



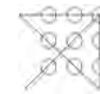
LEAD STEM FELLOWSHIP | CAPSTONE PROJECT

# Dismantling Organizational Barriers to Advance STEM Learning and Innovation



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Greater Newark STEM Ecosystem  
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# Dismantling Organizational Barriers to Advance STEM Learning and Innovation



## Brad Schenker

Founder, Partner Innovation Consultant  
Schenker Consulting Group  
Coordinator  
Greater Newark STEM Ecosystem

Connected via LinkedIn



Brad's superpower is creating impactful collaborative partnerships. He consults on education & Edtech innovation, trains teams on adaptive leadership and communication skills, and is the Board President for the Achieve Foundation. He was on the senior leadership team at LEGO Education (US), co-founded a community robotics program and is a trained theatrical improviser & sketch comedy writer.

## IMPACT

### Learner Impact: 2024 > 2025

- 6600 > 13,500+ learners impacted
- 165 > 1700 hrs programming tracked

### Cross-Sector Growth

- K12 EdTech Showcase & PD
- Workforce Skills Gap Summit
- Two cross-sector POC data projects

## THE IDEA - Create a culture of collaboration & data-driven impact among STEM and Workforce Readiness leaders

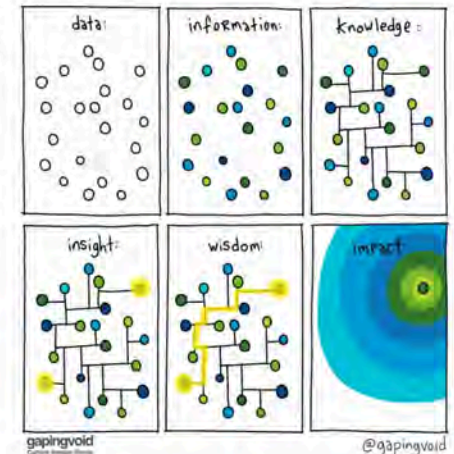
What if the brightest STEM opportunities are sitting just out of reach—not because of a lack of talent, but because of naturally occurring organizational silos that limit the collaboration needed to increase STEM engagement and outcomes? How can we address this barrier upstream?

### Structural Barriers

- Unclear Goals & Expectations for STEM vision**
- Shareholder Contribution: Limited & Inconsistent**
- Org Gaps:** Structure/expertise/KPIs affect meaningful impact

### Communication Barriers

- Info hoarding:** Limits best practices
- Inconsistent Messaging:** Weakens shared voice
- Tech Silos:** Inefficient data sharing



## THE OPPORTUNITY

Address the Barriers to Drive Measureable Actions

1. **Decentralize** the ecosystem's work to create more ownership
2. **Lead** by example
3. Offer **face-to-face** opportunities
4. Create a '**common language**' through data analytics & surveys

## OUR ECOSYSTEM

To be the **Connector, Collaborator** and **Central Resource** for:

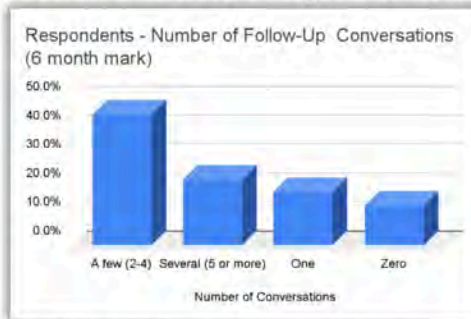
- 400K public school students that represent:
  - Largest to smallest school districts,
  - Weathiest and least wealthiest NJ communities
- Ecosystem of 100+ organizations and 330+ individuals



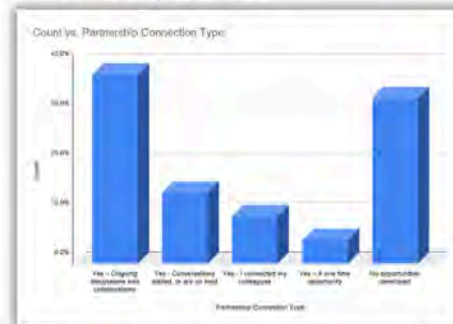
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## IMPACT

### 2025 Annual Convening Six-Month Post Event Survey Results



86% had post event conversations  
23% with five or more contacts



38% have new opportunities  
29% had one-time or stalled conversations

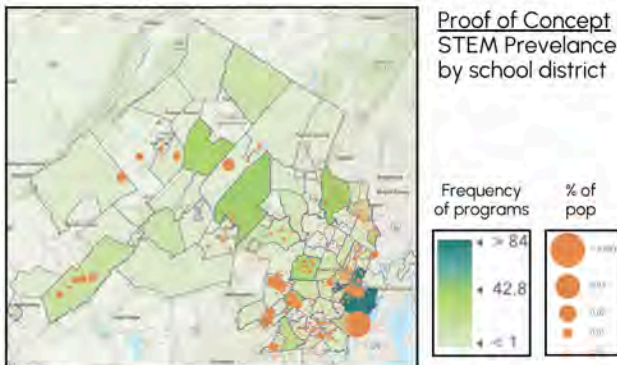


**National Inventors Hall of Fame**

**Sponsorship**

- o 1,000+ students in PreK-8th grade
- o Leadership experience - 49 teens & young adults
- o Trained 29 educators
- o Engaged 35 families in hands-on workshops

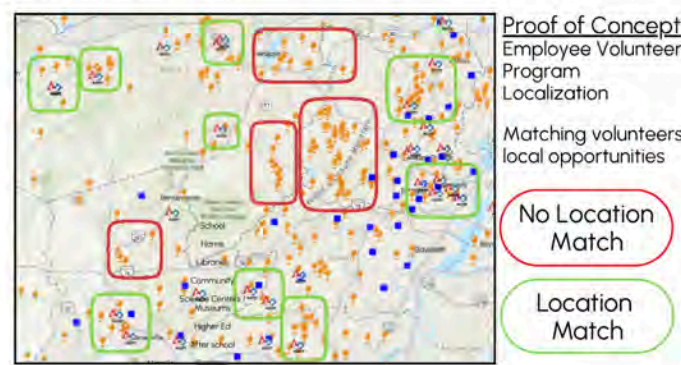
### Data Analytics - Proof of Concepts (seeking funding to continue work)



**STEM Prevalence** reflects factors influencing interest in STEM careers. Visualization highlights select STEM programs, mapped to home school district—whether school or community run.

#### Next Steps:

1. Areas with few/no programs - data gap or real need?
2. Highlight "Lighthouse" regions—understand & adapt
3. Explore connection between STEM learning & post-secondary career pathways

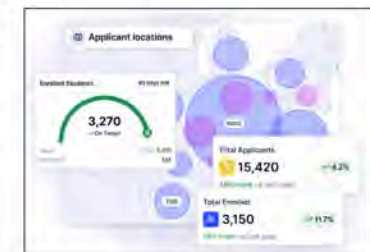


#### Employee Volunteer Program Localization

Despite **89% of companies** offering volunteer programs, only 17% of employees participate - often due to time, skills mismatch or limited options.

#### Map locations, interests & nearby STEM programs will:

- Match employees to local volunteer opportunities
- Identify regions lack volunteer options
- Boost participation through better alignment and accessibility



#### Data Across Barriers- IN DEV

Incorporating non-traditional data points; in the future connecting K12, HE & Career to ID success pathway

#### Collaborators:

- Morris Plains School District,
- Indiana University researchers,
- Schenker Consulting, Quintilian AI



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## INSIGHTS & LESSONS LEARNED

**1** External Forces Require Adaptive Partnership Models

**2** Hunger for Knowledge Exceeds Access to Information

**3** Upstream Thinking Transforms Strategic Focus and Expectations

## SCALE & SUSTAINABILITY

### Scaling Engagement

- Social Media - ID'd volunteer & collab w/ Liberty STEM Alliance
- Communication - Hubspot (free) for emails & contact form
- Purposeful outreach for more volunteers (some voluntolds!)
- Event locations must be 'free'

### Resource Needs

- Funding Analytics: Data Scientist, Compute Time, Project Mgr
- Increase capacity & support for GNSE coordinator
- Sponsors for events and collaboration workshops
- More partners to volunteer event space

## THE ALIGNMENT TO 5 PILLARS

 <p><b>PARTNERSHIPS</b> OUR IMPACT:</p> <p>The efforts offer opportunities for all partner sectors to justify their contribution.</p>	 <p><b>SYSTEMS</b> OUR IMPACT:</p> <p>Decentralizing will increase operational efficiency, more ecosystem support, resulting in greater student impact.</p>	 <p><b>STEM LEARNING</b> OUR IMPACT:</p> <p>NIHF contribution of resources &amp; time directly linked to impact</p> <p>The Henry Ford supported Innovation Atlas PD.</p>	 <p><b>DATA-DRIVEN</b> OUR IMPACT:</p> <p>Visualizing survey &amp; analytic results drive conversations. Data access once thought impossible, now possible.</p>	 <p><b>WORKFORCE</b> OUR IMPACT:</p> <p>Equal emphasis on "Workforce" "Career-Connected Learning" &amp; "STEM Education". Events for cross-sector action, not just talk.</p>
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