INPUT TO IMPACT

A Framework For Measuring Success Across the STEM Talent Ecosystem

STEMconnector

Executive Summary

Input to Impact provides a common definition for success and framework for measurement that can be used to plan and target STEM investments for greater impact, and measure progress towards goals. For those already engaged in STEM talent investments, this report provides a framework to assess the impact of existing work and improve returns.

Input to Impact builds off the findings of State of STEM, STEMconnector's report providing a comprehensive view of the STEM talent ecosystem and of the challenges and opportunities within the ecosystem. State of STEM uncovered several key findings: no single individual or organization can influence the entire ecosystem alone; there is no single STEM talent gap but rather a confluence of five critical gaps; and there is no one solution that will create progress at scale.

Based on these assumptions, Input to Impact defines success in the STEM talent ecosystem as:

Success is defined as a diverse and STEM-ready talent pool with the knowledge, skills, and mindsets needed to secure and succeed in careers today and in the future. An individual student, jobseeker, or employee in STEM cannot succeed in isolation. Systems – and the people within them – are aligned, equipped, and focused in supporting STEM talent pathways.

To achieve success, we must increase diversity across the STEM talent pipeline, foster a more inclusive STEM ecosystem, and improve collaboration across sectors and organizations. Since one individual or system cannot change the ecosystem while acting alone, organizations must align in their efforts. Additionally, we must recognize that STEM is not a single discipline, but rather a compilation of skills and knowledge that enables individuals to secure STEM jobs, and to succeed in various roles throughout their careers.

Input to Impact identifies three dimensions of impact that exist within the STEM talent ecosystem. Each dimension must be considered when making a decision about where to invest or what to focus on within the STEM talent ecosystem. The three dimensions of impact include:

- Beneficiary: Who will benefit from this intervention?
- Time horizon: When will these benefits be realized?
- Social and/or business value: What types of value will be captured?

The first step to determining when and how to invest in the STEM talent ecosystem is for organizations to define their desired return on investment (ROI). Corporations must be intentional and explicit about their desired return from the outset in order to plan and execute STEM talent investments with maximum impact. Skipping this step or delaying this decision may lead to misalignment of goals and strategy, leading to disappointment in outcomes. This not only wastes resources, but also risks reputational damage.

If an organization's desired "R" is short-term talent acquisition and development success, Input to Impact recommends they invest in the postsecondary years and the incumbent workforce to yield the greatest rate of short-term return. If the desired "R" is long-term talent pipeline growth, however, investing in K-12 makes the most sense.

Lastly, an organization may benefit from positive brand affinity and strategic positioning at any stage of investment in the STEM talent ecosystem, whether it is focused on short- or long-term outcomes.

There is an interesting inflection point of short- and long-term returns at the high school years. If a corporation has roles for recent high school graduates, investments in those years improve short-term STEM talent acquisition outcomes. If a corporation does not have such positions available, investing in the high school years becomes a means of growing STEM talent in the long-term.

Input to Impact offers a theory of change that reflects the complexity of the STEM talent crisis by taking into account inputs, outputs, and outcomes at the individual and systemic level. STEMconnector's theory of change allows for a more comprehensive view of the ecosystem that enables organizations to better understand why and how results occur in a continuous learning process and thus choose investments and activities that are more likely to have a sustainable impact.

Examples of broad categories of inputs in the report's theory of change to achieve success in STEM talent include financial capital, human capital, programming, policy advocacy, campaigns and marketing. The outputs included in the theory of change include traditional output measures – such as dollars spent, employee hours dedicated, participant demographics – but also suggests tracking dosage, frequency, duration, and standardization of those measures. Outcomes in the theory of change involve changes to the individual (e.g., in awareness, interest, knowledge, confidence, belief, etc.), the system (e.g., professional practice, coordination, incentives), and other external forces such as policy, technology, and the media. Lastly, the impact the theory of change seeks is success across the STEM talent ecosystem.

Individuals and organizations must both think and act differently, with a better understanding of the complexity of the STEM talent crisis, in order to move the needle and achieve impact. *Input to Impact* provides several measurement practices for success, including suggestions to use multiple indicators, data sources, and measurement methodologies. Often partners in the nonprofit and educational space operate with limited evaluation expertise or capacity. Funders should strongly consider investing not just in programs, but also data collection, measurement systems, and data capacity building. This will strengthen the partnership, improve data analysis, and create more rigorous learning to inform future work. The report also outlines the mindset shifts needed to achieve success in the STEM ecosystem that include:

- Shifting from attribution to contribution: recognizing the value of being part of a collective effort, even if credit is shared instead of ascribed to one organization

- Shifting from programmatic to systemic: identifying opportunities to influence multiple levels of outcomes, or to align efforts to include both programmatic and systemic work

- Shifting from representation to inclusion: committing to change in culture, and change in long held beliefs and practices from leadership and throughout an organization

Input to Impact defines success in the STEM talent ecosystem and seeks to challenge and guide individuals and organizations striving to measure their progress and enhance their outcomes. Only by aligning efforts across sectors and increasing equity in the STEM ecosystem can we begin to achieve true impact.

If you have any questions on the Input to Impact Report, please contact info@stemconnector.com.

To Download the Full Report, visit:

https://www.stemconnector.com/Input_to_Impact

About STEMconnector:
STEMconnector is a professional services firm committed to increasing the number of STEM-ready (Science Technology Engineering Math) workers in the global talent pool. We provide a platform to engage leaders in both public and private sectors who collectively are re-envisioning the workforce. Working with pioneering leaders across over 200 organizations, our overall goal is to inform, stimulate and connect leaders with a passion for and vested interest in growing a STEM-ready workforce.

STEMconnector is committed to a networked-approach because we believe that no one sector has a monopoly. This guiding principle is reinforced by the breadth of our network that represents 25+ million students, 3.5+ million educators and 2.6 million STEM jobs. We are excited to work with Heads of Talent Acquisition, Chief Diversity Officers, CIOs and CTOs at leading corporations. We count Presidents of 2-year and 4-year universities as well as Executives of NGOs within our network. Most organizations who try to tackle the STEM gap independently found it difficult to deliver broad impact across a large population. By combining resources, ideas and energy across private and public sectors, members have realized they can collectively drive much more sustainable change and improve their talent pipelines than when they try to tackle it alone.