



THE POWER OF
REGIONAL APPROACHES TO STEM
EDUCATION & WORKFORCE DEVELOPMENT

Innovation Lab Brief

May 2025

Hosted by

PLTW

Overview

STEMconnector and Project Lead The Way (PLTW) hosted the *Power of Regional Approaches to STEM Education & Workforce Development* Innovation Lab on May 6th and 7th, 2025 in Indianapolis, Indiana. The Innovation Lab brought together leaders from education, industry, philanthropy, and government to examine how regional strategies can strengthen STEM education and workforce development. The event explored the importance of localized models that are informed by national networks and driven by cross-sector collaboration.

Throughout the day, participants engaged in panel discussions, networking sessions, and a hands-on Innovation Lab activity. These sessions highlighted effective community alignments, the role of national partnerships, and strategies to scale promising practices across regions.

A key takeaway from the Innovation Lab is that regional collaboration—fueled by diverse partnerships—is essential for developing sustainable and scalable STEM ecosystems. By aligning efforts locally and nationally, communities can better address specific workforce needs while advancing equity and opportunity in STEM learning.



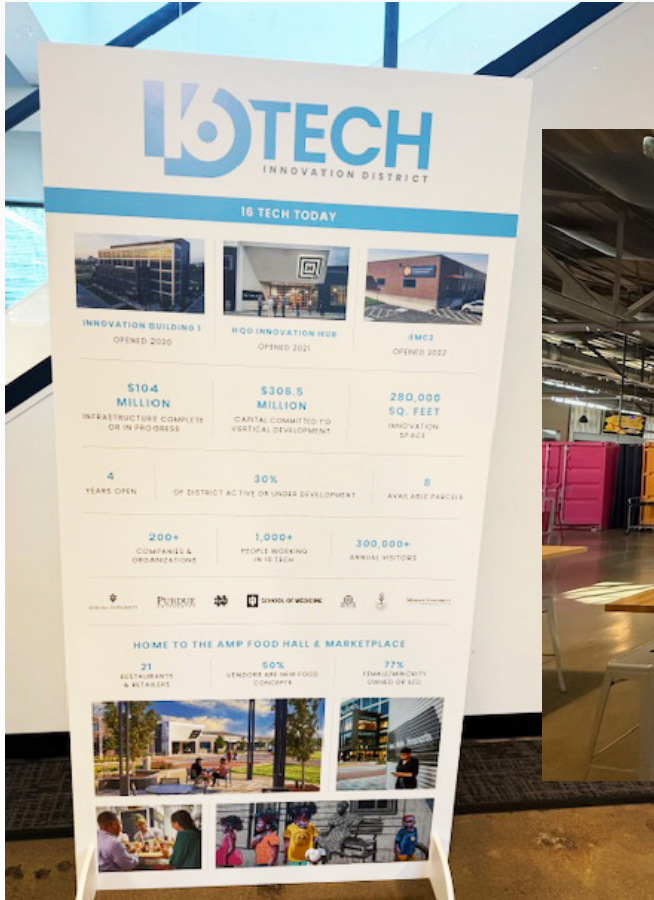
This convening represents an important step toward building a more connected and responsive national STEM infrastructure—one that is powered by innovation, informed by data, and rooted in place-based leadership.

Site Visits

Participants of our Innovation Lab toured 16 Tech, a 50-acre innovation district fostering innovation and economic opportunity. Located near key institutions, it's a hub for entrepreneurs and industry leaders driving tech in life sciences and advanced manufacturing, crucial to Indiana's economy. Home to over 200 companies and 1,000 employees, it offers flexible workspaces and events promoting collaboration. 16 Tech emphasizes inclusive growth and community, serving as a place to work, innovate, connect, and experience Indianapolis' future.

The panel featured innovative leaders from the 16 Tech ecosystem, who shared the vision and how it is being realized. This included sharing strategies including engaging residents from the surrounding neighborhood, partnering with the state's research universities, engaging key employers, and creating common space for the intersections that spur innovation.

Following the panel, Innovation Lab participants received a tour of the 16 Tech's mixed-use space, and had the opportunity to speak directly with tenants which included Indiana University, the University of Notre Dame, and Purdue University as well as Venture Capitalist firms and start-up businesses. Finally, participants explored 16 Tech offerings - including a maker space, a test kitchen, an open dining collaborative that supports local restaurants and food servers, and the soon to open apartment complex in the innovation district, available to 16 Tech tenants and surrounding community members.



Innovation Lab Agenda

STEMconnector Innovation Lab Agenda		Wednesday, May 7, 2025
9:00 AM	Welcome David Dimmett, President and CEO, Project Lead The Way	
9:20 AM	Overview of Event: Why is STEM so local? Ted Wells, President, STEMconnector	
9:35 AM	Introductions Janine Koenke, Chief Grants Officer, STEMconnector & Pod	
10:00 AM	Networking Break	
10:25 AM	Panel: Exploring How Regional Approaches are Informed by National Networks - Jeremy Anderson, CEO, National Math and Science Initiative (NMSI) - Heather Sherman, Director, STEMx Network, Battelle - Dr. Tami Goetz, Director, Utah STEM Action Center - Stephanie Rodriguez, Director, STEMM Opportunity Alliance, American Association for the Advancement of Science (<i>moderator</i>)	
11:10 AM	Panel Recap and Federal Update Ted Wells, President, STEMconnector	
11:35 AM	Presentation: Structuring Success for AI in Education at the Regional Level Dr. Leigh Ann DeLyser, Director, Center for Education Research and Innovation, SRI Education	
12:05 PM	Networking Lunch	
12:45 PM	Panel: Best Practice Community Alignments for Education & Workforce - Lena Darnay, Director, Major Projects & Grants, Central Indiana Educational Service Center (CIESC) - Todd Hurst, Senior Vice President, Strategic Partnerships & Impact, Indiana Chamber of Commerce - Anne Einig, Manager, Community Relations, Kansas City National Security Campus, Managed by Honeywell Federal Manufacturing and Technologies - Martha McCabe, Senior Vice President, Community Partnerships, Project Lead The Way (<i>moderator</i>)	
1:35 PM	Innovation Lab Activity: Connecting the Future to the Present - Dr. Laura Darnall, Project Director, Digital Promise - Mekka Smith, Deputy Chief of Strategic Partnerships & Community, Digital Promise	
2:35 PM	Report Out	
3:00 PM	Next Steps and Closing	

David Dimmett, President and CEO of Project Lead The Way (PLTW), opened the Innovation Lab by emphasizing the importance of community-driven collaboration in advancing education and workforce development. Drawing from his own journey through education leadership—from teaching to district innovation—he highlighted the impact of integrated, innovative school models and the power of partnerships in transforming student outcomes. He reaffirmed PLTW’s commitment to STEM career preparation from pre-K to 12th grade by nurturing student curiosity and acknowledged educators as key to progress.

Looking ahead, Dimmett outlined PLTW’s strategic direction, which centers on partnerships, AI integration, and personalized learning to overcome barriers such as math proficiency. He shared the organization’s commitment to expand on PLTW’s extensive history and experience with career-connected learning through the development of Career Advantage resources. These resources will connect to industry-recognized credentials, college credit and other students opportunities to enhance access to STEM pathways for more students.

His remarks reinforced a central theme of the Innovation Lab: collective action and aligned efforts are essential to scaling impact and building a future in STEM education.



Panel: Exploring How Regional Approaches are Informed by National Networks

This panel centered on how national networks can strengthen regional STEM education by aligning strategic direction with local innovation, employer demand, and community priorities. Panelists emphasized the need for technical assistance, data sharing, and intermediary organizations to bridge gaps between education and workforce systems. They also discussed challenges related to funding, particularly in light of potential federal cuts, and the need for long-term industry engagement.

The discussion highlighted the importance of national conversations in scaling effective models, promoting inclusive career pathways, and reshaping perceptions of STEM and CTE careers.



Key takeaways from the panel discussion:

Alignment Between National and Regional Efforts

National networks play a critical role in supporting and scaling regional STEM initiatives by aligning strategies with local innovations, employer needs, and community priorities.

Cross-Sector Collaboration Is Essential

Effective STEM pathways require strong partnerships between education, industry, government, and community leaders. Intermediary organizations are vital in facilitating these connections.

Technical Assistance and Data Sharing Drive Impact

States and regions benefit from access to shared tools, best practices, and consistent data to enhance program delivery and decision-making.

Addressing Funding Shifts

Panelists highlighted the need to proactively manage potential federal funding reductions by encouraging state support, private investment, and increased efficiency through collaboration.

Modernizing Career Perceptions

There is an ongoing need to reshape public perceptions of STEM and CTE careers—particularly manufacturing and technical roles—to reflect their complexity, innovation, and long-term opportunity.

Future-Forward Workforce Planning

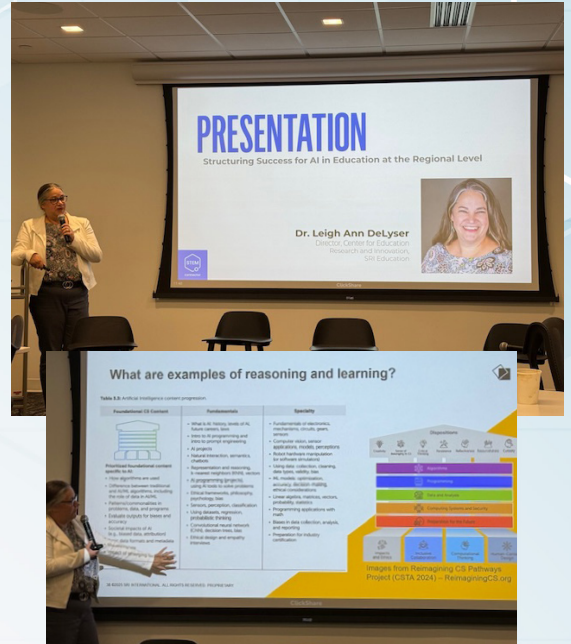
A future-focused talent strategy must prioritize foundational skills like math and leverage emerging technologies such as AI to expand access and individualize learning.

Presentation: Structuring Success for AI in Education at the Regional Level

The presentation, led by Dr. Leigh Ann DeLyser, Director, Center for Education Research and Innovation, SRI Education, highlighted the challenges and opportunities of integrating AI into education, and the need for a systemic approach to AI integration.

Emphasizing the importance of student agency, she called for a shift in educational models where learners engage with AI as creators rather than passive users, encouraging educators to view AI as an opportunity for deeper learning rather than a threat to academic integrity.

Her presentation underscored the value of collaboration—across schools, districts, and national networks—as essential to successfully integrating AI into K–12 education. She stressed the importance of early adopters, robust professional development, and community-based learning spaces in scaling impact.



Key takeaways from the presentation include:

Empower Students as Creators

AI education should foster creativity, not just consumption, helping students engage in real-world problem-solving.

Collaboration is Crucial

Cross-sector and multi-level partnerships are essential to localize and scale effective AI education strategies.

Support for Educators

Early adopter teachers and ongoing professional development are vital for successful implementation.

Mindset Shift Needed

Schools must move beyond viewing AI as a tool for information retrieval to recognize its potential to partner with students and teachers to enhance instruction and learning.

Context Matters

AI integration should reflect community needs—there is no one-size-fits-all model.

Leverage Existing Resources

States and districts should use established planning tools and networks like *AI for K–12* rather than starting from scratch.

Panel: Best Practice Community Alignments for Education & Workforce

Aligning education, industry, and community partners is essential to drive regional STEM success. This panel highlighted models of collaboration between education institutions, industry partners, and community organizations to strengthen regional STEM and workforce pipelines.

The discussion emphasized the value of immersive industry experiences in helping students and educators connect classroom learning to real-world applications. During the conversation, speakers called for improved coordination across education and workforce systems, and highlighted community engagement and volunteerism as key strategies for talent development.



Key takeaways from the panel discussion:

Cross-sector collaboration fuels regional success

particularly when focused on both student and teacher engagement.

Hands-on, immersive experiences

for educators and students are essential for making real-world career pathways visible and tangible.

Sustainable partnerships

require trust, long-term investment, and the flexibility to align with evolving local needs.

Teacher professional development programs

especially those tied to industry, improve instruction and help align classroom content with workforce demands.

Replication and scaling of proven models

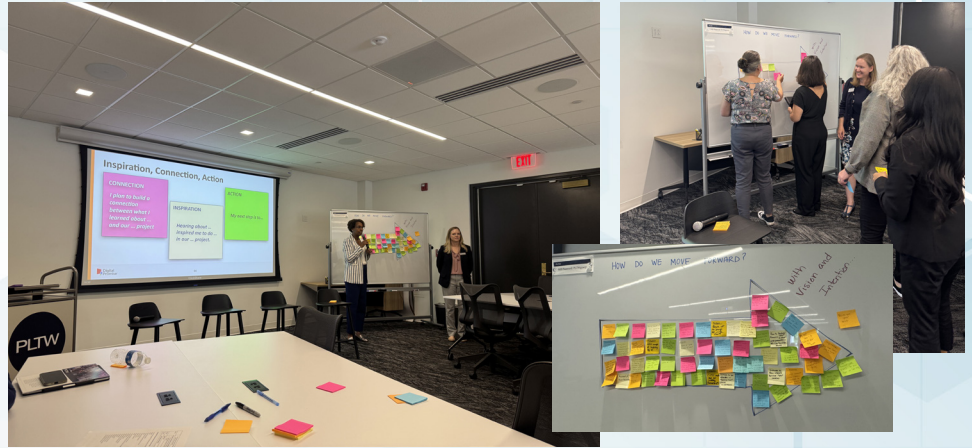
(like the KC STEM Alliance) can simplify coordination and funding across regions.

Community engagement and volunteerism

not only benefit students but also aid in recruitment and retention for local employers.

Innovation Lab Activity: Connecting the Future to the Present

Participants engaged in a facilitated visioning activity led by Dr. Laura Darnall and Dr. Mekka Smith of Digital Promise. The session invited attendees to reflect on their current challenges and imagine a future in which their ideal educational environment had been fully realized. Using the “Back to the Future” protocol, participants explored the actions, partnerships, and shifts that would have made their vision possible—framing their reflections in past, present, and future tense to ground abstract ideas in actionable steps.



The activity encouraged attendees to focus on their sphere of influence and consider intentional actions they could take to advance equitable, learner-centered education systems. Insights were shared collaboratively, contributing to a collective mural of reflections. Some of the responses included in the mural are listed below:

Inspiration

“I am inspired by the work already happening; we are not alone in this work, and can help each other.

I am inspired to be a ‘trojan horse’ in the classroom!

Today reinforced the urgency of prioritizing regional implementation.

Hearing about collaborative competition inspired me to be more thoughtful about inviting partners to the table.”

Connection

“I plan to build a connection between what I learned about state and regional networks to expand my outreach to industry.

I intend to connect with new partners who can help [my organization] strategize next steps.

My next steps are to connect with those here [at the event], to build my network and learn more about the talent pipeline.”

Action

“My next step: take the information from today to the leadership team to revamp our strategy.

I plan to take action by developing and collecting resources to share with communications.

Next steps are to identify key players needed to bridge the gap between all stakeholders and students.”

Conclusion

The Regional Approaches Innovation Lab highlighted the transformative power of cross-sector collaboration, local innovation informed by national networks, and equity-driven design in advancing STEM education and workforce development. Over the course of a two-days and through a dynamic mix of panels, strategic conversations, and hands-on activities, participants engaged deeply with key themes:

- **Undeniable importance of partnerships** - From national networks to local school districts, strong, trusted relationships are essential for scaling impact and sustaining innovation.
- **The need to better prepare students for the workforce through real-world learning** - Immersive industry experiences and upskilling programs for educators are critical to aligning classroom instruction with evolving workforce demands.
- **Personalized and future-forward education** - Integration of AI and data-informed strategies opens new pathways for individualized student learning and long-term talent development.
- **Community engagement as both a strategy and a value** - Volunteerism, storytelling, and community-based recognition elevate both the teaching profession and student-led innovation.
- **Shared vision is local action** - Visioning exercises encourage leaders to align their work with long-term goals while focusing on immediate, actionable steps within their locus of control.

Together, these themes underscore a unified message: lasting progress in STEM education requires intentional partnership, inclusive planning, and bold leadership.



Call to Action

1. Strengthen Regional Partnerships Using a Strategic Process

- Build and deepen cross-sector collaboration among K–12, postsecondary, industry, government, and philanthropy and hold regular stakeholder convenings to set goals, determine key strategic approaches, measure progress, and commit to resources, responsibilities and actions necessary with a timeline for completion.
- Prioritize trust-based, long-term relationships that align education with workforce needs.

2. Leverage National Networks

- Engage with national thought leaders and alliances to identify, emulate and scale effective practices.
- Utilize shared data, tools, and frameworks to inform local strategies and accelerate impact.

3. Prioritize Real-World Learning

- Expand access to immersive industry experiences for students and educators.
- Integrate hands-on, career-connected learning that reflects local economic opportunities.

4. Empower Educators and Students

- Invest in professional engagement and development, especially around emerging technologies like AI.
- Position students as creators and problem-solvers to foster agency, creativity, and engagement.

5. Advance Equity Through Local Innovation and Strategy

- Strive for equity as a key goal into initiatives by targeting access, representation, and support for underrepresented communities.
- Align efforts with the unique context, assets, and challenges of each region using a strategic roadmap approach.

6. Determine and Act on Vision

- Identify the goals and messaging that will authentically and meaningfully engage stakeholders.
- Translate long-term goals into short-term, actionable steps.
- Encourage and support leaders to operate within their sphere of influence while collaborating for broader systemic change.

7. Advocate for Sustained Private Sector and State Level Investment

- Respond to shifts in federal funding by encouraging private-sector investment, state-level support, and shared resource strategies.
- Make the case for STEM and CTE as essential to economic viability and growth for communities and families.

Acknowledgments

A special thanks to:

