ITSTEM roles with qualified young women, we believe there is a significant need for ITSTEM programs that benefit the overall workforce.

• Our IT and our diversity values, Freddie Mac is a longstanding partner of the Year Up program, which provides urban young adults with technology skills and work experience to launch a meaningful career. Given the significant need for IT roles with qualified young women, we believe our partnership with Year Up is another channel to expand our ITSTEM focus.

PROMOTING INCLUSION AND DIVERSITY

We live in a diverse world. We collectively need to work to give our team members the opportunity to make informed decisions about their career path, and I know that bringing together a diverse workforce creates a culture of engagement, where differences are valued.

Our employees have access to nine Employee Resource Groups that provide networks for not only women but also working parents, veterans and active military, LGBT, aging leaders, African Americans, people of Asian and Hispanic heritage and people living with disabilities.

Women technologists can join any number of Freddie Mac ERGs based on their personal interests and needs. This is a wonderful way to connect with other women who share similar interests and passions — and also offers opportunities for professional development, networking, outreach, volunteerism and cultural enrichment. These groups provide a forum for women, as a minority, to share our differences and common values, collaborate more effectively, think creatively, strengthen professional relationships and foster a positive and open culture.

MY GUIDING PRINCIPLES

As a woman and minority leader, I find it vital to be available and visible to other women so they can see a technical leader who is successful in a male-dominated industry and embodies diversity. I have a passion for coaching young women in technology careers and strive to help them move forward and be successful. I’ve served as executive chairperson for the ASIAN Employee Resource Group, which promotes and supports Freddie Mac’s ASIAN employees. Through our Women’s Interactive Network, I helped to foster an open environment by championing the professional development of women. In both leadership roles, I’ve worked to ensure that women at Freddie Mac are a community have a voice and that their voices are heard.

It’s All About Attitude: Having confidence in yourself and the value you bring to an organization is vitally important and will take you to new heights in your career. Attitude and drive mean everything. You need a positive attitude to succeed. You can learn the technical skills, but being passionate about what you do and striving to be your best self every day is essential.

Collaboration: It’s critical to partner with colleagues across organizations. Being at the table and articulating how to solve technical problems provides tremendous value to the overall team. It takes a village to solve many issues; collaborating with others is the key to success.

At Freddie Mac, we are committed to making our organization a highly sought-after destination for women. We believe in creating a diverse and inclusive workplace as a way of strengthening both our workforce and the broader technology field. Toward this vital goal, we continue to seek and develop courageous, innovative individuals who speak up, challenge the status quo and bring new voices to STEM.

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Shandarese Garr
Senior Vice President, Communications
Garden City Corporation

GCG is a leading global provider of settlement administration and business solutions. For more than 30 years, corporations, law firms and courts have trusted GCG to execute the most critical legal administrative tasks associated with class action settlement administrations, restructuring and bankruptcy matters, mass tort settlement programs, regulatory settlements, and data breaches. GCG is a wholly-owned subsidiary of Crawford & Company® (NYSE: CRD-A and CRD-B), the world’s largest publicly listed independent provider of claims management solutions to insurance companies and self-insured entities with an expansive global network serving clients in more than 70 countries.

Shandarese Garr oversees GCG’s Notice & Media Team which comprises notice, advertising and media experts with more than 60 years of advertising experience who have developed some of the most successful, complex, and high-profile notice campaigns in history while utilizing the most current methods and technology for locating and reaching class members. Based on her more than 25 years of experience in key Operations roles at GCG in which she gained in-depth knowledge of the evolution of the Federal Rules of Civil Procedure, particularly rules regarding notice, Ms. Garr leads a team that combines proven media industry expertise and operations experience with class member communications and management to provide a thorough, tailored, and efficient notice program.

Ms. Garr has led the administration of hundreds of class action settlement involving more than 150 securities class action settlements. She has orchestrated all aspects of massive administrations such as the $1.1 billion In Re Royal Ahold Securities and ERISA Litigation, in which GCG mailed over 26 million notices translated into 16 languages to potential claimants in 105 countries. For the $2.4 billion Nortel Networks Corp. Securities litigations, she oversaw the execution of a notice program involving mailed notice to over 2.3 million class members in the United States, Canada and around the globe. Some of the other large and wide-reaching programs she has handled include Global Crossing, WorldCom, Lucent, Enron, DaimlerChrysler, Oxford Health Plans, and Dolar General.

In addition to leading GCG’s Notice Team, Ms. Garr is responsible for executing GCG’s diversity and inclusion vision by creating and launching company-wide programs and initiatives that focus on innovation, performance, and business growth. She is a long-standing member of the National Association of Securities and Commercial Law Attorneys (NASCA), the American Management Association (AMA), the International Women’s Leadership Association, DiversityInc, and the Society for Human Resource Management (SHRM). She is also a former board member of MFY Legal Services.

Ms. Garr has been featured in inspirational Woman Magazine and in a CNN article, Streetinsider.com, prweb, Wh.com, Noodls, as well as in Black Enterprise magazine’s “On the Move” column, and Crawford & Company’s Currents “Associate Spotlight” column.

What is a mentor? What is a role model? I have found that many people use the terms interchangeably but in truth, they are different. A good mentor forms a lasting relationship with their mentee. They are invested in their mentee and serve as a guide throughout their professional training. On the other hand, a role model is someone you look up to, but you may not know him or her personally. Mentors and role models bring different value and benefits to an individual. When paired, they can be the ultimate growth tool.

When I first started my career, I looked around and initially could not identify anyone who looked like me. There were very few women in the industry and even fewer African Americans. Luckily, there were a few colleagues who recognized my ability to learn, my drive for success, and more importantly my work ethic. Those individuals took me under their wing and we developed relationships built on trust and admiration for each other. They shared their personal and career struggles and accomplishments. I listened and observed how they navigated through life. Armed with the knowledge they imparted, I made decisions about my own life and career. For me, this was the critical point in which I knew that my mentor and I had a connection. Both of us were willing to invest in that connection and build a relationship. This does not mean we always agreed on every subject, but it meant that we respected each other’s opinions and different approaches.

As I began to transition into a mentor myself, I quickly found that I was learning just as much as my mentees. Importantly, I also learned that the widely accepted myth that a mentor has to be more successful or older than the mentee is just that, a myth. Regardless of age, background or career level, a mentor provides both professional and personal advice for navigating different stages of a career. I strive at all times to model an appropriate and balanced person.

While a relationship is necessary for a mentorship, a role model can either be someone who is very close to you, or can be someone you have never had the opportunity to meet. In the broadest sense, a role model is someone who inspires you through their accomplishments, integrity and vision. From family members to public figures, you may not share their professional experiences, but their story has impacted you nonetheless. My role models are my mother and my grandmothers. These three women displayed strength, determination and a fierce commitment to their families and religious beliefs. While our career experiences and goals were quite different, I still strive to embody their qualities in both my work life and my personal life.

Looking back over my 28-year career at GCG through the lens of both a mentor and mentee, I see the numerous ways empowerment impacts growth, fulfillment and success on an individual and organizational level. Without a doubt, hard work, dedication and loyalty got me to where I am today. But I certainly would not have experienced a long and sustained level of job satisfaction without the help of mentors who guided and encouraged me. Equally important is the profound impact mentoring has made on the way I view my work and my goals.

As leaders, we need to continue to reach for mentorship opportunities that inspire us. But most importantly, we need to make time to empower others to seek new paths in order to lay the groundwork for rewarding long-term careers. Role models are equally as important for the success of an individual because they provide a framework of attributes, goals and achievements to strive for. Without that inspiration, there might not be a desire for mentorship. We all need someone to look up to, but we also need help each other as we continue to break the glass ceiling.
Gloria Herndon
President and Chief Executive Officer
GB Group Global

GB Group Global is a reflection of Dr. Herndon’s vision and is the culmination of over 35 years of fostering meaningful relationships across borders, believing in the human spirit, remaining committed to local communities and enabling the empowerment of others (especially women & girls in STEM careers). The Group is committed to giving back to communities and those in need. Social give-back programs in education, healthcare and municipal development are just a few areas the GB Group champions together with its collateral partners. Recognizing that some initiatives require significant funding, the Group is able to engage donors for the successful implementation of projects. The GB Group currently focuses on innovative and sustainable solutions in the energy, environment and health sectors.

My life has been a roller coaster of ups and downs but with the confidence that each experience yield a special contribution to the world at large. I have often mentioned that I was born May 9, 1868. Why? That is the date that my Grandmother who raised me, Mamma Katie, was born. She was blind and I was her eyes and our spirits merged. Her husband, Papa Coley, was a logger and the family was sharecroppers. My grandfather ultimately died from the physical deterioration of carrying those large trees. Mamma Katie was a midwife and together they were pillars of the community. They were Mentors. My parents Charles and Corrine Bozeman had the largest Black Grocery Store in the city. My father was a minister and a layman. My parents were from large families which both of their parents had 14 children. They too were the center of the community and they mentored. Fast track! My family encouraged education and I was the quintessential overachiever. I was a classical musician, economist, dancer, diplomat and entrepreneur. I breezed through academia and was mentored by men and women alike. The famous Ruth Stengisko was my musical mentor. Dr. William Finney, Dean Robert Osgood and so many others provided me so much support. After completing my academic excursion at Johns Hopkins University, I proceeded to work at the large think tank in Washington and worked on the initial papers that were the basis of the creation of the Congressional Black Caucus. There I had mentors like Congressman Charles C. Diggs, Jr. After several positions, I went into the US Diplomatic Corps. I served as economists with a very strong and diversified portfolio. Now I am into the Global mentoring.

I married and even with my diplomatic functions my husband and I established a large borehole drilling company in Nigeria. We ultimately came back to the US and I developed a large insurance company and my husband reconciled the real estate company. The insurance company was extremely successful and funds were used to invest in real estate. After the real estate failure in 2008, my husband became gravely ill, but life continues. We reinvented ourselves and established GBGROUP Global, GBENERGIE, GBPHARMA and GBENERGIE LED. The fastest growing are the global pharmaceutical company and the energy sustainability LED lighting company.

So what is Mentoring? To learn the answer, we may find different definitions therefore, I want to share traits to look for in any mentor. Lauren Taylor, wrote in her blog, “5 TRAITS TO LOOK FOR IN A MENTOR FOR YOUR CHILD.” (www.thefirsttee.org/2013/05/06/5-traits-to-look-for-in-a-mentor-for-your-child/)

1. A MENTOR EMPOWERS YOUTH TO MAKE POSITIVE CHOICES

We all face decisions in life. Some decisions are easy, while others may take careful consideration. Mentors empower youth to consider outcomes and repercussions by using life skills to help them in the decision making process.

2. A MENTOR ENCOURAGES YOUTH TO TAKE OWNERSHIP IN THEIR LEARNING

The best learning comes from doing, not through lectures. Mentors should help youth seek challenging tasks and push themselves to develop new skills. The goal is for young people to become their own best coach -- whether at school, at home or in life.

3. A MENTOR HELPS YOUNG PEOPLE DEVELOP LIFE SKILLS

Setting attainable goals, overcoming challenges, learning techniques to manage thoughts and emotions -- these are skills youth need to learn and apply to all aspects of life. Caring adults can help young people practice these techniques and provide encouragement.

4. A MENTOR HELPS YOUNG PEOPLE DEVELOP CORE VALUES

Mentors should guide youth to understand and develop key values such as honesty, integrity, sportsmanship, respect, confidence, responsibility, perseverance, courtesy and judgment.

5. A MENTOR STRENGTHENS INTERPERSONAL SKILLS AND PEER RELATIONSHIPS

Mentors can model and encourage youth to appreciate diversity and show respect to oneself, friends, playmates and fellow competitors. I believe my work has always brought me into direct contact with the people I serve. I hear their stories and through the work that I do I am able to advocate for them and bring solutions that make some aspect of their lives at least a little bit easier. I had many ups and downs, through it all I have remained a pioneer and has handled my challenges with grace. M work is an example of what one can do with the power of will and a determination to not live for myself but for others. I’m convinced my life would not have been the same without those mentors who provided exceptional mentoring.
Several years ago, Genesis Rehab Services (GRS) President Dan Hirschfeld realized that something was missing from his company. In leading one of the nation’s largest providers of physical, occupational, speech and respiratory therapy services – primarily for older adults – Dan saw innovations taking place at a very localized level. But in steering a company that touches 55,000 lives per day and employs over 17,000 therapists, physical therapist assistants, occupational therapists, occupational therapy assistants, and speech-language pathologists successfully, he identified a pressing need to elevate the importance of innovation, particularly as healthcare started to shift towards value based care.

While GRS has always prided itself on its proven record of clinical outcomes, it became clear that changes in the healthcare environment meant that the organization needed to seek innovative ways to respond to this shift. As such, GRS created a “global innovation” program that has taken on a life of its own.

As part of this program, more than 60 GRS senior leaders engaged in a 2.5-day workshop this year to learn design thinking principles. They’ve incorporated design thinking into their work, approaching clinical and organizational challenges, initiatives and workgroups with a person-centered, patient-centered lens. This is exemplified in sleep study pilots via Respiratory Health Services, the respiratory division, where the company is looking at keeping patients in their most natural environments – at home – during sleep studies, rather than having them come into a sleep center.

Genesis Rehab Services recognizes that design thinking may present additional opportunities to improve many other areas of patient care, including care coordination, cognitive intervention, patient or family engagement, socialization, community integration, financial security, civic engagement, and access to resources.

In addition to pioneering innovation technologies in our industry, Genesis Rehab Services offers a comprehensive Mentoring Program that helps ensure that our physical therapists, physical therapist assistants, occupational therapists, occupational therapy assistants, and speech-language pathologists succeed at Genesis Rehab Services (GRS). GRS views mentoring as a developmental partnership through which one person shares knowledge, skills, information and perspectives to foster the personal and professional growth of someone else. The Mentoring Program provides an extended orientation and ongoing training for recent graduates and mid-career therapy practitioners who are new to working with older adults. The program typically takes a full year to complete, and combines educational sessions and online learning modules with regular mentoring meetings to promote optimal clinical skill development. The mentee receives personalized feedback and encouragement, observes and interacts with successful experts in their field, acquire and improve knowledge, skills and attitude, learn shortcuts and strategies, gain practical resources and tools and increases their network within and outside of GRS. Such mentoring sessions may take place in a face to face, 1:1, group setting, or tele-supervision using video technology to mentor from a distance.

GRS will match each participant with a mentor who will support and guide an effective education and professional development plan based on the participant’s needs. When arranging mentoring pairs, GRS considers the following:
• Experience and skill level of the therapist or assistant to be mentored
• Proximity of the mentor to the therapist or assistant to be mentored
• Personality and communication style as determined by tools such as the Predictive Index®

Overall, the skills of therapists and assistants continue to be dominated by a female workforce. This stems from the caring and compassionate “helper” that is a dominating trait for females. In relation to the STEM directed careers, the science field is strong and pertinent to these health care, therapy professions. Genesis Rehab Services is partnered with most of the therapy and assistant universities across the country to share and guide the training and education of therapy student placements in our clinics to experience and participate in real life patient care experiences. This provides GRS the opportunity to interest college students in therapy professions as well as the specialization of the care of older adults. Thus providing employment opportunities within GRS once they graduate from a therapist accredited college program.
Laura LaRosa
Director of Client Development, Managing Director
Glenmede

Founded in 1956 by the Pew family to manage their charitable assets, The Glenmede Trust Company, N.A., ("Glenmede") is among the nation’s leading investment and wealth management firms. The company oversees more than $38 billion of assets under management for high-net-worth individuals, families, family offices, endowment, foundation and institutional clients. Headquartered in Philadelphia, the firm has offices in Ohio, Delaware, New Jersey, New York and Washington, D.C. For more information, please visit www.glenmede.com.

Laura LaRosa is Director of Client Development. In this role, she is responsible for setting the strategic practices and products that guide the Company’s business development professionals. Ms. LaRosa and her team spearhead initiatives to broaden relationships with individuals, families, endowments and foundations.

Ms. LaRosa joined Glenmede in 1994 and has over 30 years of experience in fixed income trading, sales and client development. Prior to her current role, Ms. LaRosa served as Director of Portfolio Management, overseeing a team of investment professionals responsible for managing $17 billion of assets for clients, and was previously Director of Fixed Income, managing over $7 billion in assets. Ms. LaRosa is a frequent speaker on portfolio management, fixed income, impact investing and investment strategy and serves as a member of both Glenmede’s Management Committees and Investment Policy Committee.

As a woman who has been in finance for over 20 years, I have experienced the enormous strides women have made over the past two decades. And while I have been one of many valued women at Glenmede since joining, I am conscious of the career challenges that existed in the past and continue to be challenges many women face today.

When I graduated from college with a degree in Political Science, I had no idea what path my career would take—or the unique perspective on diversity it ultimately would afford me. As I moved from fixed income trading to portfolio management and business development, I often found myself to be one of few women in my workplace. Early in my career, as the head bond trader at a very large brokerage firm, for example, I was the lone woman on a trading desk of 10 people. And I was the youngest female vice president in the company; there was one other woman besides me who held that title—and she was 80.

But, as I rose through the ranks in a traditional, male-dominated industry, my experience provided me with valuable insights into the crucial importance of gender diversity, especially in the world of STEM. And I have tried consistently to leverage my role both to help other women achieve their professional goals and to increase female participation in STEM careers, both inside and outside of Glenmede.

CHAMPIONS OF GENDER DIVERSITY

At Glenmede, in fact, we have a deep commitment to promoting diversity and a long track record as champions of female leadership development both within our organization and in the communities we serve. As part of that charge, our talent acquisition and mentoring strategies put women’s empowerment front and center. In addition to helping younger female professionals to hone their competencies in finance, I believe it’s critical we emphasize the importance of being an effective communicator. Speaking with authenticity and empathy is imperative—especially during times of high geopolitical risk and market volatility. Engaging with next-generation women is a highlight for me and I often feel I learn more than I teach. We also have partnered with such organizations as Million Women Mentors, which aims to increase female participation in STEM careers, so it might not come as a surprise that more than half of Glenmede’s workforce is comprised of women.

A look at the composition of our own leadership at Glenmede underscores our long-standing commitment to promoting gender inclusion. Women at the company make up 34 percent of Managing Directors and Vice Presidents, a number well above the industry average of 25 percent for executive and senior-level officers and managers in the financial services industry. In addition, women comprise 55 percent of our Management Committee and 13 percent of our Board of Directors, which puts us in the second-best ranking of the 2020 Gender Diversity Index, an index of Fortune 1,000 companies.

VALUES-DRIVEN INVESTING

Central to our embrace of gender diversity is our long history as a values-driven organization. To that end, I recently have played a key role in shaping and sponsoring Glenmede’s impact investing platform, which seeks to help align clients’ investments with their values. After several years developing our strategy and approach, we now are able to provide clients with a suite of investments offering not only a financial return, but also measurable social and environmental results. That means infusing client portfolios with Environmental, Social and Governance (ESG) standards taking into account how a company performs in its role as steward of the natural environment, as an employer and community member and as arbiter of executive pay, internal controls and shareholder rights. But one important bedrock of the impact investing philosophy at Glenmede is looking at investments through a gender-lens—making women’s empowerment and gender diversity a crucial consideration when constructing client portfolios, an approach that is one of the fastest growing investment segments.

In support of gender-lens investing, we recently hosted an inaugural “Investing in Women” forum in which we partnered with BRAVA Investments to bring leading women in private equity to discuss how investors can grow their assets while also advocating for women.

Looking forward, I am convinced that growth at Glenmede—and society, as a whole—will be intrinsically tied to matters related to gender diversity. With that in mind, I plan to continue mentoring young, talented professionals, especially those from under-represented backgrounds, and to help refine our investing strategies to reap both significant financial and societal rewards. It’s an exciting prospect: seeking growth opportunities for the company, while also helping to shape the next generation of women in STEM of Glenmede and the larger community.
Julia Steyn was named GM vice president, Urban Mobility Programs, in September 2015. Leveraging her extensive global business experience, Steyn is responsible for the company’s operation and strategy around providing innovative and connected transportation services to customers in growing urban areas around the world. Steyn joined General Motors in 2012 as vice president, Corporate Development and Global Mergers & Acquisitions. In that role, she managed a diverse portfolio of GM’s global automotive partnerships as well as partnerships outside the industry. Steyn also developed new merger and acquisition opportunities for the company. Before joining GM, Steyn was vice president and co-managing director for Alicoa’s Corporate Development group, leading its mergers and acquisitions, competitive scanning and new business target screening activities. She also has worked at Goldman Sachs in key positions in London, Moscow and New York where her responsibilities included a broad variety of transactions across a number of countries, industries and products. Earlier in her career, she was a business analyst at A.T. Kearney. Steyn has a bachelor’s degree from Oberlin College in Oberlin, Ohio, and an MBA with a concentration in Finance and Accounting from the University of Chicago. Steyn also was a concert pianist of international distinction. She was born in Russia and moved to the U.S. in 1990.

Today’s cars are loaded with more innovation than ever before, meaning the future of the automotive industry—and along with almost every other industry on earth—will depend heavily on the talents of people pursuing careers in science, technology, engineering and math (STEM).

At General Motors (GM), advancing STEM is a critical focus area. The company is committed to facilitating the development of a qualified and diverse STEM workforce, encouraging presence, achievement and persistence in STEM education and careers, and supporting greater participation of underrepresented population groups. To meet these goals, GM partners with organizations, including Code.org, Black Girls Code, Institute of Play and Digital Promise, to encourage young people to explore science, technology, engineering and math related professions.

As we look ahead to a changing economy and evolving transportation landscape, the role of STEM will become increasingly important.

Recent years have seen significant growth in both the popularity of ridesharing and the “on-demand” transportation economy. According data from the National Technology Readiness Survey, transportation is the second largest category (after online marketplaces) in on-demand spending, attracting more than 7.3 million monthly consumers and $6.6 billion in annual spending. Further, according to the Brookings Institute, the growth of ridesharing continues to accelerate. In 2015 alone, non-employer firms in the ground transportation sector (the Institute’s proxy for driver-contractors in ridesharing) increased nationally by 217,000 workers (or 63 percent).

Launched in January 2016, Maven is one of GM’s newest initiatives and a strategic response to the on-demand marketplace where transportation now is shared and consumed daily. Made up of close to 200 dedicated employees, the company’s mission is to make transportation more affordable and accessible to consumers and businesses. Maven is a platform where cars are an asset and customers get access to a host of highly personalized, on-demand mobility services and offerings—analytically, ride-sharing, connected car technologies and finance—Maven is a platform where cars are an asset and customers get access to a host of highly personalized, on-demand mobility services and offerings.

Maven began with a car-sharing program, including a fleet of on-demand vehicles for tenants of luxury condominiums in Manhattan, and a vehicle-leasing program designed for ride-sharing customers. More recently, GM rolled out Maven Gig, which provides cars for freelancers who want to drive to make money, whether through ridesharing, deliveries or otherwise. Maven Gig gives members the freedom and flexibility to pursue their passion and take advantage of “side hustle” job opportunities in the growing gig economy—one defined by short-term contracts and freelance work—without the constraints of traditional car ownership. These services are building blocks toward a scalable mobility portal that GM will continue to expand upon with new services in order to reach its greatest potential.

White each Maven program meets a unique consumer or market need, all are powered by a common denominator: mobile technology. Customers use an app to search for and reserve a vehicle by location or car type and unlock the vehicle with their smartphone. The app also enables remote functions, such as starting, heating or cooling, and customers can bring their digital lives into the vehicle through Apple CarPlay, Android Auto, OnStar, Siri/UXM radio and 4G LTE wireless. In addition, the Maven team uses innovative ways to connect personally with customers to share their ideas and thoughts. Finally, GM shares information gleaned from Maven services to help cities intelligently build out their infrastructure, including identifying prime urban locations for electric car charging stations.

Maven disrupts the traditional owner-drive business model and represents a radical shift in thinking for a company that, at its core, manufactures and sells cars. It’s also, however, a perfect illustration of how GM continually evolves, finding new applications for STEM skills and talent in order to solve real-world problems, improve customer engagement, meet the dynamic needs of the economy and keep the company on the leading edge of the automotive industry.

My own journey to Maven took a circuitous route. I was born in Russia, trained as a concert pianist and moved to the United States at 15; here, I completed an education in liberal arts with a focus on finance and accounting. While I pursued a career in business, music remained a central part of my life—you might even call it my “side hustle.” When the opportunity arose to parlay that experience into leading the Urban Mobility Program, the move felt like a natural progression and one that would allow me to have a more direct impact on people’s lives. Each day I come to work inspired by the amazing technology and the potential.

Maven is a platform where cars are an asset and customers get access to a host of highly personalized, on-demand mobility services and offerings. Maven customers can choose to purchase a car that is part of Maven’s fleet, or they can reserve individual cars. Maven currently is part of the American market for ridesharing and connected car services. Maven is actively building a global network of urban locations for electric car charging stations. Maven disruptions the traditional owner-drive business model and represents a radical shift in thinking for a company that, at its core, manufactures and sells cars. It’s also, however, a perfect illustration of how GM continually evolves, finding new applications for STEM skills and talent in order to solve real-world problems, improve customer engagement, meet the dynamic needs of the economy and keep the company on the leading edge of the automotive industry.

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Sylvana Caridi Coche brings twenty years of software engineering experience both in the US and internationally. Her track record of successful strategic initiatives with high-profile organizations includes a full spectrum of services, including solution architecture, software design, program management, and executive advisement. These fortified services offer her clients a partnership renowned for progress, thinking, efficiency, and measured success in their industries.

The roots of Sylvana’s career began with Roex Industries and Nestle in Geneva, Switzerland, both early adopters of SAP technologies. Prior to founding Gravity Pro Consulting, she was Vice President of SAP practice with a large consulting company where she established herself as a trusted partner to other international clients in Australia, New Zealand, Mexico, Europe, Japan, and Canada driving major software and business transformations.

Through her leadership, Gravity Pro has achieved status as the largest SAP reseller in North America, and is the only woman-owned business in North America authorized to resell SAP solutions for all licenses across SAP. This includes many products largely utilized in the Fortune 100 and S&P 500 companies as well as government. These products include Ariba, SuccessFactors, Mobility, Big Data, Cybersecurity and other cloud-based products.

Sylvana is a graduate of the UCLA Anderson School Management Development for Entrepreneurs program. She holds a Masters in Management Engineering and Business Administration with an undergraduate degree in accounting and audit from France. She is fluent in English, French, and Italian.

Technology is growing and changing at an exponential rate—researchers say that in 10 years, we will be a thousand times more advanced than we are today. As an advocate, I have been watching this growth and evolution within my own industry of IT. First there was programming and getting everyone on the platforms, going paperless and staring to track everything (ERP Era). Then there was all the data that needed to be archived, but luckily, the cost of storing became lower than the cost of archiving, so we kept all the data available. Then, came the boom of the Internet, bringing mobility for consumers, who now have the power to choose who and where they buy products, in a way they’ve never had before. This is increasing the competition and giving consumers the opportunity to buy from many companies and not just the large corporations. They can buy from anywhere in the world—it’s a whole new frontier.

Today, we have ‘big data’—the fact that we have stored all the data instead of archiving it allows us to look at the last 10 to 20 years and predict what will happen in the future based on that data. This is changing the dynamics of the companies and the market. Companies can now predict future market trends, doctors can predict and possibly even pre-determine disease factors based on patterns of the past. Corporations’ functions will now basically all link to IT, and we are going to need more STEM talent. The success of a company will hinge on how well it can analyze data and predict what consumers need before anybody else. This is actually more important today than the brand and product, which was the key to success a few years ago. This will require what I like to call “new brain” people, who can think outside the box, ask the right questions and correlate between data and impact on the products, consumers and costs.

I believe the next generation is going to be the most interesting part of history. That generation, which includes my two young daughters, will take the tools that we have given them and apply them in novel ways to accomplish things beyond our wildest dreams. We now have the means to do it. I am committed to opening the doors of tomorrow and giving the next generation insight into what they can accomplish, choosing a path for their future successes. I believe supporting this new brain generation will take a two-pronged approach.

First, we need to ask these kids, do you realize where you are going and that you really can make a difference in humanity? The rest of us need to stop criticizing the new generation of millennials, stop trying to mold them and make them fit into our views of society. We need to teach them by inspiring them and then opening our minds to their creativity and having an open mind. We need to give them confidence to do and think differently, and that is what will bring about the change we need.

Second, we need to change traditional views on mentorship. We do not need to mentor by teaching technique or experience. The new generation is already more technologically advanced than we will ever be. We need to teach them a new philosophy on life and give them the understanding that they can do anything. We need to ensure that they can question and change and create and veer from the ways of the past. Keep them positive. Take them by the hand and tell them to forget anything they hear about impossibility of anything. Support them and help them do what they are meant to do. Help them change our old belief systems that don’t serve us anymore. I have a vision of where we need to be and is already taking the steps to bring that vision into fruition.

My goal is to create a center in France where leaders spanning the generations can come together and look at the world differently... to step back and collaborate to try to solve real issues for the world and humanity. To exchange ideas on how we tackle all this STEAM innovation and knowledge and use it to better serve our society and ensure that human rights are in the forefront of everything that we do. We need to remember that money and power aren’t everything and that happiness and fulfillment are our ultimate goals. The center I am creating will give world leaders of different backgrounds a place to come together on the same consciousness and understand the true value of UNITY within humanity. My hope is that this will bring about a more cohesive understanding of different cultures and how we can come together through all the advancements of technology and implement them to create a better world where we can all stop fighting for political status and get back to the base of what we all want, happiness and fulfillment.
Ann Tripp joined The Hanover as an investment officer in 1987 and since has assumed increasing leadership responsibility in the investment division and in the company. In 2006, Ann was appointed chief investment officer and president of Opus Investment Management, a wholly-owned subsidiary of The Hanover that provides investment management services to institutional investors. In her current role, Ann is responsible for the investment strategy and oversight of more than $10 billion in assets under management and a long and distinguished history of delivering competitive investment results and exceptional service.

THE NEED

Attracting and retaining the best and brightest must be a top priority for companies that want to compete in our smaller and increasingly competitive global economy. Having a workforce that can easily collaborate, leverage the global resources, and become more than the sum of its parts and innovate is critical to success.

With STEM jobs, that is a challenge because of the industry’s significant gender gap. Women fill close to half of all jobs in the U.S. economy, yet hold less than 25% of science, technology, engineering and mathematics (STEM) jobs, according to the U.S. Department of Commerce.

The Commerce Department also notes the gender pay gap in STEM is far less than in other industries. With STEM jobs, there needs to be an emphasis on promoting company cultures that encourage diversity, value women, give them a voice that is heard and respected, and make female mentors commonplace.

THE CHALLENGE

The challenge begins before women enter the workforce. For a few rare examples, such as this year’s incoming class at Carnegie Mellon University, most STEM-majority institutions are still male-dominated. Moreover, the careers of choice for many women graduating with STEM-related degrees are education and healthcare. It makes hiring women in STEM very competitive in the corporate world.

The insurance industry faces a unique challenge. In addition to Wall Street and large corporations that often offer higher compensation and urban work environments, there is usually little awareness that the insurance industry has numerous opportunities for those with STEM degrees, from information technology to actuarial to investments.

THE RESPONSE

Engage. One size doesn’t fit all, especially when it comes to retaining high-achieving STEM women. By way of two examples at Opus Investment Management, the investment subsidiary of The Hanover Insurance Group, we made accommodations for a talented investment professional to use flex work hours when she started her family and into early school years.

In another case, a talented investment professional was able to telecommute when personal priorities led the family to relocate outside the state.

In the end, being flexible, we were able to retain two strong, intelligent women who were important players in the company, both through their work and their voices. Flexibility with the work week and work hours, as well as using tools such as telecommuting, can be a key step toward recruiting and retaining top talent.

Until recently, this type of flexibility and thinking was rare. Women in particular were often faced with a difficult choice: work or family? In the end, companies will benefit through greater diversity, the ability to attract and retain first-class talent, a higher degree of work satisfaction and increased loyalty.

Mentor. Female mentors have the power to play a major role for women at every stage of their careers. Acting as a sounding board around long-range goals and specific work issues, female mentors can provide practical help and boost confidence.

Building a mentorship relationship is sometimes a challenge for women in STEM careers where there aren’t many senior women. A commitment by senior management to not only encourage mentoring, but set up systems to make it happen, is critical.

In addition, networking events and female mentor-matching programs offer an alternative for those who find themselves in that position.

The Hanover has an active female mentor program, and as one of the most senior female leaders, I take my responsibility seriously to serve as a mentor to a number of women across the organization.

Change. With companies like The Hanover increasing the pipeline of talented women starts with the board of directors and the senior leadership team.

The Hanover board has added influential and accomplished women from STEM fields. The move acknowledges the need for diversity at the highest level, as well as a culture that embraces different points of view and different ways of doing things.

There is also an emphasis on training managers to give them tools and development programs to build their employees’ skill sets and career advancement. The affinity group, Women@Hanover, helps enhance skill and development tools and provides a supportive community.

Employees and interns are encouraged to build relationships across the organization through job shadowing, especially in outside departments. It helps make our company better, has the possibility of creating a niche for women across our organization, both in STEM and in general. I know each woman who is mentored, advocated for and coached is one more woman who will help make our company better.

It is also why I am a passionate mentor and advocate for women across our organization, both in STEM and in general. I know each woman who is mentored, advocated for and coached is one more woman who will help make our company better.

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Dr. Sophie V. Vandebroek is Chief Operating Officer of IBM Research. Since January 2017, the focus areas of IBM Research include artificial intelligence, blockchain, quantum computing, cybersecurity and more. IBM Research creates next-generation, breakthrough technologies, solutions and services for the IBM business units, and provides custom R&D services to enterprises and government.

Dr. Vandebroek was Xerox’s Chief Technology Officer from January 2006 until Xerox split into two new public companies in January 2017. She was responsible for leading Xerox’s global research labs, including PARC Inc., a Xerox Company.

Dr. Vandebroek is a Fellow of the Institute of Electrical & Electronics Engineers and a Fellow of the Belgian-American Educational Foundation. She holds 14 US patents. She was inducted into the Women in Technology International Hall of Fame and elected into the Royal Flemish Academy for Arts & Sciences in Belgium.

Dr. Vandebroek is a member of the Board of Directors of IDEXX Laboratories and previously served on the Board of Directors of Analogic Corporation and of Nypro Corporation. She has been serving on the advisory council of the dean of engineering at the Massachusetts Institute of Technology since 2010. She earned a master’s degree in electro-mechanical engineering from KU Leuven, Belgium, and a Ph.D. in electrical engineering from Cornell University, Ithaca, New York.

When I look around the corner at critical technology opportunities and trends, here are some of the things I see:

1. Everyday objects that sense and respond to their environment. This means connecting ordinary objects to the Internet and making them smart. Objects will provide useful intelligence about how we use and interact with them, and allow them to interact with each other. Miniaturization of the chips and radios that make the objects smart is essential for practical applications, as is low cost smart objects will exist everywhere, in our homes, offices, vehicles, cities – all around us. Wearable and implantable devices will sense and improve our quality of life. Cisco predicts 50-75 billion connected “things” within next 6 years, up from around 9 billion connected phones and laptops today. All future products will be intelligent and connected. In addition to doing their core function, products will become the basis for totally new services that leverage the data they generate.

2. A smart and secure flexible infrastructure. We are already struggling to deal with the volume of information traversing the Internet today. A new paradigm is needed that supports this array of intelligent everyday objects, and the need for connectivity and information delivery will become a critical issue. Doing AI model training in the Cloud and interfering at the Edge or in your Business environment (on premise) will be the way of doing business. At IBM we call this Hybrid Cloud.

3. Useable real-time insights. Today’s buzzword, “AI” is an opportunity, but it’s not a solution. The challenge is to take the many streams of real-time data, seamlessly merge them and extract the knowledge they contain. These useable insights create value for people, automated systems and enterprises. Making sense of anomalies in patterns, for example, can allow companies to proactively service critical equipment, or help doctors take better care of their patients. City officials can use this type of information to create a less congested, greener city, allowing all of us to live healthier lives and personalize healthcare treatments as Watson Health is doing today.

When intelligent, everyday objects, smart and secure networks, and useable real-time insights work in concert, a “perfect storm” of functionality emerges. This storm will completely disrupt entire industries. The most important value of AI and IoT will be measured in the good it enables: saving lives, making the economy work better, efficient energy usage, better education for our children, and the list goes on.

A questionnaire issued by the Pew Research Center Internet Project asked more than 1,600 technology innovators, entrepreneurs, analysts and others if they think the Internet of Everything will have widespread and beneficial effects on the everyday lives of the public by 2025. The majority said yes, and so do I.

At IBM Research, we have a track record of improving the quality and experience of life through the power of innovation. Collaborating with clients and partners, we are applying AI, blockchain and IoT to solve many difficult problems and make a positive impact on society.
When we aim to diversify the workforce and leadership in our industries and in our companies, we are doing the right thing. We are doing the right thing from a moral perspective because no person should be denied opportunity based on race or ethnicity or gender. But we are also doing the right thing from a business perspective because diversity in our workforce, and particularly in our leadership, makes us more reflective of the clients and customers that we serve, and that has intrinsic value. It increases the institutional intelligence of our companies and organizations. The STEM companies we represent are more successful and the employees more engaged when there is an active diversity of thought!

As a woman who has spent many years in corporate leadership positions — often as the only woman or one of few women in the organization’s leadership — I’ve been reminded every day of the underrepresentation of women in corporate leadership. The question is whether there is anything that we, as women in leadership positions, or male allies, can do to increase the pace of progress. I believe that the answer is yes, we can speed the progress through education and mentoring.

The education part of this equation requires courage and honesty. We must make the benefits of diversity and the injustices of discrimination part of a continuing conversation in society and among our work colleagues. We need to call attention to corporate boards and leadership teams that lack that diversity (and where women are not equally compensated for equal work), especially if it’s happening within our own organizations. We need to have a discussion about bias, especially unconscious bias that impedes the advancement of women in the STEM field. Unconscious bias, in fact, can be the subtlest but greatest impediment to the objective of true equality. And to battle that unconscious bias requires us to have candid conversations with ourselves. Even as successful women, we were raised in and are still part of the culture in which these biases have existed for centuries. We have to be introspective enough and honest enough with ourselves to see that we, too, carry these biases. Do I as a female leader think of female colleagues and counterparts differently than males? Do the cultural and media messages that I have been exposed to in my youth cause me to think of a female leader as “pushy” when a male leader with the same qualities might be “assertive”? Do male leaders find they are more likely to interrupt a female colleague or employee than a male? The honesty that is required of us as women means that we sometimes have to recognize that, despite our deepest sincere desires and conscious efforts to the contrary, we, too, have subconscious biases, which are almost by definition, beyond our ability to control. But in recognizing the presence of our biases, we can consciously and deliberately set those biases aside to ensure we do not allow them to affect our decision making.

As a female leader, I do believe that I can offer useful guidance and advice to women facing the challenges of work/life/family balance. Mentoring is one of the greatest joys I experience in my work and personal life. I believe that sharing the benefit of my experiences (both the positives and the challenges) can be beneficial to all of my employees/direct reports in a mentoring context, and I think that it is important to discuss the benefits of diversity and the struggles of women in the workplace with both my male and female mentees. I am committed to personally play a part, through mentoring, in speeding the progress toward a day of true equality. In fact, I feel compelled to do so because I believe so strongly in the value of diversity to our workplaces and to our country, not only because it’s the right and the fair thing to do for individuals but because it’s the right thing to do for business, and most of all because of the richness and joy that diversity adds to our lives.

Michele Watson
Senior Vice President, Client Services
Indeed

Indeed is the #1 job site worldwide, with over 200 million unique visitors per month. Indeed is available in more than 60 countries and 28 languages, covering 94% of global GDP. Since 2004, Indeed has given job seekers free access to millions of jobs from thousands of company websites and job boards. As the leading pay-for-performance recruitment advertising network, Indeed drives millions of targeted applicants to jobs in every field and is the most cost-effective source of candidates for thousands of companies.

Founded by Paul Forster and Rony Kahan, Indeed is a subsidiary of Recruit Holdings Co., Ltd. In the US, Indeed has offices located in Amsterdam, Dublin, Düsseldorf, Hyderabad, London, Paris, Sydney, Tokyo, and Toronto. For more information about Indeed, see our blog, press releases or contact us.
Ilene S. Gordon
Chairman, President and CEO
Ingredion Incorporated

Ingredion Incorporated (NYSE: INGR) is a leading global ingredient solutions provider. The Company turns corn, tapioca, potatoes and other vegetables and fruits into value-added ingredients and biomaterial solutions for the food, beverage, paper and corrugating, brewing and other industries. Serving customers in over 100 countries, our ingredients make yogurts creamy, candy sweet, paper stronger, lotions silky and add fiber to nutrition bars. A FORTUNE 500 company with 2016 net revenue of $5.6 billion, Ingredion operates in more than 40 countries; services customers in more than 100 countries; and has approximately 11,000 employees worldwide.

Ilene Gordon is chairman, president and chief executive officer of Ingredion, incorporated, a leading global supplier of ingredient solutions to diverse industries. Ms. Gordon joined Ingredion in May 2009 from Rio Tinto Alcan where as president and CEO of Alcan Packaging she led a $6.5 billion, global packaging business based in Paris, France. Over her 10 year tenure with Alcan and Pechiney, which was acquired by Rio Tinto in 2008, she held various leadership positions, starting as president of Pechiney Plastic Packaging. Ms. Gordon spent 17 years in executive roles, at Signode, a leading global packaging company specialized in materials handling, which today is a part of Illinois Tool Works. Ms. Gordon began her career at the Boston Consulting Group (BCG), an international management consulting firm, as a strategy consultant, based in the Boston, London and Chicago offices.

In addition to Ingredion, Ms. Gordon is a member of the boards of Lockheed Martin and International Paper. She is a vice chair of the Conference Board and a member of the MIT Corporation and the executive committee of The Economic Club of Chicago. She also is a director of World Business Chicago and serves on Gov. Rauner’s Illinois Bicentennial Commission.

Ms. Gordon holds a Bachelor of Science degree in mathematics, Phi Beta Kappa, from the Massachusetts Institute of Technology (MIT) in Cambridge, Mass.; and a Master of Science degree in management from MIT’s Sloan School of Management.

WOMEN IN STEM: LEVELING THE PLAYING FIELD

Imagery has no clean drinking water. Or driving a car without windshield wipers. Or suffering from diabetes before the discovery of insulin. Or a soldier fighting without the protection of a kevlar® vest and helmet.

Fortunately, these are all hypothetical situations, thanks to women whose contributions have improved or saved lives over the decades. These women were experts in STEM, science, technology, engineering or math, and most of them had degrees in these disciplines.

While more and more female students are studying STEM subjects today, males still outnumber them. Females now earn only about 37 percent of undergraduate degrees, and they are even more underrepresented in majors like computer science, engineer and physics.

Not surprisingly, the gender gap persists in the workplace. While women represent about half of the labor force, they hold only about one-quarter of core STEM jobs. Future U.S. economic growth and competitiveness largely rests on the innovations of Industries that rely on employees with STEM expertise. If it persists, the gender gap can put the nation at a competitive disadvantage and its female citizens at an economic disadvantage as STEM jobs are growing faster, are better paying and have lower levels of unemployment than non-STEM jobs.

Speaking as the CEO of a six billion dollar company, a company that relies on science, technology, and engineering as its livelihood, we need girls and women to bring their intellect, creativity and unique capabilities to the conversation. Several years ago the U.S. Chamber of Commerce issued a report on women in STEM, “Repositioning of STEM for Women and the U.S. Economy.” The researchers talked with leaders and experts from business, academia and other organizations to understand why more women are not in STEM jobs. Their three conclusions deserve repeating.

First, it’s essential to encourage young girls to explore STEM at an early age. And it needs to be fun and cool. My parents encouraged my interest in math. My Dad, who was an accountant, shared his materials from an IBM training class. That gave me inspiration for a math project. And my Mother went to bat for me up when I had been unfairly excluded from a top-level math class.

Second, females in STEM fields need mentors. This goes for girls as well as adult women because many girls lose confidence in their math abilities in middle school. A little encouragement goes a long way.

Third, creating an inclusive culture will help girls and women advance in STEM. Believe it or not, some teachers still believe that boys are better in math than girls; women advance in STEM. Not surprisingly, the gender gap persists in the workplace. While more and more female students are studying STEM subjects today, males still outnumber them. Females now earn only about 37 percent of undergraduate degrees, and they are even more underrepresented in majors like computer science, engineer and physics.

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Based on these conclusions, most everyone has a role to play. Parents can encourage daughters to explore STEM. It could be as simple as buying her a LEGO® set or taking her to a science museum. Teachers need to treat girls equally to boys in STEM classes and encourage female students to enter the science fair or take a coding class. And STEM professionals can mentor a younger female colleague.

CEOs can set goals for women in the executive ranks. It starts at the top with a diverse board and leadership team. At Ingredion, females comprise 40 percent of our board of directors and one-third of our executive team. One of my goals is to get more women running our manufacturing plants and business units. Plus, everyone on our leadership team has diverse goals for manager-and-above positions: assemble a diverse slate of candidates for at least 90% of open positions; and improve representation (quarter-over-quarter) of women (globally) and people of color (U.S. only) in manager-and-above positions.

Companies could also support students in the local community. Taking a long-term view of gender diversity in STEM, in 2011 Ingredion became the first corporate sponsor of Girls4Science, a Chicago-area nonprofit dedicated to encouraging girls to pursue a STEM education. Ingredion provides professional as well as financial support to Girls4Science. Three Ingredion employees participate on the Girls4Science board of directors and have been actively involved in program development. Ingredion has hosted a number of Girls4Science workshops at its manufacturing and R&D facility in suburban Chicago. Ingredion STEM professionals guide the girls in conducting experiments and serve as role models. Additionally, in 2013 Ingredion began funding an annual scholarship contest to send three Girls4Science students to summer Space Camp at the U.S. Space and Rocket Center® in Huntsville, Alabama.

Ingredion employs several Girls4Science alumnae who have matriculated to universities as summer interns. And, I meet with each of them individually to provide direction, encouragement and inspiration.

Though Girls4Science remains a local grassroots organization, student participation has increased almost 10 fold since Ingredion became involved in 2011. And, currently, five other companies are supporting Girls4Science. As other organizations look to stem the gender gap in science, technology, engineering and math, Girls4Science could serve as a grassroots model in other geographies.

It is predicted that the majority of jobs in the next decade will require technical skills. To fulfill the growing demand for STEM skills in the future, the STEM playing field must be leveled. We need to encourage more girls to aspire to be the next life-saving inventor or record-breaking astronaut, and to study STEM. Our future prosperity and innovation depend on it.

Girls4Science could serve as a grassroots model in other geographies.
DIVERSITY: MORE THAN A BUZZWORD

I recently came across a New York Times OpEd in which the authors likened diversity to fresh air. “It benefits everybody who experiences it (and) by disrupting conformity, it produces a public good,” says Sheen S. Levine, professor at the Jindal School of Management at the University of Texas at Dallas and David Stark, professor of sociology at Columbia.

Their studies show that by breathing fresh perspective into prevailing wisdom, diversity prevents stale and often flawed group think and improves the overall cognitive performance and critical reasoning ability of individuals working in groups.

Over the years, diversity has become somewhat of a buzzword, and scholars and advocates alike have attempted to define the benefits of diversity and inclusion in many ways. At most organizations, the benefit is the opportunity to leverage the improved performance that diversity promotes.

That is true for us at Johnson & Johnson as well, and, in addition, we believe that growth depends on maximizing the global power of diversity and inclusion to bring the best science, technology and ideas to deliver healthcare solutions. A great idea can come from anywhere in the world, and innovation depends on finding those great ideas, whether from within our own walls or from around the world, regardless of ethnicity, geography, gender or generation.

So, for us, it is not just a nice to do, but a must do to drive superior business results and create sustainable competitive advantage. Companies in the top quartile for gender, racial or ethnic diversity are more likely to have financial returns above their national industry medians. And it’s not just about financial wherewithal; it’s also about generating promising ideas that better meet the needs of men and women of all cultures and ethnicities that will be using our products. In a country like the US, where more than half of the 20 million children under age five identify as racial and ethnic minorities, that’s important for our future as well as theirs.

Yet, while research shows diversity creates stronger healthcare ecosystems, the fact is industry still has a long way to go. The good news is that we all are keenly aware of the issue and we all believe we need to work together to change it. But, our ability to affect this change over the long term requires that we work now to create that future. By inspiring young women and minorities into STEM education and careers today, we can ensure a more robust and diverse pipeline for the future. And, in addition to prioritizing diversity within our individual organizations, we also must work together to build a diverse talent pipeline within the ecosystem as a whole. Without a collaborative effort to educate, attract, retain and advance a more diverse talent pool—from kindergarten through the highest levels of leadership—the private sector will continue to miss opportunities and breakthrough ideas.

Let’s continue to keep this discussion at the forefront, and work together to find and implement solutions that can potentially benefit our industries—and ultimately society.

Seema Kumar
Vice President, Innovation, Public Health and Science Policy Communication
Johnson & Johnson

Caring for the World, one person at a time, inspires and unites the people of Johnson & Johnson. The company embraces research and science—bringing innovative ideas, products and services to advance the health and wellbeing of people. The company’s approximately 132,500 employees at more than 250 Johnson & Johnson operating companies work with partners in healthcare to touch the lives of over a billion people very day, throughout the world.

Seema Kumar is Vice President of Innovation, Global Health and Science Policy Communication for Johnson & Johnson. In this role, she drives Johnson & Johnson’s reputation as a pioneer and partner of choice in innovation, research and development (R&D) and global public health. Her responsibilities include enterprise-wide communications regarding Johnson & Johnson innovation and R&D in pharmaceuticals, medical devices and consumer products, as well as medical safety and ethics, domestic and international policy affecting the sciences, and solutions for serious public health challenges. She leads communication for the Office of the Chief Scientific Officer, including the Johnson & Johnson Innovation Centers, Johnson & Johnson Global Public Health and the Office of the Chief Medical Officer. As a champion of science and innovation, STEM, global health, and mentorship for women and minorities, she is a frequent guest speaker and lecturer at international forums.
**Jenny Stentz**
Global Vice President of Channel Sales and Operations,
Global Products division
Building Technologies & Solutions
Johnson Controls

Johnson Controls’ Building Technologies & Solutions is making the world safer, smarter and more sustainable – one building at a time. Our technology portfolio integrates every aspect of a building – whether security systems, energy management, fire suppression or HVAC – to ensure that we exceed customer expectations at all times. We operate in more than 150 countries through our unmatched network of branches and distribution channels, helping building owners, operators and contractors enhance the full lifecycle of any facility. Our arsenal of brands includes some of the most trusted names in the industry such as Tyco®, YORK®, Metasys®, Ruskin®, TruStile, Fricke®, PENN®, Sabroe®, Simplex® and Grinnell®. For more information, visit www.johnsoncontrols.com or follow @JCI on Twitter.

Jenny Stentz is the global vice president of channel sales and operations for the Global Products division of Johnson Controls’ Building Technologies & Solutions business. In this role, she works across a variety of channels to market to drive growth for a vast portfolio of products and brands – from Tyco, and Simplex for security and fire protection, to YORK® and Hitachi for HVAC. As Johnson Controls evolved as a workplace, it made our environments safer, smarter and more sustainable. Jenny has been critical to establishing that strong reputation. She is well-known throughout the company for breaking down silos and empowering teams to collaborate – regardless of geographic boundaries or reporting lines. Along with a laser-like focus on exceeding customers’ expectations, her passion for mentoring and coaching women in STEM is another key attribute.

Jenny has been part of Johnson Controls for more than 20 years. Prior to her current role, she was the general manager of the Energy Solutions business, which works closely with key vertical markets across the United States – government, healthcare and education – to design and deliver building solutions that lower costs and decrease carbon footprints with guaranteed results. One highlight in this role was working with the Hawaii Department of Transportation to design, manage and install a system that saved the county $6 million by upgrading facilities, reducing energy usage by about 49 percent and is guaranteed to save a total of $518 million at 12 state-operated airports. Jenny has held several other leadership positions in general management, sales and marketing throughout her career at Johnson Controls.

She holds an MBA from Tulane University and a bachelor’s degree in electrical engineering from Louisiana State University. In her free time, Jenny enjoys spending time with her family volunteering at her children’s STEM-certified school and cheering on little league sports.

**EXPERIENCING THE PASSION OF STEM**

If you ask a child what her favorite subject is in school, she will tell you engineering.

She’s only nine, but she attends a STEM-certified public school. Her answer has consistently been engineering since kindergarten. What makes this answer interesting is that her least favorite subject has consistently been math. She is an experiential learner. She has been taught to think of an idea, explore a subject, sketch a design, build a prototype – test it! – and improve her invention. She has learned a formal process for innovation, and she loves to solve problems. Compared to experimenting and inventing, plain math is just boring to her. She has been intimidated by math but dove right in without any reluctance to building and inventing things. Of course, along this journey she has been using math all along. Measuring the right amount of each ingredient, cutting the right length of material, understanding the value of time during testing. She learned to do math by actually experiencing it. Unfortunately, if she had not attended a school that embraced STEM, she would have chucked math up to something she is not good at, and would likely never aspire to be an engineer.

When I grew up, I distinctly remember the advice, “You are good at math. You should be an engineer.” These two ideas were so interconnected that anyone that did not develop a passion for equations and word problems by middle school was destined to not pursue a STEM-related career. We each learn differently, but we all have one thing in common. When you develop a passion for something, your effort and persistence in driving that passion will be exponentially greater. Experiential learning, whether math, science, engineering or anything else – helps students build a passion for learning.

As I’ve talked with college engineering students through our partnerships with Society of Women Engineers (SWE), I repeatedly hear their passion around bio-medical or bio-mechanical engineering, because they can more tangibly understand how they can use this degree to change someone’s life. The truth is that you can change the quality of life for people in any STEM-related field. They just haven’t built a passion for other disciplines, because they may have missed the experiential learning opportunity.

When I accepted a job with Johnson Controls, I had no idea of the impact I would have working with an amazing team on projects that would save our customers billions of dollars on energy costs, and these projects have made our world a more sustainable place. I look across the skyline of the buildings that I have helped to make smarter, more sustainable and safer for people to work, heal, learn and live in – it makes me proud of how I have been able to make an impact. We have an opportunity to leverage STEM to help every generation build a passion for how they can make an impact across so many different careers and professions.

We can create experiences through internships, networking and mentorships, starting as early as elementary school. An electrical or mechanical engineering major does not generate the same level of passion and excitement to a younger student as having the opportunity to build the skyline in your city, but it takes these skills to do just that. For some reason, we wait until students pick these majors later in their educational experience before we tell them the cool things they can do with those degrees. Why not create these experiences sooner?

What makes this opportunity even more exciting is the impact that technology is having across every single industry. Artificial intelligence is opening up new possibilities. But it’s the ability to store incredible amounts of data in the cloud – matched with tiny, affordable sensors that can be put inside basically anything – transforming knowledge into decisions and action that has enabled artificial intelligence to take center stage. Digitalization is happening to homes, to buildings, to automobiles and more – but it is also happening to almost any kind of product or equipment, whether a watch or a pair of shoes or a golf club. Today, we can measure almost anything, and what we can measure we can analyze and improve.

Let’s face it, women make great problem solvers. We listen and we care. We want to make the world better. When we are passionate about something, we will move mountains to make it happen. This doesn’t mean that every woman will choose a STEM-related field, but why not cast the STEM net a little further to create more experiences for young girls and women to get excited and build their confidence in solving problems?

Why not give my daughter – and those like her – more reasons to choose a career in STEM and make our future brighter? The possibilities are endless if we’re willing to tap into their natural passion.
Lori Beer
Global Chief Information Officer
JPMorgan Chase & Co.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of $2.6 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, and asset management. A component of the Dow Jones Industrial Average, JPMorgan Chase & Co. & Co. serves millions of customers in the United States and many of the world’s most prominent corporate, institutional and government clients under its JPMorgan and Chase brands.

JPMorgan Chase is currently the highest-ranked megabank among all companies worldwide and ranked #1 for technology innovation in Fortune’s annual World’s Most Admired Companies list. JPMorgan Chase is also the highest ranked financial services company Boston Consulting Group’s list of the most innovative companies.

Information about JPMorgan Chase & Co. is available at www.jpmorganchase.com.

Lori Beer is the Global Chief Information Officer of JPMorgan Chase & Co., responsible for the firm’s technology systems and infrastructure across all lines of business globally. Lori manages a budget of more than $9 billion and over 40,000 technologists supporting JPMorgan Chase’s Retail, Wholesale and Asset Management businesses. She also serves as a member of the firm’s Operating Committee.

Lori joined the firm in 2014, and most recently was the Chief Information Officer for the Corporate & Investment Bank. Prior to joining the firm, she was Executive Vice President of Specialty Businesses and Information Technology for WellPoint, Inc. She was responsible for a $10 billion business unit which included WellPoint’s Specialty Products, comprised of dental, vision, life, disability and workers’ compensation, Internet retail business, 1-800 CONTACTS, Federal Government Solutions, health services research subsidiary, HealthCore; Information Technology; Information Management, and technology-driven innovation.

Lori has been featured in MIT Sloan Management Review; The Digital Transformation of Healthcare; Fortune Magazine’s ‘Leadership Series’. She was named a Computerworld Premier 100 IT Leader and the National Association for Female Executives Women of Excellence Health Care Champion in 2011.

She earned a Bachelor of Science degree in Computer Science from the University of Dayton.

Being the Global Chief Information Officer at JPMorgan Chase bears great responsibility – and yields opportunities.

You may know that JPMorgan Chase is the largest bank in the U.S., serving half of all US households. We have nearly 250,000 employees in more than 60 countries serving clients that range from individuals to large corporations, small and medium sized businesses, governments, hospitals and educational institutions.

We process $5 Trillion in payments every single day, manage 6,500 applications for our employees, customers and clients, and serve 45 million digital customers – all of which is accomplished through technology. This means we need to be constantly innovating, building commercial technologies that operate at scale. It means we have to be creative, always thinking about the future, investing in new ideas and partnering with fintech startups where it makes sense.

In addition to keeping the business running though, there’s another responsibility – and an opportunity – for leaders in corporations, especially technology organizations, to help improve diversity and close the gender gap.

According to the Census Bureau’s 2009 American Community Survey, women comprise 48% of the U.S. workforce, but just 24% of STEM workers. It is now a commonly known fact that diversity of people means diversity of perspectives, which is better for business.

Throughout my career, I’ve been a staunch, outspoken supporter of women in technology and have strived to serve as a role model for women – especially my two daughters, Christina and Morgan (who I’m proud to say are pursuing a career and degree, respectively, in STEM). I’m fortunate that my company is equally as supportive of women and overall diversity in the workplace.

At JPMorgan Chase, we’ve seen great progress across the firm: 50% of our Operating Committee (our 10 most senior management executives) and employees are women and 30% of women are in senior leadership positions. But like the Census study indicates, we have more to do in technology.

The firm is keenly focused on maintaining and, where needed, improving the pipeline of talented women. We created a Diversity Council to more concertedly advance diversity and inclusion among our technologists. We focus on attracting, developing, including and retaining talent with different backgrounds, perspectives, nationalities, ethnicities, disabilities, gender and sexual orientations.

We’re partnering with terrific organizations focused on bringing more women into STEM careers – like STEMconnector – hosting events and implementing programs directly targeted toward recruiting and developing women.

For example, our Tech Connect program aims to bring more women into technology careers. It provides graduates who didn’t major in computer sciences with four weeks of training and development, including basic programming skills, mentoring and networking opportunities, to help them in their first steps toward a career in technology at JPMorgan Chase. The firm’s ReEntry program aims to bring experienced professionals who took a hiatus from working to care for their family. This structured program also provides training and development resources to help with the adjustment of going back to work.

Beyond recruiting, we’re very focused on developing our women to ensure that they’re prepared to take on challenging technical and managerial challenges.

Take IT Forward is a firmwide training program for women in technology that provides continuous learning in technical skillsets and leadership development opportunities in support of career advancement. And our dozens of firmwide women’s groups provide additional opportunities for women to get to know each other and support one another.

We’re also conducting unconscious bias training to further complement our diversity and inclusion efforts.

I’ve consistently encouraged and mentored staff across my teams to create an inclusive environment, regularly challenging my management team to ensure that women are given opportunities to take key roles in innovative and strategic initiatives and represented on recruitment and promotion slates.

On a more personal note, my family and I established a scholarship fund at the University of Cincinnati earlier this year which will help recruit more top women students to study information systems and analytics and pursue careers in STEM fields. We hope to empower women business students to grow as industry experts in a rapidly evolving and innovative world.

I often encourage women to continue building their technical skills and be courageous – take risks wherever they are in their careers. By using our education and expanding our knowledge, we will leave a unique mark on the world.
Miriham Hernandez-Kakol
Advisory Principal and U.S. Service Line Leader, Customer and Operations Business/Global Lead Partner

KPMG

KPMG is one of the world’s leading professional services firms, providing innovative business solutions and audit, tax, and advisory services to many of the world’s largest and most prestigious organizations.

KPMG is widely recognized for being a great place to work and build a career. Our people share a sense of purpose in the work we do, and a strong commitment to community service, inclusion and diversity, and eradicating childhood illiteracy.

KPMG LLP is the independent U.S. member firm of KPMG International Cooperative (“KPMG International”). KPMG International’s independent member firms have 189,000 professionals, including more than 9,000 partners, in 152 countries. Learn more at www.kpmg.com/us.

KPMG overall is focused on cultivating future generations of diverse leaders skilled in the important disciplines of STEM. Our professionals invest their time, passion, and skills volunteering for organizations like Junior Achievement and NAE, which focus on building the STEM skills of diverse youth.

Companies also need to ensure that inclusion and diversity continue be integrated into the strategic business priorities of their organizations. An inclusive, supportive environment that ensures everyone can reach their full potential and contribute, is a must.

I am fiercely committed to diversity and the advancement of women. I am a member of KPMG’s Women’s Advisory Board, served on the leadership team for KPMG’s Network of Women, and belong to the New Jersey Women “Network to Network” organization. I also actively serve on the New Jersey Junior Achievement Board.

I am motivated by my own personal experience that diverse teams are the most creative, the most impactful and can create the most lasting impressions on our clients, our people and each other. This is not only my belief, it is proven through research and observation. Today’s business environment requires innovative solutions to complex problems, and success in companies that work in an inclusive environment with diversity of thought, diversity of experience, and diversity of skills are the teams that are best poised to solve our clients’ strongest challenges.

We need to have the best talent, with diverse perspectives, to deliver high-quality and innovative services. The STEM disciplines are driving innovations that impact how we work and live. Disruptive technologies like cognitive, robotics, intelligent automation, and cloud, all need the STEM disciplines in order to advance.

Diversity of thought, experiences and skills are needed in the STEM fields to continue to foster this type of innovation in the years ahead.

Mentoring programs and relationships – combined with a focus on inclusive environments and empowering work cultures – can help the development, recruitment and retention of diverse STEM talent.

Miriam Hernandez-Kakol joined KPMG in 1999 after working for a software, engineering and consulting firm that was acquired by SAIC. Since joining the firm, Miriam has helped build the Management Consulting business from its inception. In addition, she previously led KPMG’s U.S. Technology Enablement practice. Over the course of her career, Miriam has consulted with some of the largest technology, communications and media companies in the Americas, rolling out large transformational programs and advising clients as they make operational and system changes as a result of industry convergence and consolidation.

She is a member of KPMG’s Women’s Advisory Board, served on the leadership team for KPMG’s Network of Women, and belongs to the New Jersey Women “Network to Network” organization. She also actively serves on the National Academy Foundation’s STEM committee and the New Jersey Junior Achievement Board.

Miriam was recently recognized on ALPFA’s 50 Most Powerful Latinas of 2017, as well as Consulting magazine 2016 Women Leaders in Consulting award for Excellence in Client Service.

STEM touches every industry and every enterprise in today’s fast-changing marketplace. Recruiting and retaining diverse talent is a major challenge and priority for companies to meet their competitive goals. There just is not enough STEM talent to go around if the talent and inclusion are not part of the solution.

The President’s Council of Advisors on Science and Technology estimates that 1 million more STEM professionals are needed over the next decade if the U.S. is to retain its historical preeminence in science and technology. The need for talent is urgent. The Bureau of Labor Statistics reported 8.6 million STEM jobs in 2015 alone, making it the fastest growing U.S. sector.

However, the number of women and individuals from certain ethnic populations in STEM careers is already alarmingly small. Mentoring programs and relationships, inclusive environments and empowering work cultures are powerful catalysts to help address this diversity and talent issue.

It starts early with the pipeline of high school students interested in a STEM field of study, through university and into their first jobs. According to the U.S. Department of Commerce, women hold a disproportionately low share of STEM undergraduate degrees, particularly in engineering. In addition, women with a STEM degree are less likely than their male counterparts to work in a STEM occupation; they are more likely to work in education or healthcare.

I strongly believe that more programs need to be developed to create attractive job opportunities for diverse individuals as they attain STEM-related degrees, and to retain those already working in STEM-related careers.

As a member of the National Academy Foundation’s (NAF) STEM committee, which helps shape the STEM curriculum within NAF’s 600+ Academies, and the New Jersey Junior Achievement Board, I have seen firsthand the powerful impact that a focused curriculum, mentoring programs and relationships can have.

In STEMconnector’s white paper, “Women in STEM: Realizing the Potential,” one out of four female students reported that their greatest challenges in attending college are confidence, motivation or support.

When we connect young people with senior leaders in college are confidence, motivation, or support.

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Women make up only a quarter of STEM occupations. The challenges for women of color were even wider, making up less than 10% of working scientists and engineers in the U.S. in 2013.

We need visible role models who are taking the time to coach, mentor and sponsor women in STEM. And we need to proactively identify high-performing and high-potential women in STEM fields and provide them with growth opportunities to build skills and advance.

I work hard to instill confidence in emerging female leaders I especially encourage them to let their passions be their guide. I do this by providing career growth opportunities and “stretch” assignments meant to show that I believe they can do it -- they have both my faith and trust.

Companies also need to ensure that inclusion and diversity continue be integrated into the strategic business priorities of their organizations. An inclusive, supportive environment that ensures everyone can reach their full potential and contribute, is a must.

I am fiercely committed to diversity and the advancement of women. I am a member of KPMG’s Women’s Advisory Board, served on the leadership team for KPMG’s Network of Women, and belong to the New Jersey Women “Network to Network” organization. I also actively serve on the New Jersey Junior Achievement Board.

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Irena Savakova
RIBA LEED AP BD+C
Vice President, Director of Design
Leo A Daly

Ms. Savakova is a Vice President at the award-winning international architecture and engineering design firm Leo A Daly and is the first woman to serve as Director of Design in its Washington DC office. Recognized with numerous design awards, she is highly regarded by her peers as a leader in the design profession. Her senior level responsibilities include strategic planning, design oversight, business development, marketing and recruiting. Throughout her 25 year career, Ms. Savakova has led teams schooled in the STEM disciplines, designing and delivering beautiful, complex, comfortable, secure and inspiring works of architecture. Her projects span the Corporate Commercial, Federal, Educational, Municipal and Intentional market sectors. Ms. Savakova’s multidisciplinary approach leverages her knowledge of building core and shell development, interior design and complex space planning. “Architecture is the ultimate synthesis of Science, Technology, Art and Mathematics. To ignore any single discipline, removes the humanity from our built environments.” Her many projects represent this unique design approach and can be experienced throughout the nation and internationally (Dubai, Abu Dhabi, Qatar, Serbia, Bulgaria).

The passion for interdisciplinary design has led Ms. Savakova to contribute to the designs of many significant buildings for agencies such as The Social Security Administration, the National Guard Bureau, the Air National Guard, the Naval Facilities Engineering Command and the National Aeronautics and Space Administration. Most recently for the US Department of State, Ms. Savakova provided conceptual design for US embassies in Zimbabwe and Mauritania. Ms. Savakova was also a key member of the design team for the winning entry in the University of Dubai International Design Competition. Currently she serves as Principal in Charge, leading the design team for the University of Maryland School of Public Policy, which began construction in 2019 on the College Park Campus.

EXPERSIENAL LEARNING
All learning is based on personal experience that is refined through application. When we consider how people learn, we must acknowledge that no two people are alike. Every person is unique, therefore every person has their own unique way of learning. Essential learning, or life-long learning, only occurs as a result of a person’s collected experiences. More specifically, learning happens out of personal experience. The creative application of acquired learning to solve a problem is how we define innovation at Leo A Daly. Science, Technology, Engineering and Math are the tools we use to drive that innovation.

HOW WE LEARN
At Leo A Daly, we believe education is a transformative process accomplished through an immersive experience. As architects, it is our job to craft that experience. When a person has an immersive experience, it is internalized, changing that person irrevocably. Once ingrained, that experience becomes learning. Our education practice encapsulates the action of learning into four stages: Explain, Demonstrate, Guide, and Enable (EDGE). These stages move a learner from a passive to an active state of participation and result in a transformative experience. Explain (introduce a concept): “This is the recipe for Chocolate chip cookies!” Demonstrate (How to apply the concept): “Begin by combining the ingredients in a large mixing bowl. Next pre-heat the oven to 375 degrees…” Guide (see that the learning experience is successful): “Be mindful of the time in the oven.” Enable (reminding the learner of what is possible and what they now know): “For the rest of your life you will enjoy fresh baked cookies!” Each stage incorporates attributes of the STEM disciplines and can be applied to any subject of learning. Understanding the learning process is crucial when designing and planning environments intended to support learning activities. It is one of the tools we use to create immersive experiential learning environments. Environments designed using and for the application of science, technology, engineering and math.

SUBSTANTIAL LEARNING = PERSONAL EXPERIENCE
At Leo A Daly we define Creativity as original ideas having useful application in solving a problem. In architectural design, no two buildings are alike. Each has their own individual site conditions, programming, demands, etc. We frame every design as a problem in need of a solution. To address the unique complexity of each project we deploy an immense amount of creativity in seeking the singular solution that answers the problem to the best of our abilities. We may call on our past experiences to reference a former solution, but we rigorously test that solution and adjust or refine them for the project at hand. The point being that buildings are personal expressions of the owner/occupants within them. Buildings are meant to be experienced. The most successful ones culminate in an experience that expresses something about the owner/occupants of that building. When we enter into a building we have an emotional, intellectual and, often, physical response to our surroundings. We are programmed as beings to do so. Step into a church and people immediately adopt a humble posture and begin to speak in lower, whispered tones. Enter into a concert hall and we adopt a more excited anticipatory posture. Our experience is dictated by the environment in which it occurs. The process of crafting space to articulate behavior and experience can take a lifetime to perfect and is often more art than science. The real art of designing the built environment is rooted in empathy. To truly design a successful environment, we must understand and adopt our client’s desires, dreams and goals. Any designer can draw a building plan or section or create a rendering. But a true architect – someone who can craft an experience out of brick and mortar and wood and metal – has to be able to see the vision from the client’s perspective. Without this one attribute - empathy – a building will be generic, lacking warmth, absent of personality, lacking in personal detail and devoid of humanity. To create built environments that express the personal values of the owner we use spatial geometries, a combination of textures and materials, carefully orchestrated space planning, technology and coordinated interdisciplinary design. These architectural elements are subservient processes learned through skills and ways of thinking that are developed while practicing Science, Technology, Engineering and Math. At Leo A Daly we practice these skills in the designing and execution of every single project.

CREATING THE ARCHITECTURAL EXPERIENCE
STEM discipline has pervaded architectural design for centuries. They are inexorably tied together. To that end, most architectural training is rooted in STEM education. At Leo A Daly, we are so keenly aware of this that we were the first design firm to offer in-house engineering services in tandem with architectural design. As we stand at the brink of our second century design- ing buildings of substance, we are looking forward to a bright future where, as our firm began to do decades ago, the disciplines of science, technology, engineering, math and architecture began to merge revealing possibilities we have yet to dream of. As each discipline progresses in its own course, they support each other facilitating the future designs of our homes, schools, hospitals, embassies, churches, villages, towns, cities, societies, and beyond. This embodies all these in the most unique, personal and artful ways.

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All learning is based on personal experience that is refined through application. When we consider how people learn, we must acknowledge that no two people are alike. Every person is unique, therefore every person has their own unique way of learning. Essential learning, or life-long learning, only occurs as a result of a person’s collected experiences. More specifically, learning happens out of personal experience. The creative application of acquired learning to solve a problem is how we define innovation at Leo A Daly. Science, Technology, Engineering and Math are the tools we use to drive that innovation.

HOW WE LEARN
At Leo A Daly, we believe education is a transformative process accomplished through an immersive experience. As architects, it is our job to craft that experience. When a person has an immersive experience, it is internalized, changing that person irrevocably. Once ingrained, that experience becomes learning. Our education practice encapsulates the action of learning into four stages: Explain, Demonstrate, Guide, and Enable (EDGE). These stages move a learner from a passive to an active state of participation and result in a transformative experience. Explain (introduce a concept): “This is the recipe for Chocolate chip cookies!” Demonstrate (How to apply the concept): “Begin by combining the ingredients in a large mixing bowl. Next pre-heat the oven to 375 degrees…” Guide (see that the learning experience is successful): “Be mindful of the time in the oven.” Enable (reminding the learner of what is possible and what they now know): “For the rest of your life you will enjoy fresh baked cookies!” Each stage incorporates attributes of the STEM disciplines and can be applied to any subject of learning. Understanding the learning process is crucial when designing and planning environments intended to support learning activities. It is one of the tools we use to create immersive experiential learning environments. Environments designed using and for the application of science, technology, engineering and math.

SUBSTANTIAL LEARNING = PERSONAL EXPERIENCE
At Leo A Daly we define Creativity as original ideas having useful application in solving a problem. In architectural design, no two buildings are alike. Each has their own individual site conditions, programming, demands, etc. We frame every design as a problem in need of a solution. To address the unique complexity of each project we deploy an immense amount of creativity in seeking the singular solution that answers the problem to the best of our abilities. We may call on our past experiences to reference a former solution, but we rigorously test that solution and adjust or refine them for the project at hand. The point being that buildings are personal expressions of the owner/occupants within them. Buildings are meant to be experienced. The most successful ones culminate in an experience that expresses something about the owner/occupants of that building. When we enter into a building we have an emotional, intellectual and, often, physical response to our surroundings. We are programmed as beings to do so. Step into a church and people immediately adopt a humble posture and begin to speak in lower, whispered tones. Enter into a concert hall and we adopt a more excited anticipatory posture. Our experience is dictated by the environment in which it occurs. The process of crafting space to articulate behavior and experience can take a lifetime to perfect and is often more art than science. The real art of designing the built environment is rooted in empathy. To truly design a successful environment, we must understand and adopt our client’s desires, dreams and goals. Any designer can draw a building plan or section or create a rendering. But a true architect – someone who can craft an experience out of brick and mortar and wood and metal – has to be able to see the vision from the client’s perspective. Without this one attribute - empathy – a building will be generic, lacking warmth, absent of personality, lacking in personal detail and devoid of humanity. To create built environments that express the personal values of the owner we use spatial geometries, a combination of textures and materials, carefully orchestrated space planning, technology and coordinated interdisciplinary design. These architectural elements are subservient processes learned through skills and ways of thinking that are developed while practicing Science, Technology, Engineering and Math. At Leo A Daly we practice these skills in the designing and execution of every single project.

CREATING THE ARCHITECTURAL EXPERIENCE
STEM discipline has pervaded architectural design for centuries. They are inexorably tied together. To that end, most architectural training is rooted in STEM education. At Leo A Daly, we are so keenly aware of this that we were the first design firm to offer in-house engineering services in tandem with architectural design. As we stand at the brink of our second century designing buildings of substance, we are looking forward to a bright future where, as our firm began to do decades ago, the disciplines of science, technology, engineering, math and architecture began to merge revealing possibilities we have yet to dream of. As each discipline progresses in its own course, they support each other facilitating the future designs of our homes, schools, hospitals, embassies, churches, villages, towns, cities, societies, and beyond. This embodies all these in the most unique, personal and artful ways.
Lorraine M. Martin
Executive Vice President and Deputy
Lockheed Martin Rotary and Mission Systems

Lockheed Martin solves the world's toughest technology challenges. More than 70 nations rely on Lockheed Martin employees, products and technologies to help them protect and connect their citizens and advance scientific discovery.

In a time of growing unpredictability and evolving threats, innovation and performance are at the center of everything we do.

We’re driven by a sense of purpose and passion to shape the future and solve the world’s most difficult challenges. We bring that same passion and purpose to our communities, where our employees play an active role in strengthening the quality of life where we live and work.

Throughout her career, Ms. Martin has held a variety of high visibility leadership positions across Lockheed Martin, including Vice President of C-130 Programs, Vice President of the C-5 Program, and Vice President, Flight Solutions, Lockheed Martin Simulation, Training & Support, responsible for aircrew training programs for the U.S. Air Force Special Operations Command, C-130 Hercules, F-16 Fighting Falcon, F-22 Raptor and F-15 Eagle, among other programs. She led the expansion of Lockheed Martin’s training business to numerous international training contracts.

Prior to joining RMS, Ms. Martin served as the Executive Vice President and General Manager for the $9 billion F-35 Lightning II Program, for Lockheed Martin Aeronautics Company. She was responsible for acquisition, development and demonstration program, production, flight testing, global deployment and sustainment of the three F-35 variants for 13 military services in nine partner countries and three foreign military sales customers.

As a woman in STEM – one who entered the world of science, technology, engineering and mathematics more than 30 years ago, before the term “STEM” existed – my commitment to encouraging and supporting girls in these fields evolved from a deeply personal place.

DISRUPTING THE STATUS QUO FOR GIRLS AND WOMEN IN STEM

As an executive with one of the world’s leading defense and aerospace companies, I understand that closing the gender gap in technology is critical to driving innovation – not only for continued business success but to our country’s strength as a technology leader.

For example, there are currently about 500,000 open computing jobs in the U.S. That number grows to 1.4 million by 2020 – and 4.4 million by 2024. In comparison, there were only about 43,000 computer science graduates in the U.S. last year, and only a small fraction of them were women.

I believe that our country’s stability and leadership depend on preparing the next generation of students to solve the complex challenges of the 21st century – ones that will rely on STEM innovations. Our girls and young women must be part of the solution. With them, our power to solve these challenges is doubled.

There is no question that we, as a society, need to disrupt the status quo when it comes to girls and their confidence in – and attraction to – STEM. A study published earlier this year in the Journal Science found that white as toddlers, girls make no distinction about gender brilliance, by age 6 they are less likely than boys to believe that girls are “really, really smart” and begin avoiding activities they perceive as being for really smart kids.

This study should be a call to action for all of us to double down on our efforts to share our passion for STEM and enable young women in these fields – and continue to work with America’s girls for a growing role. I am fortunate to work for a corporation that believes deeply in the importance STEM will have on our future and the role young women will play. Lockheed Martin just this fall pledged to invest $25 million over the next five years in computer science education, on top of the $50 million it’s already invested in STEM outreach.

It has been my pleasure – as well as my responsibility – to work with organizations such as Girls Inc. in supporting the work they do to inspire girls and young women in STEM. Lockheed Martin’s Creating the Future program provides girls firsthand experiences in STEM and allows them to explore aspirations that they may not discover otherwise. We are helping Girls Inc. pilot a five-year, virtual mentoring model that provides girls hands-on, minds-on opportunities to build their interest, confidence and knowledge in STEM.

And it is my hope that the time I have spent mentoring girls and young women in these programs has inspired them as much as it has inspired me. Seeing bright eyes of amazement and the infectious excitement of girls discovering new possibilities for themselves has been incredibly rewarding and a reminder of not only how cool my job is, but how much what we do is truly changing the world.

I am also encouraged by the early progress of the BIAAD initiative, a partnership of the Anita Borg Institute and Harvey Mudd College launched in 2014 to increase the number of women in computer science majors. The program – Building, Recruiting, And Inclusion for Diversity – seeks to help universities across the country replicate the success achieved by the Computer Science Department at Harvey Mudd, which increased women graduates from 10 percent in 2006 to 47.5 percent in 2016 by eliminating the “macho effect”.

Faculty at Harvey Mudd recognized the need to break down barriers to women, such as intimidating classroom environments and curriculums focused around independent coding assignments, instead building a more collaborative curriculum and creating an introductory course reserved for students with no prior coding experience.

Today, we are faced with statistics like this: Only 0.4 percent of teenage girls plan to major in computer science, even 11 percent of physicists and astronomers are women and only 15 percent of engineers are women. Frankly, those are numbers that give me great pause.

Still, I’m encouraged by the progress we are making. My hope is that through visible leadership and consistency of effort, all of us – companies, nonprofits, schools and universities, and individuals – will achieve a momentum that will significantly shift the status quo for girls and women in STEM. Together, we will get there – and we will make a difference.
Balanda Atis
Manager, Multicultural Beauty Lab &
U.S. Face Lab
L’Oréal USA

L’Oréal USA is the largest subsidiary of the L’Oréal Group, the world’s leading beauty company. L’Oréal USA manages a portfolio of more than 35 iconic beauty brands and also serves as the international hub for the product development and marketing strategy for L’Oréal’s American brands: Baxter of California, Carol’s Daughter, Carbon38, Dermablend, Essence, IT Cosmetics, Klei’s, Matrix, Maybelline New York, Mizani, NYX Professional Makeup, Pureology, Ralph Lauren Fragrances, Redken, SoftSheen-Carson, SkinCeuticals and Urban Decay. Generating more than $6 billion in sales annually, L’Oréal USA is committed to growth through sustainable innovation, driven by the company’s Sharing Beauty With All ambition for sustainable development across the Group’s value chain. The company is headquartered in New York City, employs more than 11,000 people, and operates administrative, research, manufacturing and distribution facilities across 14 states. For more information, visit www.lorealusa.com or follow us on Twitter, Facebook and Instagram @LOréalUSA.

For years, the entire cosmetics industry had faced a major challenge: formulating foundations for medium-to-deeper skin tones. As a woman of color myself, I really only had three options: to buy an assortment of products, mix them together and hope it worked, wear the completely wrong shade or not wear makeup at all.

This struggle to find a solution piqued my interest in science. At the time, I remember thinking: there has to be a way to fix a problem that affects millions of women. Now as a chemist at L’Oréal, I felt like women around the world deserved this breakthrough and depended on L’Oréal, the #1 beauty company in the world, to provide it.

The Multicultural Beauty Lab is a team within L’Oréal USA’s Research & Innovation division dedicated solely to developing new shades and product formulas for diverse skin tones. The team’s goal is to ensure that women in each of the 140 countries where L’Oréal products are available find more that matches the texture and color of their skin. Through our initial research, we discovered that the challenge lied in the four colorants typically used to compose a foundation shade: white, yellow, red and black. When combined to create a deeper hue they can leave the skin looking bruised, the result of too much black colorant, or orange, when too much yellow or red is used. These traditionally available colorants that are used to deepen the hue of a foundation’s formula yield a limited color range, often resulting in one-dimensional colors that are flat and lack luminosity or appear oily. As a result, beauty brands tend to offer a narrower spectrum of colors that don’t address a large segment of the population.

Once we identified the problem, I pulled in two other chemists to discuss a game plan. We crisscross the country to events and fairs in Minnesota, Nevada, New Jersey, Pennsylvania and Texas. We measured over 1,000 women’s skin tones, collected 20,000 data points that were representative of 57 countries. Once we were back in the lab, we would work on weekends, lunchtime, after work to make batches, test formulas, strategize orders, and gather raw materials to create prototype shades. Through our research, we discovered the key to developing deeper, more pure color: ultramarine blue, a breakthrough blue pigment that researchers tend to shy away from due to its unavailability. However, we knew it was essential from the very beginning.

Once we felt confident in the research and formula, we pitched the marketing teams at select brands at L’Oréal USA who all opted to leverage this research to expand their color lines. L’Oréal is now on the forefront of this conversation and we’re focused on customizing, personalizing and thinking about every single woman individually. Our work is transformative – it’s not only bringing more diversity to products – it’s helping to change attitudes about makeup. This is all due to a breakthrough that was discovered because of investment and dedication to STEM and research & development.

This is why it is important for people, especially women, to be curious and explore different career paths in STEM. I never expected to work for a global beauty company and work behind the scenes, developing, experimenting and innovating on the back end of beauty products. I now even have the opportunity to share science with younger generations. I visit elementary, middle and high schools and universities to discuss the importance of science and possible careers in science that may seem unexpected. Young men and women are surprised that you can be a color chemist, a supply chain expert, work in a Technology Incubator – and that you can create and reinvent the future of beauty quite literally. We conduct experiments with the students to show them how engaging and creative science can be.

You learn something new every single day. More girls need to be exposed to women in STEM fields, so they can understand that scientific careers allow you to break new ground, invent something new and enjoy an incredible career path. I hope young girls recognize the additional career opportunities open to them in beauty. Believe in yourself and in your potential and you’ll see that only great things will follow.
Catherine Lamson
Senior Vice President,
Chief Administrative Officer
The MEMIC Group

The MEMIC Group specializes in workers’ compensation insurance with offices from Maine to Florida and is licensed in 46 states. The company’s performance, business practices and financial strength have earned an “A” (excellent) rating from A.M. Best.

The company began operations in 1993 to address run-away costs and high frequency injuries in Maine. With a relentless focus on workplace safety and effective injury management, the company has proven it can lower the cost of work’s compensation and reduce lost time injuries.

The parent company, a mutual, is governed by employer policy holders representing all major sectors of the economy in order to understand and tackle the challenges and opportunities found in various industry sectors. The MEMIC Group works exclusively through independent agents and brokers and continues to grow its reputation for excellence in the most important line of insurance—workers’ compensation.

In 2008, Catherine Lamson, The MEMIC Group’s Senior Vice President and Chief Administrative Officer, was named to the Board of Directors for the Institute of Civic Leadership. As a member of the Board, she serves as a mentor and is a member of the Executive Committee. She remains an active member of the Institute and continues to participate in the Annual Leadership Forum, The MEMIC Group’s leadership forum, informal mentoring sessions as well as her external participation in the Olympia Snowe Women’s Leadership Institute (OSWLI), the Women’s Exec Forum, etc.

MEMIC is a founding sponsor, member and business advisor to OSWLI. Through OSWLI, Lamson has mentored seven young emerging leaders in values, voice and vision from Lewiston High School and six whom are pursuing a career in the STEM field. “Once you identify the passion and spirit of success in the female talent pool, mentoring is easy. The ability to look beyond traditional business, marketing and risk management majors is critical to our talent acquisition model for today and into the future,” Lamson insists. “It is our obligation as leaders to address the issues of connect and confidence.”

The timing of MEMIC’s participation in MMWA STEM program aligns with the small steps that MEMIC has already taken as an organization hiring young female math majors and updating several job descriptions to augment specific business, risk management or finance majors with consider a number of alternative curriculums.

In addition, MEMIC helped establish the University of Southern Maine’s Risk Management and Insurance (RMI) program in 2008 which has enhanced the workforce of 40 different insurance organizations throughout the region, with MEMIC being the largest single employer of RMI graduates. Recently, the company created an endowment in Maine for the RMI program for which it will help raise matching contributions from other industry partners.

Lamson recalls, “Five or seven years ago a business or marketing degree felt adequate but today, we look for computer science majors or minors, math degrees and engineers. We feel strongly that we can teach these young females our culture and the specifics of our insurance business, partner them with a strong intern and mentor and benefit from their technical savviness, creativity and expertise to better serve our customers.”

As MEMIC’s Vice President of Underwriting, Catherine Duranceau, also is leading the charge as another OSWLI advisor. In addition, she serves on the Board of Directors for the Institute for Family Owned Business, an organization that has emphasized the advancement of women as part of succession planning. For her visible leadership in the industry, Duranceau recently received an Award of Excellence from the CPCU Society’s Maine Chapter, recognition that honors Allen as the first woman in New England to earn the prestigious CPCU designation. Duranceau’s passion for mentoring comes from a long family history beginning in the early 1920’s, when her pioneering namesake, Catherine Co- rol (her great aunt), started her own insurance agency at a time when there were few women even in the workplace. Since then, MEMIC has facilitated many young women into assuming leadership roles.

As we move forward into 2018 our goal will be to continue work with our partners and with our local universities and colleges to enhance the STEM and USM Risk Management programs, as well as young women looking to enter into insurance careers. We will continue to solicit our internal workforce and our interns to help us further develop a diverse and eminently qualified workforce for the future.

To fulfill our vision of equal opportunity, connection and confidence, we will persist in our support of Women to Watch in insurance, the Family Owned Business Institute, the Olympia Snowe Women’s Leadership Institute, The Executive Women in Financial Service Leadership Forum, the MEMIC Internship Program and the University of New England’s Technology Roundtable Program. We also will enhance our internship Leadership Forum, Networking for Business Success and Women of Distinction.
Jan Holloway is senior vice president of community relations and chief of staff for Monsanto Company, where she previously served as chief information officer. She joined Monsanto more than 30 years ago as a programmer in the company’s information technology department, developing applications for research in agriculture. Over her tenure with the company, Jan has held information technology positions within several commercial and research organizations. Her work in application strategy development contributed to bringing new agricultural products to market to help farmers improve farming practices and grow better harvests using less land, water and energy, in her current role, Jan oversees the company’s community relations activities and business services organization, and manages the office of the chairman and CEO. Jan is passionate about serving as a strong advocate for women in the St. Louis community and has earned recognition for her work, including the St. Louis business journal’s 25 most influential women in business, YWCA leader of distinction, and Washington University’s engineering alumni achievement award. Jan holds a bachelor of science degree in mathematics from Augusta college and a master of science degree in applied mathematics and computer science from Washington University.

AIMING HIGHER: ENCOURAGING YOUNG WOMEN TO SET BOLD GOALS IN STEM

In my high school days of the early 1970s, the computer programming classroom was little more than a closet with a single metal punch-card machine. There were only a few of us, and we’d take turns punching out sequences of code onto heavy card decks. At the tail end of the class, we’d lug the thick stacks into my blue Volkswagen Bug® and drive them to Southern Illinois University to be processed by the school’s one IBM 360 computer. If there was a glitch or a correction to be made, we drove the decks back to the classroom and punched out a whole new card with the changes the next day. I had seven or eight classmates, one of whom was a woman. None of us could have imagined the technology advances that would transform our world. And sitting in that Beetle®, I certainly never dreamed it was the beginning of my journey to become the CIO of a Fortune 500 company.

Several years later, I began a programming job at Monsanto. I have a vivid memory of talking with a family friend about my new role. She asked about my future plans and career goals at the company. I said I’d work to move up a few levels and hoped to become a manager. My friend laughed and said, “Aim higher.” I couldn’t imagine myself in a position of senior leadership, I replied. She stopped laughing, looked me right in the eye and asked, “Why not?”

Over the past 30 years, I have frequently reflected on that conversation and its impact on my career. I make it a point to ask the same questions of the young women with whom I cross paths. Why not picture yourself as a leader? What’s keeping you from setting the bold goal of aiming higher and getting to the top? While the answers vary, one thing is certain: We have a gap between the number of young women with an early interest in STEM and those who actually pursue careers in science. What will it take to close that gap and ensure more young students receive the education and support to become future STEM leaders?

Start young. A study by Microsoft showed that most girls who like science and math at age 11 lose interest in these areas by age 15. It’s critical to support programs that target early STEM education and help turn interest into passion. This is why Monsanto employees dedicated to K-12 STEM education partner with schools all over the world in science classes, career fairs and activities that make science accessible and fun.

Encourage aspiring leaders to dream big. Show young people no one needs permission to envision herself as a leader, or to chart her own journey in getting there. Leadership requires the courage to set bold goals, the flexibility to open our minds to new opportunities, and the resilience to change course without losing sight of our aspirations. Current leaders must serve as role models, sharing stories of our successes and failures, along with unexpected events that have been important in shaping our careers.

Teach, coach and mentor. Obtaining a STEM education is one thing. Successfully navigating a STEM career is an even bigger challenge. Building on my graduate work at Washington University in St. Louis, I partner with the school of engineering and other alumni to support the Women & Engineering program, an initiative designed to connect alumnae, faculty and students to support one another. Sharing our experiences, networks and passions, we can promote the advancement of more women in STEM fields and inspire the next generation.

Promote science and entrepreneurship in our communities. Creativity and success are enhanced when people come together in spaces where ideas can be developed and shared. Communities that value science and innovation have a better chance of attracting talent. Dedicated innovation districts, small business support communities and high-tech startup incubators are providing entrepreneurs with opportunities to collaborate in a science-forward space – not to mention raising the profile of STEM as a job-generator in urban areas.

We don’t know what the future holds, but we know we must ask the right questions and take deliberate action if we’re to encourage young people – especially young women – to succeed in STEM. What will be the next technology to move from a punch card machine in a closet to satellite data at the world’s fingertips? Who will be next to lead us into the technological future? And who will be there to encourage her, to look her in the eye and ask, “Why not?”
LanTing Garra
Innovation Design Director
Motorola Solutions

Motorola Solutions is a technology company known for mission-critical work group communications. The company provides devices, software and networks that enable public safety agencies and businesses to communicate and work more effectively.

Founded in 1928, Motorola Solutions has a history of innovation that has revolutionized communications, including pioneering mobile communications in the 1930s, making equipment that carried the first words from the moon in 1969 and developing the first commercial handheld cellular phone in 1983.

LanTing Garra is Motorola Solutions’ innovation design director and has global responsibilities for innovation strategy and product design. In this role, LanTing oversees all aspects of innovation and design including customer research, idea envisioning, design strategy and product development. She leads the company’s global industrial design team and research efforts into high-velocity human factors - an emerging discipline of Human Factors sciences and psychology that is central to the technology Motorola Solutions designs for first responders.

LanTing leads a team focused on design excellence, winning 73 major global design awards for product design excellence and Innovation, including IF Design Awards and Germany’s Red Dot Design Awards. She holds 33 U.S. patents.

LanTing joined Motorola Solutions in 2003 as an industrial designer, managing product design for commercial and public safety customers. She holds a bachelor’s degree in industrial design from the University of Cincinnati and lives in Fort Lauderdale with her husband, John, and their two children.

From point products to end-to-end solutions and shifts the innovation focus from “what is the next radio feature?” to “what would a next-generation communication experience?”

IMPORTANT OF STEM
As the Innovation Design Director at Motorola Solutions, I oversee all aspects of innovation and design including customer research, idea envisioning, design strategy and product development. This role enables me to approach STEM differently than the traditional engineer or scientist.

I often see female students categorizing STEM in the U.S. as very math-, engineering- and science-focused, and they believe they have to excel in these subjects alone to be part of the STEM community. However, I believe STEM is a place where anyone with curiosity for life, passion for change and a belief in innovation can be a part of this community. I am a designer and strategist by trade who has the privilege of working with and leading amazing technologists and creative thinkers every day.

I have a bachelor of arts degree in industrial design, so I am privileged to have learned STEM subjects in collaboration with art and design. I had to absorb the mechanical background knowledge focused on materials and tooling in order to design for mass production. At the same time, I learned how to capture the emotional link between users and the product through art and design.

My day-to-day job is working closely with scientists and engineers, so I have to be able to speak their language. But I must also speak the language of our end users and business partners as well. This allows my team and I to act as the “glue” between many different parts of our organization.

At Motorola Solutions, we create innovative, mission-critical communication solutions and services that help public safety and commercial customers build safer cities and thriving communities. We provide devices, software and networks to police officers, firefighters, emergency medical technicians and others who find themselves in high-stress, sometimes life-and-death situations.

To do this, we have to stay ahead of the curve when it comes to incorporating the best, most strategic technologies into our solutions. This illustrates again that STEM is a much bigger field than these school subjects, because my team of designers influences our company’s innovation in a very unique way. We emphasize user-centered experience design and envision the ideal user experience based on customer needs. This kind of design thinking elevates our innovation focus from point products to end-to-end solutions and shifts the innovation goal from “what is the next radio feature?” to “what would be a next-generation communication experience?”

By applying this kind of design thinking, our company continues to lead the charge in innovation and design in our industry. Most recently, we were awarded several accolades in global design competitions, including the Red Dot “Best of the Best” distinction for one of our solutions. This brings us to a total of 73 global design awards to date and is just one example of how STEM, combined with design thinking, can create results.

In addition, I strongly believe that diversity of thought and perspectives helps accelerate innovation. STEM is a community of inclusion and diversity. We apply the same philosophy in building our design team and believe diversity in gender, culture, background and expertise helps spark dynamic thinking. For example, my high-performing team is made up of people with four different kinds of expertise (design, user experience, research and human factors) and 12 nationalities that speak 14 different languages. As I mentioned, my team includes many female professionals who focus on industrial design, user experience design and human factor research. They bring a unique perspective when it comes to problem-solving. Keeping in mind the “diversity of thought” philosophy and ensuring we hire the best people for the job has allowed our team to organically become diverse and, in turn, cohesive and successful.

A girl in STEM today is likely to be a woman in tech tomorrow. In a traditionally male-dominated STEM field, I believe it is important to give back by inspiring girls and women to pursue their dreams in the tech industry. As a member of the Society of Women Engineers, I have been able to stay connected with an inspiring and well-rounded group of professionals, and we discuss how to encourage more women to pursue careers in tech or stay in tech. Most recently, my company facilitated seminars for female college engineering college students to meet with women leaders in tech. We shared different career stories from STEM engineering college students to meet with women leaders in tech. We shared different career stories from STEM.

One piece of advice I would offer up-and-coming STEM professionals:

STEM is neither a label nor a title. STEM is a thriving community that welcomes anyone with curiosity to collaborate and desire to innovate for a better future. Coming out of your STEM education, don’t think you are only going to work with people like you. STEM may seem like it is an education targeted at specific fields, but once you get to college and beyond, there is a breadth of careers within the STEM world that can enable you to think differently, work with interesting people and make a difference.
Lisa Hook
President and Chief Executive Officer
Neustar, Inc.

Neustar Inc. is a leading global information services provider, driving the connected world forward with trusted, holistic identity resolution. As the only company capable of knowing with certainty who is on the other end of every interaction, Neustar is trusted by the world’s great brands to grow and guard their businesses with the most complete understanding of how to connect people, places and things. The combination of Neustar’s unique, accurate and real-time identity system, and our cloud-based workflow solutions empower clients to make actionable, precise and valuable decisions across marketing, risk, IT/security, network & operations departments. Also, as the sole provider to the U.S. Number Portability Administration Center (NPAC), Neustar facilitates the routing of all telephone calls and text messages in the U.S.

HOW DO WE ENCOURAGE STUDENTS TO CONTINUE THEIR STUDY IN STEM SUBJECTS, PARTICULARLY WOMEN AND UNDER-REPRESENTED MINORITIES?

To encourage students to pursue STEM education, we need to make it appealing and accessible at all levels — elementary, high school and college. You never know what will spark a student’s interest. Even the simplest of projects can ignite the creative spirit in a young person. It can begin with a sixth-grade student who walks into a science class in awe of the lab equipment, an eighth-grader who discovers how bridges are built, or a high school senior who designs her very own robot.

The best we can do is to expose students to different learning opportunities and let them determine their particular interests. We should encourage them to explore the natural environment to understand how it works. Then provide ongoing encouragement, and never underestimate the power of this simple act. Who knows? They could have a starting insight or make a groundbreaking invention that changes lives, creates entire industries and benefits humanity.

One reason Neustar is dogged on STEM is because we take an active role in shaping our future. The skills and knowledge acquired through a STEM education are foundational for today’s workforce. That’s especially salient for women and people of color, who are vastly underrepresented in technology and science careers. Even though systemic inequality plays a powerful role in shaping our educational opportunities, inequality is not inevitable and poverty is not destiny. A STEM education provides a path to a rewarding career and a better socioeconomic position.

HOW IS YOUR COMPANY INFLUENCING DIVERSITY WITH STEM INITIATIVES?

Neustar embraces the ideals of inclusion, diversity and parity, and we are committed to providing a workplace where everyone feels valued and respected. Our focus on diversity and advocacy of STEM go hand-in-hand. They are not only elements of our core values but business critical investments in our future workforce and success.

The ancient Greek mathematician, Archimedes, said, “Give me a lever long enough and a fulcrum on which to place it, and I shall move the world.” I firmly believe that a STEM education can be that fulcrum. The length of the lever is only limited by a person’s imagination and drive.

It is critically important that we provide assistance to populations that have been disadvantaged historically, and help them onto a more level playing field. Towards that end, Neustar has several corporate initiatives that encourage STEM education for under-represented groups.

We have a longstanding partnership with EVERrr to provide digital literacy education in local schools. EVERrr is a Washington, D.C.-based technology company on the front lines of the evolution in education and reaches more than 16 million learners across all 50 states and Canada. Their programs teach and certifies students in digital literacy skills and responsibility. Entitled “My Digital Life,” the program is designed to teach kids how to be better online citizens and encourages further education in technology.

Our partnership makes this cutting-edge program available free of cost to schools. We have graduated 78,000 students in the past five years.

In addition, Neustar is investing in the next generation of talent and driving the connected world forward through our strategic partnership with the Year Up organization. Year Up provides underrepresented young adults with the skills, knowledge and experience that today’s businesses require.

There are more than six million young adults who are out of work, out of school, and without access to the economic mainstream. Many of these young people have talent and drive but lack opportunity. The Year Up organization works to help build the skills they need to begin successful careers and earn a living wage. Over the past seven years, Neustar has hosted 40 Year Up interns and hired 12, with a plan to expand our program participation going forward.

Year Up is a one year intensive training program that combines marketable job skills, internships and college credits. Graduates either go on to post-secondary education or into a career. By partnering with Year Up, Neustar gains a reliable, scalable talent solution for entry-level positions.

As a partner, we have the opportunity to host Year Up interns for a six-month period and hire program graduates. We gain access to a more extensive pipeline of well-trained and motivated talent, and the Year Up graduates get access and opportunity to come work for a market-leading company. It’s a win-win for all involved.

Neustar has several partnerships and initiatives for women in particular. The Company has an ongoing partnership with Girls Who Code, a nonprofit organization that supports and aims to increase the number of women in computer science. This organization runs summer programs that teach computing and programming skills to high school girls. Also, we are a long-time supporter of The Anita Borg Institute for Women in Technology — a nonprofit founded by computer scientist Anita Borg that advance women in technology. Each year, a team from several Neustar offices attends the Borg Institute’s Grace Hopper Celebration event (the world’s largest gathering of women technologists).

WHAT IS THE STEM INITIATIVE YOUR COMPANY SUPPORTS THAT YOU ARE MOST PROUD OF?

I am exceptionally proud of our grassroots Women In Technology organization. It was formed several years ago to support the advancement of women technologists at Neustar and in the larger technical community. There are chapters across the company that hold professional development workshops, discussion panels and community outreach events on a regular basis. Our Sterling, VA, and San Diego, CA, offices frequently host “Hour of Code” events that introduce computer programming to girls from local schools and community organizations.

These programs and others like them, which connect diversity and the excitement of STEM learning, are what will drive us forward — as a company, a nation, and a society.
Elaine Page
Vice President HR & Chief People Innovation Officer
Northwell Health

At Northwell Health, we aren’t satisfied with settling. We search for innovation in everything we do. That’s why we place such a high value on STEM education in achieving our goal of optimizing the health of our community. We’re seeking the pioneers – the visionaries – who will help define and deliver tomorrow’s health care. As New York’s leading health system and largest private employer with over 62,000 total employees, we’re proud to employ thousands of highly skilled and educated STEM professionals. To maintain a constant flow of candidates with strong STEM backgrounds, Northwell Health is taking the leading role in driving STEM initiatives on Long Island. We collaborate with internal and external partners to host system-wide STEM career programs, provide teacher education opportunities and foster transformational education through the creation and support of Career Academies. Our student programs promote the wide scope of STEM-focused career paths and opportunities available within health care. Two notable examples are the first Career Exploration Camp, implemented in partnership with Girl Scouts of Nassau County; and Medical Marvels, a collaborative research competition established by the health system’s Feinstein Institute for Medical Research for Long Island students in grades 9 and 10.

Elaine Page is a pioneering HR executive recognized within the industry as a bold cultural change agent who has developed and driven substantial and systemic human capital strategies that have achieved outstanding business results. With experience working on a global scale, across multiple industries, Elaine has been a trusted advisor to CEOs, executive teams, and boards of directors on all aspects of human capital strategies. She brings to her role a deep expertise in global talent management and total rewards, organizational change, and leadership development strategies. In her six years at Northwell Health, Elaine has helped the organization unleash its potential through the transformative power of people. She has an uncanny ability to engage and grow top talent, thereby creating high-performing, dynamic leadership teams. She has designed, developed and delivered multiple, systemic, targeted and successful solutions that restore focus and performance, and drive game-changing people strategies. This has involved such initiatives as:

- Increasing student awareness and opportunities as Co-Founder and STEM Hub with Brookhaven National Lab,
- Medical Marvels, a competition for 9th & 10th grade students to engage educators and students in exploring careers in STEM research,
- The Spark! Challenge, a system-wide STEM career awareness program for 11th and 12th grade students,
- Professional Development Day for Teachers - Educators are engaged in the broad spectrum of STEM career paths and encouraged to incorporate this into their curriculum,
- Healthcare Forums – In partnership with the Long Island Regional Advisory Council on Higher Education, LIRACHE, these forums disseminate information, facilitate meaningful dialogue, and develop concrete next-step solutions to shortages in STEM talent,
- Nursing Fellowships and Externships.

Technological advances are at the forefront of medicine today, supplementing the personal skills of our employees and allowing them to achieve more for our patients. As part of our true innovative culture, we believe that it’s vital to keep learning and adopt new approaches. Therefore, our strategy includes developing partnerships with our organizations leading the way in medical technology as well as creating opportunities for innovation within Northwell.

For example, earlier this year, we introduced a partnership with Peerbridge Health to improve remote medical monitoring of patients by using wearable sensors. A health system getting into wearables may seem non-traditional, but it’s part of a broader, overarching strategy to introduce disruptive technologies that will help shape the future of health-care delivery.

Promoting innovation and growing our future workforce is the passion of Elaine Page. Northwell Health’s Vice President of HR, HR People Innovation Officer and leader of our Workforce Readiness Team, Elaine knows that our future success depends upon growing and empowering tomorrow’s health-care workforce to take an active interest in learning and innovation. With the changing healthcare landscape and a critical shortage of nurses and other skilled clinical professionals, educating our youth on the opportunities in health-care and STEM skills (Science, Technology, Engineering and Math) take on a new and urgent priority.

In her many roles, Elaine works to emphasize innovation and strengthen the pipeline for future employees. Her team accomplishes this by:

- Inspiring students to explore health-related, STEM-focused careers,
- Showing how coursework is relevant in preparing for a future in the health-care field,
- Revealing opportunities to transform lives, communities and the health-care landscape,
- Promoting high growth/high demand careers – clinical and non-clinical,
- Encouraging collaboration among students, educators and the community.

Through Elaine’s leadership, Northwell Health is opening its doors, reaching out and engaging our future workforce in many exciting ways:

- Medical Marvels – in partnership with the Feinstein Institute for Medical Research, Medical Marvels hosts a competition for 9th & 12th grade students to engage educators and students in exploring, understanding and preparing students for the broad spectrum of STEM careers,
- The Spark! Challenge - This is a system-wide STEM career awareness program for 11th and 12th grade students. The program highlights high growth and lesser known careers in healthcare. The Spark! Challenge has hosted over 1,300 students at more than 50 Northwell Health sites,
- Top Minds Meet webinar series - This interactive webinar introduces students to key Northwell Health leadership as it highlights various pathways to a successful career.
- Medical Scholars Pipeline Program - The Hofstra School of Medicine and Northwell Health’s Center for Learning and Innovation are preparing high school students for health-care careers through hands-on training, rigorous academic classes and mentorship.
- Annual Professional Development Day - in partnership with The Feinstein Institute, we’re engaging educators in the broad spectrum of career paths and the skills and education needed to work in tomorrow’s health-care roles.
- Middle School Partnership - Through a partnership with our Center for Learning and Innovation (CLI) and select middle schools, we’re promoting continuous learning and introducing children to career opportunities in science and health-care.

- Campus Recruitment – We actively recruit on-campus and maintain partnerships with top colleges, universities, technical schools and the Long Island Regional Advisory Council on Higher Education.
- Administrative Fellowship Program – For students with a recent graduate degree in health-care administration, this 12-month fellowship launches careers through departmental rotations, project management and individual mentoring.
- Administrative Internships – High school and college-age students can develop and refine the skills necessary to provide vital administrative support.
- Feinstein Administrative Internship – High school, undergraduate and graduate students gain hands-on experience and exposure to career opportunities available in the growing field of medical research.
- Health Care Management Internship Program – Northwell Health’s premiere internship program is designed for college juniors who demonstrate academic excellence and natural leadership abilities. This eight-week internship program shows participants how to use their talents to shape the future of health care.
- Management Associate Program – Through exciting, strategic and innovative projects and mentorship, this program helps college graduates developing essential business, professional, analytical and project management skills.
- Clinical Internship – Northwell Health partners with local schools to provide experiential learning to students with clinical majors. Students develop specialized job skills by working alongside top clinical professionals and subject matter experts.
- Long Island STEM Hub – Northwell Health and Brookhaven National Lab are Co-Stewards of this regional effort focused on engaging and aligning business and educational communities to engage and develop students for STEM careers.
- Health Care Career Academies – Through a partnership with eight New York State high schools, this program expands pathways and connections for high school students interested in higher education and employment within health-care.
- International Internship Program – Northwell Health’s Center for Learning and Innovation and University College Cork in Ireland are opening exiting opportunities for undergraduates pursuing a bachelor’s degree in business information systems.
- Institute of Health Professions at Amelia Heights – With a strong focus on technical education and science, this program encourages students to graduate high school and obtain a four-year college degree.

In addition to the educational initiatives detailed above, Northwell Health also fosters a wide range of inclusion initiatives for Veterans and People with Disabilities. Through her visionary leadership, Elaine Page is helping Northwell Health do more than merely anticipate and stay ahead of the dramatic changes happening every day in health care. She’s helping Northwell Health drive them.
Gloria Bohan
Founder and Chief Executive Officer
Omega World Travel

Omega World Travel is a certified woman-owned business headquartered in Fairfax, VA. One of the largest travel management companies in the US, Omega is a global agency with offices in Europe and the Middle East, a European headquarters in London and support operations in Romania and India. For more than four decades, Omega has built a consistently strong reputation for seasoned expertise, quality service and innovative technology, in the corporate, government, meetings and leisure spaces. Its client portfolio includes customers of all sizes from numerous industries, local and national governments, associations, NGOs and not-for-profit organizations.

A leader in technology, Omega introduced its proprietary reporting platform, OmegaLytics, in 2015. The system offers many enhanced features including consolidated global reporting and predictive analytics to forecast “what if” scenarios. Omega also owns Cruise.com, one of the largest sellers of cruises on the internet, and TravTech, a software development company providing solutions to the travel industry.

Gloria Bohan founded Omega World Travel in 1972 and has transformed it into a global travel management company with annual sales revenues over $1 billion. Omega is the largest woman-owned and operated travel management company. Gloria has built an organizational reputation for expertise, quality service, and innovative technology in the corporate, government, meetings, cruise, and leisure markets. As a result, Gloria has been frequently recognized for her work.

Her list of accolades also includes the Washington Business Hall of Fame, Executive Lifetime Achievement Award during the Executive Women’s Forum at TravelCom, American Society of Travel Agents’ Travel Agent of the Year Award, one of the 25 Most Influential Leaders in the Travel Industry by Tour and Travel News, one of the Most Powerful Women in Washington by Washingtonian Magazine, and the Lifetime Achievement Award and Doctor of Law from Marymount Manhattan College. Gloria serves as a board member for multiple organizations, including the World Affairs Council. She is a member of the Zenith Group and SmartCEO, and is active in various civic groups, and a sponsor of Junior Achievement.

Gloria is a pioneer in Government travel and is a cofounder of Space Adventures, which sent the first tourists into space. Cruise.com and TravTech were started in 1997; today, Cruise.com is one of internet’s largest online cruise agencies and TravTech is a leader in online technology services. Omega’s MICE division is recognized for its expertise on meetings, incentives, conference planning, and events. Gloria, a former teacher, decided to change careers after honeymoon planning for her headquarter, that required hiring from local cities, learning new business practices; and, reaching out to others.

Business increased as I became more flexible. Working with staff in new challenges helped me to discover the creativity that many people evoke when opportunity brings the best out in them. It has been an incredible experience.

I never expected to have a business as large as I have today. Growth evolved as I was swept away by the challenges: never wanting to fail. I learned about the creativity needed for a business that evolves around customer service and technology; and, I learned about the sheer joy of discovering what the entrepreneurial spirit is all about.

I want to share in that joy and love to remember all the crazy ideas that grew into successful services that have grown the company. It has never stopped. It is the essential reason why I stay in my job.

I love seeing others grow as they tap into their creativity; and, I try to make jobs flexible enough to let people create new techniques. We never want to treat customers in a cookie cutter manner; always keeping their needs and business philosophy in mind.

I am fortunate to be a part of the ever-expanding travel and tourism business. This is a sector that brings people from different backgrounds, cultures, and beliefs closer together. It plays a huge role in economic development as the sector generates over 10% of the world’s GDP and supports 1 in 10 jobs, thereabout.

Travel and Tourism is a landing place for people of many fields of expertise to flourish from sales to technology to business, accounting, training, tour conductors, translators, etc. The STEM studies are well represented. Travel and Tourism is a highly diversified industry; and, I believe business should be diversified not only with staff, but also, with product.

I was a teacher before starting my company; and, I am always grateful for that experience since I learned how much training is needed for the growth of any company. I sometimes feel like a talent scout who is always looking for what makes people tick; and, how they can best use their talents.

This is a happy and endless journey that began on the ocean liner, Queen Elizabeth 2, where I held my wedding reception and honeymooned aboard. I eventually met many travel agents and decided that I wanted to be one of them! That was the start of a happy marriage and a challenging new career that took me around the world.

45 YEARS AND STILL COUNTING!
My story as the Founder of OMEGA is a story of many journeys and discoveries; stories that go far beyond the ones you might expect that involve visiting and exploring new places and cultures around the world.

While I have a treasure chest of many incredible journeys, I find that the ones I have learned from the most are right here in running my business.

I learned that no one person can make a business successful. Yes, you must lead; you must know how to do the job; and you must be willing to let others learn from you so they can do your job as you keep building the company. This is a journey that never stops. It can be arduous; but, it can be exciting with many discoveries along the way. Taking detours along the way can lead you into paths of opportunities that you never expected.

I often opened offices based on customer requests, away from my headquarters, that required hiring from local cities, learning new business practices; and, reaching out to others.

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Carey Smith is the President of the Federal business unit of Parsons Corporation. She was previously the Vice President of Technical Services, Vice President, Business Development, Maritime Systems & Sensors, and President and CEO of Canada. Carey holds an M.S. in electrical engineering from Syracuse University and a B.S. in electrical engineering from Ohio Northern University. Carey is a certified Program Management Professional and a certified Green Belt. She is the keynote speaker for the Groundbreaking Women in Construction and NDIA Logistics conferences. She was recognized as Alumni of the Year at Marlington High School in 2016 and Alumna of the Year at Ohio Northern University in 2015. In 2014, she was named one of the Top 100 Corporate Leaders in STEM and in 2012 one of the Top 100 Women in STEM. Carey is a member of the Professional Services Council Executive Committee and Board of Directors.

Parsons Corporation

Founded in 1944, Parsons Corporation is a global leader in diverse markets focusing on infrastructure, construction, security, defense, and professional services. We deliver design/build, program/construction management, and technology-enabled solutions and services packaged in innovative, alternative delivery methods to global federal, regional, and local government agencies as well as private industrial customers.

Parsons applies its differentiated capabilities to perform complex programs worldwide. With a focus on our people, process, and technologies, we have successfully driven both organic and inorganic growth through acquisitions. Our six core values - diversity and inclusion, innovation, quality, sustainability, integrity and safety - define our culture.

Parsons’ recognition of being one of the top innovators, most ethical companies and top design firms. Parsons’ recognitions include being one of the top innovators, most ethical companies and top design firms.

Our history of exceptional performance, technology innovation and diverse contract portfolio and customer base are key highlights of our business.

The automobile was invented in 1885. Airplanes began to fly in 1903. Computers were invented in the 1930s and personal computers started use in 1975. Cell phones were invented in 1973. In just over 100 years our entire world has changed, driven by technology innovations. What will our world look like 10 years from now or in 100 years?

Technology is evolving at an unprecedented pace. Whether it is smart buildings, artificial intelligence and machine learning, driverless cars or blockchain, we are at the cusp of a technology evolution. This essay examines a core market for Parsons Corporation: securing the world’s critical infrastructure.

Cyber attacks are rampant and have impacted individuals, corporations and federal, state and local government. Market research estimates that these attacks cost more than $700B in 2017 and will exceed $2.5T annually by 2022.

The recent attack on the Equifax credit agency may have impacted up to 143 million people, or nearly half of the U.S. population. These disruptions are increasingly complex and sophisticated, including denial of service attacks, malware, ransomware and botnets. There is major investment to prevent attacks. Juniper Research predicts cybersecurity spending will be at nearly $100B in 2017 and increase to $250B by 2022. Yet even with this spend, we are unable to keep up with the evolving cyber threats.

Cyber attacks began as early as 1988 with the Morris worm exploiting weaknesses in the Unix system. Since then, and with the rapid adoption of the internet fueled by mobile computing, the need for cybersecurity to protect our information assets has exploded. The Internet of Things compounds the problem with 258 billion devices projected by Gartner Research to be connected by 2020.

The scalable demand for the latest breakthrough technology is creating an industry that is focused on speed-to-market, cost and product functionality. But securing our devices, networks and the access points into the digital environment of our nation’s critical infrastructure has lagged as innovators rush to meet the technology demand. And legacy solutions exist which were originally designed without robust security in mind. Aggregation of data in the cloud is becoming more common yet has the potential for increased security risk. Globalization has fueled the challenge, for example, global connected supply chains.

The cyber problem must be addressed holistically with changes in legislation, policy, law enforcement, international relations, technology and education. Cybersecurity must continue to be elevated in national security and viewed on par with land, air and sea domains.

One approach to protecting our critical infrastructure is to increase focus on cybersecurity technology.

1. A comprehensive system security engineering framework: Cyber attacks are becoming every more sophisticated, including denial of service attacks, ransomware and malware. There is major investment to prevent attacks. Juniper Research predicts cybersecurity spending will be at nearly $100B in 2017 and increase to $250B by 2022. Yet even with this spend, we are unable to keep up with the evolving cyber threats.

2. Networks and information systems must be designed to be resilient and maintain an acceptable level of service when challenges occur to normal operations. The cyber architecture must be difficult to exploit and when an attack occurs, the systems must continue to operate and prevent the attack from further disruption or halting the operation. This is accomplished by having trustworthy protocols, architectures, products, services and configurations. To ensure network resilience, metrics are needed for the service to be protected, including measuring progress against the ever-evolving threat, mitigating escalating impacts, rapidly restoring the critical infrastructure and applying standards-based automated remediation to return to a known state. Technology needs to be enabled to sense, react to and communicate changes in its security posture.

3. A risk management framework is an approach to information security protection that assesses threat vulnerabilities and their potential impact on an asset. Critical high-value assets (and elements within these assets) are defined where these assets are disrupted, damaged or destroyed, major impact would occur. The risk management framework prioritizes cybersecurity actions to apply resources where they offer the greatest risk mitigation. This includes identifying, managing and controlling risk, including high value asset segregation. A complete risk management framework includes planning, asset analysis, risk identification, risk analysis and risk treatment. Defining depth in information assurance strategy that may be applied.

4. Data analytics recognizes the patterns of network threats. By correlating information from disparate sources, compiling previously unseen patterns and creating a common operating picture of relevant, operational cyber information, data analytics can drive actionable intelligence to predict and stop cyber attacks. This includes the use of behavioral analytics to detect insider threats. Leveraging big data tools and techniques, cyber analytics captures and processes network data, assesses network nodes and employs visualization tools to spot unusual behavior.

Cyber analytics allow security and network operation centers to recognize patterns of activity that may represent threats. Advanced technologies combined with analytics improves a system’s security posture.

This essay barely touches the surface of cybersecurity. It is a rapidly evolving field and a national imperative to our safety, security and health. By taking a holistic approach with a deliberate plan, we can better secure our nation’s critical infrastructure and our economic viability.
Cliona Murphy
Vice President, Research & Development
PepsiCo

PepsiCo generated approximately $63 billion in net revenue in 2016, driven by a complementary food and beverage portfolio that includes Frito-Lay, Gatorade, Pepsi-Cola, Quaker and Tropicana.

At PepsiCo we believe that, the emerging STEM talent we’re supporting and grooming today will be driving innovation and top-line growth for PepsiCo tomorrow. We are committed to STEM progression both inside and outside the company and we believe the private and public sectors as well as NGOs need to work together to support and raise awareness of STEM education so students are inspired and empowered to pursue careers in STEM-related fields.

At the same time, PepsiCo recognizes that retaining STEM talent is essential to our success. Part of our retention strategy is a robust learning, upskilling and development program designed to provide associates with opportunities to expand their skills and capabilities.

Cliona Murphy is Vice President, Research & Development at PepsiCo Ireland. She is responsible for the Dairy Centre of Excellence as part of PepsiCo’s Global Nutrition Category and for creating and driving a culture of innovation and collaboration in the company’s newly expanded Cork R&D center, PepsiCo’s fifth-largest R&D center globally. She is chair of PepsiCo Ireland’s STEM Council.

Cliona joined PepsiCo in 1997 and has worked in a variety of R&D roles across the PepsiCo system in the Europe, UK, China and Asia Pacific regions. She has led many innovations to market including Sensations in the UK, Quaker Congee in China, SunBliss in Thailand and Tropicana and Fruizin in the Philippines. Prior to her current role, Cliona headed the Technical Function for PepsiCo’s Global Concentrate Business, guiding a team of more than 140 engineers and scientists in an array of areas including R&D, Engineering, Quality, Health & Safety and Environmental Management.

Cliona is a Chartered Engineer with a Degree in Engineering from Trinity College Dublin and a Diploma in Management from Manchester Metropolitan University. She is presently pursuing a Master’s Degree in Food Science and Nutrition. She is a member of the Teagasc Authority as well as a Director of Cork Chamber of Commerce.

As part of her commitment to mentoring and leadership, Cliona has ensured PepsiCo actively participates in and sponsors. She wishes, a growing movement dedicated to cultivating STEM skills among women in Ireland. While shining a light on professional possibilities for the next generation, this also helps raise PepsiCo’s profile as a corporate leader in growing talent and creating greater choices for women.

Cliona is a fan of keeping fit; whether it’s through running, playing hockey or briskly walking the family dog.

MENTORING: A LIFETIME JOURNEY

Some people look at mentoring as a binary proposition – you are either the learned mentor or the novice mentee.

But I believe in lifelong learning, and that means I am committed to being both a mentor and a mentee. I find that each role informs the other and I wouldn’t have it any other way.

I’m fortunate to have enjoyed a lengthy career in STEM, yet at various intervals, I still reach out for guidance and advice from those whose experience and judgment I trust. It helps me in making my own decisions and goes toward my being able to serve as a more effective mentor to those I strive to guide and advise.

I am grateful that in my first job as an engineer I had a mentor who really encouraged me, especially when things were tough. Initial negative exposure to my profession could have discouraged me from continuing, but I received the courage to keep going. My journey has gone on, with its share of twists, and I’m thankful somebody suggested I not give up.

Fast forward from when I was starting out to some years hence when I was working in China and mentoring a young woman there. She was an excellent engineer, yet narrowly focused on what she thought she was capable of, which surely wasn’t all she was capable of. I spent time talking to her and guiding her in an effort to let her realize all she could do. Soon she developed the confidence to step up, take on assignments and craft a terrific career of her own. She’s thriving at PepsiCo today. It’s a delight to watch people come to understand what they’re able to do, to see them do it and then realize they can do even more.

The result is not only better for PepsiCo and other employers, but in a broader sense, STEM itself is strengthened when talented people extend their roots into these disciplines.

As STEM professionals I believe we need to do more to raise awareness of the wide range of jobs that are open to STEM talent.

I try to convey to anybody on the cusp of their career to not be self-limiting. When I speak at secondary schools in Ireland, I find there are some stubborn historical biases still infiltrating the thought processes among students, particularly the girls. There’s a recurring mis-conception that engineering equals men in hard hats, and everything else about science is confined to a lab coat and a microscope. Obviously, there is so much more.

STEM is exciting, and we have to get that across. People, young and old, tend not to grasp how much science informs their lives. From my own experience in the food and beverage business I know that many people under estimate the role of STEM in feeding the world. From agriculture to food science to manufacturing, supply chain and distribution, science and technology drives innovation, efficiency and sustainability at every step of this business.

We should do all we can as mentors to make STEM – what it takes to be a part of it and what it can bring you once you’re a part of it – as accessible as possible.

In my native Ireland, science is not compulsory in the secondary schools, which I honestly consider to be a disgrace. It’s difficult to expect a young person to eventually choose a STEM career if they haven’t received a basic science education.

A greater emphasis has to placed on educating the teachers as well as the parents on what’s out there in terms of opportunity for boys and girls who show an affinity for STEM subjects. Building confidence is critical to constructing the kind of STEM workforce that will bolster our future.

I’m happy to be working with I Wish, the Irish initiative in which we put educating young women about STEM into action, striving to inspire, encourage and motivate young secondary school female students to pursue STEM careers.

Similarly, more than 500 of my colleagues at PepsiCo have committed to on-going mentoring relationships as part of the Million Women’s Mentors program. And we have many other formal and informal mentoring and campus career activations that are aimed at driving STEM career awareness among the next generation of boys and girls.

The choice to pursue a STEM career – or not – will be theirs, but the responsibility to introduce them to the possibilities belongs to all of us.
Dr. Cheemin Bo-Linn is CEO and President of Peritus Partners, Inc. and Board Director of both US public companies and European-based companies. Under Dr. Bo-Linn’s leadership, Peritus Partners is globally recognized for leading companies to market leadership and increased valuation through its analytics based platform and business consulting services. She is a global business executive with over 25 years in technology, from digital marketing to IT infrastructure operations, complemented by transformational leadership expertise. She was recruited to be Vice President of IBM Corporation running multi-billion-dollar businesses, to Mergers and Acquisitions Advisory Partner to Former Chief Marketing Officer and Chief Revenue Officer for NetLine Corporation, and officer for mobile and online companies.

Leveraging her experience serving as Board of Director and Audit Chair for multiple public companies and Director for private, she is on the faculty of Stanford University’s Graduate School of Business, the University of Houston, and the University of Hong Kong.

In 2015, she was inducted into the “Women in Science and Technology Hall of Fame,” a US based program supported since President Bush, Clinton and Obama administrations, in recognition of her innovation leadership and ability to link strategy to financial results. Prior, she was invited to speak at the United Nations on global growth and recognized as one of the most outstanding executives in California, receiving the Silicon Valley Business Journal “Woman of Influence Award,” Women in Technology International “T3” “Teach the Teacher Award,” “Women in Industry Award,” and “FMC Asian Star Award.”

Dr. Bo-Linn, a business technology trailblazer, is committed to supporting women and girls. Under her leadership, over 50 women were raised for community programs with the YWCA Silicon Valley including TechGYRLS for STEM education and careers. She has received the Open-A-Door-Foundation’s “SHE DOES” Women Changing the World 2015 Award, and received the Silicon Valley Business Journal “Woman of Influence Award.”

Leadership Program.

Dr. Cheemin Bo-Linn is CEO and President of Peritus Partners, Inc. and Board Director of both US public companies and European-based companies. Under Dr. Bo-Linn’s leadership, Peritus Partners is globally recognized for leading companies to market leadership and increased valuation through its analytics based platform and business consulting services. She is a global business executive with over 25 years in technology, from digital marketing to IT infrastructure operations, complemented by transformational leadership expertise. She was recruited to be Vice President of IBM Corporation running multi-billion-dollar businesses, to Mergers and Acquisitions Advisory Partner to Former Chief Marketing Officer and Chief Revenue Officer for NetLine Corporation, and officer for mobile and online companies.

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In 2015, she was inducted into the “Women in Science and Technology Hall of Fame,” a US based program supported since President Bush, Clinton and Obama administrations, in recognition of her innovation leadership and ability to link strategy to financial results. Prior, she was invited to speak at the United Nations on global growth and recognized as one of the most outstanding executives in California, receiving the Silicon Valley Business Journal “Woman of Influence Award,” Women in Technology International “T3” “Teach the Teacher Award,” “Women in Industry Award,” and “FMC Asian Star Award.”

Dr. Bo-Linn, a business technology trailblazer, is committed to supporting women and girls. Under her leadership, over 50 women were raised for community programs with the YWCA Silicon Valley including TechGYRLS for STEM education and careers. She has received the Open-A-Door-Foundation’s “SHE DOES” Women Changing the World 2015 Award, and received the Silicon Valley Business Journal “Woman of Influence Award.”

Leadership Program.

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Leadership Program.
Carolyn Toto, a Pillsbury Intellectual Property partner, Co-Leader of Internet & Social Media team
Pillsbury Winthrop Shaw Pittman LLP

A leading international law firm with 21 offices around the world, Pillsbury has been recognized as one of the Most Innovative Law Firms by Finance Times three years running and is one of 10 firms most consistently recommended by general counsel, according to a 2017 Bill Consulting Group survey. Pillsbury’s lawyers are highly regarded for their forward-thinking approaches, their enthusiasm for collaborating across disciplines and their unsurpassed commercial awareness.

In her practice, Carolyn advises technology industry leaders on all aspects of IP litigation, prosecution and portfolio management. She has successfully resolved patent, trademark, trade secret and copyright infringement cases through jury trial, on appeal and by negotiated settlement. Carolyn has obtained protection for various technologies, including imaging systems and medical devices, in jurisdictions worldwide. Well-versed in the legal issues involving social media, content distribution and advertising, Carolyn co-leads the firm’s Internet and Social Media team and manages the firm’s Internet & Social Media Law Blog.

As Chair of the National Asian Pacific American Bar Association’s Women’s Leadership Committee and has been honored by Working Mother magazine as a Working Mother of the Year.

When we look more broadly at technology’s impact on traditional industries, it’s indispensable that even the legal sector, famously attached to conventional management and operating styles, is not immune to disruption. The Internet and computer technology have improved many facets of work in a law firm, including communications (internal and external and client-facing) and the process of reviewing huge amounts of data, which is fundamental to the business of a firm. Research and document tools have become markedly more sophisticated and more accurate. Document production, search and review during litigation have been streamlined, and courts around the U.S. are moving their systems online to replace hard copy filings. And, of course, this digital shift has made courts and firms significantly more eco-friendly.

Technology also plays a huge role in work/life balance for professionals across industries, and lawyers are certainly no exception. The ability to connect to their work anytime and from anywhere provides much more flexibility for traditionally time-challenged lawyers—especially those who are working parents. Cloud technology and remote IT connectivity have made it easy to work in document-heavy and deadline-intensive professions like law without having to haul hard copies around or be chained to the office.

Every day, law firms throughout the U.S. are making strides for women. Pillsbury is unquestionably a leader in this area, from spearheading regular mentoring and sponsorship programs, to promoting a 2017 partner class that is 76 percent women, to celebrating the achievements of the firm’s many inspiring women leaders. That the rapid pace of innovation in technology coincides with the most exciting time for the advancement of women in law firms can only make this story more compelling. All fields, especially the traditional world of law firms, must continue to recognize the importance of exposing and encouraging women and girls to work in technology. It is a sector that provides well-compensated jobs and highly transferrable skills, and it will only continue to grow. We must prioritize education and enrichment opportunities for women and girls to nurture the ever-quickening momentum of this cause to the benefit of all fields, including law.
Chamber of Commerce and serves as Chairman Emeritus for Life of the United States Hispanic and Comerica, Inc. In 2012, she was named Chair of the Women Presidents’ Organization, and in both decades. In 2015 it was named fastest-growing company in the nation by the Women Presidents’ Organization, and in both 2016 and 2017 it was named second-fastest. Vaca also serves as a director of three Fortune 100 companies with a combined market cap of $23 Billion: Kohl’s Corporation, Cinemark Holdings, and Comerica Inc. In 2012, she was named Chair- man Emeritus for Life of the United States Hispanic Chamber of Commerce and serves as Chairman of its Foundation. In 2014 Vaca became a Presi- dential Ambassador for Global Entrepreneurship and has traveled to five continents inspiring the next generation of entrepreneurs globally. Vaca is a German Marshall Fellow, a British American Project Fellow, and a Hanny Crown Fellow at the Aspen Institute. In 2016 she was inducted into the Minority Business Hall of Fame and Museum and recently she was honored as a Trailblazing Woman in Labor and Business by the National Women’s History Project. Recently Nina was featured on the cover of Latino Leaders Magazine, as one of 2017’s 101 Most Influential Latinos in America, a list she has been included in for the past decade.

**Nina Vaca**
Chairman & Chief Executive Officer
Pinnacle Group

Pinnacle Group is an award-winning workforce solutions provider. With custom-fit talent and management solutions responsive to client needs and cutting-edge reporting via Oracle analytics, we provide clients the tools and service needed to drive transformation in their contingent workforce programs. Our excellence in service and operations make us a top choice of Fortune 500 and mid-market companies across the country and in Canada.

STEM IS THE PATH TO THE NEW AMERICAN DREAM

In 1996, as the Dot-com era was booming, there was this amazing demand for IT talent. At that time, I was the 25-year old daughter of entrepreneurs with a passion for connecting people with opportunity. And I responded to the environment and the possibilities I saw the only way that made sense to me – I founded a company providing IT talent to the companies that needed it.

Fast forward nearly 21 years, and that company, Pinnacle Group, has grown into a powerhouse workforce solutions provider that has evolved alongside clients such as Verizon, Comcast, AT&T, and HP. Companies that connect people worldwide at the speed of thought, and 3.2 billion consumers and business owners across the globe have access to affordable, effi- cient, and secure online services – something that we could only imagine back in 1996.

Today, Pinnacle Group is one of America’s fastest growing woman-owned enterprises, largest Latina-owned business, and a leading workforce solutions provider. But we didn’t get here by accident and it didn’t happen quickly. I often stay it took us 20 years to become an overnight sensation.

At Pinnacle, we’ve been incredibly successful by mar- rying our entrepreneurial DNA with STEM disciplines, but when I think about how far we’ve come, I think how far we still have to go. At Pinnacle, our motto is, “Our community is our business,” and we’re on a mission to help others find the success we’ve had. This means helping a new generation find success in STEM fields.

STEM education and workforce development are an absolute necessity for American workers and entre- preneurs to compete in the global marketplace. It is essential that industry leaders help ensure that we have a vibrant and resilient workforce ready to meet today’s challenges and who are able to keep con- stantly and throughout their careers to keep pace with the challenges that will arise down the road.

The first step is getting students interested in business and in STEM fields. I firmly believe that “you can’t be what you can’t see.” One of my top priorities is help- ing young women and minorities see that they too can choose business and find success there, even if they don’t know anyone who has done it before. I spend a lot of time talking to young people, especially in dis- advantaged areas or underrepresented populations about futures in STEM education and STEM careers. I want to show them that this can be the path to their own American dream.

But simply speaking with and inspiring others isn’t enough. I also spend a lot of time talking with other business leaders about how we can improve partici- pation in STEM education and provide better access to STEM careers. As business leaders we have to cre- ate meaningful opportunities that open the doors for others.

As an example, over the past two years, Pinnacle has gotten deeply involved with an initiative in our downtown Dallas, Texas called the P-TECH Program through the Dallas Independent School District. P-TECH stands for Pathways to Technology Early College High School, and creates a unique three-year relationship between the school district, local commu- nity colleges, and industry to ensure students are fully equipped to take on career-track jobs upon gradu- ation with employers local to their community. It’s the best model we’ve seen so far on how to create real change within underserved student populations. This program serves two major goals – it helps more people find their American dream by training them for suc- cessful STEM careers, while also building up the highly skilled workforce that businesses need to continue competing in the global marketplace.

Students who apply for the program in their 8th grade year are selected based on personal characteristics such as drive and grit, as well as their families’ willingness to support their success in the program, which is rigorous. Most of the students are the first in their family to pursue higher education and their families under- stand the importance and the potential of the oppor- tunity to change not only the lives of their students, but also their families and the community.

When students graduate from the P-TECH program, they will earn both a high school diploma, as well as an associate’s degree. Some students will also earn industry certifications. Importantly, they will also have industry experience in their chosen field or pathway to help them find employment following graduation if they choose not to pursue a 4-year degree.

With the constant demand for workers with STEM back- grounds, and the sharply increasing cost of higher education, this program allows students to pursue STEM education and careers who otherwise may not have had the idea or the access to do so. Pinnacle is so proud to be part of this transformative program as industry partner to Thomas Jefferson Pre- Tech College High School. Our first class of graduates will walk the stage in 2020 and we know they have bright futures ahead of them. This program underscores what we have known all along. Business leaders can help shape the future of this country. By ensuring that students from all back- grounds have the resources they need to succeed with access to STEM education to open the door to high-demand careers, we can change not only the lives of individuals, but families, communities, and the country. STEM careers can provide a new American dream for people of all backgrounds.
Kathy Fish
Chief Technology Officer
Procter & Gamble Company

Innovation has been P&G’s hallmark for more than 180 years and continues to drive our growth. We serve nearly five billion people around the world with our brands and have one of the strongest portfolios of trusted, quality, leadership brands including Always, Bounty, Charmin, Crest, Downy, Febreze, Gillette, Oral-B, Pampers, Pantene, Pringles, Mr. Clean, Olay, and others. We believe innovation starts with the consumer. We gain insights into their everyday lives so we can combine “what’s needed” with “what’s possible.” P&G’s Purpose sets a high bar for the performance of our products, and requires that we continually innovate to create irresistibly superior products that meaningfully improve consumers’ lives, now and for the future.

Our 6,800 R&D employees are at the heart of our innovation pipeline. We have more than 36,000 active granted patents worldwide, and invested more than $1.9 billion in research and development in 2016. The P&G community includes operations in approximately 70 countries worldwide.

For more information about P&G visit www.pg.com.

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Since P&G was established in 1837, innovation has been the hallmark of our Company. Year after year, decade after decade, innovation has built brands, transformed categories, and created entirely new businesses.

For us, innovation starts with the consumer. We gain insights into their everyday lives so we can combine “what’s needed” with “what’s possible.” Our goal is to improve people’s lives around the world everyday with superior products that meaningfully improve consumers’ lives, now and for the future.

Diversity plays a powerful role in driving innovation. Innovation doesn’t happen in a straight line. We are successful when we bring together individuals from different backgrounds, cultures and thinking styles to connect seemingly unconnected ideas. The healthy tension that comes from a diverse, well-functioning team is what’s needed to deliver big, breakthrough innovations that lead to the long-term growth of our business.

Diversity in our STEM fields, such as Research & Development (R&D) and Engineering, is an essential part of how we drive innovation. When I joined the Company back in 1979, R&D was primarily a male dominated field. Women had been in management roles for less than 10 years. There were three women leaders within R&D that stood out and became pioneers to those of us who had aspirations for rising to a higher level. They forged a path for others to follow in their footsteps.

Over time, the representation of women in R&D leadership roles has grown exponentially. Today, we have over 3,350 women within our function, with over 50% female representation on the R&D Leadership team. The company continues to demonstrate its commitment to diversity in STEM leadership positions with my appointment as the first female Chief Technology Officer. I hope this serves as inspiration to our young female employees.

As a Company, we work hard to support our employees through a variety of teams so everyone can feel valued included and perform at their peak. Within R&D, we established the “Women in Innovation Network” to support the development, advancement and retention of women. This group strives to bridge the diversity gap and foster an environment where women can succeed and excel both personally and professionally in the area of innovation.

While we are making strong headway, there is always more work to do. Our R&D organization is focused on driving even more into our most technical disciplines – technology, packaging and process. To do this, we have established a disciplined approach to recruiting and training and have recently updated our internal technical career path. We offer courses that equip females with the tools and capabilities needed to enhance their professional development. These courses are highly interactive and expose top talent to senior leadership throughout their career. We believe this is an important step in retaining strong talent across the globe. We also strive to make the work environment more inclusive, leveraging key external thought leaders to strengthen our approach.

But this work shouldn’t start when women apply for positions at P&G. We must expose females and minorities to the areas of STEM early on in their education. As an industry, we have an opportunity to invest in programs that promote students to consider STEM careers. Planting this seed early is important to the success of our industry, our innovation and our ability to compete on a global level. Our focus in communities where we operate is on programs aimed at students with the potential to be successful STEM professionals. Recent highlights include:

• Newcastle site leaders hosted a STEM career day with hundreds of scientists of tomorrow from local high schools. The site educated students on the dynamic possibilities of an education and career in STEM, the importance of diversity in the workplace, and in particular, helping young women overcome the cultural and societal barriers to choosing a career in science.

• In Cincinnati, we partnered with Greenlight for girls (g4g), an international organization dedicated to encouraging young women and girls to pursue studies and careers in STEM. We welcomed hundreds of girls to expose them to role models in STEM and show them anything is possible.

• Our Singapore Innovation Center hosted teen girls for a fun-filled day in the laboratory where volunteers shared insights into the career of our researchers. The girls were exposed to hands-on activities in the laboratory and got an inside look at the science that goes into our products, seeing first-hand the ingredients that allows P&G to touch and improve lives every day.

Connect+Develop, our open innovation program, works with key external strategic partners to bring new ideas and technologies to market. Connect+Develop includes more than 2,000 innovation partners around the world including top universities. Our partnership with these universities provides us the chance to work closely with PhD students, including women and minorities. These high performing students are exposed to the breadth of sciences at P&G, as well as our facilities.

Personally, my goal is to drive diversity in our organization within all roles and at all levels, to create an inclusive work environment where everyone is valued and making a difference. Having an environment where we challenge each other openly and transparently will benefit from the collective power of the organization, and ultimately lead to breakthrough innovation. This healthy tension can only happen in an inclusive organization with a high level of trust and respect. We must be successful in order to deliver the long-term health of our business supported by innovations that are meaningful for our consumers.
Barbara G. Koster
Senior Vice President and Chief Information Officer
Prudential Financial, Inc.

For 140 years, Prudential Financial has helped individual and institutional customers grow and protect their wealth. We are known for delivering on our promises to our customers, and are recognized as a trusted brand and one of the world’s most admired companies. With operations in the United States, Asia, Europe and Latin America, we provide customers with a variety of products and services, including life insurance, annuities, retirement-related services, mutual funds and investment management. We strive to create long-term value for our shareholders through strong business fundamentals, consistent with our mission guided by our vision and directed by our company’s core values.

Middle school girls may not often fill the conference rooms of corporate America, but here I’ll make the case that they should. That was the scene in Prudential’s Newark, New Jersey headquarters recently when our Global Business & Technology Solutions department invited girls from local middle schools to meet women who work in technology and hear how they got into the field.

As simple as this event and others like it may seem, we’ve received consistent feedback that just seeing other women accomplish their dreams in the STEM field was a powerful motivator for these young women. It opened up a “world of possibilities” in their minds about the opportunities available to them.

That’s one reason why I’m honored to be one of STEMconnector’s 100 Corporate Women Leaders in STEM. I look forward to a day when women in technology are so integrated that our presence is no longer deemed exceptional. Having the right role models and mentorship is vital to encouraging girls and women to pursue an education and careers in STEM.

Prudential has invested so much to ensure that we grow and maintain a strong pipeline of talented women in STEM roles. Here are a few of the key things that have stood out to me on this journey.

First, companies need to demonstrate their commitment to STEM by integrating themselves in their local communities and empowering young women with the tools they need to learn and grow. At Prudential, we have been a strong supporter of the Girls Who Code mission by sponsoring summer immersion programs for high school sophomores and juniors.

Programs like Girls Who Code give young women hands-on training in the basics of computer science, which kick-starts their journey into the technology field. Promoting this effort broadly has helped us to encourage young women in Newark and surrounding areas to apply to the program. Our ultimate goal is to recruit from this pool of talent as they go on to college and ultimately graduate their respective programs.

In addition, we are a sponsoring company for Workforce Opportunity Services (WOS), a next-generation nonprofit organization that recruits diverse youths, veterans and military spouses and provides them with education, on-the-job training and mentoring to pursue careers in STEM and other fields. As a result of this commitment, we have provided education and career opportunities to women in technology, not only at Prudential, but at more than 50 companies across the country. We also partner with local colleges and universities to increase student awareness of IT careers, support student networking and mentoring opportunities, and provide job experiences through internships and short-term assignments.

Secondly, companies need to capture insights from these young women and adjust their programs to reach and support them accordingly. Through our pipeline programs, we have found that these young women are mostly looking for two things—the chance to do meaningful work and to work for a company they’re proud of. Not all are looking to work in technology, but understand that the STEM disciplines can help them to think differently about solving problems in their chosen careers.

We have also found that for many of these young women, practical problems can get in the way such as how to pay for their education. For recruits that needed to take out loans, we offer student loan assistance. In fact, Prudential was one of the first companies to put together a formal program to help new hires pay down their student loans. Our student loan assistance program offers campus hires a $5,000 lump-sum payment, and we fought hard to make sure that ours was among the most generous programs out there.

Finally, because technology moves so quickly, we have found that STEM recruits often have an appetite for lifelong learning. So, we have made sure to establish a robust tuition assistance program that offers qualifying employees financial support to advance their education. In addition to traditional college tuition assistance, the program also covers degree and certificate programs, as well as industry designations.

We are active in our support of the Grace Hopper conference, and have successfully recruited talent through that and other diverse technology conferences. Our focus, however, remains on ensuring that talented women in technology are supported long before they achieve Grace Hopper status. After all, they may be just middle school girls in the conference room today—but they’re leaders in the boardroom tomorrow. A world of possibilities awaits.
Carol Zacharias is underwriting counsel to QBE North America. Ms. Zacharias has served as Chair of the American Bar Association’s Insurance, Professional Liability, and Errors and Omissions Insurance Committee, and as a speaker and teacher of professional liability at New York University School of Law. She attended New York University School of Law, where she received a master’s degree in corporate law. She has served as Chair of the American Bar Association Business Law Section’s Business Insurance Committee and Vice Chairman of the Professional Officers’ and Directors’ Liability Law Committee of the Tort and Insurance Practice Section. She also served as co-chair of the insurance sub-committee of the American Bar Association Litigation Section’s Committee on Corporate Counsel. She is a member of the United States Supreme Court Bar, the Federal Bar, the New Jersey bar, the American Bar Association, and the American Corporate Counsel Association.

Ms. Zacharias has been published in a securities law textbook and a variety of periodicals including: The Journal of the American Underwriter, Global Reinsurance, Bank Director, Professional Agent, Journal of Accountancy, John Liner Review, Professional Agent, Insights, BNA’s Tax Management & Compensation Planning Journal and Liability Corporate Analyst. She is quoted in various publications, such as Business Insurance and the Wall Street Journal. She is a frequent speaker and taught professional liability at New York College of Insurance, now part of St. John’s University.

In 2003, Norway led the world in implementing the first quota for women on boards. In a groundbreaking move, a new law mandated that 40% of boards had to be comprised of women by 2009, up from only 9% at the time. Italy, Germany, France, Belgium and Iceland followed suit with mandatory gender quotas for boards, and Austria, Finland, Netherlands, Spain, Sweden and the United Kingdom followed voluntary gender quotas for boards. Next year, 2017, 37 countries and with significant portions of boards in these countries: 47% of boards in Norway, 34% in France and Sweden, and 31% in Italy and Finland. Yet the United States lags far behind, with neither mandatory nor voluntary quotas, and with only a distant 18.7% of women on boards in the S&P 500.

The arguments for women on boards are varied and the fodder for considerable debate. Some contend that gender parity is mandated by a sense of equity. Others believe that women on boards drive increased participation in social good activities and investments. While these arguments might be debated, one is incontrovertible: women drive business.

- Women control over $17 trillion globally, making women one of the world’s largest emerging markets, larger than China and India combined.
- Over 70% of consumer spending is driven by women, meaning that women control the purchasing decisions or have a veto vote over or influence someone else’s purchasing decision.
- Women earn 57% of bachelor’s degrees, 60% of master’s degrees and 51% of doctoral degrees.
- Women are the primary or only breadwinners in 40% of US households with children under the age of 18.
- Women control 51% of wealth.

As a result, and perhaps not surprisingly, women in corporate leadership roles are good for business.

One study found that companies with women in 25% of senior leadership roles outperform others by a compound annual growth rate of 2.8%, and those with women in 33% of senior leadership roles outperform others by a compound annual growth rate of 4.7%. Moreover, returns on equity average 19% higher and dividend payments are 9% higher.

Another study of companies with at least some women in senior management roles found that those companies with women in 35.2% of leadership roles and 44% in the CEO role produced a median return on assets and equity at least 74% higher than the other firms in the study. Yet another found that women make up only 20% of executives globally.

Accordingly, it is an economic imperative that industries promote, cultivate and reward women in senior leadership and boardroom ranks. The best way to begin is to simply begin: women will bring other talented women. Female chief executive officers are 50% more likely than their male counterparts to have a female CFO, and are 55% more likely to have women leading profit centers. Moreover, the female talent is there. 70% of women with children under 18 are in the labor force, and women possess higher levels of education in terms of holding more bachelor, masters and doctoral degrees.

Yet, only one of the 100 largest stock company insurers was led by a female chief executive officer as of 2016. 85% of companies in the insurance industry had no females in top executive positions, such as CEO, CFO and COO, as of 2013, in the entire financial services sector, women hold 42% of the staff roles but only 20% of senior roles. The conclusion is clear: the insurance industry has tremendous opportunities to be gained by attracting and promoting female5 business, and by achieving gender equity in remuneration. Inclusion and diversity in senior leadership and the boardroom is critical to being relevant, meeting the challenges of today’s marketplace, and attracting and retaining leading talent.

Carol A.N. Zacharias
Senior Vice President
QBE North America

QBE, founded in Australia in 1886, is a $15 billion global insurance company operating in every key insurance market in the world. Its unique integration of financial strength, global presence, broad array of products, sophisticated underwrit- ing acumen, and claims handling expertise deliver risk miti- gation solutions to its customers as well as position QBE to be a leader in the insurance industry.

QBE’s North American business covers four major market seg- ments: (i) the Property & Casualty division includes mono-line and multi-line business for commercial lines, personal lines, and programs; (ii) the Specialty Lines division offers niche insurance products such as accident and health, aviation, cyber, healthcare, inland marine, management liability and professional lines, programs, surety, trade credit, and transac- tional liability; (ii) the Crop division includes multi-peril, crop hail, named peril and livestock coverage; and (v) the Reim- surance division provides reinsurance for property & casualty and specialty businesses.

QBE North America
Senior Vice President
Carol A.N. Zacharias
Rebecca R. Rhoads
President, Global Business Services
Raytheon

Raytheon Company, with 2016 sales of $24 billion and 63,000 employees, is a technology and innovation leader specializing in defense, civil government and cybersecurity solutions. With a history of innovation spanning 95 years, Raytheon provides state-of-the-art electronics, mission systems integration, C5I™ products and services, sensing, effects, and mission support for customers in more than 80 countries. Raytheon is headquartered in Waltham, Massachusetts.

Rebecca R. Rhoads has more than 35 years of experience within the defense industry. Rhoads was appointed president of Global Business Services (GBS) at Raytheon in December 2013 to lead the expansion of common business operations across the company’s enterprise service delivery areas, including sectors of Raytheon’s supply chain management, finance, information technology (IT), human resources, facilities and advanced media functions.

As the chief information officer (CIO) for Raytheon from April 2001 through December 2015, Rhoads was responsible for IT strategy, functions, processes and people companywide and globally. This included IT architecture, systems, networks, investments, information protection and assurance, and IT supplier relationships. It is used in the state, design, build, procurement, delivery and support of all Raytheon products and services. The office of CIO remains part of her GBS organization, reporting directly to her.

Rhoads serves as chairperson of Raytheon’s Pension and Investment Committee, and is a member of the Raytheon UK board of directors. She previously served as executive diversity champion for Raytheon and led the Executive Diversity Leadership Team.

Rhoads began her career as an electrical engineer, designing automated test systems for the Standard Missile, RAM™ and Stinger® missile programs. While working in Engineering and Operations, she held various assignments of increasing responsibility at General Dynamics, Hughes and Raytheon. These assignments included systems reliability, safety and product effectiveness engineering, test engineering, and manufacturing engineering. In addition, Rhoads taught electrical engineering classes at California Polytechnic University in Pomona, California.

Throughout her career, Rhoads has received numerous awards and recognitions, including: Corporate America Top 100 Influential Leaders, CIO Hall of Fame and Top 50 Women in Technology in 2012; she was named Boston’s most powerful woman in technology on Boston.com and was ranked sixth on ExecRank’s list of Top 50 Female CIOs. Rhoads was inducted into California State Polytechnic Pomona College of Engineering’s 2014 Hall of Fame. In 2015, The Fisher CIO Leadership Program at the University of California Berkeley’s Haas School of Business awarded Rhoads the 2015 Fisher-Hopper Prize for Lifetime Achievement in CIO Leadership. She also serves on multiple business and technology councils and advisory boards.

Rhoads holds bachelor’s and master’s degrees in electrical engineering from California Polytechnic University. She also holds a master’s degree in executive management from the University of California at Los Angeles Anderson Graduate School of Business Management.

Today, nearly 26 percent of the STEM workforce is female, but when I took my first engineering job, I was one of just a few women in the field. As my career grew, I sought mentors to help me navigate the industry’s ever-changing landscape.

Having these guideposts along the way served to shape my work and my career, and I am passionate about paying it forward. That is how we accelerate change. I take every opportunity to advise the next generation of STEM professionals, and have worked to ensure we have a strong mentor program at Raytheon.

Our company has a long history of women in technology. Starting early is key to increasing the percentage of women in this industry. Whether it is the result of societal pressures or perceived boundaries, girls can be less confident about math and are more likely than boys to doubt their own abilities – even when they perform better in these subjects than their male peers.

I know my daughter faced these doubts when she went to college and when she took her first job as an engineer. In one of her first on-site assignments, she was having trouble with a drill and her client questioned her ability to do the job. She had to move past her self-doubt, find her confidence, and ultimately, a path forward. Fortunately, she had the resolve to push forward, not give up or ask to be rescued – she relied on her skills and her knowledge to get the job done.

Moments like these are what I share with young professionals in our field. And it’s why Raytheon focuses on introducing girls early to STEM careers. Our five-year partnership with Boys & Girls Clubs of America to create STEM Centers of Innovation across the U.S. specifically targets teenage girls through exploring computer programming, 3-D printing, and robotics alongside knowledgeable STEM professionals. Mentoring also takes place in our regional afterschool programs, which pair high school girls with Raytheon employees in short- and long-term programs to encourage young women to see themselves in those careers. Every February, Raytheon supports Girl Day, a worldwide campaign to introduce girls from elementary through high school to technology by offering role models in the field.

At the college level, we offer scholarships and internships to women pursuing education in fields like computer science and cybersecurity. We also invite college students to shadow Raytheon engineers for a first-hand look at STEM careers in action.

We are proud supporters of the Student Veterans of America, the world’s largest network of student veteran groups. Raytheon has a strong commitment to military personnel and their families. We strive to empower student veterans to reach their higher education and career goals, particularly in the high-demand STEM fields.

Once women begin their careers at Raytheon, we provide opportunities to help nurture their growth at the company. The Raytheon Women’s Network, a global employee resource group, is one such resource committed to retaining and increasing the visibility and contributions of Raytheon women. The group is open to all employees, and provides members with opportunities for professional development, and to discuss the barriers and misconceptions that exist for women in the workplace.

When I mentor young women, I stress the importance of growing and changing in order to maintain relevance. At five or 10 years into your career, consider where you are, your skills, and where you need to go. Check in with yourself and ask: Do I have a rich 10-year experience or do I have one year of the same experience ten times? Take chances, step out, try things. Be a life-long learner.

To move forward, we must take on different and difficult assignments. Actually, we should run toward them. In the process you will enrich your network, and that network will tap you on the shoulder in the future with new opportunities. People will learn they can count on you and they will.

And when you go for that next-level role in your career, remember to chase the work, not the promotion. In the interview, ask what they are looking to solve, what are the barriers and misconceptions that exist for women in the field. And when you find that, you will be successful.
Martina L. Cheung
Executive Managing Director, Head of Global Risk Services
S&P Global Market Intelligence (SPGMI)

At S&P Global Market Intelligence, we know that not all information is important—some of it is vital. Accurate, deep and insightful. We integrate financial and industry data, research and news into tools that help track performance, generate alpha, identify investment ideas, understand competitive and industry dynamics, perform valuations and assess credit risk. Investment professionals, government agencies, corporations and universities globally can gain the intelligence essential to making business and financial decisions with conviction.

S&P Global Market Intelligence a division of S&P Global (NYSE: SPGI), provides essential intelligence for individuals, companies and governments to make decisions with confidence. For more information, visit www.spglobal.com/marketintelligence.


Ms. Cheung is Head of Risk Services. She is responsible for monetizing and leveraging S&P Global’s significant risk intellectual property (research, content, models, data, analytics and solutions) to serve clients in managing complex risk challenges.

Martina most recently served as S&P Global’s Chief Strategy Officer, where she was responsible for the execution and measurement of S&P Global’s Growth and Performance objectives.

Ms. Cheung joined S&P Global in 2010 as Vice President of Operations and was appointed Managing Director of the Global Strategy group in 2012. Prior to joining S&P Global, she worked in Accenture’s Financial Services Strategy group and later as a Partner at Mitchell Madison Consulting.

Ms. Cheung holds a bachelor’s degree in Commerce and a master’s degree in Business Studies from University College Galway.

As Executive Managing Director, Head of Global Risk Services, I am passionate about the importance of STEM programs and resources. I believe the next generation of leaders must have both business and technology acumen in order to truly take our business to the next level with regards to innovation and the client experience.

Competition is fierce in today’s job market—yet many positions in science, technology, engineering and mathematics (STEM) remain unfilled. In financial services and adjacent sectors, we can envision a scenario where robotics and artificial intelligence (AI) automate many tasks requiring humans today. This presents both an opportunity and a challenge: the opportunity is to figure out which technologies are best suited to your business needs and how to upskill your talent to maximize the benefit. The opportunity is to leverage these tools to best position the value-add from your workforce and create real differentiation for your customers. Those who are successful will have found the balance between automation/AI and human insights.

I lead the Risk Services business line for S&P Global Market Intelligence, a $1.5 billion provider of intelligence and insights for the global financial markets. I also serve on the S&P Global Operating Committee which is responsible for setting strategy and driving growth and performance for this $6 billion financial information company.

I am responsible for monetizing and leveraging S&P Global Market Intelligence’s significant risk intellectual property, which includes research, content, models, data, analytics and solutions. My responsibilities include P&L management, strategic planning, team development, and product execution.

As I was elevated to my current position, I was tasked to establish new leadership, build new team capabilities, and develop a visionary 3-year plan focused on product development and go-to-market strategies. Coupled with that was the introduction of new analytics products and fostering a culture of innovation.

My philosophy on innovation is that we must disrupt ourselves before someone else does it for us. We have up a dedicated innovation team staffed with data scientists and are proactively exploring fintech and technology partnerships. Most recently, we partnered with technology companies, such as Plotly and Kensho, to bring together our analytical capabilities and robust datasets coupled with their AI and data visualization capabilities.

While innovation is always top of mind for S&P Global, there are many factors that play into it. As technology revolutionizes the way we work and interact, companies face the question of how to redesign their workforces, as my team was no exception. While some companies expect to reduce their workforces as a result of automation, remaining talent pools need to be redefined with an emphasis on STEM-based skills. Most importantly, future talent pools will need to be more technology literate as skill gaps are especially acute in areas of artificial intelligence, machine learning, virtual and augmented reality – all areas that rely significantly on STEM skills.

In addition to talent acquisition, we are examining the talent development framework required to elevate STEM-based skills throughout the Risk Services workforce. Areas of focus include robotic process automation, machine learning and behavioral modeling.

We are also participating in efforts to develop future talent pools through a number of programs spearheaded by S&P Global. These programs are designed as an assisted underserved people, including women, minorities, immigrants and low-income youth, to gain the essential skills today’s economy demands. We sponsor events like the Global STEM Talent Summit and leverage our highly skilled workforce as mentors for the next generation of business leaders. S&P Global also partners with various STEM-related groups including FIRST (For the Inspiration and Recognition of Science and Technology), Girls in Tech, Commonwealth, to name a few.

Academic partnerships play a critical role in helping us to innovate as well while developing STEM students by giving them real-life problems to solve. We recently sponsored a program with Columbia University where graduate level students work for duration of two semesters alongside S&P Global employees. Students developed quantitative models for Comprehensive Capital Review analysis (CCAR) and Dodd-Frank Act Stress (DFAST). Both models are required by federal regulators to perform financial analysis by major US banks to test adequacy of their capital reserves. Through the project, students learned about the credit risk, regulatory requirements, and how banks perform stress analysis and report test results.

These talent development initiatives are critical to developing the people and culture needed to drive innovation in the Risk Services business and position the group for future business success. Innovation cannot simply be just about the products or the data. Fostering a culture of innovation in a field where technology is moving a mile a minute requires an agile approach and assessing the intangibles that come with innovation.

I have an intense focus on developing STEM talent, seeking opportunities to collaborate with outside partners and setting ourselves up to be our own disruptor.
Andrea Leszek is SVP of Technology & Products Services at Salesforce. She leads engineering enablement and engagement initiatives, including innovation programs, engineering training, employee recognition, diversity, technology marketing, and agile coaching. She is also responsible for customer-facing documentation, in-app help, and technology communications. She is a founding member of Salesforce’s Women in Technology network, and is passionate about increasing diversity in tech. She holds a B.S. and M.S. from the Massachusetts Institute of Technology.

IT TAKES A VILLAGE: WHY MENTORS ARE KEY FOR KEEPING WOMEN IN TECH

Mentorship and a feeling of belonging are key factors for keeping women in technology. I learned this the hard way.

My high school chemistry and math teachers (both men) were my first technical mentors, and their encouragement prepared me for my college major—chemical engineering at MIT. The atmosphere of learning, technology, and science was exhilarating at MIT (still is!), but the isolation of being one of just a few women in my ChemE classes began to wear me down. On top of that, I was too young and inexperienced to understand the importance of the mentorship that my female ChemE professor offered. I ended up switching away from ChemE to focus on Linguistics and Cognitive Science, two departments that had more women and took a stronger role in mentoring their undergraduates. Unfortunately, my story is not unique for women in STEM—feeling isolated and lacking mentorship drives many women to take less technical roles or to drop out altogether.

As I’ve grown in my career since then, I’ve been fortunate to have great mentors who have pushed me to take on bigger roles and do things I didn’t think were possible. An early mentor in my career gave me the support and time to learn how to code. Another mentor helped me envision a bigger future role for myself, and another gave me the encouragement to take more risks. Having multiple mentors has been invaluable in my career.

Paying it forward is important to me. I regularly mentor women earlier in their career at Salesforce. I also volunteer as a mentor for Technovation, a world-wide challenge for middle-school and high-school girls to build mobile apps to solve a problem in their communities. I love to see the girls grow in confidence as they progress through the 12 week program. I’ve also been a program mentor with the Tech Women Program, a Department of State initiative for technical women from Africa, Central Asia, and the Middle East that pairs them with technical women mentors from Silicon Valley. Not only does the program promote peace and cultural understanding, but it gives all of the women (mentors and participants) a greater sense of belonging to a global community of technical women.

What I’ve learned from my experience as a mentor and a mentee is two-fold. First, it’s that everyone can be a mentor because we all have something we can teach someone else no matter where you are in your career development. Second is to not be afraid to ask for help. Who knows where I’d be as a chemical engineer if I had asked for help or accepted the help offered to me back in college?

The positive news is that we’re at a turning point—more girls are becoming interested in STEM as computer science is taught in more schools and as programs like Technovation blossom. So, we need mentors not only to get girls into STEM fields but also to keep them there. Providing mentorship, experiences, and opportunities for girls can build their confidence and stretch their potential, but we need mentoring at every step of the way that goes deeper as they grow.

In addition, there is a growing awareness around the issues faced by women in technical fields and people are mindful of what I learned firsthand in college—that it can be difficult to feel like you belong when you’re in the vast minority. That’s why I started the Women in Technology (WIT) group at Salesforce. We have chapters in offices around the globe at this point! Some favorite events have been an outing to see Hidden Figures, a speed mentoring session, and an internal conference featuring lightning-style talks by Salesforce employees. People of all roles, departments and backgrounds have shown their support for WIT, and as a result it’s grown into a powerful community for our employees.

As part of my role at Salesforce, I lead an organization that is focused on creating the best, and most inclusive, engineering culture. We empower all of our employees with agile, innovation, learning, and development programs, and I hear from women all the time that they want to see senior leaders involved as mentors. In 2015, our team launched the Technology & Products Women’s Leadership program. The program originally focused on developing and mentoring senior women and it was so successful that we’ve expanded it globally and now serve women at more even levels, and work with male employees as well as to engage them in creating a more inclusive workplace. It’s programs like this that have propelled Salesforce into the list of Fortune’s Best Workplaces for Women, and I couldn’t be prouder.

On a macro level, Salesforce emphasizes a four-pronged approach to building a path toward equality: equal pay, equal opportunity, equal education, and equal rights. In 2016, the company performed an audit of all employees’ salaries and provided pay adjustments as needed to close any pay gaps that existed. We performed another audit this year and plan to do so on an ongoing basis. This strong stance on equality makes me proud to work at Salesforce. I’m honored to be part of a company that supports women and is paving the way for the next generation of technical women.
Emily Baranello
Vice President
SAS Global Education Practice

SAS is the leader in analytics and focuses its philanthropic efforts on education initiatives geared toward increasing the STEM-skilled workforce. SAS uses a multi-pronged approach to provide support through many channels and uses its resources to develop creative instructional materials. Examples of this approach include providing free interactive, standards-based curriculum software for K-12, as well as free SAS software to university students, professors and researchers. SAS collaborates with higher education institutions around the world to create degree and certificate programs in analytics and related disciplines, including the first Master of Science in Analytics program at North Carolina State University. By supporting efforts that prepare more graduates for college, work and success in the 21st century, SAS continues to play a vital role in the global community.

Emily Baranello is the Vice President of SAS’ Global Education Practice. She leads the company’s efforts to increase the use of SAS for administrative data-driven decision making, academic research, and teaching in early learning, K-12 and higher education markets. Many of these efforts involve supporting STEM education, with a particular focus on computer science.

Prior to taking this position, Emily led efforts to integrate SAS in K-12 environments, including the company’s free web-based curriculum resources, enterprise decision support solutions, Statewide Longitudinal Data Systems and more. She manages the Analytics U and SAS University Edition initiatives, which provide active user communities and SAS® Analytics software to professors and learners worldwide, at no cost.

Emily previously worked in a SAS subsidiary that focused on products for enterprise data quality and data integration. In this role, she worked on some of the first real-time data quality initiatives in the Education market.

Emily Baranello has participated in the North Carolina P2W Project and Council since its grant award in 2011. The project enhances North Carolina’s ability to track student performance across years and sectors, help evaluate institutions and program performance, analyze data in more detail to validate or improve performance. Emily participates in the UNC Educator Quality Dashboard Advisory Committee to help track and improve performance from the UNC College of Education into the classroom. Emily is also a board member of Youth Thrive, which convenes professionals serving young people to discuss how data can help align services reaching all youth and helping them toward becoming thriving adults.

Emily’s career has been spent almost entirely working with the public sector, with a large portion dedicated to working within the Education market. Emily is a graduate of North Carolina’s Elon University with a degree in psychology.

The rise of big data has created a persistent analytics skills gap in the U.S. Career demand for analytics careers demand strong proficiency in many STEM disciplines, including math and statistics. Analytics unlocks value from big data, which fuels productivity and innovation. As such, companies around the world clamor for STEM talent, particularly data expertise.

However, a person does not have to be a PhD data scientist to seize rewarding careers. There is high demand for data driven management, for instance. Data management encompasses the extraction and cleaning of data, among other things, that creates high-quality data. We hear a lot about sophisticated analytics like machine learning and artificial intelligence. That is impossible without data management on the front end. So there is a wide breadth of data-related careers, and many people are able to develop the skills to land one.

According to a 2016 Fortune study of LinkedIn data, women only hold 23% of STEM jobs. The study indicates that number is rising, and we have reason to be optimistic it will accelerate.

SAS was one of the founding companies of the Computer Science Coalition, which evolved into the computer science advocacy group, Code.org. Code.org has shown what the right coursework and teacher training, traditionally underrepresented populations will gravitate to computer science.

According to a Code.org study, in participating schools, the number of female students taking AP Computer Science exam grew 135% since 2016. Participation by underrepresented minorities was up 170%.

But we still have a ways to go. Despite the leap in the number of exams taken, only 27% of test-takers were female, while minorities lagged behind at 20%. The problem persists in higher education, where 83% of universities computer science majors are men, and continues into the workforce.

Seeding the field of STEM talent

SAS cultivates STEM and analytics talent in many ways, from pre-K through the workforce.

SAS® Curriculum Pathways® free digital resources and mobile learning apps for K-12 are used in all 50 states by more than 2 million teachers and students. Some apps build early literacy and number sense, which are critical to STEM studies. New app CodeinHayes helps teach programming basics and engages classroom learners with Pads and Sphero robots.

More than 1 million people have downloaded SAS University Edition, which offers valuable experience with SAS foundational technologies to anyone, for free. SAS University Edition is also used in free high school teacher workshops to help educators integrate programming skills into instruction.

Professors and students can access more sophisticated SAS statistical analysis, data mining and forecasting software at no cost through SAS OnDemand for Academics.

SAS has partnered with colleges and universities to launch 65 master’s programs and 140 certificate programs in analytics and related disciplines. Community colleges offer valuable analytics degrees, but also develop data-related competencies that boost student marketability. SAS collaborates with many community colleges and with Achieving the Dream to build those talent pipelines.

Other initiatives include an annual SummerSTEM event which immerses educators in STEM-related organizations to learn about successful STEM career skills. STEM Career Days, where SAS volunteers excite young students about analytics. 1:1 laptop initiatives, award programs for students doing interesting work with analytics and support of Computer Science Education Week and the Hour of Code.

Building a more diverse STEM workforce

Fortunately, many organizations have accepted the challenge of increasing the percentage of underrepresented populations in STEM. US2020 cultivates STEM mentors, with a focus on underserved students. Proverbia226 opens up STEM opportunities for kids with incarcerated parents, a situation which disproportionally affects minority children.

SAS is honored to work with these organizations. SAS and Capella University not only partner to offer analytics masters degrees, but also award annual Women in Analytics scholarships. The Women’s Initiatives Network, a group of more than 600 female SAS employees, fosters female leadership and professional excellence and reaches into communities to encourage women to pursue STEM-related careers.

Through a mentoring collaboration with the Girl Scouts’ Cookie University, SAS helps young female entrepreneurs understand how analytics can do many things, including boost cookie sales.

While military veterans have many characteristics that appeal to employers, the transition to civilian life can be challenging. SAS partners with many veterans organizations to help those heroes succeed post-service. For instance, SAS offers training and certification to former service members and their families through the Institute for Veterans and Military Families.

One group that sometimes gets left out of the skills gap discussion is people with disabilities. For instance, there are about 285 million people with visual impairments, according to the World Health Organization. People with visual impairments are often shut out from careers in STEM fields, including data science, as most charts and graphs are created exclusively for visual consumption.

Launched in 2017, SAS Graphics Accelerator generates alternative presentations of data visualizations, including verbal descriptions, tabular data and interactive sonification. The technology opens up new doors for inclusion of people with visual impairments, and facilitates collaboration between sighted and blind professionals that was previously impossible.

With women making up nearly half our workforce, and more than 40% of management, SAS is a bit unusual in the tech sector. But we will keep striving to not only help generate the STEM talent organizations need, but to increase the representation of those groups that have been historically scarce. With countless organizations and individuals joining that fight, we will close the skills gap with a more rich and diverse STEM workforce.
STEM PIPELINE – HOW DO WE FILL IT?

Preparing young people—particularly young women—to enter STEM careers is an economic imperative. Near-term domestic employment and graduation rates suggest there will be as many as three million unfilled STEM positions by 2020. Long term, experts predict a global need for 420 million STEM jobs by 2030. Presently, a worldwide productivity deficit keeps tens of millions of STEM positions vacant.

Technological advancements, increasing global interconnectivity, economic repositioning, and changing consumer behaviors between STEM jobs. Learning institutions, corporations, organizations, and foundations are recognizing and responding to the STEM crisis by shifting priorities, offering incentives, and launching initiatives to better prepare a STEM-centric future workforce. These measures, while beneficial, typically focus on technology, engineering, science, and computer programming. Foundational mathematics, meanwhile, remains underserved.

Mathematics is the centerpiece of STEM preparedness, and our national deficiency in math competency is cause for considerable alarm. Studies suggest incoming American high school freshmen are among the least mathematically proficient in the developed world. Data show 70 percent of American eighth graders are unable to comprehend the math of their grade level. As the remaining 30 percent progress through increasingly sophisticated mathematics courses, attrition increases until fewer than 10 percent of high school graduates continue to take advantage of math courses designed to prepare them for STEM majors and, later, STEM careers.

To ensure the pipeline of well-prepared, STEM-ready students remains full, we must focus on the following.

**REQUIRE MORE MATH**

Math is the language of STEM; and fluency is critical. While the after-school tutoring market is driven by math comprehension needs, math remains the remedial subject with the most enrolled students at two and four-year colleges. The baseline math requirements in high school and college are insufficient to adequately prepare students for the more advanced concepts they will confront in STEM jobs. One way to correct this national math deficiency is to require—in high school and college—additional mathematics courses related to in-demand STEM fields. The foundational math concepts courses ensure the majority of students will avoid the field—keeping the number of STEM-ready prospective employees considerably low.

**CALM ELEMENTARY AND MIDDLE SCHOOL MATH ANXIETY**

In many American elementary schools, math is taught for an average of 12 minutes a day. The early-elementary emphasis on counting, addition, and subtraction is extinguishing concepts that are introduced—and the time allotted for students to properly understand them does not significantly increase.

Between fourth and eighth grades, children begin to self-label as either math competent or math incompetents. Often, a variety of factors limit an educator’s ability to provide individual attention and encouragement, and a student’s math insecurity persists—until she is free to evade the discipline through optional course selection.

The significance of STEM topics to the global economy should inform the amount of time students have to explore mathematical topics, ask questions, and develop confidence within the early academic experience.

**DEVELOP SCALABLE MATH-BASED PROGRAMS**

The value-added, encouraging STEM programs and initiatives underway throughout the country are often not scalable. We need to reach every student—regardless of location, school, and socioeconomic status. By leveraging technology tools, this is imminently achievable. Particularly through applications that place tough topics within a conversation understood by children—specifically interactive online competitive games—the opportunity for students to gain traction in STEM topics is limited only by imagination.

Applications like TiViz seek to frame foundational mathematics within a context embraced by children. And, with online, multiplayer functionality, these applications offer opportunities to pair students struggling in math with accomplished mentors who play and learn along with the mentee, while serving as an aspirational example to a child who may not otherwise have one.

**MOTIVATING GIRLS AND YOUNG WOMEN**

As we know, women make up 50 percent of the workforce, but only 24 percent of the STEM workforce. In fields like mathematics and engineering, women comprise as little as 15 percent of the professional population. More sobering: of the women in STEM positions, close to half transition out of STEM within 10 years. The need for capable STEM professionals across numerous disciplines and industries presents an opportunity for women to reverse the professional underrepresentation trend—particularly in the hard sciences.

The time is now to grow the number of women in STEM, and the best way to accomplish this is by creating and capitalizing a pipeline approach that begins with improved math instruction in elementary school and carries one through college.

By surrounding our female mathematicians, engineers, scientists, and computer programmers with resources, support, and mentoring opportunities, we can ensure that women are properly represented in fields in which there has been a dramatic undersupply, and conversely, absent. We can move away from exclusionary cultures that persist in STEM disciplines, we can ensure better lives and economic freedoms for women in developing countries, and we can make good on the domestic promise that you can become whatever you wish—without gender-based qualifiers and artificial impediments that for too long have nudged women away from professions in which they would flourish.

**DELIVERING RESULTS**

Scalable math-based programs focused on elementary and middle school math anxiety provide the most expedient way to significantly improve upon the 30 percent of eighth grade students with the skills required to excel in high school math. The most efficient and effective way to fill the largest number of STEM positions in the shortest time is to work directly with students suffering from math anxiety. These programs ensure students develop the skills and confidence required to succeed in STEM.

This work is the foundation of TiViz: a mobile satellite solutions company, as well as a program manager for telecommunication satellites at Hughes Aircraft Company’s Space & Communications Group, and for the free Electron Laser Project at TRW’s Space Division.

Siobhan was a fellow at the Joseph H. Lauder Institute for Management & International Studies at the University of Pennsylvania—where she earned a Master of Business Administration from The Wharton School and a Master of Arts in International Studies. She also holds a Bachelor of Arts in Physics and a Bachelor of Science in Optical Engineering from the University of Rochester.

Siobhan Mullen is Founder and CEO of SAS Games, Inc., the parent company of TiViz, Ltd. led by CEO Siobhan Mullen, a former aerospace executive and entrepreneur, in partnership with TiViz creator Stephen Scully.

TiViz games motivate students to solve the universal language of mathematics, in a deeper need for STEM science, engineering, technology and math (STEM). TiViz is as easy to learn as checkers, but as challenging to master as chess. TiViz is adaptable to multiple themes, subjects, skill levels, languages, and platforms. Recently named Public Sector Education Partner of the Year by Microsoft U.S., TiViz is used by more than 500,000 students and 11,000 teachers nationwide.

SAS Games focuses on scalable math-based programs, primarily for elementary and middle school students. The TiViz games are the foundation of the TiViz Office 365 Challenge, the Teacher to Teacher TiViz Challenge, the Live-action TiViz Tournaments, National TiViz Math Challenge, and the TiViz College Savings Game-a-thon.

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**CALM ELEMENTARY AND MIDDLE SCHOOL MATH ANXIETY**

In many American elementary schools, math is taught for an average of 12 minutes a day. The early-elementary emphasis on counting, addition, and subtraction is extinguishing concepts that are introduced—and the time allotted for students to properly understand them does not significantly increase.

Between fourth and eighth grades, children begin to self-label as either math competent or math incompetents. Often, a variety of factors limit an educator’s ability to provide individual attention and encouragement, and a student’s math insecurity persists—until she is free to evade the discipline through optional course selection.

The significance of STEM topics to the global economy should inform the amount of time students have to explore mathematical topics, ask questions, and develop confidence within the early academic experience.

**DEVELOP SCALABLE MATH-BASED PROGRAMS**

The value-added, encouraging STEM programs and initiatives underway throughout the country are often not scalable. We need to reach every student—regardless of location, school, and socioeconomic status. By leveraging technology tools, this is imminently achievable. Particularly through applications that place tough topics within a convention understood by children—specifically interactive online competitive games—the opportunity for students to gain traction in STEM topics is limited only by imagination.

Applications like TiViz seek to frame foundational mathematics within a context embraced by children. And, with online, multiplayer functionality, these applications offer opportunities to pair students struggling in math with accomplished mentors who play and learn along with the mentee, while serving as an aspirational example to a child who may not otherwise have one.

**MOTIVATING GIRLS AND YOUNG WOMEN**

As we know, women make up 50 percent of the workforce, but only 24 percent of the STEM workforce. In fields like mathematics and engineering, women comprise as little as 15 percent of the professional population. More sobering: of the women in STEM positions, close to half transition out of STEM within 10 years. The need for capable STEM professionals across numerous disciplines and industries presents an opportunity for women to reverse the professional underrepresentation trend—particularly in the hard sciences.

The time is now to grow the number of women in STEM, and the best way to accomplish this is by creating and capitalizing a pipeline approach that begins with improved math instruction in elementary school and carries one through college.

By surrounding our future female mathematicians, engineers, scientists, and computer programmers with resources, support, and mentoring opportunities, we can ensure that women are properly represented in fields in which there has been a dramatic undersupply, and conversely, absent. We can move away from exclusionary cultures that persist in STEM disciplines, we can ensure better lives and economic freedoms for women in developing countries, and we can make good on the domestic promise that you can become whatever you wish—without gender-based qualifiers and artificial impediments that for too long have nudged women away from professions in which they would flourish.

**DELIVERING RESULTS**

Scalable math-based programs focused on elementary and middle school math anxiety provide the most expedient way to significantly improve upon the 30 percent of eighth grade students with the skills required to excel in high school math. The most efficient and effective way to fill the largest number of STEM positions in the shortest time is to work directly with students suffering from math anxiety. These programs ensure students develop the skills and confidence required to succeed in STEM.
Carmen Castillo
President and Chief Executive Officer
SDI International Corp.

Since 1992, there have been many value-added factors that have drawn major corporations to align with SDI. International Corp, these factors range from our leading-edge procurement outsourcing capabilities to our quality program, and from our M/WBE status to our core business philosophy, ISO 9001:2008 and SAE 16 certified. SDI’s quality policy governs all of our initiatives, and our corporate-wide quality agenda pledges that our programs and outsourcing activities meet and exceed our customers’ service expectations.

For most of SDI’s Fortune 500 customers, the prevailing draw is our underlying business philosophy. We are committed to providing world-class services while producing both hard and soft cost savings. These savings are generated through program-wide initiatives such as process consolidation and retirement, and adherence to aggressive pricing models. From these cornerstones, we have built and implemented programs for our customers that adapt to fluctuating market conditions, grow with the needs of the client, and produce real value.

SDI has also been recognized as the largest minority and woman-owned company in the industry, and Carmen Castillo has received numerous accolades from minority, women, and Hispanic organizations.

Carmen Castillo is the President and CEO of SDI International Corp. (SDI), one of the world’s largest Hispanic- and Woman-owned companies in the procurement industry, with a portfolio of managed spend of over $3B. The company, which she founded in Florida in 1992, provides its clients with fully scalable global indirect procurement solutions centered for the tail of the supply chain. These programs are designed to manage large numbers of small suppliers handling non-critical/non-catalogue transactions that are often untracked, resulting in inefficiencies in process times, corollaries, and costs.

“We make ourselves indispensable to our clients by building globally and acting locally.” Carmen states emphatically. Her mantra is evident in SDI’s global footprint, which includes Centers of Excellence in the U.S., Argentina, Belgium, Canada, China, India, Bratislava, Mexico, Poland, the United Kingdom, and South Africa. The company is opening operations in Russia and Singapore later this year, and soon in the UAE. SDI has distinguished itself as a provider of robust process efficiencies, driving repeatable hard cost savings through cutting-edge technology, risk assessment, quality policies and a dedicated team, fostering long-standing business relationships with its Fortune 500 customers.

Carmen is a staunch proponent of paying it forward and corporate social responsibility. As a business leader, Carmen takes on 8-10 mentees per year, among them women entrepreneurs (many of them Hispanic), to share her insights and experience, with special focus on hiring, retention, business development and international expansion. More importantly, Carmen facilitates networking opportunities and introductions between her mentees and her extensive network of corporate contacts and peers.

From the advocacy perspective, Carmen acts as a Board Member of the United States Hispanic Chamber of Commerce (USHCC) and leads their Audit and International Committees. She is also Vice Chair of the International Women’s Entrepreneurial Challenge (IWEC), and she also collaborates with the boards of many other minority- and Woman-owned business organizations. Under her leadership, SDI holds an international membership and leads their Audit and International Committees. She is also Vice Chair of the International Women’s Entrepreneurial Challenge (IWEC), and she also collaborates with the boards of many other minority- and Woman-owned business organizations. Under her leadership, SDI holds an international membership and leads their Audit and International Committees. She is also Vice Chair of the International Women’s Entrepreneurial Challenge (IWEC), and she also collaborates with the boards of many other minority- and Woman-owned business organizations.

Carmen was the recipient of the 2016 Abe Venable Lifetime Achievement Award from the U.S. Department of Commerce’s Minority Business Development Agency (MBDA).

Carmen received the National Hispanic Chamber of Commerce’s Hispanic 500 Award for her lifetime achievement in business development, innovation, and community leadership.

Carmen has been recognized by various organizations for her business leadership, including the Hispanic Women Leadership Awards, the National Association of Women Business Owners 2016 Woman of the Year, the Hispanic Women Leadership Awards, the National Association of Hispanic Women 2016 Hispanic Women of the Year, and the Hispanic Women Leadership Awards, the National Association of Hispanic Women 2016 Hispanic Woman of the Year.

Carmen is a native Spanish speaker and is fluent in English and Italian.

EARLY ADOPTION AND EMPOWERMENT FOR WOMEN IN STEM

It begins with curiosity, exposure, and exploration — and ends with discovery, innovation, and empowerment. The importance and influence of STEM education simply can’t be overstated.

As a global procurement company that relies heavily on tech innovation as the foundation of our business, unequivocally supporting inclusion in STEM is imperative for SDI. Over the past 25 years, I have seen an explosion in demand for IT staffing, particularly for tech services professionals who demonstrate proficiencies in data analytics, cybersecurity, and cloud architecture. And while many of these positions are eventually filled, they are often almost exclusively by men.

A dedicated approach to foster inclusion and close the gender gap in STEM participation would yield countless engineering, scientific, and technological resources. Early, recurring exposure and mentorship are two strategies that would ultimately expand critical 21st century skills among women, whether it’s for building rockets, erecting bridges, or designing video games.

Further, at home and in school, we must encourage curiosity in girls — curiosity about the world around us and how it works. With curiosity comes discovery, understanding, and knowledge. With knowledge comes empowering women to take control of their lives, their revenue-generating opportunities, and their businesses, and produce global innovation and transformation in technology, science and the very thread of our communities.

Mentoring and apprenticing may not appear to be particularly novel ideas, but accountable, consistent mentoring can generate tremendous results. I see it year over year in the women that I mentor in business development and growth, many of them minorities: when young girls and women work closely with supportive, successful role models, when they have equal access to funding and resources and when they are educated in sought-after fields that can transform their lives, they unlock opportunity otherwise thought off limits. Not to mention defying and disrupting gender stereotypes.
Dr. Ashley DeDecker grew up on a 3rd generation family pig and grain farm in West Central Illinois. She received her B.S. from Southern Illinois University Carbondale in Animal Science in 2006. She then pursued her Ph.D. in swine well-being at the University of Illinois where she studied the impact of housing pregnant sows in group-pens and how it impacts animal behavior, performance and stress physiology. After receiving her Ph.D. in 2011, Dr. DeDecker began her career as the Assistant Director of Production Research in the Science & Technology Department at Smithfield Hog Production Division. Dr. DeDecker’s responsibilities are to conduct an internal technology development effort across the Smithfield organization that is innovative, future-focused, and strategic in nature. More specifically, to identify opportunities, scientifically assess those opportunities, and track the implementation of those assessed opportunities. Dr. DeDecker conducts high quality research in all disciplines of swine production including feed manufacturing, nutrition, well-being, reproduction, performance and productivity, animal health, and meat quality. In her career at Smithfield, Dr. DeDecker has conducted over 126 controlled experiments. Currently, the Director of Production Research for Smithfield, Dr. DeDecker’s passion is still centered around using research to help improve the well-being of animals. As an Animal Scientist and expert in swine well-being, Dr. DeDecker serves on multiple committees, including Smithfield Animal Care Committee, National Pork Board Animal Welfare Committee, and is on the executive board for the Animal Agriculture Alliance.

Partnering or collaborating is critical to the success of all individuals, regardless of the end goal. Helen Keller once beautifully put, “Alone we can do so little, together we can do so much”. This philosophy should be engrained in the minds of any young, old, male or female professional, as we strive to improve ourselves as individuals, but also to improve our business or corporation. We have so much to learn from our peers and that collaborative mindset can only help diversify our own knowledge and therefore positively impact our businesses and professional relationships. As an Animal Scientist for Smithfield Foods’ Hog Production Division, I can speak firsthand to the importance of good relationships and partnering with experts in the industry and in academia. Our industry is very diverse, including STEM experts in various disciplines from veterinary medicine, pharmacology, meat science, engineers, accounting, geneticists, swine nutritionists, and more. As most of these professionals focus primarily on their specific expertise, there is typically not one day that goes by when there is not an interaction across disciplines that occurs; and in fact encouraged and necessary for the success of Smithfield. This collaborative relationship across disciplines is critical because each one of these disciplines influences the other. For example, a geneticist selects the fastest growing pigs to breed to help improve the growth rates of the entire herd which directly influences the nutritional requirements of these faster growing pigs causing the nutritionists to adjust diet formulations to ensure those pigs are getting the proper nutrition at each stage of their life. When diet formulations change that can influence the meat quality of the carcass, which will impact the meat scientist’s specialty. So, no matter what, we all must work together throughout the entire process to ensure proper welfare for the pig and the best quality product for our consumers.

Being able to collaborate with these various experts in our own company has taught me how much one simple change can cause such a ripple effect. It creates a different kind of thought process in an individual that requires you to think of downstream impacts that one change may cause. Therefore, you get the opportunity to learn about those different areas of the business that you may not have in another setting, such as academia. That is one of the best parts of being a scientist for Smithfield is the interaction I get with experts from various disciplines in the industry and in academia. Partnerships gives me the opportunity to grow and learn new information that improves my skill set and in the end benefits Smithfield.

Some partnerships that have taken place in our industry is not only to diversify our own skill sets, but also to educate and mold future animal scientists, meat scientists, engineers, or veterinarians. When collaborating with university professors we also get the opportunity to provide a different educational experience to students, which is more real-world application. Not only does this allow students to get a better understanding of what the industry has to offer to them, but also to allow Smithfield to take part in that education about our business and to identify potential future employees. This type of partnership really provides benefit to all parties involved.

Partnerships or innovation can come from anywhere or anywhere, including in your personal life or when you least expect it. As a new mother to a pre-mature baby I built a relationship with a pediatrician in the NICU that developed into a professional relationship. After learning about methods of pain mitigation for human medicine in infants from this new colleague, I took the information I learned and wondered if I could apply it to my industry, or more specifically to piglets. The pediatrician shared the scientific literature with me on the topic and connected me with other experts in the medical field of infant pain relief so I could pursue my scientific theory of applying infant pain relief to neonatal piglets. I share this story as a reminder that professional partnerships can develop from the most unlikely circumstances and to always keep your eyes and mind open for new opportunities to learn and build relationships, even in your personal life.

In closing, I would like to reference Ken Blanchard, “In the past a leader was a boss. Today’s leaders must be partners with their people... they no longer can lead solely based on positional power.” This statement emphasizes the importance of partnership for individual’s growth and development in their professional role, but for developing future leaders as well.
Dr. Christina E. Phillips
Director of Production Research
Smithfield Hog Production Division

Smithfield is a global packaged meats company with farms, facilities, and offices in North America and Europe. We employ 53,000 people who all work together to provide families worldwide with Good food. Responsibility.® Based in Smithfield, Virginia, in the United States, we are the leader in numerous packaged meats categories with popular brands including Smithfield, Eckrich®, Nathan's Famous®, Farmland®, Armour®, Cook's®, John Morrell®, Gwaltney®, Kretschmar®, and Healthy Ones®. Smithfield Foods is committed to providing good food in a responsible way and maintains robust animal care, community involvement, employee safety, environmental, and food safety and quality programs.

Smithfield Hog Production Division is the livestock production subsidiary of Smithfield Foods, Inc. As the world’s largest producer of pork products, we are committed to producing quality pork while protecting the environment and preserving family farms.

DEVELOPING SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS TALENT

Growth in Science, Technology, Engineering and Math (STEM) talent is important for many organizations, and according to CBG Global it is expected to increase in 2016 by 10%. This does not mean however, that less time should be spent developing and recruiting STEM talent. Despite the investment of $11,225 per individual that companies spend to recruit top STEM talent, organizations still face challenges with STEM employment. Employees with STEM talent are harder to attract. The median time for companies to fill STEM positions has risen 77% since 2010. Therefore, attracting top STEM talent should continue to remain a priority for organizations. Organizations that are willing to provide hands on internships or externships that allow students to get experience in potential STEM positions and develop mentor/mentee relationships with employees, if providing a good experience, can only reap future benefits from such an endeavor.

In fact, completing internships is how I became interested in my chosen career. The summer after I graduated from high school I applied for an internship with Murphy Family Farms, now known as Smithfield Hog Production Division. That summer I worked on a hog farm and really developed a passion for working in the swine industry. I returned the next summer, after I had completed my freshmen year at North Carolina State University, to work in the Quality Assurance laboratory, in the same building as some of the company’s veterinarians and researchers. As I completed the tasks that my internship required; sampling grain and ingredient trucks, completing laboratory tests on those samples, making vaccines, and entering data, I was also asked by one of the researchers to assist with collecting pig weights on some of his ongoing projects on a research farm. I had positive experiences both summers, working in different areas of the company.

Giving interns the ability to experience different parts of a company during their short summer stent is key to helping students figure out a future career path. Being able to experience different parts of the company as an intern enabled me to determine what I enjoyed, which was working with the researcher. I learned from the researcher through an informal mentor/mentee relationship that summer; what level of education was necessary and also what other experiences might benefit me in my future goal of becoming a researcher. While obtaining my Bachelor’s degree at North Carolina State University I chose to work at the University farm animal units as well as work as an undergraduate research assistant for a professor in Animal Science. My experiences of working in research while completing my Bachelor’s degree, both in the industry and at the University, contributed to me being accepted in a Master’s degree program at North Carolina State University followed by a Ph.D. program at the University of Minnesota. The mentor/mentee relationship with the researcher that I worked with during my summer internship in the industry gave me the opportunity to become informed about the education and dedication that was required for that career path and enabled me to make my chosen career come to fruition.

After I graduated with my Ph.D., I interviewed and was hired for a Director of Research position at Smithfield Hog Production, the very company I interned for 10 years prior. The number of Ph.D.’s working in or involved in swine production in the U.S. is small enough that most of us at least know of each other, even if we haven’t met. The researcher that inspired me to choose my chosen career path had since moved on to a position in the area of feed milling at North Carolina State University. And, as it turned out, the North Carolina State University feed mill is where Smithfield Hog Production manufactures all of the research diets for research trials. So, not only did I have the opportunity early in my education to have him as a mentor, but also early in my career I had the opportunity to work with him in a corporate/academic relationship capacity. Because of his willingness to serve as my mentor during my summer internship, and knowing what that did to help me determine my chosen career path, I now have the desire to mentor students. I offer a summer internship in the research department and I also take time to talk to local high school classes about careers available within Smithfield Hog Production Division. I do this in hopes of influencing young students to not only develop STEM talent but also to share with them my experience of leaving the area to get a higher education but being able to return due to the career opportunities in STEM that the local agriculture industry has to offer. My goal is to develop local talent that have the drive to succeed in obtaining their career goals in STEM and also may potentially decide to return to the local area to further benefit agricultural sustainability in the Southeastern U.S.

Dr. Christina Phillips grew up in Duplin County, North Carolina, and received her B.S. and M.S. in Animal Science from North Carolina State University. She then obtained her Ph.D. in Animal Science from the University of Minnesota. Christina was hired by Smithfield (Hog Production Division in 2011), and currently holds the position of Director of Production Research.

The responsibilities of her current position are to conduct an internal research and development program within Smithfield Hog Production. She is tasked with identifying opportunities in all areas of swine production. Phillips manages research programs to scientifically evaluate opportunities in multiple disciplines and across all phases of production. She is responsible for communicating research information across the organization for technical support, education and implementation and she tracks the economic benefits when implemented.
Amy Holm-Noebel
PMO Programme Director
Smiths Group, LTD

Smiths is a global technology company listed on the London Stock Exchange, employing over 22,000 people in more than 50 countries throughout its five divisions – John Crane, Smiths Medical, Smiths Detection, Smiths Interconnect and Flex-Tek. We have been at the forefront of technology for over 160 years and our products and services continue to touch the lives of millions of people every day.

We apply leading-edge technology to design, manufacture and deliver innovative solutions that meet our customers’ needs. We do this across a wide range of applications and end markets – from healthcare, energy and petrochemicals through to threat and contraband detection, telecommunications and equipment manufacture. Our products and services are often critical to our customers’ operations, while our proprietary technology and high service levels help to create competitive advantage.

Ethnic and gender gaps in STEM fields remain a challenge we’ve not yet fully overcome. Despite many efforts, barriers-to-entry and retention of female talent in this space persists. What is the root cause? Analysis indicates that while positive change has occurred, traditional gender roles remain a primary contributor of apprehension in women entering and, therefore, persevering in the STEM space. Statistics demonstrate that women are more conservative about being innovative and creative until they feel confident their ideas will be accepted. Men, on the other hand, are more likely to take that leap of faith despite the risk of failure. The question that immediately comes to mind is, how can I instill change when cultural disparities and inequalities are still a part of our society? It starts with the Art of the Possible, and Power of Exposure.

At a recent STEM conference in Bloomington, Minnesota, I had the opportunity to represent Smiths Medical in helping young talent learn and aspire to engage in the four sciences. During my six-hour commitment, I had a very young female customer visit my station more than eight times to touch, see, play and ask questions. What caught my attention, however, was how the questions went from “Why?” to “What If?”. I knew the display left a powerful impression on her when she again returned to my station with a piece of paper and crayon, laid herself down on the floor, and started drawing the display regardless of the foot traffic all around her. She was in her own creative world. That’s when I knew corporate sponsorship in STEM makes a difference. Corporations like Smiths Medical are champions of change. Like my young STEM repeat customer, we all have to change our mindsets from “Why?” to “What If?” and more importantly accept the possibility of failure in the spirit of perseverance. The key is to offer a safe environment to allow experimentation and possible failure without consequence. It all starts with a simple opportunity.

When I reflect on the aspects of my personal life that inspired me to pursue a career in technology and math, one reflection stands out as the spring board that gave me confidence and the willpower to be a very young age. As a 3rd grader I was recognized by a teacher and provided an opportunity to stretch myself by participating in the 4th grade math class. Although a fairly standard practice today, this was more than 40 years ago when the promotion of skills during the elementary school years wasn’t even a thought. Not only did this give me confidence, it also gave me a safe environment to experiment and eventually succeed. That confidence quickly turned into a desire to enhance my skills in the areas of math and technology, which has since made me successful as a woman leader in the technology and project management space.

When I speak with young STEM talent, I’m always inspired to hear their stories of how their interests were ignited. I am, however, concerned about those who were inspired but did not enter the space. In two situations I’ve most recently encountered, I found two young women that “aspired” for the sciences, but due to standardized test scores at a young age, lost confidence and interest. Reminder – the cultural pressure of women is to refrain until they know they can succeed. This was their impediment to entry into STEM. Even more concerning is the feedback that I also encountered that local school systems did not accommodate different learning styles. I believe that different learning and thinking styles are the ticket to the next generation of entrepreneurs in STEM. My commitment to STEM is to find and correct the broken bridge to engagement in STEM sciences.

As a woman in leadership and an advocate of STEM, I am committed to investigating the following hypotheses: Has standardized testing and early ranking of young children enabled a school system that has discouraged children from aspiring to investigate and, therefore, grow their talents in the STEM sciences? I personally did not fare well on standardized tests, however, have been successful in my life and career in technology and math. Academic testing should not be a gauge of individual success but rather an indicator of where financial investment in new teaching techniques is required to enable growth in these sciences. Educational systems need to adapt to the ever changing needs of our future STEM leaders in aspiring to innovate, create and think out of the box.
Nelly Pitocco
Regional President of Enterprise Sales
Sprint

Nelly is recognized for her “Refuse to Lose” approach, sales and operations, transformation, and passion for customer service excellence. Prior to joining Sprint, Nelly held executive positions at Apollo, AT&T, and IBM, leading domestic and global teams responsible for IT outsourcing, operations, customer care, and product development.

With over 20 years of experience in Technology, IT Outsourcing and Professional Sales, Nelly has successfully managed a wide range of Fortune 500 companies. She serves on the Board of Advisors for Women In Communications, the Heavy Reading Thought Leadership Council and recently joined WMM II's Illinois Steering Committee. She has served as an ESL (English as a Second Language) tutor through Literacy Volunteers of Fox Valley and speaks to local high school students about the importance of pursuing a college education, especially in STEM fields.

Nelly holds a B.A. with a concentration in Computer Networking Technologies from DePaul University.

Nelly’s contributions to her community include serving as a mentor to students and leading mentoring circles. Nelly sits on the Board of Advisors for Women In Communications, the Heavy Reading Thought Leadership Council and recently joined WMM II’s Illinois Steering Committee. She has served as an ESL (English as a Second Language) tutor through Literacy Volunteers of Fox Valley and speaks to local high school students about the importance of pursuing a college education, especially in STEM fields.

Beyond the need for companies to leverage the available gender diverse workforce, there are clear, tangible, and quantifiable benefits of the power of women in technology. Diverse teams drive innovation, fostering new ways of thinking and problem solving. Women are lead adopters of technology and drive the majority of consumer purchasing. Who better to develop and influence new products and services than the leading consumer - women? In addition, fostering a gender diverse workforce affects retention rates, productivity, and performance.

And so it becomes incumbent on all of us to do all we can to support the equity imperative in technology. There are multiple studies and research papers focused on the cause of this inequality. Among the reasons: gender expectations; access to STEM education; unconscious and overt biases; exclusive, male-dominated cultures; and pay disparity. All have an impact and all need to be addressed.

At Sprint, we are committed to pursuing diversity in all its forms. This commitment begins at the top. Senior leadership, everything from board members to our line of business leaders, knows that diversity and inclusion are top priorities. For us, diversity is more than just numbers; it’s about creating a culture where every employee feels valued and respected for who they are. Nelly’s contributions to her community include serving as a mentor to individuals and leading mentoring circles. Nelly serves as Regional President, Sprint Business. In her role Nelly leads account business development and channel management teams supporting business solutions for Sprint’s Enterprise customers.

THE EQUITY IMPERATIVE

Moore’s Law states that computing power advances at an exponential rate. The pace of that growth is often debated, however, no one contends that technology advances exponentially. In parallel, the demand for information technology continues to increase to the point that technology skills have become foundational.

Our world, including businesses, institutions, government and even individuals, have an insatiable appetite for the latest innovations or faster and more efficient ways of getting things done.

That’s why it’s critical for businesses to continue to provide digital and technical advancements in order to remain relevant and competitive. To feed this hunger for innovation, businesses need an educated workforce with the skills and expertise to develop cutting-edge solutions and applications for the many needs of our society.

That workforce must include an equitable representation of women, it comes down to numbers.

Today, women make up 50.52% of the population in the United States and 47% of the workforce. Unfortunately, women hold only hold 25% of computing jobs and the number of women earning computer science degrees is declining. Only 28% of students earning computer science degrees are women, down from a peak of 36% in 1991.

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SOURCES
http://goodworks.sprint.com/1MillionProject/Index.cfm
http://www.isaca.org/info/2017-women-in-technology-survey/index.html?

http://www.isaca.org/info/2017-women-in-technology-survey/index.html?

http://www.isaca.org/info/2017-women-in-technology-survey/index.html?
Ashley Pettit is Senior Vice President (SVP) in Enterprise Technology at State Farm Mutual Automobile Insurance Companies at their Corporate Headquarters in Bloomington, IL. Her role includes oversight for Infrastructure and Operations across all IT locations. In addition, she oversees IT Department Operations such as strategy and planning, budgeting and costing, performance measures, workforce hiring and retention activities, and oversight of external suppliers used by IT.

Ashley sponsors the Women & Technology Employee Resource Group (ERG) – I am a charter member of the Women & Technology ERG group which has been in place for more than a decade and is one of the initial ERGs established within State Farm. I now serve as the enterprise-wide executive sponsor for this group with members across many State Farm locations. This group provides technology and leadership level connections, personal development, and exposure for ERG members connecting them with internal resources, role models, and opportunities to build their skills and develop professionally.

As a senior IT executive in a Fortune 50 organization, I often find myself at industry events and board meetings where I am the only one or one of only a few women represented. It’s unfortunate in 2017 to see this limited representation of female leaders and role models in STEM and has fueled a commitment from me to change this dynamic.

At State Farm, this has not been my personal experience and I feel fortunate to work for an organization that has provided me numerous challenges, advancement opportunities, and relationships with both male and female mentors to guide me throughout my career. I also take tremendous pride in State Farm’s community involvement and support of STEM by aligning with industry peers and encouraging systemic change from our employees.

My personal commitment has allowed me to focus on a number of initiatives and efforts, all aimed at increasing the total number of students who pursue STEM-related education and careers. I began my efforts within State Farm to encourage employees to understand and leverage technology in ways that benefit our organization. I am also very active in supporting STEM community initiatives across the communities where State Farm operates leveraging my ability to commit organizational resources and funding to support this work.

I’m delighted to highlight a few examples which demonstrate this combined commitment and engagement from me, my State Farm peers and my industry peers:

**Women & Technology Employee Resource Group (ERG)**

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**Grace Hopper & Anita Borg Institute (ABI)**

- I attended the Grace Hopper convention in 2016 for the first time and was inspired by the range of talented females in technology and engineering fields from all across the globe. I returned to State Farm with a goal to increase our involvement with ABI, a non-profit organization focused on increasing the number of women technologists in the global workforce. The ABI programs enable a win-win by providing access to targeted professional development opportunities for our associates while enabling us to actively demonstrate organizational commitment and support. State Farm has increased funding and commitment to this work in

2017, has named both male and female technology executives as sponsors, and will double the number of employees participating.

**Millennium Girls** – Millennium Girls is a one-day technology camp held on our State Farm Corporate campus each October. For over a decade, we’ve enabled well over 2000 5th-8th grade girls to experience coding, robotics, and engineering challenges in a safe and fun setting. I was the first coordinator of this event and continue as executive sponsor today. This event includes partnerships with Illinois State University, including interns, labs and exhibits are done in partnership with University of Illinois, University of Texas Dallas and Arizona State University. We have a tremendous volume of support including hundreds of employees who volunteer their time to support this event.

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Beverly A. Bailey
Founder, President, and CEO
Stronghold Engineering, Inc.

Stronghold Engineering, Inc. (Stronghold) is an ENR-ranked, award-winning design-build and build-operate-maintain general contractor based in Riverside. Throughout its celebrated 25-year history, Stronghold has constructed high-profile ground-up facilities, performed technically challenging repairs and historical renovations, implemented significant seismic upgrades, and completed large civil, infrastructure, renewable energy, energy efficiency, and electrical projects. In 2005, Stronghold established a Renewable Energy division and has completed multiple solar projects.

In 1991, Beverly and Scott Bailey pooled their resources and founded Stronghold Electric. With determination, hard work, talented team members, and a commitment to always exceed client expectations, Stronghold Engineering, Inc. became a California corporation in 2000 and continues to grow. Stronghold provides its clients with full-service construction support, including design-build, engineering procurement construction (EPC), vertical, civil, and high-voltage electrical construction and is recognized nationally for excellence in the construction industry with more than 100 awards and commendations from industry-leading organizations, government entities, and satisfied clients.

Beverly Bailey is directly responsible for all aspects of the corporation. From Stronghold’s, it has performed as a woman-owned minority business and ranks in the top ten of Minority/Women-owned construction companies in the nation.

As a visionary, Mrs. Bailey looks for relevant, strategic markets where Stronghold can utilize its outstanding performance to easily maneuver into profitable opportunities. Supported by diversified, strong team members, Stronghold continues its growth as an industry leader. Proof of this adorns the walls of Stronghold’s corporate offices and reflects many years of construction excellence.

As a serial entrepreneur, Beverly acquired her first business in 1981, owning and operating Vera Villa Café in Chino and utilizing her previous skills in the restaurant industry which included hospitality, service, and culinary. After three years, she sold the business for a profit and obtained her real estate license, working in the finance side as a loan officer for the next five years.

Departing from real estate, she and her husband, Scott founded SEI, a leader in construction for the past 26 years. During this time, additional companies were founded, including Bailey California Properties—a development, real estate acquisition LLC, Lamb Energy—a known race team focused on off-road racing and Lamb Finance—a finance company focused on investments.

Beverly was recognized by Ernst & Young as Inland Empire’s Entrepreneur of the Year in 2000. That same year, the U.S. Small Business Administration elected her as the Minority Small Business Person of the Year. She was also the recipient of the 2013 Athena Award Recipient. This annual award, given by the Riverside Chamber of Commerce, identifies local professional women who have demonstrated significant achievements in business, community service, and the professional advancement of women.

WOMEN MENTORING WOMEN
I do not know if it is because I chose to be in a male-dominated industry or perhaps my desire to help others and not recognizing my own needs, in my 26 years in the construction industry, I have not had the opportunity to be mentored by another woman or equally by a man. Trust me, I looked early on, but there was no one that would kindly share their knowledge or experiences or lessons with me.

In the 26 years since founding Stronghold Engineer ing, Inc., I have learned countless lessons, experienced challenges of owning and operating a successful business, ridden the waves of an up and down roller-coaster economy along with the rest of the country, and have provided employment to hundreds of workers. As a woman-owned, minority-owned company, I have led our team to successful completion of more than $1.5 billion in construction projects. I was fortunate that I had been a successful entrepreneur before, having owned and operated a popular restaurant which I sold for a profit. It was through my own trials and experiences that I was able to use my entrepreneurial skills to forge a new company, to anticipate our needs for growth, and to weather the economic bad times in order to stay afloat. There were certainly difficult and uncertain times since that day in October 1991 and lacking a role-model and a mentor certainly made things more challenging.

This lack of shared experience and knowledge that I experienced drove within me a desire to share nuggets of wisdom or experience or advice with anyone who asks.

Something I enjoy is hearing a person’s status or their personal story as they share their struggles or their fears and concerns and maybe their triumphs. In listening and understanding what they are saying, I assess what I hear and think about what I can share from what I have learned from my past that hopefully could benefit the other person, or perhaps in cases of when I have the privilege of giving talks, that can benefit my listeners.

Why do I do this? I do this from a deep desire to see another person succeed. To help them fulfill their personal destiny. In addition, I do it to further opportunities, which I have learned through experience, are both plentiful and alive in our great country. In other ways, I do it to share a common bond of understanding. How often do we think that we are alone in our thinking only to find out through mentoring experiences that others have actually been there before and have forged a path perhaps that we didn’t even know about? Whether it is serving as a mentor to a person, or connecting a mentor with a mentoree, or finding a source or organization or even an advocate to help another person, I enjoy serving this role and witnessing the success that comes both with it and from it.

After some self-reflection, my advice to all women is to not be fearful to share freely, to pull each other up and not down and to stop and listen to each other’s needs and fears and concerns. It is to offer advice or help and learn where we can help or perhaps do business with each other. So much of life is competitive, and the construction industry is no exception, but there is a time to be cooperative and to help each other; to stand beside and to cheer each other on. Mentoring plays a big role in this.

I realized that as I look back on my life and my career, some of the most satisfying moments that I have experienced as an entrepreneur have been when I have witnessed another woman’s success and knowing that I had a moment or many moments to share time with them. And whether it is an employee or a friend, or my daughter or granddaughters, I can take pleasure and satisfaction in knowing that as the world changes and the workplace evolves and more and more doors open to women, that I have had a special opportunity as a business owner and leader to effect a positive change, not only in their lives, but in my own life as a result.

This kind of success comes with only one price. The giving of oneself.
Sheila Jordan
Senior Vice President and Chief Information Officer
Symantec

Symantec Corporation (Nasdaq: SYMC), the world’s leading cyber security company, helps organizations, governments, and people secure their most important data wherever it lives. Organizations across the world look to Symantec for strategic, integrated solutions to defend against sophisticated attacks across endpoints, cloud and infrastructure. Likewise, a global community of more than 50 million people and families rely on Symantec’s Norton and LifeLock product suites to protect their digital lives at home and access their devices. Symantec operates one of the world’s largest civilian cyber intelligence networks, allowing it to see and protect against the most advanced threats. For additional information, please visit www.symantec.com or connect with us on Facebook, Twitter and LinkedIn.

Sheila Jordan is senior vice president and chief information officer at Symantec. She is responsible for driving Symantec’s information technology strategy and operations ensuring that the company has the right talent, stays ahead of technology trends and maximizes the value of technology investments. Her goal is to drive increased productivity, better efficiency and strategic business partnerships through simple and intuitive experiences for Symantec’s global workforce.

Since joining Symantec in February 2014, Sheila has set the vision and strategy for Symantec IT, developed an experienced leadership team, and insured IT operations from an outside vendor by building Symantec’s next generation secure data center in the company’s virtual private cloud. Sheila also led the effort to split IT operations when Symantec separated its security and information management businesses–a highly successful, transformative initiative accomplished in nine months.

Prior to joining Symantec, Sheila served as senior vice president of Communication and Collaboration IT at Cisco Systems. Within her purview at Cisco were collaboration platforms, user experience and support, and communications, collaboration and mobility services. During her nine-year tenure at Cisco, Sheila’s IT organization was recognized by the industry with awards presented by CIO, InformationWeek and CIO Magazine. She also received the 2010 Cisco Executive Sponsor Catalyst award for her leadership in developing successful relationships with customers, including several Fortune 100 companies.

Earlier in her career Sheila worked at Walt Disney World in Orlando, Florida, where she was senior vice president of Destination Disney. A key architect of the strategic planning process, she was responsible for delivering profitable growth. She was instrumental in integrating marketing, sales, and services across the organization as Disney transformed its business from a product-centric to a guest-centric organization.

In June 2016, Sheila joined the Board of Directors of FactSet Research Systems Inc. (NYSE:FDS), a $6.5 billion global company that delivers the world’s best insight and information to investment professionals through superior analytics, service, content, and technology. She holds a Bachelor of Arts degree in accounting from the University of Central Florida and an MBA from Florida Institute of Technology.

Much has been written about how to develop a strong pipeline of leaders, particularly with respect to opening doors for women and minorities—this ensures a diverse leadership team and workforce as well as diverse thinking. Unfortunately, over the course of my 25-year career it doesn’t seem like we’ve made significant improvement in STEM careers for women. And if the recent headlines are any indication, this continues to be a problem particularly in Silicon Valley—telling considering that this is the source of so much change and innovation.

Studies by Catalyst, the leading nonprofit organization with a mission to accelerate progress for women through workplace inclusion, bear this out: Globally, women’s labor force participation rate decreased from 52.4% to 49.6% between 1995 and 2015. Statistics on women in STEM also show lack of progress. Again, according to Catalyst, globally women are scarce in scientific research and development:

- Averaged across regions, women accounted for less than a third (28.4%) of those employed in scientific research and development (R&D) across the world in 2013.

In addition, women are less likely to enter and more likely to leave tech-intensive business roles:

- Women who start out in business roles in technology-intensive industries leave for other industries at high rates—53% of women, compared to 31% of men.
- In the United States, only 11% of working engineers are women. Among women who earned engineering degrees, over a third (38%) quit engineering or never even entered the profession.

Leaf rates for women in science, engineering, and technology (SET) peak about 10 years into their careers. The cause? Isolation, hostile male-dominated work environments, ineffective executive feedback, and a lack of effective sponsors are factors, and that includes almost one-third of women in the United States (32%). Women make up only about one-quarter (25.8%) of those in STEM occupations. For women of color, this gap is even wider: Asian and black women and Latinas made up less than 10% of working scientists and engineers in the United States in 2013.

So, what can be done to improve women’s STEM ranks?

1. Increase the pipeline—get more girls into and excited about STEM careers.
2. Keep STEM women in the workplace. Women have to help women, and that means networking, mentoring, supporting and promoting! If your company doesn’t have flexible work-life arrangements, offer them. Studies prove that a more flexible work environment keeps employees happy and efficient.
3. Improve your company culture by speaking out, and eliminating unconscious bias and stereotyping.

The bottom line is that diversity is good business. As a recent McKinsey study shows, “Companies in the top quartile for racial and ethnic diversity are 33% more likely to have financial returns above their respective national industry medians.”

Let’s be the drivers of more parity in our individual companies, supporting STEM careers throughout the entire life cycle!

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Elizabeth Hunter
Vice President, Technology Strategy Implementation
T-Mobile

As America’s Un-carrier, T-Mobile US, Inc. (NASDAQ: TMUS) is redefining the way consumers and businesses buy wireless services through leading product and service innovation. Our advanced nationwide 4G LTE network delivers outstanding wireless experiences to 69.6 million customers who are unwilling to compromise on quality and value. Based in Bellevue, Washington, T-Mobile US provides services through its subsidiaries and operates its flagship brands, T-Mobile and MetroPCS. For more information, please visit http://www.t-mobile.com.

She is a high-impact, technology executive with strong leadership experience on multi-billion dollar transactions and large scale, transformation C-suite initiatives. Elizabeth is a creative problem solver who has led numerous strategic planning efforts, task forces and rapid results operational initiatives in structured, unstructured, and regulatory environments.

Currently at T-Mobile US, and previously at AT&T, she is credited with the implementation of industry leading, high-impact cross functional, technology and digital transformation programs, policies and governance and for driving cross functional planning, communication, change management, and accountabilities across the organization.

She is also recognized for billions of dollars of impact on programs which realized key objectives of acquisitions related to network synergies, churn, customer retention, employee engagement, cost synergies, and large scale process change management.

Elizabeth Hunter is a nationally recognized telecom executive in pre and post-merger integration and cross-functional programs. She is an effective team leader, mentor, coach and motivator with exceptional communication and presentation skills. She is consistently recognized for her ability to influence and lead upward, downward and across organization toward revenue growth, cost-reduction, efficiency and productivity goals.

She has a keen understanding of symbiosis between and across business units driving synergy, operations and performance and excellent analytical and problem solving skills, with a solid background in strategic planning, transformation, program implementation and technology development.

Elizabeth is the executive sponsor of both the Women’s Leadership Network and the Women in Technology Employee Resource Groups at T-Mobile US.

ALL THE PIECES OF THE TECHNOLOGY PUZZLE

When I was in high school, I loved all things fashion and decided that I wanted to be the next Anna Wintour and run Vogue magazine. And then came that day as a sophomore in college, double majoring in journalism and graphic design, that I read a book asking a very poignant question: “Do you want to do things or do you want to write about the things that other people do?” While I wasn’t sure what I wanted DO at that point I was pretty sure it wasn’t writing about what other people do.

After some interesting but ultimately indeterminate soul searching on the “what to DO” front, I started my career at a large electric utility company in the Midwest. I supported a director in IT as his secretary, because, well, I needed to pay my rent and they offered me the job because I could type extremity fast and I knew how to use Photoshop. I’d been working for him a couple of weeks when he called me into his office and asked if I’d ever considered a career in technology. Like many young women, STEM curriculum was vaguely interesting and necessary for my GPA, but not something I wanted to dedicate my life to and I considered it as nothing more than writing code (and COBOL code at that!) while sitting in a cubicle by myself. He convinced me that while programming is a huge part of technology, there was so much more to it, and I became his Chief of Staff, learning about the Software Development Lifecycle (SDLC) and all the different pieces of the puzzle that that contribute to getting technology functionality out the door and into the hands of customers. I also eventually figured out that coding is much more amazing than I anticipated.

Today, as the VP of Technology Strategy Implementation at T-Mobile, I lead a team that doesn’t own dev, but owns many of the support services around it – wrangling a portfolio of hundreds of millions of dollars to ensure it is working on the right things and we are aligned with the business, solution architecture and design that delivers an amazing experience for both internal and external customers, managing technology projects and programs from shiny new idea through delivery into production, all while ensuring the department follows compliance standards and controls. Comprised of roles such as architects, project and program managers, business architects and analysts, we work collaboratively across both the business and technology teams to embody innovation and deliver on the Un-carrier promise every day. That is what I call something to DO!

I’ve been so fortunate throughout my career to have a variety of opportunities to explore the various functions, skills, and processes that make up technology. I often wonder what I would be doing had I not rather accidentally gotten that secretary job all those years ago, and even more – if my boss hadn’t seen potential in me, someone with little evident technology experience. I talk to – and hire – people every day who have accidentally ended up in a technology field and I am positive there is an untapped, hidden reservoir of talent we can use in STEM that just doesn’t know it yet.

While I am supportive of every single way we can get more diversity into these fields, so many of them relate to starting a pipeline, which takes years to cultivate. There should also be specific focus on looking beyond the resumes, finding that hidden potential, investing in people to help them grow. Often, especially with women, all it takes is a leader to believe in someone and provide them with mentoring, coaching or opportunity, which is something anyone in STEM can do.

I’m involved with our Women in Technology (WIT) network, and an executive sponsor of the Women’s Leadership Network (WLN) at T-Mobile and have had the chance to speak at several conferences and events this year about both diversity of technology, and diversity in technology. It’s so important to help people understand that there is a wide array of important roles to be played in a technology department, and you don’t necessarily have to have a traditional STEM major to fill them. While I still enjoy flipping through the pages of Vogue, and my shoe collection is legendary, I know I am so much happier to DO things in a STEM field, and I am committed to helping others find that passion as well.
Dr. Ritu Anand
Senior Vice President & Deputy Head-Global HR
Tata Consultancy Services (TCS)

Tata Consultancy Services (TCS) is one of the world’s top IT services and consulting organizations, providing business solutions and digital technologies to many of the world’s largest enterprises to strengthen and transform their businesses. It provides the industry’s highest level of satisfaction through a deep commitment to its clients and employs 344,000 of the sector’s best trained computer scientists, programmers, data analysts, and designers in North America. TCS is heavily invested in cross-sector efforts to expand diversity and access to computer science education. From its founding partnership of STEM mentoring programs (e.g., US2020 and Million Women Mentors) and ongoing partnerships and pro-bono tech platforms (e.g., NPower, US2020, LeadCS.org, STEMconnect®@IMPACT2030) to computer science industry roundtables and TCS signature K-12 CS education program, golf, which teaches computer science, programming and design in middle/high schools in 31+ cities to prepare the next generation of digital innovators.

With a career spanning over 25 years, Dr. Ritu Anand is a pioneer in the field of Human Resources. She is a Senior Vice President at Tata Consultancy Services and spearheads TCS’ Workplace Diversity initiative.

Her various advisory roles include: Member of Worldwide ERC Global Advisory Council and Advisory Board member of the National HER Network in Mumbai. She is also on the governing board member of WILL (Forum for Women in Leadership) that aims at bringing together the collective aspirations, talents, and mentoring of women across corporate India. Having received meritorious awards for HR excellence and expertise, Ritu serves as an independent director and an advisory board member for several organizations. A doctorate in Psychology, she is also on the Board of Directors at two Tata Group companies.

An eminent leader, Ritu has diverse functional experience at TCS and is recognized for workforce policy and planning. At a time when diversity was not a celebrated topic, she was instrumental in launching DAWN (Diversity and Women’s network) in 2009. The program focused on initiatives to retain and advance women.

Ritu has been a change ambassador by implementing progressive policies for Gen Y workforce in the company that aims at re-skilling & up-skilling in a digital context to close pay and career growth gaps.

She has also driven mentoring initiatives for young students towards a career in technology through TCS goIT/Platform that encourages them to use technology to solve real world problems.

An iconic leader, a charismatic speaker in the HR community of India, Ritu has been instrumental in bringing diversity, equal opportunity, and advancement of women in corporate leadership along with being a role model to many aspiring young leaders.

Creating an Inclusive Workforce and Building the Leaders of Tomorrow

Technological breakthroughs and demographic shifts are beginning to have a significant impact on businesses and workforce around the world. Digital technologies are transforming industries globally. We see organizations adopting initiatives such as cloud and automation to make their enterprise more agile and responsive, and providing superior experience to their end consumers. This change will also be responsible to create a wide range of new jobs in fields such as data analytics, computer science and engineering. The shifting environment makes it even more vital to make adequate investments in education, learning and in preparing our employees for the future of work.

These new jobs will require higher skills and therefore investment in reskilling and upskilling becomes crucial. Digital fluency, technology skills and innovation excellence remain at the core of the reskilling and upskilling pathways that will help individuals adapt to the future. The task at hand is to create access to the right skills.

At TCS, our view for future-ready talent is shared into three parts:
- Reskilling and upskilling employees to realize their full potential
- Preparing youth for 21st century careers
- Empowering women and minorities who are under-represented in the workforce

TCS has a talent pool of 387,000 employees, over a third of which are women. Our focus is on upgrading the “digital quotient” of our associates. We have already trained more than 200,000 employees in 500,000 new digital competencies and 1.1 million certifications. This has been achieved by providing “anytime, anywhere” access to high class content on the internal TCS learning platform which itself is being continuously and rapidly transformed.

At TCS, 84% of the employees belong to Gen Y. We have emphasized the need to create a collaborative work culture while promoting learning and reverse learning to build stronger teams. TCS’ social engagement platform has connected 300,000 users to senior leaders allowing open dialogue and idea sharing. At TCS we believe it is imperative that we reach out and help this new era of talent to make smart choices about career potential.

At TCS, we believe in inclusion to become a lens for identifying and developing talent. This has been achieved through structured programs such as iNIB which mentor women in entry level or junior management positions and iNEX that identifies high performing talent amongst senior women associates and assigns them into leadership positions. Going beyond workforce development, through all women Business Process Services & IT Centre in Saudi Arabia, we are creating employment opportunities for women over the next 5 years.

It is the development of an organizational culture and policies that are sustainable even through turbulent evolutions that demonstrates leadership and forward thinking. Initiatives targeted to achieve tangible changes must be relevant, fully integrated into the business strategy and be able to demonstrate measurable results. It is vital to build an organizational culture that lasts beyond those who implemented it.
Angela (“Angie”) Beltz McCourt was appointed vice president, Cisco Solutions Group at Tech Data in September 2010, leading the company’s dedicated team of sales, marketing and technical professionals in support of all Cisco solutions available through Tech Data in the Americas. In 2016, she was appointed to lead the company’s worldwide Cisco strategy, as well as its Smart IoT Solutions strategy and implementation in the Americas. McCourt serves on Tech Data’s Diversity & Inclusion Advisory Board and is a member of the board of directors of the St. Petersburg College (SPC) Foundation. She is also a co-founder of the Exploratory Lab Boot Camp, a collaborative career development program for college students to develop technical skills and prepare for careers in the technology industry. McCourt was selected as a “Channel Chief” by CRN magazine in 2015 and 2017, named one CRN’s “Power 100: Women of the Channel” in 2011. In 2014, she was named the BusinessWoman of the Year by the Tampa Bay Business Journal and the Technology Leader of the Year by the Tampa Bay Business Journal. In 2016, she was named one of the 25 Most Influential Women in IoT by Industry Week. McCourt holds a B.S. in Human Sciences from Florida State University.

Tech Data is passionately committed to promoting STEM education within the communities in which it operates around the world. No one at one of the company better embodies that mission than Angie Beltz McCourt, a tirelessly dedicated advocate for STEM education. McCourt is a driving force in this important initiative at Tech Data in the Americas region, particularly in and around the Tampa Bay area (where Tech Data’s global headquarters are located).

In 2015, McCourt led a strategic partnership with St. Petersburg College, the Tampa Bay Technology Forum, Agile Thought, Valpak, and Career Source Tampa Bay to recruit more students into the technology industry and fill skills gaps that existed in the Tampa Bay region as the area seeks to become a tech hub. Known as the Exploratory Lab Boot Camp, the initiative is an experimental way to introduce college students (who may not be tech/IT majors) to the real-time world of technology and the skills needed for a career in the field. The educational program is facilitated by professionals in the technology industry (including many Tech Data associates) and focuses on three pillars: Technology Solutions, Integrated Business and Process and Tools to Create User Experience. The weeklong program, held at Tech Data’s campus and other locations throughout the Tampa Bay area, culminates with students receiving a technical certification. Of the 22 students who graduated the first program in 2015, only five had a technology degree focus. In fact, Tech Data prefers recruiting students to the program who do not have a STEM background/major, hoping to encourage students to expand their skill sets and to expose them to potential careers and companies in technology. Now in its fourth iteration, Exploratory Lab has yielded a fantastic group of graduates (and new Tech Data employees), enabling students to find a new interest in the technology industry, an increased confidence level, and inspiration. The award-winning program is now being developed for the high school level.

McCourt was also instrumental in the development and opening of the Tech Data/Cisco Systems STEM Lab at the Girls Inc. Center in Pinellas County (FL). The ribbon-cutting ceremony was the culmination of several years of dedicated efforts by Tech Data and Cisco (spearheaded by McCourt) to help make the STEM Lab a reality for the organization. Completed in 2015, the STEM Lab is equipped with multiple island workstations, storage, electrical power, plumbing, and lighting. It was designed to enrich the after-school and summer camp STEM programs at Girls Inc., a non-profit organization focused on inspiring young women. McCourt has served on Girls Inc.’s STEM Advisory Board for four years, co-chairing the Girls Inc. of Pinellas STEM Woman of the Year Luncheon to raise funds towards the STEM Lab and related programs. Tech Data’s business partners at Cisco, also active supporters of STEM, selected Girls Inc. of Pinellas as their community partner during their annual Tech Data/Cisco Ignite partnership event for the past two years.

Another core STEM education program developed under McCourt’s direction is Tech Data’s collaboration with the PACE Center for Girls through Tech Data’s female employee resource group. Earlier this year Tech Data hosted the second annual “Girls in Technology—Go for IT!” event in partnership with the PACE Center for Girls. The Go for IT! workshop provided mentorship opportunities and taught PACE girls from Hillsborough, Pasco and Pinellas counties the basics of HTML, how to build a PC, and career opportunities available in IT. After the breakout sessions, the girls had the opportunity to hear from a panel of Tech Data employees.

Tech Data has continued these efforts and involvement with PACE through a curriculum developed for the girls called “The Basics of HTML and CSS.” The class is focused on teaching PACE girls how to structure and style a webpage using HTML and CSS, the fundamental building blocks for web development. If the girls continue programming, they can incorporate what they learned from the class with more advanced languages like JavaScript. Ultimately, the goal of the class is two-fold: to teach the girls valuable skills and give them the confidence to pursue a career in technology.

As McCourt says, “The prioritization and focus on building, expanding and delivering technology programs for students in grades K-12 will lead to more technology programs at local colleges and universities, where students learn the skills needed by technology companies. My call to action to parents, educators, non-profit organizations and technology businesses is to get involved, create and deliver curriculum, lead workshops, sponsor mentor and inspire children to pursue an education or career in technology.”

From Chuck Bartlett, SVP, Advanced Solutions, America at Tech Data: “Angie is a proven leader with a track record of success. She is dedicated to channel enablement and supporting the diverse technical needs of solution providers. Beyond the channel, Angie is a leader in the community, where she is dedicated to STEM education initiatives and building the future leaders of tomorrow.”
Alka Dhillon is the founder and Chief Executive Officer of Technalink, Inc., one of the leading technology companies in the Washington Metropolitan area. She is a Conscious Leadership Expert and International Speaker.

In addition to her responsibilities as CEO of Technalink, Ms. Dhillon uses her passion for technology as platform to give back. She is a keynote speaker to various organizations and corporations globally at their conferences on Entrepreneurship, Leadership and STEM. Ms. Dhillon is actively involved in the Network for Teaching Entrepreneurship (NFTE) and serves as a board member.

Ms. Dhillon has been honored with numerous awards not only for her professional achievements, but also for her commitment to serving her community. Her accolades include receiving the 2012 BRAVAl Women Business Achievement Award presented by SmartCEO, the Top 100 CEO’s in STEM, the Top 100 Women Leaders in STEM, the 2013 Locally Grown honor by Network for Teaching Entrepreneurship (NFTE) and the Abe Veneable Legacy Award for Lifetime Achievement presented by the U.S. Department of Commerce’s Minority Business Agency (MSDA). She is also the recent recipient of the Global Technology and Innovation Leaders Award of the Decade presented by the Women’s Economic Forum. Ms. Dhillon is the author of the book The OM Factor: A Woman’s Spiritual Guide to Leadership; 7 Essential Tools and 7 Key Traits to Cultivate for Your Success and Well-Being. This International Best Seller, provides you with essential tools to deal with stressful situations in the workplace real-time, and also teaches how to cultivate key traits to limit those scenarios from arising so often. The OM Factor has also received the Bronze Medal from Axelom Business Book Awards as one of the Best Business Books of 2016 in North America.

Ms. Dhillon holds B.A. degrees in Economics and Spanish from the University of Virginia. She contributes to The Huffington Post, Today.com & NBC Universal, Blogs and offers OM Factor related merchandise and advice at AlkaDhillon.com.

I feel that focusing on advancing our upcoming generations through STEM enables us to Seize The Evolutionary Moment. All that is evolving hinges on innovation and creativity which are the building blocks of STEM and therefore those of our future. The creative aspect of STEM gives me passion. Creativity is the seed for innovation and manifestation. I love that there are no boundaries with STEM. Anything that one can imagine can become a tangible reality and allow us to progress in a way that positively impacts the planet. STEM allows us to grow consciously and productively so that we can truly make a difference in the experience we have during our journey through life. Evolution may be a fact and something that is inevitable, however how we evolve is completely up to us. We can choose to evolve from a fear based state of trying to compete and keep up with our global competitors. Or, we can take a more conscious and unique approach and exercise our creative muses. This latter method of evolution is where true innovation is birthed. Here, there is no comparing or contrasting and taking old ideas or ideas that once served us and simply rehashing them to come up with version 5.12. This method cleans the slate and allows us to go within and tap into the field of infinite possibilities.

The two groups that can really drive change and make an impact in STEM related careers are Women and Minorities. They are important to STEM careers because more women are naturally matriculating by exponential numbers into the workforce every minute. If those 2 vital groups do not have the proper STEM education or training we will be doing a dis-service to our progression as a nation first, and globally second. We will never be able to advance at the rates necessary to keep up with innovation and growth. STEM is not the future. It is part of our everyday lives now, and we need to be able to participate effectively.

We can ensure more women leaders in STEM by starting to instill the belief and confidence in our little girls that they can actually have a future in the STEM world. We must tell them that they can dare to dream and those dreams will manifest. Once they have this solid belief, they will be properly equipped and passionate about learning about STEM. Then, we as a nation need to give equal opportunities to girls and women to actually gain experience in STEM related jobs and allow them to become leaders as they would in any other field. In order for this to happen, we need to commit to mentorship and sponsorship. Organizations like Million Women Mentors are making that solid commitment and they are making their commitment scalable, which is so admirable. They are building partnerships and getting commitments from Corporations globally to commit to mentorship. The corporations have the platform and resources to commit to making mentorship a priority and by committing to this they are effectively shaping our future competitive landscape to be filled with more women and minorities in these innovative careers.

Mentoring isn’t a job title. It is a lifestyle. It is something you practice every day by living a life of imparting your knowledge and leveraging your platform to benefit another. Mentors commit to walking the path of humility and selflessness because they are not thinking that by sharing their network they are losing anything; they completely see it as a collective gain. Believe it or not, the kids that got the “O” for outstanding in the category of “shares well and plays with others” on their report cards in elementary schools make the best mentors. Surprisingly, it’s not the ones that got accolades for their leadership. Mentors are Connectors. They do not need to be in the limelight. They may happen to be by virtue of their profession or achievements, however it is not something they need. They see the opportunity in connection. They thrive on finding synergies between entities and getting them together to create a greater good and benefit everyone, not just looking “what’s in it for me?”

Ede Fraser, CEO of STEMconnector, is my STEM role model. She is also my mentor and embodies the true essence of what mentorship should be. Her impeccable spirit and unwavering commitment to women and girls in STEM related fields is unrivaled. Many people jump on the STEM bandwagon because it is the hottest show in town at the moment. Ede truly champions this movement and lives her life to mentor and advance women and girls in their careers. She gives opportunities and open doors that would have remained closed for so many women. She is a true inspiration to humanity and it is an honor to be in her presence and her friend.
Dr. Rebecca Parsons

Chief Technology Officer

ThoughtWorks

Before coming to ThoughtWorks, Dr. Parsons worked as an assistant professor of computer science at the University of Central Florida where she taught courses in compilers, program optimization, distributed computation, programming languages, theory of computation, machine learning and computational biology. She also worked as a Director’s Postdoctoral Fellow at the Los Alamos National Laboratory researching issues in parallel and distributed computation, genetic algorithms, computational biology and nonlinear dynamical systems.

Dr. Parsons received a Bachelor of Science degree in Computer Science and Economics from Bradley University, a Master’s of Science in Computer Science from Rice University and her PhD. in Computer Science from Rice University. She is also the co-author of Domain-Specific Languages, the ThoughtWorks Anthology and Building Evolutionary Architectures.

Dr. Parsons is a sought after speaker for industry events, serving as a featured presenter at well-known conferences, including Collision Conference, Web Summit, WOW!, Grace Hopper Celebration of Women in Computing and more. She is also the co-author of Domain-Specific Languages, the ThoughtWorks Anthology and Building Evolutionary Architectures.

DOING DIVERSITY DIFFERENTLY AT THOUGHTWORKS

After 25 years, we have learned firsthand that diverse teams are simply more productive, something that decades of research supports. However, doing diversity right is far from simple; it’s an ongoing discussion that involves repetitive work in training, refreshing and re-evaluation. And it involves everyone. Individual companies can attract and recruit a diverse crowd of talent, but also ensure these efforts are supported through the development of inclusive workplace cultures. Education on the benefits of a diverse workforce and hands on inclusiveness training is essential to retention of diverse employees in STEM careers.

• Taking a unique approach to hiring. We don’t require four-year computer science degrees but cast a wider net for talent, which includes self-taught coders, or graduates who majored in disciplines like economics, liberal arts or mechanical engineering. Some firms see the size of GitHub profile as a sign of intellectual curiosity and productivity, but that isn’t the only or necessarily best sign of interest or skill in tech. ThoughtWorks has a thorough interview process that includes a cultural interview that explores self-awareness and development, how much the candidate has learned from failures and how difficult decisions and risks.

• Putting human and economic resources into purposeful onboarding and investing in all talent from day one. All new graduates attend ThoughtWorks University, a five-week intensive training program which simulates projects and covers both technical and soft skills, as well as content on economic and social justice. Other hires, mid-level to executive, are paired with onboarding buddies, helping them navigate all aspects of the business, especially the cultural ones.

• Feedback Culture. ThoughtWorkers are expected to give and receive feedback to their colleagues, fostering a space of improvement, openness and inclusion. This feedback is collected from colleagues before each annual review and starts from the Agile prime directive, “Regardless of what we discover, we understand and truly believe that everyone did the best job they could, given what they knew at the time, their skills and abilities, the resources available, and the situation at hand.”

• Community building. We believe knowledge is for all and we thrive on community interaction. We regularly engage with diverse organizations by hosting their events in our offices. This provides us an opportunity to have impact in the local market and gain exposure to talented individuals from all walks of life.

• Rewarding teamwork. Creativity and innovative problem solving thrive when diverse opinions and perspectives are shared, and ThoughtWorks collaborates on culture values teamwork and shared knowledge over individual heros.

• Trainings and Workshops. Additionally, ThoughtWorks committed to and continues to provide focused training, workshops, and discussions on topics that impact and affect society including unconscious bias awareness, sexism, gender diversity and inclusion, privilege, and race and ethnicity.

Striving to make your organization a place that everyone can be themselves means translating diversity goals and standards into very practical guidance, particularly during induction. In fact, we have found the people we recruit are hungry for practical suggestions about how to challenge their assumptions, question language, and interrupt behavior that hurts, silences or stands by.

Even though there are business opportunities and short-term benefits for getting and doing diversity right, the business case for diversity isn’t enough. To really shift culture and metrics, to really make a difference to our industry, we need to measure them act. I believe that our goal in the tech industry and as a society at large is to break down dividing barriers, so hopefully in the future the tech industry never needs to refer to people as “women technologists” or “minorities in STEM.” At the end of the day we’re business leaders, scientists, engineers, and technologists. No qualifiers needed.
Meaghan Hooper-Berdik
Vice President & General Manager
Turner Construction Company

Turner is a North America-based, international construction services company, and the largest general builder in the United States. With more than 5,000 employees in 20 countries around the world, and an annual construction volume of more than $11 billion, Turner is a leader across the industry’s major market segments including healthcare, education, sports, commercial, transportation, and manufacturing construction, as well as green building. The company is also recognized as a leader in the use of Building Information Modeling and other technology tools, as well as lean construction practices that foster collaboration and improve project outcomes.

Meaghan’s diverse and inclusive culture begins with recruiting resourceful graduates across disciplines – particularly STEM. The company encourages innovation, creativity, and continuous learning to deliver increasingly safe, efficient, and unique projects for our clients.

A graduate of Tufts University with a Bachelor of Science in Civil Engineering, Meaghan made the decision to join the construction industry and began her career with Turner in 1997. In her first five years with the company, she worked on construction sites as a field engineer, a chief of party, and a superintendent on a variety of large-scale construction projects in Boston.

After gaining important field experience, Meaghan moved to an office assignment where she joined the estimating group in 2002, eventually leading the preconstruction planning effort on projects ranging in size from $20 million to $150 million. She then returned to field operations in 2005, serving as project superintendent for a $90 million condominium project in Charlestown, Massachusetts.

In 2007, Meaghan was named operations manager, and later general manager of the Special Projects Division in Boston, an 80-person group that completes more than $150 million of work each year. She was promoted to vice president of Turner in 2014, and general manager of the company’s Boston’s main office in 2016. She currently co-leads the $900 million business unit.

Meaghan is active in the Boston business community. She serves as board member of Boston Harbor Now – an organization committed to revitalizing Boston Harbor – and, she is a member of the Women’s Breakfast Committee for Horizons for Homeless Children. Meaghan is married and has eight-year-old twins.

Meaghan on Experiential Learning
As people advance in their careers, it is important to be continuous learners and achieve a balance between formal classroom training and on-the-job training. The majority of our college recruits begin their careers at Turner with a field assignment, meaning they work on a job site full-time. Many of our recruits find a balance between classroom learning and on-the-job learning even before they leave college. We hire college interns and co-op students to give students an opportunity for experiential learning that compliments their learning in school. In this way students can apply first-hand the technical skills they are advancing in college.

I began my career with Turner, fresh out of college, on a design-build new maximum security prison project. It was exhilarating to move from a classroom setting into the field, where I worked with a team of engineers to support the site work foundations, and structural operations. It was a period of intense learning, as I was interacting with seasoned tradesmen and an experienced Turner team. Questions were welcomed by thirty-year carpenters and ironworkers, not to mention our own superintendents and engineers. The two-year building project gave me first-hand knowledge of the design, engineering and construction process.

Particularly for young women, this experiential learning is critically important. Immersion on site can be a real equalizer. We must find our own confidence in this new, dynamic, sometimes tough environment. Being immersed in the environment takes away the mystery, and there is literally no time to feel intimidated. We dig into daily planning and problem-solving, and quickly show our value to the process. In doing so, we earn the confidence of the designers and subcontractors with whom we work so closely. It is a cycle of positive reinforcement that I hear many women in the field talk about. There is something about getting our boots dirty that propels us into a more successful career in construction.

Meaghan on Supporting Women in STEM Careers
We have to take a multi-part approach to encouraging women in STEM careers, starting while they’re still students and continuing throughout the recruitment and hire process. And then, once women enter STEM fields – once they’re on the job site, so to speak – companies have to provide ongoing support to retain their talent. In other words, we have to connect with girls and young women early and stay connected.

Turner and other leading companies have made strides, expanding our outreach efforts in elementary, middle, and high-schools, as well as our scholarship offerings at the higher-education level, all to grow the talent pool entering the workforce. We inspire girls with a passion for STEM studies, and nurture that passion through their careers.

At Turner we have both formal and informal mentoring and peer networks for women and minorities. These networks provide a safe and supportive space to share stories and trade advice. I am particularly focused on supporting women through family-building years. It can be an exit point for women in any field, but particularly in a field where women are a minority, and may feel they do not have as much flexibility or potential for career growth. Importantly, at Turner we work hard to offer flexibility around work hours and telecommuting, balancing the needs of an individual with the requirements of the job. We are very deliberate about career coaching and career mapping to align the employee’s goals with the business. That clear communication enhances the connection back to our organization and helps support women while keeping them engaged throughout the many demands moments of raising a family.

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TO BRIDGE GROWING DATA SKILLS GAP CORPORATE AND EDUCATION MUST PARTNER TO ENHANCE DATA LITERACY AMONG WORKFORCE

Data is a commodity that everyone has, but few know how to properly manage. When data is understood, managed and manipulated correctly, the results are powerful for decision makers across every industry. With the vast amount of data being generated every minute of every day, education and training of today’s workforce to enable them to leverage this new asset is the first step in harnessing its power.

To best understand the potential in this future, we must look at how quickly the data landscape is growing. From 2014 to 2020, the availability of data is projected to grow from more than five zettabytes to more than 44 zettabytes, doubling in size every two years. Managing this high volume of data and transforming it into actionable knowledge that renders it useful to an organization, takes the expertise of skilled business leaders, analysts and data scientists.

Unfortunately, these professionals are in short supply, making data management a prevalent workplace issue. Without this role, the potential of the data is lost, at best. Worse case, the data is misused, resulting in decisions that are detrimental to an organization.

It is our responsibility to mentor up-and-coming leaders about these future jobs and to prepare that up-and-coming workforce for the challenge. Leaders should work together to create a diverse and qualified talent pool and to train employees to meet the data and analysis skills demands of today’s workforce.

The bottom line is this: in order to fulfill the need for data literacy in organizations, data knowledge must be added to the list of “basic skills” for all Americans. Institutions need to enhance their educational offerings, and the workforce should develop programs for training and learning new skills while on the job. The once distinct lines across technical and business skills, including management, have now blurred. If we are to prevent a whole new type of glass ceiling for women, we need to make sure girls are educated about their opportunities and understand the importance of honing their skills in this area.

To help address the skills gap that exists in the data management world, institutions of higher learning often partner with business leaders to identify the gaps, and adjust curriculum to help close it. The ever-changing landscape of technology and business dictate that ongoing training is necessary in both industries in order to meet the demands, let alone keep pace.

This has resulted in a shift in how new technologies and skill sets are incorporated into curriculum at many universities, including ours, however the fundamental principles of analytics, statistics and economics remain. What’s new is how these skills are applied to the field of data analytics. More recently workshops and shorter coursework opportunities have been made available to provide the additional skills necessary to those who have traditional training. And for those entering into higher education degree programs, the curriculum has been enhanced.

For organizations looking to take control of these continually growing data management opportunities, there is a trade-off between looking outside of the company for trained talent versus enhancing the skills of your current workforce. Data scientists who are traditionally trained in statistics, economics and analytics often have the education and training to transform data into actionable knowledge, but they may need real-world experience in order to quickly identify how they can best align the data and affect business opportunities.

An added complexity is that there is a wide array of new skill sets needed in order to be considered a qualified candidate. In some cases the skill to formulate questions and present answers in a comprehensible manner are needed. In other positions, the needed skillsets are far more analytical, as they use predictive analytics to identify trends and then model possible future states.

Underpinning these skillsets is the responsibility of organizations and individuals to adhere to and enforce strict parameters around data security – a primary concern for everyone as cyberattacks continue to rise. According to a recent University of Phoenix survey, nearly half of respondents have experienced a personal security breach within the past three years. This means cybersecurity education and training must also be emphasized.

The upsurge of available data provides an immense opportunity to enhance a career or begin a new one. But improved education and training offerings need to be developed to ensure the proper workforce is in place to meet the need. It is the responsibility of institutions of higher education and organizations to collaborate to bridge the current skills gap and provide solutions to the issues the industry is facing.

Ruth Veloria was appointed as the Executive Dean, for the School of Business in December 2013. In this role she is responsible for the School’s academic, programmatic and business processes and operations. Ruth has spent the most recent years of her career leading a reinvention of the student experience as the Senior Vice President of Student Experience at the University of Phoenix. Her work has focused on identifying and piloting innovations in and out of the classroom that improve student success and progression.

Formerly Ruth was Vice President of Client Services at Charles Schwab Co. She joined Schwab as a Vice President of Corporate Strategy. Ruth began her career in Management Consulting; she was a principal at the Boston Consulting Group in San Francisco and a business analyst at Booz & Co, in London.

Ruth has an M.M. degree from the Kellogg Graduate School of Management in Evanston, Illinois, and a Bachelor of Arts degree in Chemistry from New College, Oxford University, England.

What fuels Ruth’s passion every day is her determination to create an environment that offers the finest possible student experience at University of Phoenix; and that students graduate ready to tackle the job requirements of their chosen professions.
Lauren Love-Wright is Vice President of the Connected Cities team at Verizon. In this role, she is responsible for the strategy and governance of the Connected Cities program. In addition, she is responsible for the development and management of relationships with City leadership, in an effort to improve the time to market and maximize the strategic value of the Connected Cities program.

Her career with the company spans more than 14 years and includes positions of increasing responsibility in marketing, sales, consumer electronics, business and retail services. Prior to her current role, Lauren was Chief Marketing Officer of Partzon Wireless’ region covering Michigan, Indiana and Kentucky in 2015. There, she was responsible for all sales, marketing, operations, financial performance and customer service in the three states.

Love-Wright returned to the Illinois/Wisconsin Region in 2014 to help lead its retail channel and was subsequently promoted to President of Verizon Wireless’ region covering Michigan, Indiana and Kentucky in 2015. There, she was responsible for all sales, marketing, operations, financial performance and customer service in the three states.

Love-Wright has a bachelor’s degree in Computer Science and Electrical Engineering from Spelman College and Georgia Institute of Technology; her Master’s degree in Electrical Engineering from Georgia Institute of Technology; and her MBA from Harvard Business School. In early 2012, she joined Verizon Wireless’ Marketing team as director of connected consumer electronics and personal computing devices, responsible for driving strategy to ensure that Verizon Wireless service was embedded in the leading consumer electronics and portable personal computing devices sold in the U.S.

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Verizon Communications Inc. (NYSE, Nasdaq: VZ) employs a diverse workforce of 177,700 and generated nearly $132 billion in 2015 revenues. Verizon operates America’s most reliable wireless network, with more than 112 million retail connections nationwide. Headquartered in New York, the company also provides communications and entertainment services over America’s most advanced fiber-optic network, and delivers integrated business solutions to customers worldwide.

The impact that mobile technology has had on society cannot be overstated. In only two decades since the launch of the first smart phone, there has been a profound transformation in the way we live, work and play – in virtually everything that we do. We have a more connected world that allows us to share everything from what we had for lunch to powerful images that can fuel social revolution.

Also, mobile technology is the platform that enabled the sharing economy, which gave rise to a robust and dynamic landscape of digital services. It allowed business models to grow that gave us new ways to communicate, eat, shop and travel. It changed the way that we work, by allowing us to send important files almost anywhere in the world in seconds so business is addressed when it is critical. We can collaborate with co-workers in real-time no matter how spread out they may be. News, entertainment and sports – along with advertising and media – have been transformed, as the bandwidth and availability of technology like 4G LTE have enabled us to watch whatever we want, whenever we want, from wherever we are.

With every generation of network technology, increased bandwidth, speed and functionality have made it possible for people to live more of their lives on the mobile platform. Until recently, when researchers started studying the impact of wireless, they found that its transformational effects are mainly in digital industries – information, technology and communications – whose business models have adapted to the new digital paradigm. But that’s all about to change.

5G is a game changer. The next generation of wireless technology, called 5G, isn’t just another iteration of wireless innovation. It has the potential to transform industries across every sector of the economy in what has been called the Fourth Industrial Revolution. By merging the digital and the physical worlds, it will redefine work, elevate living standards, and define the future of global economic growth. This is the promise of the digital world.

It’s projected that by 2035, 5G will enable $12.3 trillion of global economic output and support 22 million jobs worldwide. This will be driven by the proliferation of The Internet of Things (wearables, smart home appliances, connected auto and the deployment of smart city technologies that create smarter, safer and connected communities. These next generation networks open the door to innovation, which will transform industries, launch a new wave of companies, and create new opportunities for those in the technology fields. The opportunities that will be open to future generations are unimaginable to us today.

Connecting communities and delivering the promise of the digital world is the primary objective of my role at Verizon. I lead a team whose goal is to leverage Verizon’s network investment to drive the growth of mobility services, and create more connected cities. That’s why I understand that the continued growth of our industry, as well as the extent to which we can leverage new technology to make a better world, depends upon the steady flow of a diverse group of individuals into the STEM disciplines.

Why is it so critical? STEM workers generate new ideas and new companies which help drive our nation’s innovation, competitiveness and economic growth. Currently, the demand for qualified individuals to fill STEM jobs exceeds the supply. In order to increase the supply, it is essential that students in all communities across our country receive access to technology and the educational support to gain the relevant skills for good jobs and entrepreneurship.

Verizon has many initiatives to increase the number of students selecting STEM majors in college and pursuing STEM careers, and to ensure that more students from underserved communities can realize the opportunities of the digital world. The education initiative of the Verizon Foundation, called Verizon Innovative Learning, provides free technology, free access and intensive, hands-on learning opportunities to students in underserved communities. Verizon Innovative Learning offers several programs, including tech immersion camps – one specifically for middle school-aged minority boys and one for middle school girls – that take place on university and community college campuses in the summer. These programs also meet regularly throughout the year to reinforce the skills taught in the summer, which include tech skills like coding and 3D design, and also design thinking, entrepreneurship and storytelling. Also, they connect students with mentors who serve as STEM role models.

Leveraging private partnerships is an additional initiative that Verizon is using to develop the next generation of innovators. The recent partnership with the City of Sacramento is one example. Through this partnership, we assist the city in bridging the digital divide by providing free Wi-Fi access in 27 of Sacramento’s public parks. Verizon is in discussions with other cities to enable significant investment to expand access to the Internet as we lay the foundation for the next generation of wireless infrastructure.

I am excited for the future of these public-private partnerships, as well as our Verizon Innovative Learning Initiative, which will enable us to increase STEM participation and deliver the promise of the digital world.
Since its inception in 2006, VRM Mortgage Services (VRM) has grown to be one of the largest mortgage servicing solution providers in the industry. VRM has achieved and sustained its growth without compromising quality by effectively managing their processes, providing internal quality control and oversight of all operations. VRM reduces operational and reputational risk using proprietary innovative technology and reporting that provides clients complete transparency into business operations. Also VRM is a certified minority-owned business enterprise that provides tiered reporting of its diversity spend.

VRM offers nationwide services in the area of: Commercial/Residential Asset Management; Inspections; Property Maintenance & Preservation; Property Repair & Renovation; Eviction Services; Rental Management; Short Sales Services; Document Generation & Management; Title Services; Closing Services; Commercial Asset Management and HCA & Tax services.

Cheryl Travis-Johnson Executive Vice President and Chief Operating Officer VRM Mortgage Services

Cheryl Travis-Johnson has served as Director of REO Sales Operations and Chief Operating Officer of VRM Mortgage Services. Since joining VRM in 2008, Ms. Travis-Johnson’s leadership has distinguished VRM among clients and within the industry by successfully delivering non-traditional solutions to mitigate losses from non-performing loans. She has helped VRM become a solution provider for mortgage servicing solutions, while preserving communities nationwide. She is responsible for developing and rolling out VRMU, which is one of the leading training vehicles for real estate professionals. VRM is in collaboration with the MBA developed and free Self-Assessment tool to help companies assess the strength and compliance of their diversity and inclusion initiatives. Further, as a director on the board of PCV/VRM Seeds of Hope nonprofit and the founder of the Council for Inclusion in Financial Services (CIFS), Ms. Travis-Johnson leverages philanthropy to support neighborhood stabilization efforts and financial literacy nationwide. Additionally, VRM launched the Mortgage Collective to provide thought leadership platforms for key decision makers to address industry pain points.

The goal for any organization should be to get the best talent, and let differences be used to foster an environment of inclusion, rather than in thoughts, ideas, beliefs, appearance, or the cultural nuances that shape our individualism. The financial services industry is far from achieving this level of inclusion. Multiculturalism influences decisions in multiple ways and can have an adverse economic impact on business results if leaders do not manage it effectively. Employees will turn over if they do not feel they have a voice at the decision table that can represent their specific needs. It is also important that all employees understand that an inclusive environment is not a by-product of corporate diversity reporting (CSR), but an economic and competitive advantage.

Additionally, the financial services industry is aging and we need the next generations to see the value in not only the products and services but working within the industry. The average age of an appraiser and real estate broker is north of 55. Moreover, as the Baby Boomers continue transferring wealth to Generation X and the Millennials these young men and women will need to be financially savvy to ensure the wealth continues for the next generation. So generational inclusion has become an important part of any business inclusion and sustainability plan.

What does all this mean? We need educational platforms that allow us to meet people where they are most comfortable and that allow the financial services industry to: (a) start financial literacy training during the adolescent years; (b) combine on the job training and mentoring during college years through courses, skill certifications and internships (c) address those workforce issues that prevent women, minorities and millennials from leaving the industry after reaching middle management for C-Suite opportunities, (d) create a market place where financial services companies can be intentional about finding diverse suppliers and applicants beyond the traditional methods and (e) develop and maintain educational programs that help consumers understand and compare financial products and services and learn wealth management tactics.

The financial services industry requires an educational platform that responds to where the nation is today. Too many people are relying on Go Fund Me to finance important life events like funerals. Consequently, we need educational platforms to teach financial literacy in high schools and college. In fact, most high schools do not have any requirements around financial literacy and this is also the case for many colleges. Many students are unable to attend a four year college due to costs, but not all careers in the financial services industry require a formal education. Therefore, by leveraging high schools and community colleges financial services companies can help build a larger pool of qualified candidates for careers in financial services while improving financial literacy.

Lastly, the financial services industry must be more nimble and diverse in the infrastructures and resources used to support business models to attract younger generations and retain women.

Recognizing that there is a need for a nationwide solution I founded The Council for Inclusion in Financial Services (CIFS). Through this organization and partnering with VRM, National Association of Women Real Estate Brokers (NAWRB), Mortgage Bankers Association (MBA), New American Funding University (NAFU) and Dallas Community College District (DCCCD) they have been able to place on (a) technological solutions, (b) thought leadership, (c) internships and mentoring, and, (d) educational platforms. To date the following solutions have been developed:

1. A FREE online Self-Assessment tool. It is an anonymous resource for lenders to assess the strength and compliance of their diversity and inclusion initiatives. This comprehensive tool distills the Office of Minority and Women Inclusion’s (OMWIs) proposed standards into an easy-to-use tool to assess, document, measure and share compliance with the standards developed in response to Section 342 of the Dodd-Frank Act. The results of this assessment provide a measurement of: (a) organizational commitment to diversity and inclusion, (b) workforce profile and employment practices, (c) procurement and business practices and, (d) diversity & inclusion policy transparency and communication process.

2. A three part diversity & inclusion certification program for leaders.

3. CIFS Sourcing Solution which is an electronic market place for organizations to register their business or individuals to upload their resumes. This tool allows companies to source for candidates or suppliers by diverse status, city, state, or zip code.

4. Monthly financial literacy segments co-sponsored with Wells Fargo. On the second Thursday of each month we host financial literacy sessions and a career fair. Our goal is to have financial literacy training occurring nationwide on the second Thursday of the month.

5. Partnered with MBA, CIFS and DCCD to offer financial services certification courses and internships for community college students.

6. A Financial Services Week Annual Expo, where we offer B2B and B2C opportunities as well as live educational sessions and a career fair. The 2018 expo will be July 16 – July 20th at the Irving Convention Center in Irving, Texas.

7. Transitional training and internship for Veterans.

I am in the process of developing a four year program for high school students, which will give them job skills for full or part-time opportunities following graduation. In summary, through the use of technology, education, sponsorship, mentoring and corporate collaboration we will makediversity and inclusion the norm by which our industry forms.
Regina O. Heyward
Senior Vice President and Head of Supplier Diversity
Wells Fargo & Company

Wells Fargo & Company (NYSE: WFC) is a diversified, community-based financial services company with $2.0 trillion in assets. Founded in 1852 and headquartered in San Francisco, Wells Fargo provides banking, insurance, investments, mortgage, and consumer and commercial finance through more than 8,500 locations, 13,000 ATMs, the internet (wellsfargo.com) and mobile banking, and has offices in 42 countries and territories to support customers who conduct business in the global economy. With approximately 273,000 team members, Wells Fargo serves one in three households in the United States. Wells Fargo & Company was ranked No. 27 on Fortune’s 2016 rankings of America’s largest corporations. Wells Fargo’s vision is to satisfy our customers’ financial needs and help them succeed financially.

Regina O. Heyward is Senior Vice President and head of Supplier Diversity for Wells Fargo. With more than 17 years of multi-industry global supply chain and supplier diversity strategy experience, she leads a team that is responsible for developing and engaging certified diverse suppliers to integrate them into the company’s sourcing and procurement processes. Ms. Heyward joined Wells Fargo in 2014.

Throughout her career, Ms. Heyward has developed high impact supplier diversity programs and led strategic supply chain initiatives globally in regions including Asia, Latin America and Europe. Prior to her current role, she served as the director of enterprise supplier management for Capital One, a role in which she led the supplier diversity team and was responsible for corporate real estate category sourcing. Prior to that role she served as the director of global supply chain compliance at MeadWestvaco, where she implemented a supplier diversity program and was responsible for global supplier risk management.

Ms. Heyward, a native of Thomasville, Georgia, is a Summa Cum Laude graduate of North Carolina A&T State University and earned her J.D. from North Carolina Central School of Law. She serves as a national board member for the US Hispanic Chamber of Commerce and the US Business Leadership Network National Council as well as an Advisory Board Member for the Clark Atlanta University School of Supply Chain Management, Advisory Board Member for MBNUSA magazine and a member of the Charlotte Chamber of Commerce Board of Advisors.

She is a member of the Institute for Supply Management’s (ISM) Ethical Standards Committee and, from 2010 to 2013, was Chair of ISM’s Diversity Committee, where she implemented a diversity undergraduate student mentoring program focused on increasing diversity within the supply chain management profession.

Ms. Heyward has been featured three times by DiversityPlus magazine as one of the “Top 25 Women in Power Impacting Diversity,” and has received numerous other awards for her leadership in supplier diversity, including honors from Minority Business News and DiversityInc. Magazine.

Mentoring Women Entrepreneurs in the STEM Will Strengthen Wells Fargo’s Supplier Diversity Strategy
Growing up in a small town has its advantages. You learn to help your neighbor, and to leave things better than you found them. Those were values that I learned early in life having been raised in southern Georgia.

Over my seventeen year career, I have had opportunities to work at major corporations including General Electric, Capital One and now Wells Fargo. I’ve worked alongside of some of the best and brightest supplier organizations in the United States, Asia and Europe. Through my experiences, I have come to appreciate the innovation, creativity and efficiency that diverse businesses infuse within the supply chain.

In 2014, I joined Wells Fargo as head of Supplier Diversity. In my role, I am accountable for strategically aligning with business teams and supply chain partners to drive spend growth; diverse supplier development and strategic outreach. Since joining Wells Fargo, we have grown spend with diverse businesses by over $365 million. In 2016, we achieved more than $1.1 billion in diverse spend.

A key aspect of my role at Wells Fargo is listening to diverse businesses, identifying their strengths and partnering them with the right internal decision makers. I have witnessed diverse businesses successfully compete for work with Wells Fargo in a wide array of categories including professional services, marketing, technology and construction to name a few.

To enable Wells Fargo’s diverse spend growth, we’ve put a lot of effort into making sure that businesses have access to development, mentors and information. That’s why Wells Fargo and STEMconnector are launching the Million Women Mentors Entrepreneur Initiative, a focused effort to increase technical capacity and know-how for women business enterprises (WBE’s) in the Science Technology Engineering and Math (STEM) fields. This initiative will kick off in 2018, and I am proud to serve as Chair of its Advisory Council.

Our country needs strong women entrepreneurs in STEM to be at the forefront of solving the world’s global challenges and developing innovative solutions and ideas. A diverse scientific community where women can create and solve is vital. I’m excited to see what these women can accomplish in STEM!