

This project seeks to identify the key components of prosperous regional manufacturing communities and determine what defines a “thriving” manufacturing ecosystem.

1. Identify the major ecosystem stakeholders, interventions, and programs (“**the component parts**”).
2. **Measure** each of those component parts and the ecosystem as a whole.
3. Create best practices for regions to use as a self-assessment tool, producing **better measures and target outcomes**.

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Organized around Key Subject Areas

1. Workforce & Training
2. Research & Innovation
3. Infrastructure & Site Development
4. Supply Chain Support
5. Trade & International Investment
6. Operational Improvement & Capital Access

[More on the Big 6](#)



Thanks to our partners:



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Manufacturing Community Ecosystem Metrics (MCEM)

Demonstration using Utah 1.0 Trial Map and **Hypothetical Data**

- UAMMI partnership leads to two MCEM meetings in January and June 2023
- Utah Manufacturers Association conducts initial mapping exercise, reaches out to network with Davis Technical College and Weber State University
- **Next step:** Identify and collect relevant stakeholder-level data.



Utah MCEM Webinar Attended by:

America Makes, The ARM Institute, Davis Technical College, Granite School District, i5 Service's CONNEX Marketplace, Idaho National Laboratory, Salt Lake Community College, Spectrum Recruiting Solutions, Utah Advanced Materials and Manufacturing Institute, Utah Department of Workforce Services, Utah Governor's Office of Economic Opportunity, Utah Manufacturers Associations, Utah State University's College of Engineering, Utah STEM Action Center, Utah System of Higher Education, and Weber State University



Thanks to our partners:



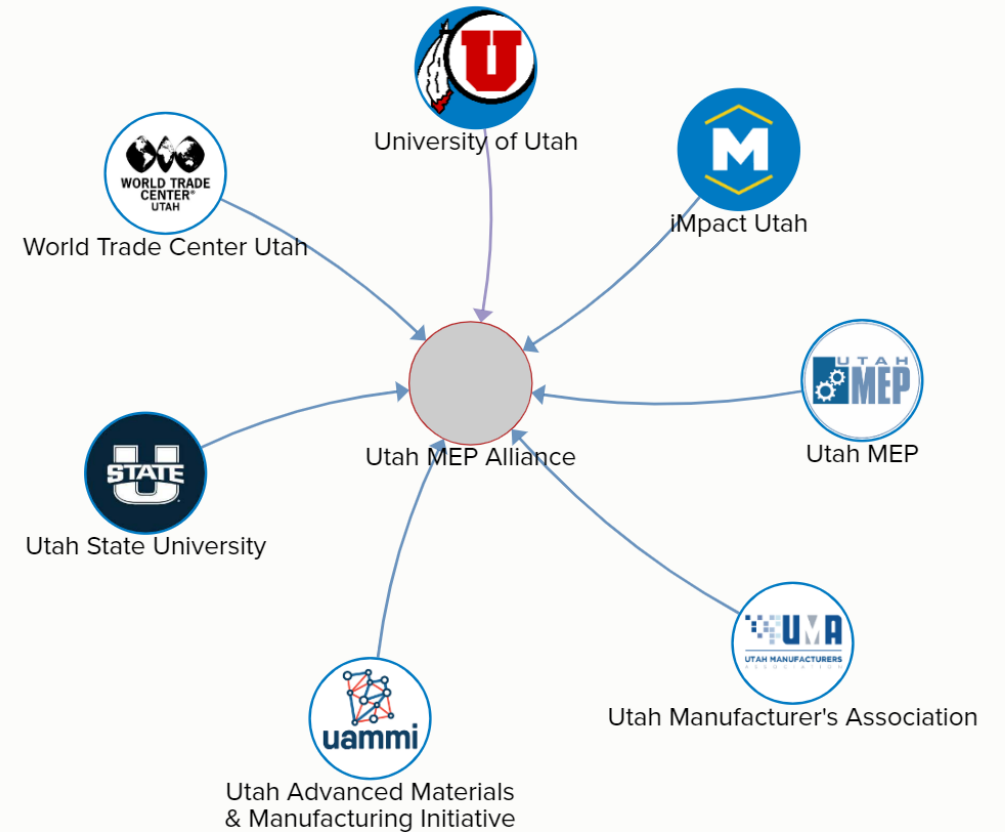
Manufacturing Community Ecosystem Metrics (MCEM)

Use MCEM To Investigate Regional Workforce Development

Challenge: Survey of manufacturers reveals aggregate need for 10,000 skilled workers/year.

Skill Attainment	Example Professions	Likely Education Pathway	% of Need	# Required
Above Mid Skill	Engineer Production Manager	University Community College	20%	2,000
Mid Skill	Machinist Tool Operator	Community College Trade/Technical School	45%	4,500
Below Mid Skill	Entry-level Technician	High School Entry credentials	35%	3,500

Step 1: Utah MEP Alliance seeks federal, state, private funding to increase regional training capacity.



Thanks to our partners:

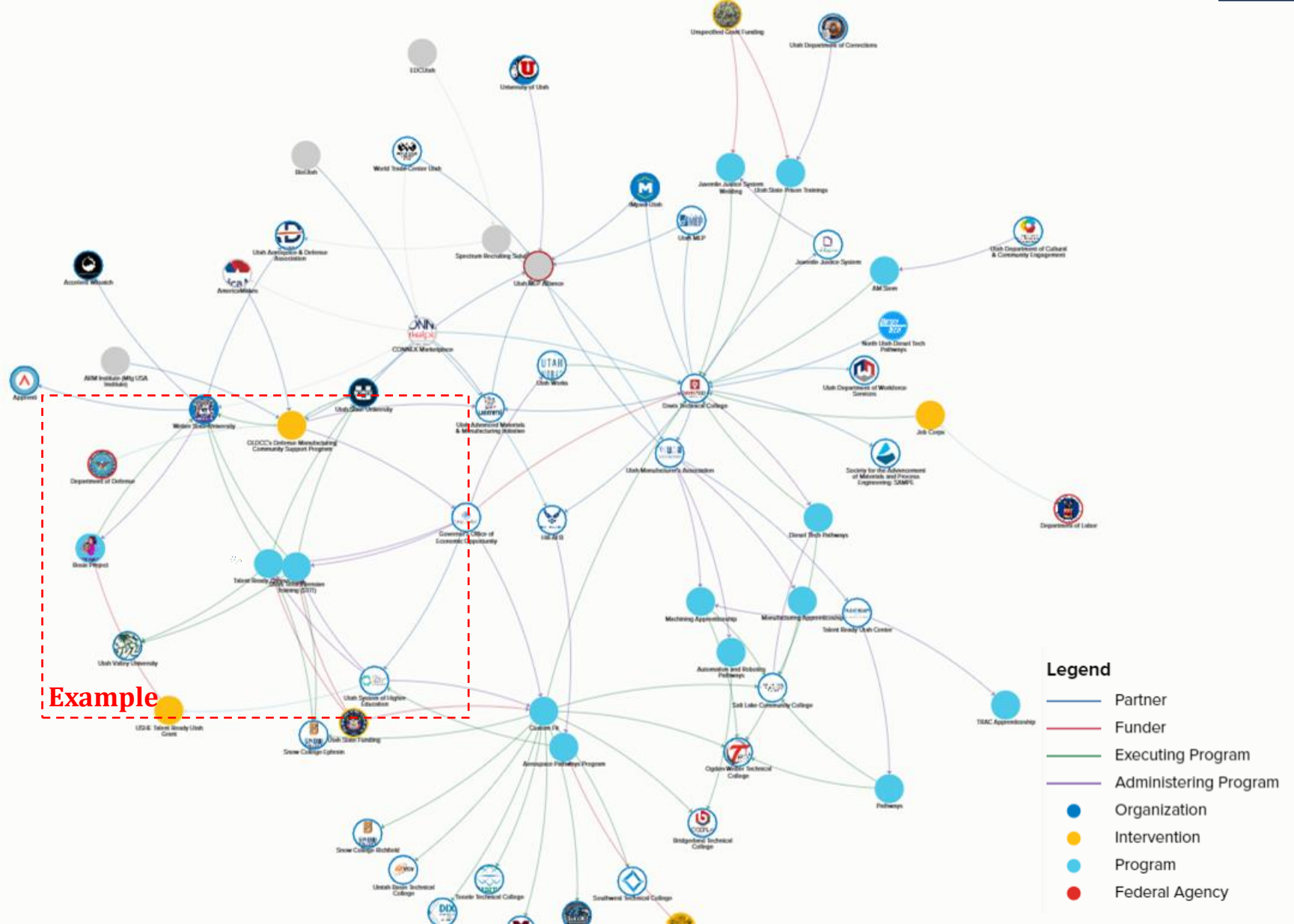


Manufacturing Community Ecosystem Metrics (MCEM)

Map and Visualize Your Workforce Ecosystem

Step Two: Utah Manufacturers Association spearheads stakeholder map with support from Weber State University and Davis Technical College.

Stakeholder map identifies organizations, programs, and existing intervention “**nodes**” connected by relational lines.



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Manufacturing Community Ecosystem Metrics (MCEM)

Align Standard Metrics Across all Stakeholders

Step Three: Utah coalition collects standardized metrics from partners to assess workforce ecosystem.

Descriptive data: org type, website, description etc.

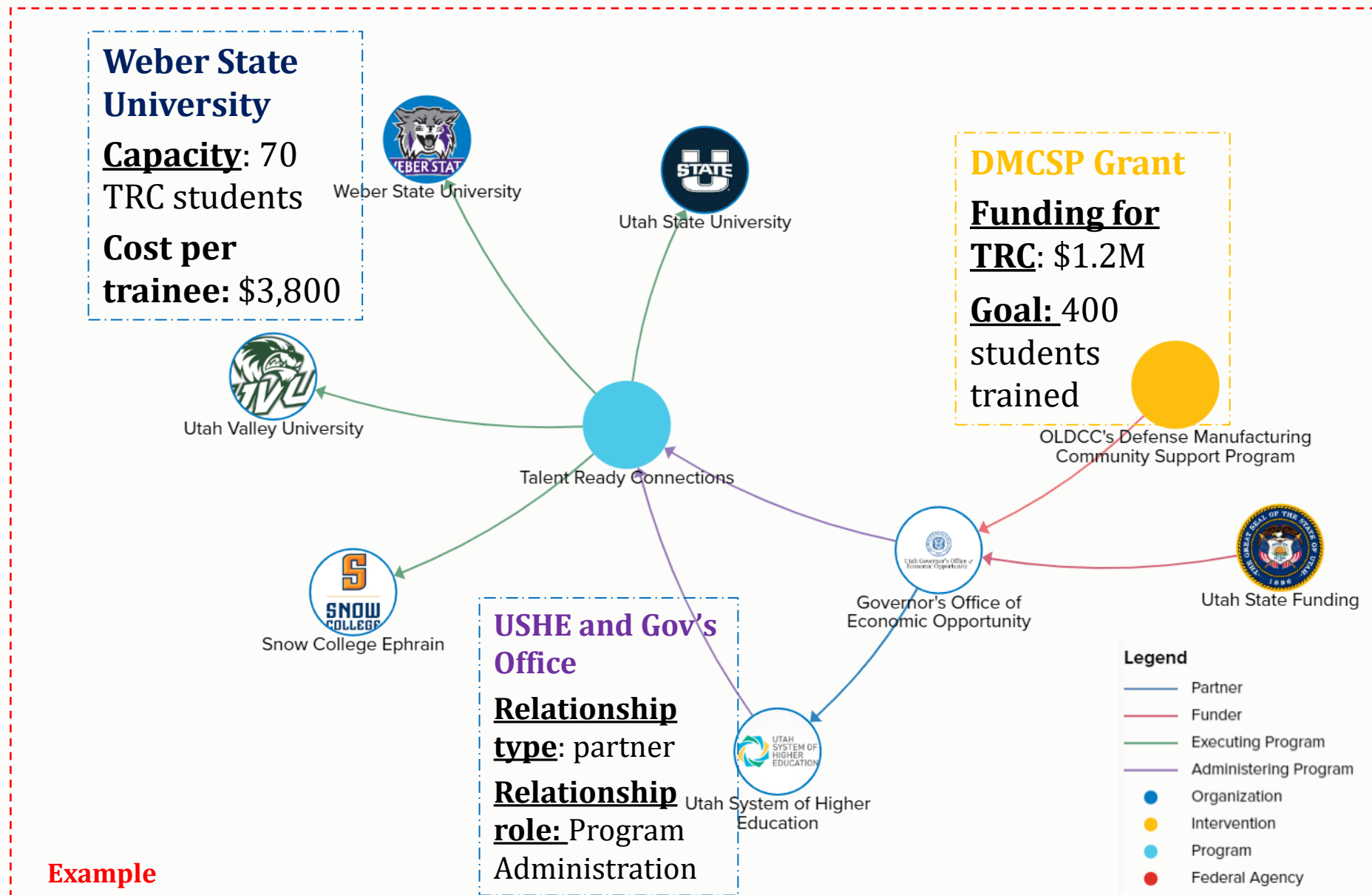
Program data: capacity, # trained per year, cost per training

Intervention data: funding amounts, sources, intended outcomes

Relational data: collaboration types



Thanks to our partners:



Example

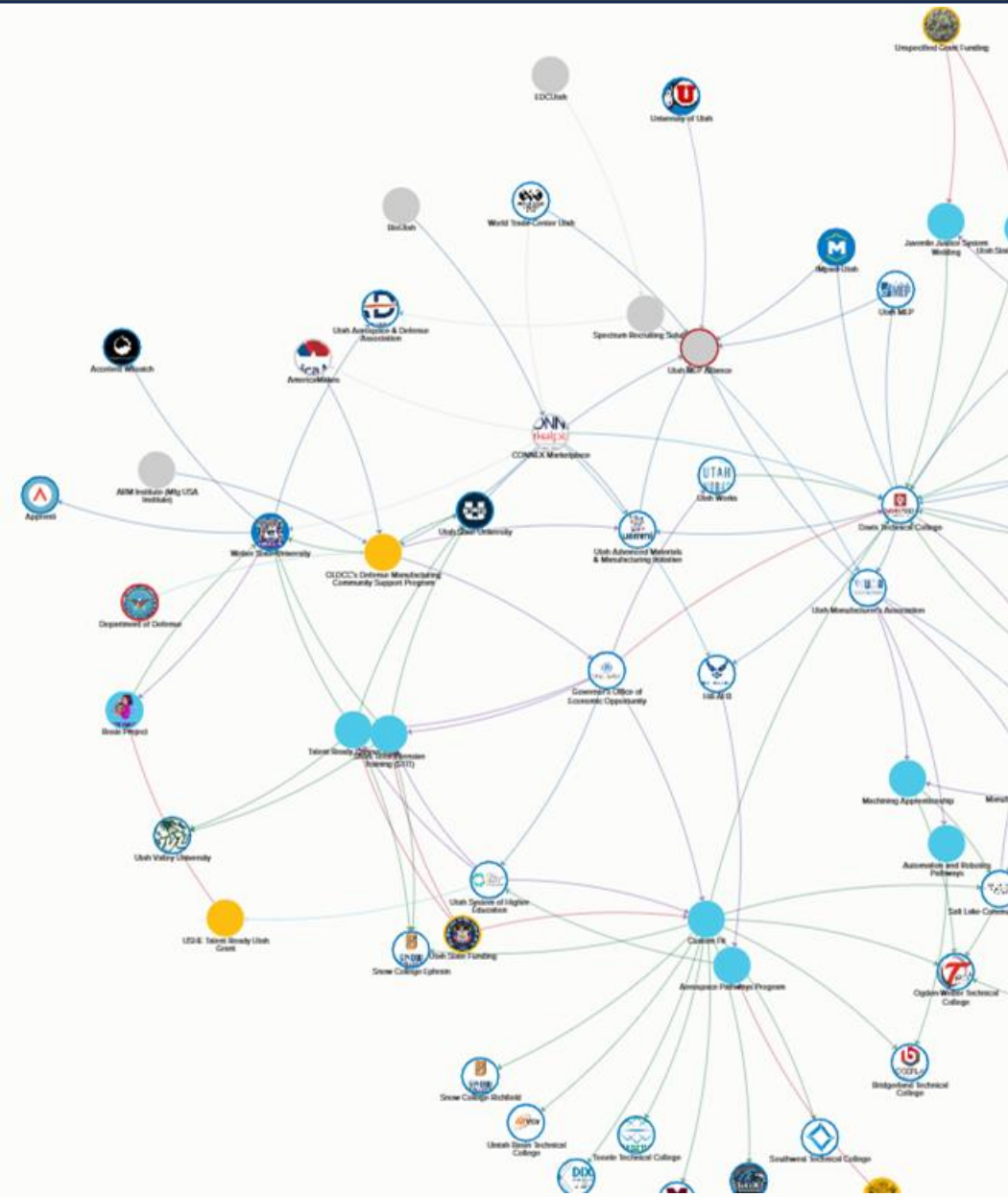
Manufacturing Community Ecosystem Metrics (MCEM)

Drill Down into Program-level Data

From the network assessment, Utah's coalition can determine specific org-level or aggregate ecosystem-level capacity related to high priority professions:

Program	Skill Attainment	Annual Training Capacity	Cost per Trainee
Talent Ready Connect	Above mid-skill	800	\$5,300
MFG Apprenticeship	Mid-skill	1,200	\$3,900
Machining Apprenticeship	Mid-skill	700	\$3,600
AM Stem	Above mid-skill	600	\$7,000
Diesel Tech Pathways	Mid-skill	600	\$4,300
Juvenile Justice Welding	Below mid-skill	500	\$2,800
Rosie Project	Mid-skill	100	\$4,000
Automation and Robotics Pathways	Mid-skill	400	\$3,900
Custom Fit	Below and mid-skill	2,000	\$3,000 / \$3,800
Other	varied	900	range

HYPOTHETICAL DATA



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Aggregate Findings to Inform Strategic Planning

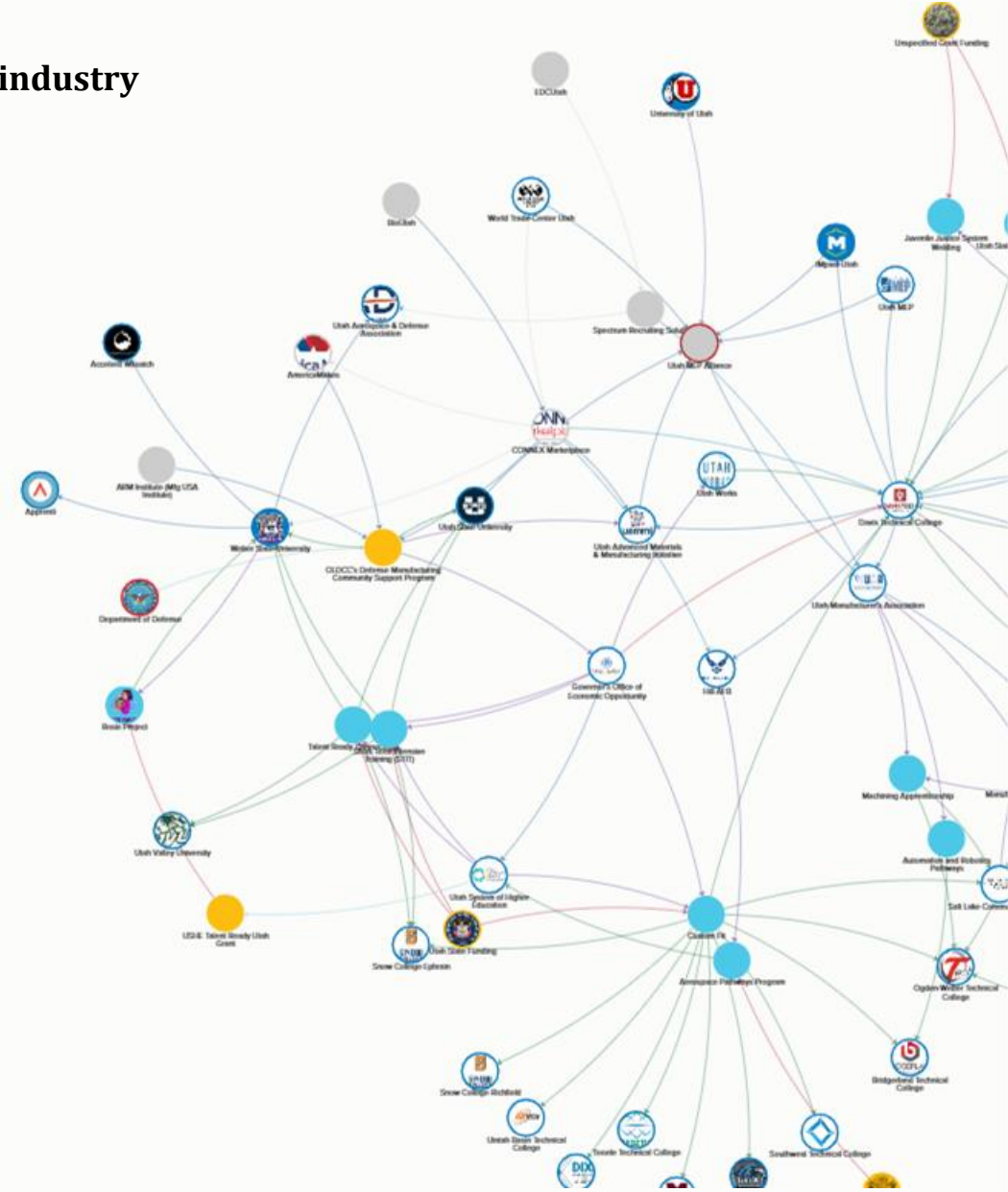
Aggregate training capacity reveals gap of **2400 workers less than 10,000** needed by industry

Skill Attainment	Annual Training Capacity	Avg. Cost per Trainee	Diff. from demand
Above mid-level	1400	\$6150	(600)
Mid-level	3800	\$3920	(700)
Below mid-level	2400	\$2900	(1100)

HYPOTHETICAL DATA

Using this analysis, Utah's coalition can:

- Assess total and average cost of training to better articulate funding needs.
- Identify “nodes” in the ecosystem primed for additional investment and capacity-building.
- Build specific recommendations and key partners to close workforce gap.



Thanks to our partners:



Manufacturing Community Ecosystem Metrics (MCEM)

Benefits of Network Mapping and Analysis

The exercise allows Utah's coalition to engage in further assessments, including **network** analyses, **root cause** analyses, and **gap** analyses to inform prescriptive actions. Further benefits include:

Short-term

- Discover and collaborate
- Align with partners
- Identify and invite new stakeholders

Mid-term

- Engage in ecosystem-building activities
- Orient new stakeholders
- Enhance ecosystem with data
- Validate and align stakeholder benchmarks

Long-term

- Enhance funding pitches and proposals.
- Strengthen long-term regional network
- Boost economic and sustainable growth

