



U.S. DEPARTMENT OF LABOR

# ETA VISION 2030

## WORKFORCE CONVENING

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*USING COMPETENCY MODELS TO SPARK  
SKILL DEVELOPMENT*

MAY 16-18, 2023

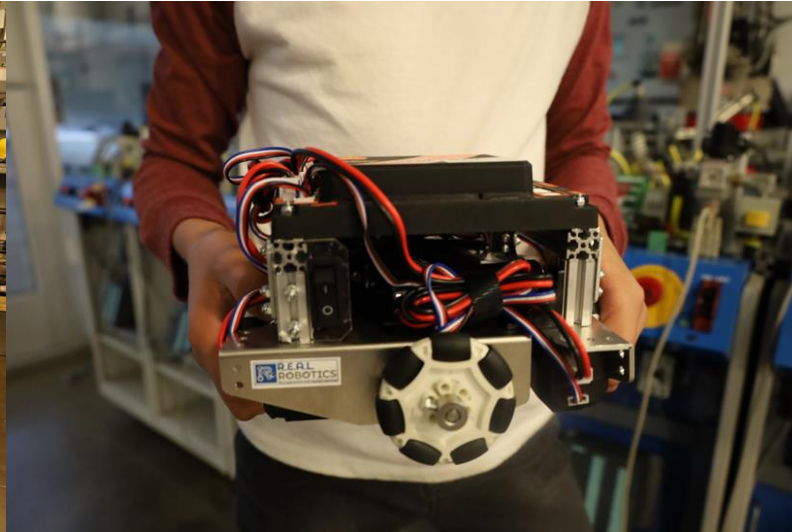
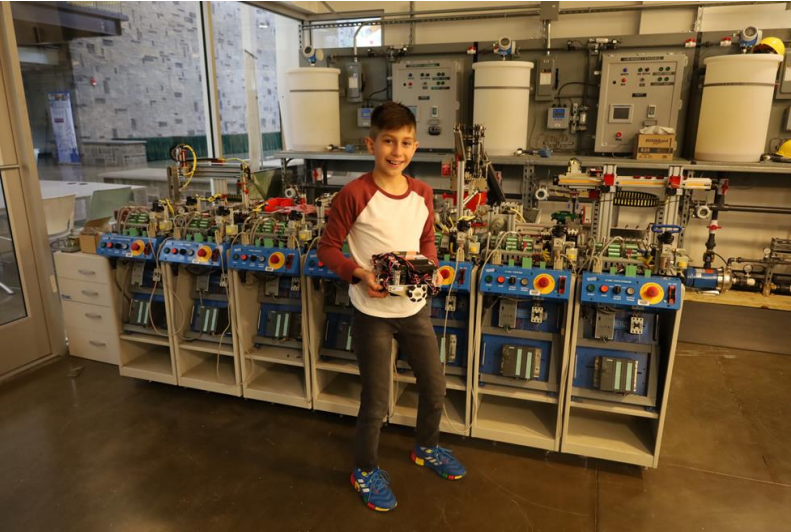
# National Talent Pipeline Development Initiative

**The NIIT is responsible for a national strategy and infrastructure to develop the talent pipeline to support strategic industries**

- **Attract** and engage a broader segment of the population
- **Connect** industry, education and job seekers
- **Develop** the talent pipeline for industries central to national security and global competitiveness
- **Support** regional and place-based economic development and national security priorities

***The National Talent Hub is a critical component of the infrastructure and the national strategy.***

# TPDI Key Components



## Infrastructure to build and connect the talent pipeline

- Database/portal to connect industry-education-talent (National Talent Hub)
- Industry engagement process to inform workforce standard database
- Curriculum alignment process to ensure courses meet needs

## Programs linked to industry standard to provide career and education pathways

- K-12
- Community College/University
- Adult/veteran training

## Mechanism to scale the initiative

- National infrastructure supporting regional needs
- Industry / academia / government partnerships
- Public / private sector investment

# TPDI / National Talent Hub (NTH) History

- 2010 - Initiated in at the request of the Obama Administration
- 2012 - Initial pilot in NY to develop ecosystem to support GlobalFoundries
- 2014 - Further input on national model through Advanced Manufacturing Partnership (AMP)
- 2017 – Initial Discussions with DOL-ETA to leverage / enhance Competency Models
- 2018 – NTH framework developed to be nation’s first dynamic, integrated system
- 2019 – NTH development expedited via NSF-ATE support
- 2019 – Redesign of Advanced Manufacturing Competency Model to create “unified” approach  
(Enables translation across industry sectors to promote systematic development of transferable skills as foundation across sectors; enables translate of credentials, certificates, degrees to industry requirements)
- 2019 – Industry engagement to create “Comprehensive Competency Standards Database” for NTH
- 2021 - Deployment of NTH in pilot regions
- 2021 - First GAINS Registered Apprenticeship pilot successfully launched
- 2021 - NIIT awarded nation’s first (exclusive) semiconductor/nanotechnology RAP contract
- 2022 – Nation’s first Semiconductor Standard developed and is housed in NTH database, making it dynamic
- 2022 – NTH goes live with community colleges and I support of NIIT Registered Apprenticeships

# Process Informed by Industry Standard

**Competency database used to align course curriculum to industry and individual needs**

**Aligned courses provide career and education pathways**

JOB PROFILE for: MAINTENANCE TECHNICIAN		Relevance / Proficiency Rating:
Competency Definition	Comp Code	Relevance / Proficiency Rating
Mathematical principles	2.3.1	4
Number systems and relationships - whole numbers, decimals, fractions, alternate base systems (e.g., binary, octal, and hexadecimal numbers)	2.3.1.1	3
Arithmetic - arithmetic operations on numbers, percentages, square root, exponentiation, and logarithmic functions	2.3.1.2	4
Plane and solid geometry - distance, perimeter, area, and volume, spatial coordinates, visualization, spatial reasoning, and geometric modeling	2.3.1.3	4
Measurement - measurement of length, mass, time, systems of measurement, units, and conversion between systems (e.g., from English to metric)	2.3.1.4	4
Mathematical notation - the language of mathematics to express mathematical ideas	2.3.1.5	3

CERTIFICATE PROFILE for: SEMI-CERT PROCESS TECH		Relevance / Proficiency Rating:
Competency Definition	Comp Code	Relevance / Proficiency Rating
Mathematical principles	2.3.1	4
Number systems and relationships - whole numbers, decimals, fractions, alternate base systems (e.g., binary, octal, and hexadecimal numbers)	2.3.1.1	3
Arithmetic - arithmetic operations on numbers, percentages, square root, exponentiation, and logarithmic functions	2.3.1.2	3
Plane and solid geometry - distance, perimeter, area, and volume, spatial coordinates, visualization, spatial reasoning, and geometric modeling	2.3.1.3	3
Measurement - measurement of length, mass, time, systems of measurement, units, and conversion between systems (e.g., from English to metric)	2.3.1.4	2
Mathematical notation - the language of mathematics to express mathematical ideas	2.3.1.5	3

DEGREE PROFILE for: AAS-MECHATRONICS		Relevance / Proficiency Rating:
Competency Definition	Comp Code	Relevance / Proficiency Rating
Mathematical principles	2.3.1	4
Number systems and relationships - whole numbers, decimals, fractions, alternate base systems (e.g., binary, octal, and hexadecimal numbers)	2.3.1.1	3
Arithmetic - arithmetic operations on numbers, percentages, square root, exponentiation, and logarithmic functions	2.3.1.2	3
Plane and solid geometry - distance, perimeter, area, and volume, spatial coordinates, visualization, spatial reasoning, and geometric modeling	2.3.1.3	3
Measurement - measurement of length, mass, time, systems of measurement, units, and conversion between systems (e.g., from English to metric)	2.3.1.4	2
Mathematical notation - the language of mathematics to express mathematical ideas	2.3.1.5	3

INDIVIDUAL PROFILE for: #23345		Relevance / Proficiency Rating:
Competency Definition	Comp Code	Relevance / Proficiency Rating
Mathematical principles	2.3.1	4
Number systems and relationships - whole numbers, decimals, fractions, alternate base systems (e.g., binary, octal, and hexadecimal numbers)	2.3.1.1	3
Arithmetic - arithmetic operations on numbers, percentages, square root, exponentiation, and logarithmic functions	2.3.1.2	3
Plane and solid geometry - distance, perimeter, area, and volume, spatial coordinates, visualization, spatial reasoning, and geometric modeling	2.3.1.3	3
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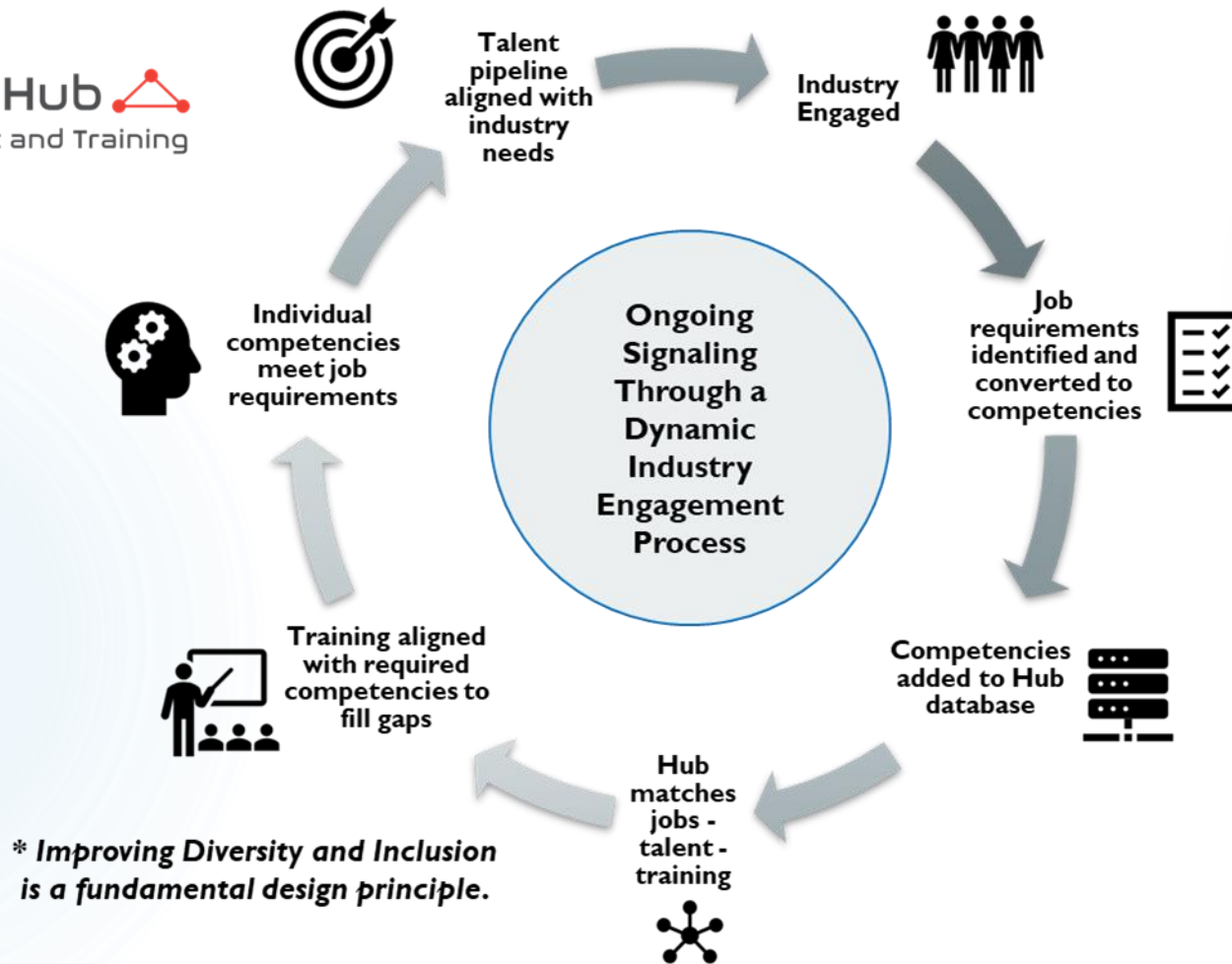


- K-12 – Post Secondary Course Alignment
  - Skills Based Learning
  - Advanced Manufacturing ECHS Programs
  - CTE Programs
- Pathways to Apprenticeship/Careers
- Competency Based Apprenticeships
- Veterans Training & Placement Programs
- Career Readiness Programs
- Returning Citizen ‘Fresh Start’ Programs



# The Only Integrated, Comprehensive Approach to Developing the Talent pipeline

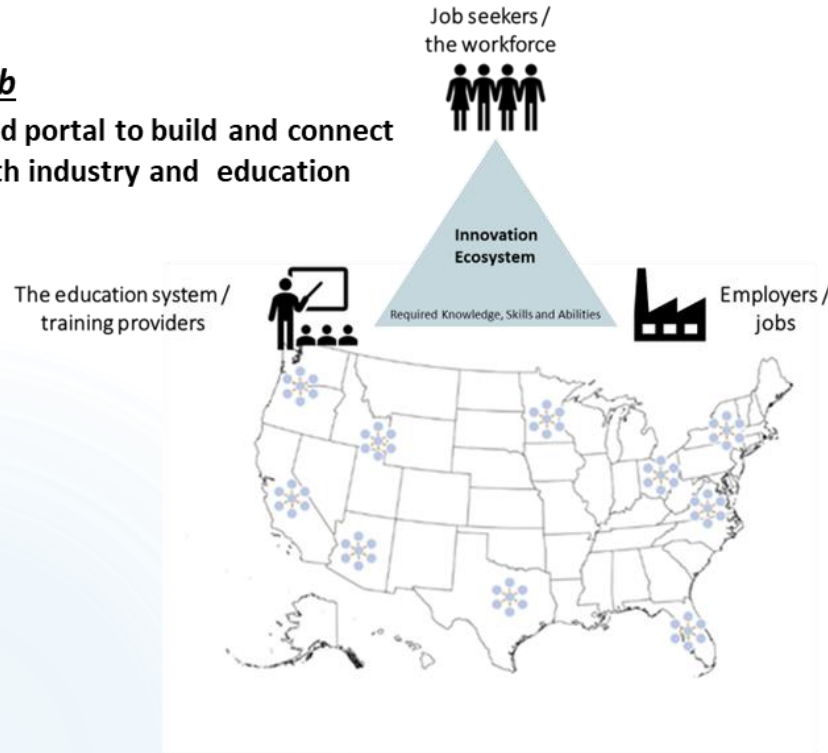
**National Talent Hub**  
Connecting Industry, Talent and Training



# Deployment of the TPDI and National Talent Hub

## National Talent Hub

The nation's integrated portal to build and connect the talent pipeline with industry and education



## Talent Development Hubs

## Apprenticeship Pathways

established in each regional hub

### Interconnected Education Pathway Aligned with Target Industries / Employers



Align All Ecosystem Programs With Target Industry Requirements

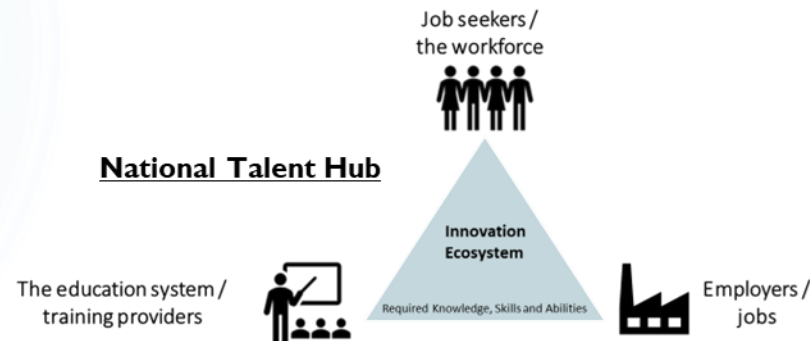
Experiential Learning Programs ➡ Advanced Manufacturing Early College High School (ECHS) ➡ Career and Technical Education (CTE) ➡ GAINS Registered Apprenticeships

# Broadening the Career and Education Pipeline...

*Increasing Access to Careers and Advancing Education Through Registered Apprenticeships*

Increased Opportunity

Career and Education Advancement





# CONNECTING INDUSTRY, TALENT AND TRAINING LIKE NEVER BEFORE.

Developing the technology talent pipeline – starting today.  
A state-of-the-art, tailored platform that identifies skills required by  
industry to match talent to real careers and targeted training.

 SIGN IN

 JOIN NOW

[National Talent Hub Retail Page](#)

## National Talent Hub Demo

### The National Talent Hub

- The nations only dynamic system enabling real time alignment between detailed job skill requirements, course curriculum and individual skill profiles, keeping up with the speed of advancements in technology.
- Enables skills assessments and gap analysis, career mapping, comprehensive job and course opportunity assessments, and connections to careers and learn and earn opportunities through Registered Apprenticeships.

# Our Panelists

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- **Moderator - Mike Russo – President and CEO, NIIT**

- **Employers**

- **Clayton Nagel - Sr. Manger/Deputy Director Technical Training, GlobalFoundries** (contract chip maker / semiconductor foundry) - Clayton.Nagel@globalfoundries.com
- **M. Clara Neri-Mejia, PMP Manager, Program Manager - Global Manufacturing Training Institute, Applied Materials** (semiconductor equipment (“Tol”) provider to semiconductor companies) - Clara\_Neri@amat.com
- **Matt Grattan - Workforce Development Manager, PlugPower** (hydrogen power generation) MGrattan@plugpower.com

- **Community Colleges**

- **Dr. Hector Rodriguez - Dean of STEM, Dean of Science, Technology, Engineering and Math, Hudson Valley Community College** - h.rodriguez@hvcc.edu
- Timothy Thomas - AVP for Learning and Academic Affairs, Mohawk Valley Community College - TThomas@mvcc.edu

- **The NIIT**

- **Robert Weinman – Director of Workforce** Innovation, NIIT (SME on National Talent Hub, Competency Based Learning; semiconductor / industry training) - Rweinman @niit-usa.org