



AI Scaling Initiative for Small and Mid-sized Manufacturers

Executive summary

To boost the competitiveness of small and mid-sized manufacturers (SMEs), increase private investment, retain good manufacturing jobs, and build a high-tech manufacturing cluster that links manufacturers, technology providers, and industry partners across the commonwealth, Team Pennsylvania will leverage its large network of industry partners to connect manufacturers in Pennsylvania's 52 Appalachian counties with resources and technical assistance to scale artificial intelligence (AI) in their manufacturing operations. The AI Scaling Initiative for Small and Mid-sized Manufacturers connects manufacturers already advancing along the AI learning curve – targeting companies with innovation-oriented leadership and active AI pilots – with financial resources and technical experts to scale AI responsibly and securely. Key learnings will then be amplified across the broader manufacturing ecosystem, encouraging adoption by additional firms.

The Challenge

Many of Pennsylvania's small and mid-sized manufacturers are struggling to scale artificial intelligence (AI) beyond simple applications, despite AI's potential for transformational productivity gains without massive capital investment. Companies face barriers of complexity, cost, culture, and risk in scaling AI, risking competitive disadvantages as larger companies rapidly innovate using these technologies.

The Opportunity

The AI Scaling Initiative leverages market forces underway in Pennsylvania to ensure that innovative small and mid-sized manufacturers (SMEs) - the backbone of community prosperity - lead the AI revolution.

The AI Scaling Initiative's goal is to support innovative small and mid-sized manufacturers in Pennsylvania to jump ahead on the AI learning curve, to capture real gains in productivity, boost their ability to compete, increase their attractiveness to talent, and ultimately accelerate their growth. Paired with an active approach to disseminate learnings to other manufacturers and strengthen regional peer-to-peer networks of leaders, we believe this strategy will build a high-tech, highly competitive manufacturing cluster that links manufacturers, technology providers, and industry partners across the Appalachian region of the commonwealth. Ultimately, AI Scaling aims to bolster output and retain manufacturing jobs, which are drivers of prosperity in Appalachian communities with high economic multipliers.

How We'll Do it

The AI Scaling Initiative drives two main actions. First, it connects innovative small and mid-sized manufacturers with resources and technical assistance to scale AI responsibly, securely, and sustainably by leveraging Team Pennsylvania's extensive network of industry partners, trusted local organizations, and technical subject experts. Then, Team Pennsylvania and its partners will amplify learnings through tools and workshops across the broader manufacturing ecosystem so that additional companies and communities can benefit.

Action 1. Connect innovative Small and Mid-sized Manufacturers with financial and technical resources. Team Pennsylvania and its partners will:

- Cultivate collaboration agreements with major engineering and technology companies to boost leverage of planned investments among small and mid-sized manufacturers in Pennsylvania.
- Launch a minigrant fund to support manufacturers to leverage technical experts for scaling AI, to reduce companies' risk, and accelerate return on investment of taking early action.
- Build an information bank of PA-based AI subject experts, including private engineering/integration companies and non-profit organizations (such as ARM Institute and Industrial Resource Centers).
- Elevate and recruit manufacturers with innovation-oriented leadership and active AI pilots, to connect them to this initiative.

Action 2. Amplify Learnings and Tools from early AI Scaling partnerships. Team Pennsylvania and its partners will:

- Build and elevate tools and templates to simplify planning for SMEs. Team Pennsylvania will work with Delaware Valley Industrial Resource Center's (DVIRC) Ai Center of Excellence to create new scalable tools
- Share learnings via regional workshops (including peer-to-peer learning), company case studies, and a statewide summit so that companies beyond those initially targeted can benefit.

Why Team Pennsylvania

Team Pennsylvania's neutral, non-partisan convening role, statewide presence, and established relationships with a broad network of manufacturers, local partners, and engineering and technology companies uniquely position us to lead this initiative and ensure benefits reach small and mid-sized manufacturers and their surrounding communities, all across the Appalachian region of the commonwealth.