
CONVENING RECAP

CREATING COLLECTIVE IMPACT

Growing Our Community: From Discussion to Action

70% of business leaders report critical skill gaps limiting growth and innovation. New Jersey faces a critical challenge to ensure our graduates are equipped with essential skills for higher education and the future STEM workforce.

Join our community of business leaders, educators, and industry experts as we move past conversation and develop actionable opportunities for STEM and career-connected learning. Help shape NJ's future talent pipeline.

Key Topics Include

- Defining the Challenge: The current reality of career readiness and skill gaps
- Future Pathways: Insights from industry collaboration, networking, and exhibits
- Action Planning: Define and tackle our shared challenges

Event Sponsor

Location:

New Jersey Institute of Technology

NJIT Campus Center

Newark, NJ 07102

9:00am-1:30pm

Event Detail



**National Inventors
Hall of Fame®**

EDUCATION PROGRAMS

*The [Greater Newark STEM Ecosystem](#) is a **Connector, Collaborator and Central Resource** for educators & industry to supercharge STEM & career-connected learning. Through understanding the work and activities of our cross-sector partners, we co-design an educational support system that cultivates STEM and Career Ready Skills, building a future workforce of STEM-capable talent.*

Newark STEM is part of STEM Learning Ecosystems, community-based collaborations that transform how students learn and connect to future opportunities. They bring together cross-sector partners—schools, afterschool programs, colleges, businesses, community organizations, and government agencies—to create powerful STEM learning experiences.

Recap Sections

1. [Agenda](#)
2. [Plenary Session Opening](#)
3. [Panel Discussion](#)
4. [SPARK Talk Highlights](#)
5. [Student Q&A](#)
6. [Small Group Work](#)

AGENDA

Check-in begins at 8:30 - Continental breakfast will be available	
8:45a-10:00a: Table Presenters & Exhibitors	Networking and conversations with STEM programs, service providers, educators, students and more. See our tables and sponsors.
PLENARY SESSION	2025 Video was looped
10:00a-10:15a: Ecosystem Update	2025 in review, 2026 outlook
10:15a-11:00a: Panel - Industry Insights	SPARK Talk: NJ Industry Outlook Hear from industry leaders as we discuss the current workforce skills gap, authentic learning and the durable/essential skills needed now and in the future. Learn more about the speakers
11:00a-11:10a: Welcome	NJIT President - Dr. Telk C. Lim 
11:10a-11:40a: SPARK Talks	Learn about assessing durable/essential skills, teacher PD support and how authentic learning is being implemented. Learn about our speakers.
11:40-11:45: Remarks	Rutgers- Newark Provost & Executive Vice Chancellor - Jeffery Robinson 
11:45a-12:30p: Lunch & Student Q&A	Hear from students about their STEM learning experiences. <u>Moderator:</u> H2M Architects <u>Students representing:</u> <ul style="list-style-type: none"> • Borough Elementary • Maplewood Middle School • Morristown High School
12:30-1:30p: Solving Our Challenges Through Collective Impact	Using the SLECoPs 5 Pillars of Success, we will develop incremental steps and action plans to drive success for all students in New Jersey.
2:00-3:00pm: I Can Invent® (optional through pre-registration)	The National Inventors Hall of Fame® leads a hands-on workshop on Invention Education pedagogy.

Opening Remarks - Plenary Session

Presenter: Brad Schenker, GNSE Co-lead/Coordinator, and Education Partnership Consultant

Following the looped video recapping 2025, Brad discussed three ongoing projects the ecosystem is involved with:

Free STEM EdTech Hardware Assessment

- Designed to help schools save money, time, and resources by performing inventory, redundancy analysis, streamlining recommendations, and creating a savings roadmap. [Survey Form](#)

2025-2026 Data Project: STEM Prevalence & Volunteer Matching

- Aiming to map STEM programs and match employee volunteers, seeking participation from program providers and CSR programs.

2026 Data Project: Predicting Earlier Intervention Needs

- A "Moneyball for Education" data virtualization collaboration between Morris Plains SD, Quintilian, Schenker Consulting, and Greater Newark STEM. The project would like to expand to a pilot program for K-12 schools/districts in Northern New Jersey. [Form for Data Projects](#).

Greater Newark STEM Ecosystem
Serving the New Jersey counties of Essex, Morris, Passaic, Sussex, Union, Warren
www.newarkstem.org

Why Are We Here Today?

71% of U.S. employers struggle to find skilled talent they need, doubling since 2015 (ManpowerGroup 2024)

Critical Skills Gap
70% of business leaders report critical skills gaps limiting innovation & growth
(2024 Springboard Survey)

Global Talent Shortage
74% of employers globally are struggling to find skilled talent
(ManpowerGroup 2024)

Worsening Trend
69% of US firms experiencing difficulty finding staff with right skills vs 55% in 2021
(Wiley 2023)

Greater Newark STEM Ecosystem
Serving the New Jersey counties of Essex, Morris, Passaic, Sussex, Union, Warren
www.newarkstem.org

Fastest Growing Skills - Essential/Durable/Soft

in 2015

- Complex Problem Solving
- Coordinating with Others
- People Management
- Critical Thinking
- Negotiation
- Systems Thinking
- Self-control
- Service Orientation
- Active Listening
- Creativity



in 2020

- Complex Problem Solving
- Critical Thinking
- Creativity
- People Management
- Coordinating with Others
- Systems Thinking
- Self-control
- Service Orientation
- Judgment and Decision Making
- Negotiation
- Cognitive Flexibility



Source: Future of Jobs Report, World Economic Forum

Future of Jobs Report 2025 Core skills in 2025		WORLD ECONOMIC FORUM	Future of Jobs Report 2025 Top 10 fastest growing skills by 2030	
1.	Analytical thinking		1.	AI and big data
2.	Resilience, flexibility and agility		2.	Networks and cybersecurity
3.	Leadership and social influence		3.	Technological literacy
4.	Creative thinking		4.	Creative thinking
5.	Motivation and self-awareness		5.	Resilience, flexibility and agility
6.	Technological literacy		6.	Curiosity and lifelong learning
7.	Empathy and active listening		7.	Leadership and social influence
8.	Curiosity and lifelong learning		8.	Talent management
9.	Talent management		9.	Analytical thinking
10.	Service orientation and customer service		10.	Environmental stewardship

Brad then opened up with data to kick off the panel discussion, which centered on how our education system can produce more graduates ready with the skills our STEM workforce needs and desires.

Preparing students for the future workforce requires far more than content knowledge alone, and the desire for and increasing importance of **durable skills** as essential complements to technical STEM learning.

These skills include:

- Communication
- Teamwork
- Problem-solving
- Adaptability
- Self-awareness

January 27, 2026

Panel Discussion: Building Skills, Pathways, and Alignment

The panel session underscored a shared reality beyond the importance of durable skills.



Intentionality - Whether through classroom instruction, curriculum design, or informal learning experiences, students need explicit opportunities to develop skills, understand what those skills look like in practice, and receive meaningful feedback to improve. The discussions highlighted the value of common language, clear expectations, and structured tools that help learners connect their experiences to real-world applications.

Early and Sustained Exposure to STEM and Engineering Pathways - Engaging students from elementary through high school using hands-on, inquiry-based, and design-driven approaches is critical to building both interest and confidence over time. These early experiences help demystify STEM careers and broaden participation, particularly when they reflect authentic problems and workplace practices.

Real-World Relevance and Partnerships - Connecting students and educators to industry, professional engineers, and workforce-aligned experiences strengthens learning and makes pathways more visible and attainable. Speakers emphasized that collaboration across sectors is foundational to building scalable, equitable talent pipelines.

SPARK Talk Highlights

ELIPSS (Enhancing Learning by Improving Process Skills in STEM)

Speaker: Juliette Lantz, Professor of Chemistry, Drew University

- ELIPSS focuses on intentionally developing and assessing **durable, transferable skills** alongside core STEM content.
- The work emphasizes the importance of a **shared language** between educators and students to clearly define what skills look like in practice and how they can be improved.
- Research-backed **rubrics and feedback tools** were highlighted as a way to provide actionable coaching rather than vague performance indicators, with findings showing students improve both their skills and their awareness of those skills, strengthening long-term academic and career readiness.
- The presentation underscored how **instructional design and assessment choices** can better align education with real-world workforce expectations.



TryEngineering (Powered by IEEE)

Speaker: Debra Gulick, Director of Student & Academic Education Programs, IEEE

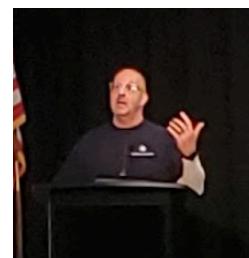
- TryEngineering provides **free, high-quality engineering and STEM resources**, centering around the Engineering Design Process to support educators, volunteers, and outreach programs.
- With 130+ lesson plans and digital tools, TryEngineering supports **early and sustained exposure** to engineering concepts and career pathways.
- **Professional learning opportunities** help educators integrate engineering more effectively across grade levels and disciplines.
- The work reinforces the role of **early engagement and real-world relevance** in building both technical interest and durable workforce skills.



Students 2 Science

Speaker: Dan Barnett, Chief Development Officer, Students 2 Science, Inc.

- Students 2 Science delivers **hands-on, immersive STEM learning experiences** connecting students directly to real lab environments.
- Spanning **grades 3–12 and beyond**, S2S intentionally builds a long-term pipeline from early exposure to career readiness.
- Programs include in-person labs, virtual labs, internships, mentoring, and **workforce-aligned skill development**, demystifying STEM careers.
- Strong **education–industry partnerships** were highlighted as essential to scaling impact and strengthening regional talent pipelines.



Lunchtime Q&A with Students

Representatives from [H2M Architects](#) led a Q&A with students from **Borough Elementary, Maplewood Middle School and Morristown High School's STEM Academy**. The discussion wrapped around the students' interest in pursuing STEM subjects. Many students emphasized having a supportive teacher or some hands-on aspect of learning sparked their interest in participating in New Jersey's STEAM Tank competition or, for the high schoolers, being part of the school's STEM Academy.



When asked what advice they have for their teachers and administrators, many focused on increasing the amount of hands-on engaging learning opportunities and asked teachers not to dismiss a student's interest, or willingness to learn because of previous behaviors or poor grades or test scores. **They wanted to feel encouraged to take risks and challenge themselves to learn and build resilience.**

Small Group Work

The small group session moved the Convening from discussion to action. Registration including the following prompt that was submitted with registration: *“From your perspective as an educator, industry professional, funder or STEM advocate, what is a big challenge/obstacle you face, and would like help solving?”* The answers were analyzed and culminated in eight core areas of focus, five of which were addressed during the session. Specific outcomes can be found in the summary document on our website.

Student STEM & Career-Connected Learning Journey

Group A: Developing Persistence in Young Students to Envision STEM Careers
 Group B: STEM and Career-Connected Program Implementation
 Group C: Creating Bridges to Higher Levels of Education & Opportunity

Rethinking Access to STEM Materials and Resources

Group D: Rethinking STEM Learning & Creating Small “Moments of Impact” through a Student’s Day
 Group E: Widening Equitable Access to STEM Materials, Programs and Resources

Educator and Family Support

Group F: Embedding Industry-Aligned Skills Throughout K-12 Education
 Group G : Educator Professional Development & STEM Instructional Capacity
 Group H: Family Engagement and Support for Student STEM Persistence

[www.gnewarkstem.org](#) January 27, 2026

PANEL: INDUSTRY INSIGHTS



Anthony Russo

President

Commerce and Industry Association of New Jersey (CIANJ)

Anthony Russo is president of the Commerce and Industry Association of New Jersey (CIANJ), a business association representing the interests of more than 900 companies. In this capacity, Mr. Russo is responsible for all aspects of the association. Mr. Russo is also the CEO and publisher of COMMERCE Magazine. COMMERCE magazine is a business to business magazine with a readership of more than 40,000 professionals.

Prior to his current position, Mr. Russo served as Executive Vice President of Government Affairs and Communications for CIANJ as well as Deputy Executive Director of the National Lime Association in Washington, DC representing the interests of mining companies producing calcium oxide (aka lime) at the federal level.

Mr. Russo started his career at the New Jersey Department of Environmental Protection as a senior engineer issuing water quality permits. He then spent 5 years as an environmental consultant working for two firms, GES and ERM. He began his government affairs career when he served as Director of Regulatory and Legislative Affairs for the Chemistry Council of NJ, representing chemical and pharmaceutical companies in Trenton on legislative and environmental matters.

Mr. Russo is a graduate of the New Jersey Institute of Technology (NJIT) with a degree in mechanical engineering.



**Michael D. Burke, PG, CHMM, LEED AP - Senior Principal
LANGAN**

Mike Burke is a geologist/environmental scientist with 25 years of experience, whose practice involves site investigation and remediation, transactional due diligence, environmental site assessments, in-situ remedial technology, and manufactured gas plant (MGP) site characterization and remediation.

Burke's additional services include multi-media compliance audits, sub-slab depressurization system design, non-hazardous and hazardous waste management, emergency response, community air monitoring programs, environmental and geotechnical site investigations, and health and safety monitoring.

He has experience with projects in the New York State Department of Environmental Conservation (NYSDEC) and New York State Brownfield Cleanup (NYS BCP) Programs; Inactive Hazardous Waste, and Spill Programs, and New York City Office of Environmental Remediation (OER) e-designated and New York City Voluntary Cleanup Program (NYC VCP) sites



Caroline Jackson

Business Consultant

Honeywell International. Energy & Sustainability

Caroline Jackson is a seasoned business professional with a background in leading teams to drive improvement projects across various sectors, including education, healthcare, and commercial markets. With a specialized focus on performance contracting, she has successfully collaborated with over 75 schools and municipalities in New Jersey and Pennsylvania to implement impactful energy savings and infrastructure improvement initiatives.

A graduate of Clarkson University with a BS in Mechanical Engineering and Management, Caroline's career includes pivotal roles at Honeywell, Siemens, Duke Energy, and several start-up building solutions companies. At Honeywell, she has honed her expertise in HVAC systems, lighting technology, and energy conservation strategies, including solar and battery energy storage. She consults with clients to evaluate energy alternatives that enhance their building infrastructures.

She has adeptly leveraged utility incentive programs from NJ Clean Energy, JCP&L, PSE&J and Atlantic City Electric to support funding the projects which are paid for primarily through utility incentives, grants, energy and operational savings.

Caroline has taken on leadership roles as a Business Development Manager and Team Leader, where she has designed strategic business plans and fostered collaborations with architects and engineers to deliver comprehensive technical solutions. Her consultative approach ensures the optimal balance of energy savings and financial solutions for her clients.

Caroline is passionate about inspiring the next generation of innovators in STEM. She advocates for the vital skills and experiences that students need to succeed in an ever-evolving technological landscape.



Jessica McKenzie

Mgr. of Corp. Contributions and Program Officer

Panasonic North America

Jessica leads corporate citizenship with over a decade of experience in social impact. As Manager of Corporate Contributions and Program Officer at Panasonic North America, she oversees philanthropic strategy and grantmaking to promote education equity through the Panasonic Foundation. Jessica is dedicated to advancing economic and educational equity, launching national initiatives, and encouraging corporate involvement in addressing societal challenges related to economic mobility and education. She also founded 908 Visionaries, a youth nonprofit in Plainfield, NJ. Jessica earned her BA from Delaware State University and an MPA from Kean University.



Tracey A. Robinson

Sr. Trading Operations Analyst – Risk
PSE&G

Tracey Robinson has been a Senior Trading Risk and Market Operations Analyst at PSEG for the past nine years, leveraging extensive expertise from her prior experience on Wall Street. In her previous role, she led a hybrid team responsible for managing Fixed Income, Currency, Commodities, and Equities markets at Société Générale Investment Bank and other financial institutions.

With a solid 15+ year background in financial and physical commodities, Tracey expertly oversees the entire trade lifecycle for various derivatives, including futures, options, and physical contracts.

Known for her exceptional relationship-building skills and strong analytical skills, she effectively reconciles trade from various exchanges, develops P&L and risk dashboards, and minimizes settlement discrepancies through enhanced operational processes.

Her meticulous attention to detail and capacity to excel in high-pressure trading environments contribute to a robust control framework. Dedicated to enhancing trading efficiencies and ensuring regulatory compliance through technology and data, Tracey collaborates effectively with front office traders, auditors, risk and compliance teams, and external clients.

She is currently pursuing a master's degree in organizational training and development at St. Elizabeth University. In addition to her academic endeavors, she holds a certification in Human Resources from SHRM and has previously obtained a Series 99 license in trading operations through FINRA. This diverse background highlights her dedication to continuous learning and professional advancement within the dynamic energy markets.

<https://njbia.org/pseg-publishes-whitepaper-on-need-for-green-skills/>

SPARK TALKS



Juliette Lantz - Professor of Chemistry
Drew University (Madison, NJ)

Juliette recently completed a rotation as the Associate Dean of Curriculum in the Arts and Sciences. Early in her career, her research focused on the development, implementation, and assessment of active learning strategies in chemistry, particularly in the areas of case studies, role-playing laboratories, and Process-Oriented Guided Inquiry Learning (POGIL). She has been active in the POGIL Project for over 20 years, designing and facilitating professional development workshops and mentoring faculty in guided inquiry curriculum development. Juliette was the PI on the NSF-funded project that produced POGIL materials for analytical chemistry: Analytical Chemistry: A Guided Inquiry Approach - Quantitative Analysis Collection, and Analytical Chemistry: A Guided Inquiry Approach - Instrumental Analysis Collection.

Juliette's ongoing research is now centered on the development and assessment of student process skills (also known as professional, transferable or durable skills) across STEM. She was a PI on the NSF-funded Enhancing Learning by Improving Process Skills in STEM Project (elipss.com). Through this project, she has designed and facilitated numerous professional development workshops to hundreds of instructors across STEM disciplines on the ELIPSS instructional strategies and materials that support the implementation and assessment of process skills. She is currently a PI on the ongoing SkillBuilder NSF grant, in which a web application was designed and built to deliver actionable skill development feedback to students at scale.



Debra Gulick - Director, Student & Academic Education Programs
IEEE

Debra joined the IEEE team in October 2022, after serving as a long career in New Jersey's public schools, holding a variety of senior administrative posts including Mathematics Supervisor, Director of Curriculum and Superintendent of Schools. Debbie started her career as an engineer before moving into education, and continues to teach at Rutgers University. She holds a Bachelor of Arts in Engineering from Lafayette College and a Master of Arts in Educational Leadership from Kean University.



Dan Barnett
Chief Development Officer (CDO)
Students 2 Science, Inc.

Students 2 Science provides students with authentic, dynamic lab and in-class learning experiences that challenge them in new ways. They connect science to real-world applications, demystifying STEM jobs and illuminating pathways for a better future.

Student Lunch Q&A



Students from Borough School, Maplewood Middle School and Morristown High school will share thoughts and experiences with STEM learning. Our discussion will be facilitated by Rachel Kim, a licensed professional engineer with over 15 years of experience in civil infrastructure. Her background is geotechnical engineering and hydrogeology and is currently working in potable water supply and system design. She has a B.S. in Civil and Environmental Engineering with minors in Engineering Management and Architecture from Cornell University

H2M is a multi-disciplinary consulting and design firm with over 90 years of experience, offering architectural, engineering, and environmental services. H2M actively participates in a wide range of community initiatives and is passionate about local youth STEM outreach.

Invention Education Workshop Facilitator



Andrea Dulac
Educational Outreach
National Inventors Hall of Fame®

Andrea develops and sustains education partnerships with public school districts on the East Coast and Northeast. She will be leading the post-convening professional development workshop, **I Can Invent®: A STEM Mindset for PreK-8 Educators**

Table Exhibitors



Powered by IEEE



January 27, 2026