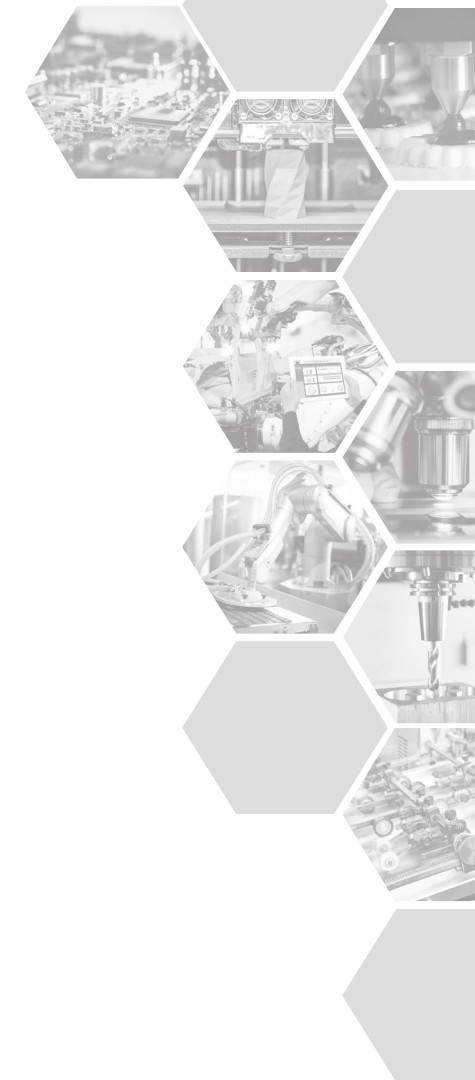




Webinar: Advanced Manufacturing Initiative
December 6, 11:00 am

MEP National Network





MEP
National
Network™

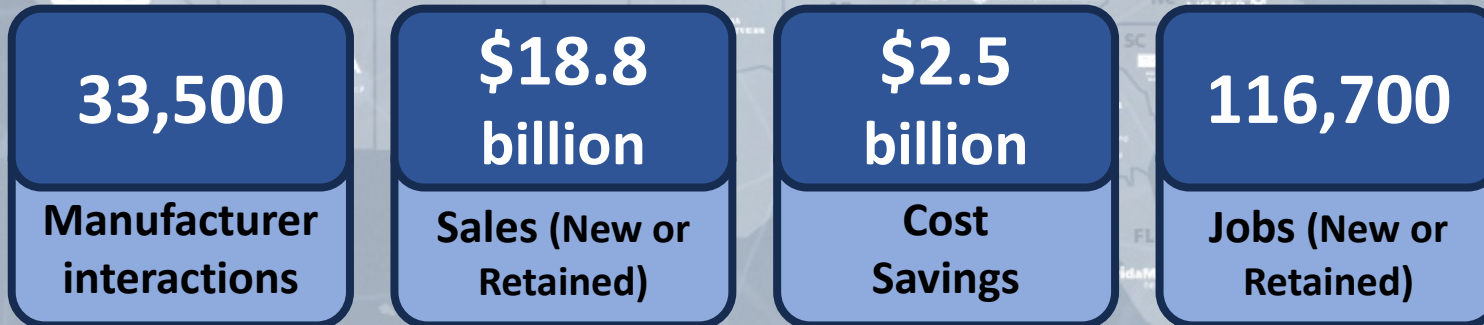
NIST
National Institute of
Standards and Technology
U.S. Department of Commerce



Manufacturing Extension Partnership

- Serving small to medium-sized manufacturers

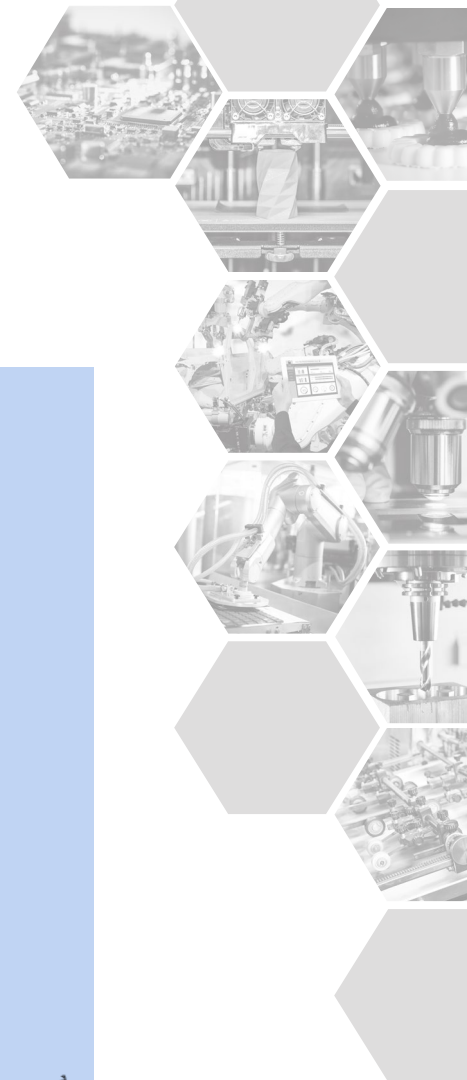
2022 Impacts:



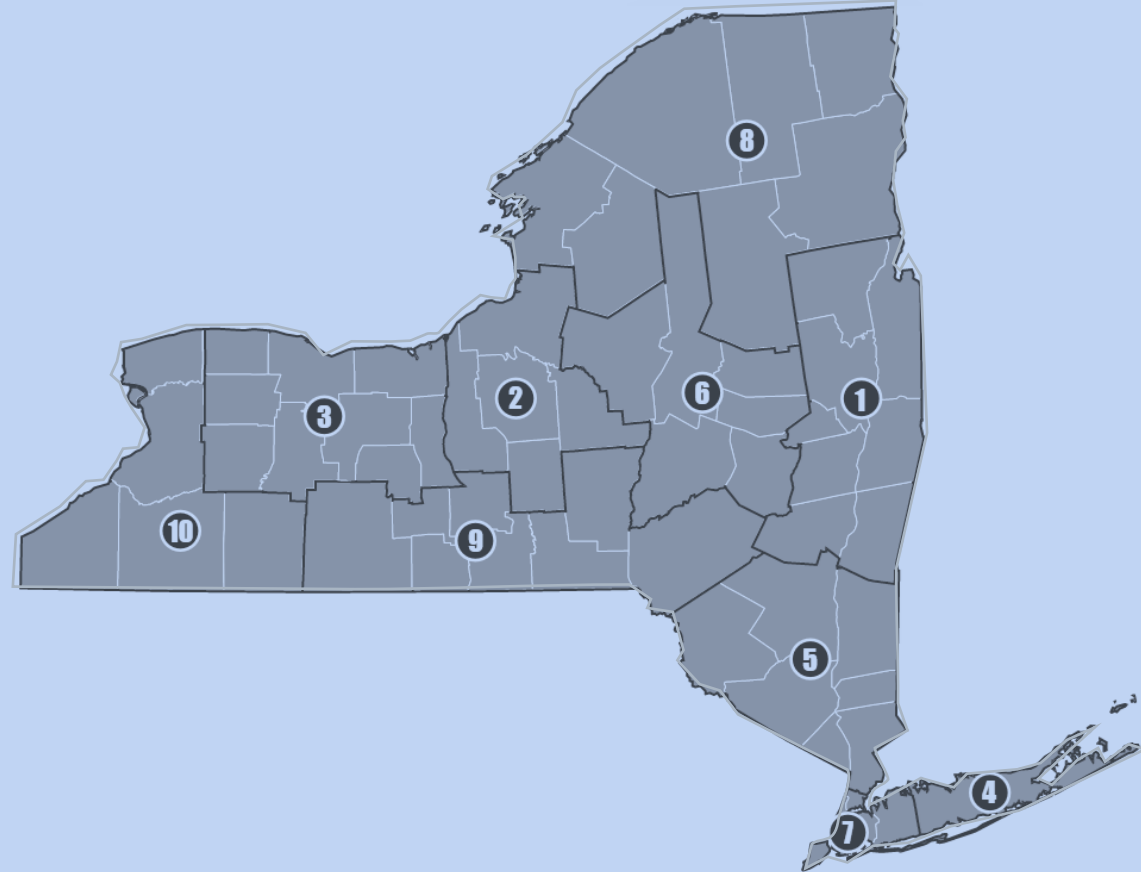


NEW YORK

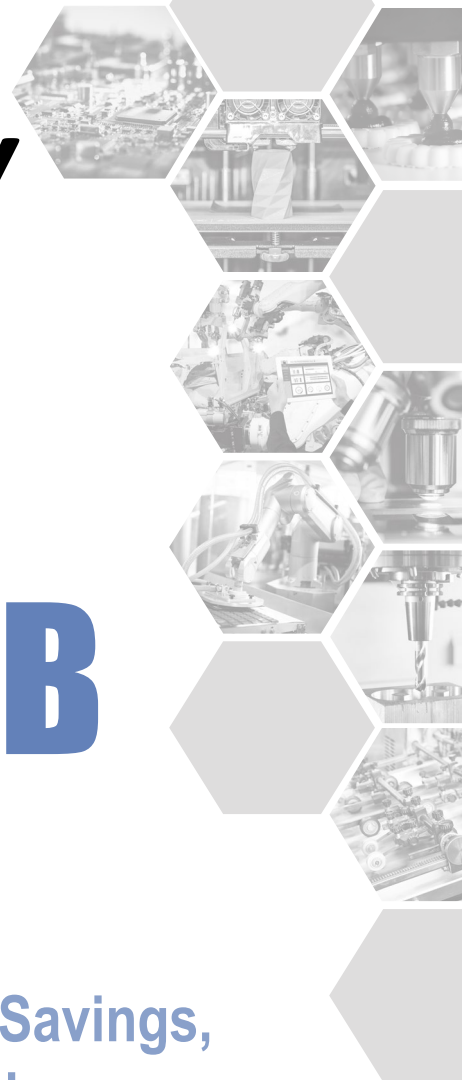
Manufacturing Extension Partnership



- STATEWIDE**
FuzeHub
fuzehub.com
- 1 CAPITAL REGION**
Center for Economic Growth (CEG)
ceg.org
- 2 CENTRAL NEW YORK**
Train, Develop, Optimize (TDO)
tdo.org
- 3 FINGER LAKES**
NextCorps
nextcorps.org
- 4 LONG ISLAND**
Manufacturing and Technology
Resource Consortium (MTRC)
stonybrook.edu/mtrc
- 5 MID-HUDSON**
Manufacturing & Technology
Enterprise Center (MTEC)
mfgtec.org
- 6 MOHAWK VALLEY**
Advanced Institute for
Manufacturing (AIM)
aim-mep.org
- 7 NEW YORK CITY**
Industrial & Technology
Assistance Corporation (ITAC)
itac.nyc
- 8 NORTH COUNTRY**
CITEC Business Solutions
citec.org
- 9 SOUTHERN TIER**
Alliance for Manufacturing
& Technology (AMT)
amt-mep.org
- 10 WESTERN NEW YORK**
Insyte Consulting
insyte-consulting.com



Making an Impact in NY



**7,171
JOBS**

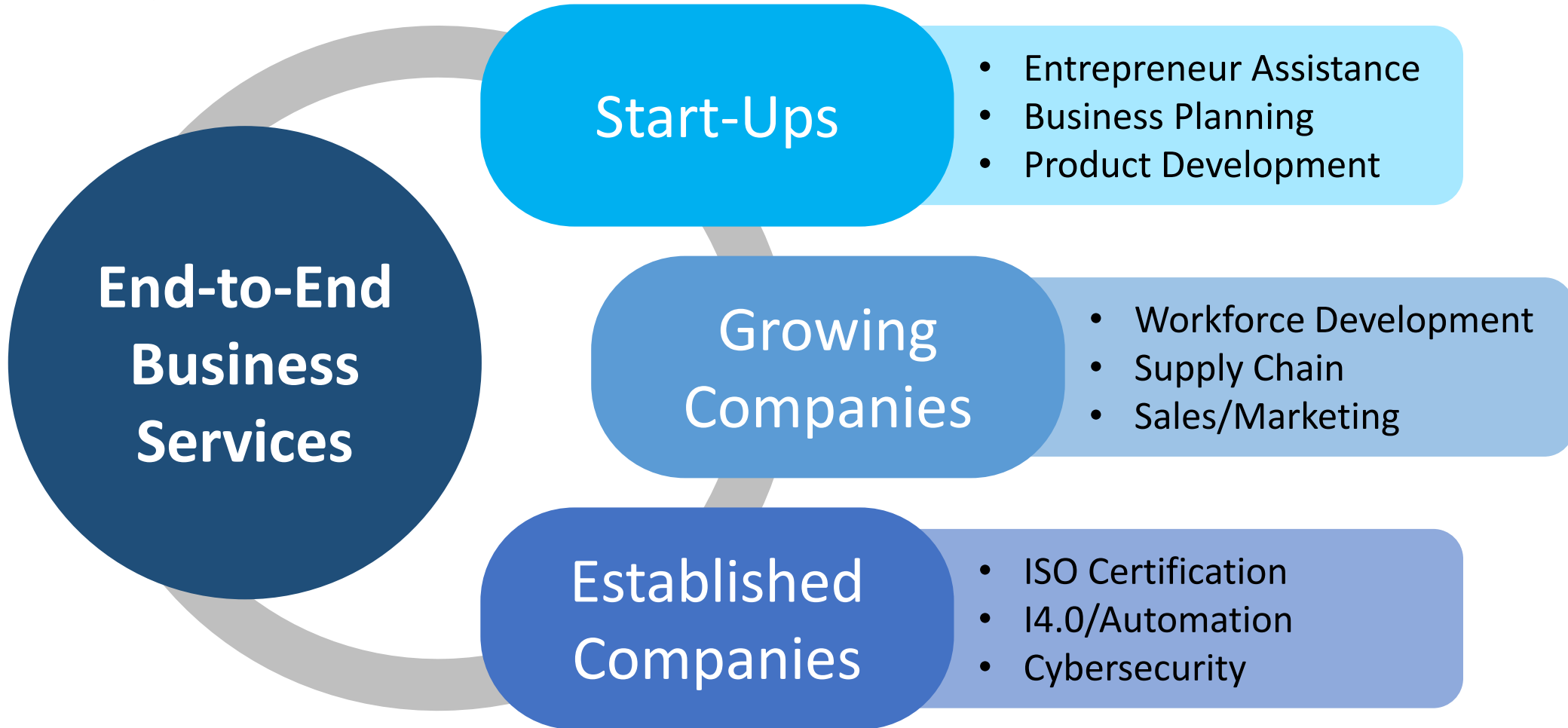
Both New and Retained Jobs at Small
to Medium Sized Manufacturers



\$1.2B

New/Retained Sales, Company Cost Savings,
New Investments in Manufacturing

Providing Support



Advanced Manufacturing Initiative

Programs designed to help support technical assistance from NY MEP centers in 4 focus areas.



Division of
Science, Technology
& Innovation

A Division of Empire State Development



Cybersecurity

[Learn More](#) ➔

aim Advanced Institute
for Manufacturing



Advanced Materials

[Learn More](#) ➔

FUZEHUB



Supply Chain

[Learn More](#) ➔

TDO TRAIN
DEVELOP
OPTIMIZE



Industry 4.0

[Learn more](#) ➔

AMT Alliance for
Manufacturing
and Technology



Up Next...

Supply Chain Initiative

Don Lynch





Supply Chain Assessment Program

Don Lynch
Senior Project Manager

December 4, 2023

Advanced Manufacturing Initiative Programs



Cybersecurity

Whether it's due to industry standards, government requirements, an eye towards growth, or a desire to keep your business and client's information protected, cybersecurity should be on the forefront of the priorities of every manufacturer.

The NYS Cybersecurity Manufacturing Initiatives Grant has been designed to help manufacturers address common cybersecurity needs and issues in a practical and understandable way through in-person assessments by professionals who specialize in working with small and medium manufacturers, as well as to provide funding assistance for both assessment and implementation projects.

[Learn More](#) ↻



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[Learn More](#) ↻



Supply Chain

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[Learn More](#) ↻



Industry 4.0

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[Learn more](#) ↻



Supply Chain Assessment

- Goals:
 - Assist manufacturers strengthen supply chain management practices
 - Enhance the competitiveness of US manufacturers
- Funding:
 - National Institute of Science and Technology (NIST) grant to strengthen the supply chains of US manufacturers
- Delivery:
 - Offered through each state's Manufacturing Extension Partnership (MEP) centers

Supply Chain Assessment

- Benefits for manufacturers:
 - Increased awareness of best practices
 - Prioritized list of improvement opportunities
 - Reduced costs
 - Materials, logistics, inventory
 - Improved competitiveness
 - Shorter lead times, higher on time delivery, improved quality

Supply Chain Assessment

- New York's program:
 - Web based supply chain assessment in 9 categories
 - Confidential, manufacturer-specific recommendations shared individually based on assessment results and business impact.
 - Grant funded assistance to strengthen supply chain management practices (up to 8 hours)

Supply Chain Assessment

- Assessment Categories
 - Supplier pricing controls
 - Collaborative planning with sales and operations
 - Supply chain continuous improvement
 - Communication with suppliers
 - Supply chain controls
 - Transportation and logistics
 - Inventory management
 - Inventory control
 - Supply continuity planning

Supply Chain Assessment

- Timeline
 - Q4 2023:
 - Launch assessment tool
 - Roll out to New York State's MEP Centers
 - Q1 2024 – Q2 2025:
 - Conduct assessments with New York State manufacturers
 - Generate manufacturer specific recommendations
 - Review results with manufacturers
 - Assist manufacturers select and implement the most impactful best practices

Supply Chain Assessment

- How to participate:
 - Contact your local Manufacturing Extension Partnership center
 - Capital Region: CEG, Carlos Flores, 518-431-1483, carlosf@ceg.org
 - Central New York: TDO, Mike Metzgar, 315-425-5144, mmetzgar@tdo.org
 - Finger Lakes: NextCorps, Annette Brenner, 585-214-2400, annette.brenner@nextcorps.org
 - Hudson Valley: MTEC, David Carter, 845.391.8214, david.carter@hvtdc.org
 - Long Island: MTRC, Amy Erickson, 631-216-7516, amy.erickson@stonybrook.edu
 - Mohawk Valley: AIM, Tanya Macri, 315.624.9800, tmacri@mvcc.edu
 - New York City: ITAC, Paul McQuade, 212.809.3900, pmcquade@itac.nyc
 - North Country: CITEC, Steve Lockwood, 315-777-0556, lockwood@citec.org
 - Southern Tier: AMT, Jeff DuBrava, (607) 422-1048, jdubrava@amt-mep.org
 - Western New York: Insyte, David Hanitz, 716.636.3626, dhanitz@insyte-consulting.com
 - Program Coordinator
 - Don Lynch, 315-425-5144, don@tdo.org



Up Next...

Cybersecurity Initiative

Cory Albrecht



A decorative graphic on the left side of the slide, consisting of a network of light blue lines and circles, resembling a circuit board or a data network.

NEW YORK STATE CYBERSECURITY MANUFACTURING INITIATIVES GRANT

DETAILS OVERVIEW





Cybersecurity

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GRANT DETAILS/ GOALS

- Program launched in 3Q 2023
- Services through end of 2025
- Award funds for “Assessment and Implementation Services”
- In-person cybersecurity events scheduled in 2024 and 2025

ELIGIBILITY

- Manufacturing NAICS Code
- New York State
- 500 employees or fewer
- DoD supply chain involvement not required
- Demonstrate a need that is aligned with the grant
- Completed application

PHASE 1: ASSESSMENTS

- Assessments performed by AIM or trained MEP partners
- All NYS manufacturers are eligible (10 Regions)
- Based on NIST 800-171 guidelines
- Follow-up assessment after 90 days
- Awards \$6,000 toward \$7,500 assessment
- \$1,500 due from manufacturer

PHASE 2: IMPLEMENTATION

- Timeline: 10/24-12/25
- Number of companies-TBD
- Funding for implementation projects and advanced testing
- Prior assessment a requirement
- Funding amount per company-TBD

IN-PERSON EVENTS

- Winter 2024-Mohawk Valley Region
- Spring 2024 Southern Tier Region
- Fall 2024 Finger Lakes Region
- Spring 2025-Long Island Region

HOW TO APPLY

- newyorkmep.org/cyber-security-assessment-program
- Fill out application information
- Applications reviewed every two weeks
- Awardees sent award letter and contacted by implementation team
- Approx. 15 awards per quarter

CONTACT INFORMATION

Grant Administration- Cory Albrecht

MVCC-Advanced Institute for Manufacturing

calbrecht@mvcc.edu 315-717-8774

Grant Application and Assessments-Paul LaPorte

MVCC-Advanced Institute for Manufacturing

plaporte@mvcc.edu 315-792-5578



Up Next...

Industry 4.0 Initiative

Amanda Jackson

Advanced Manufacturing Initiative – Industry 4.0

Advanced Manufacturing Initiative Programs

ESD Designated Regional And Statewide MEP Centers



Cybersecurity

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[Learn more](#)





Q: What's Industry 4.0 or i4.0?

A: Use of advanced technologies

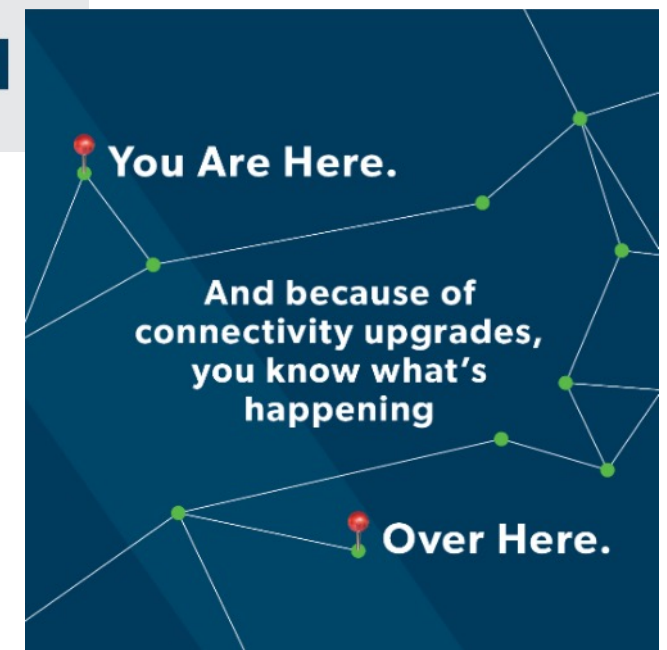
like automation, data exchange, and artificial intelligence

to create smarter, more connected and efficient industrial processes.

Does this apply to me?

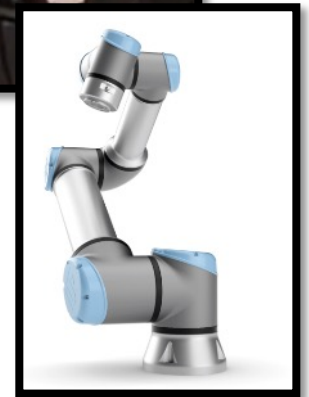
Manufacturers facing:

- Workforce shortages
 - Supply chain disruptions
 - Global competition
-
- New Technology Can Help Solve these challenges!



Technology Examples

- Collaborative Robots:
 - Use robots that work alongside humans
 - Handle repetitive tasks
 - Employees focus on more complex tasks



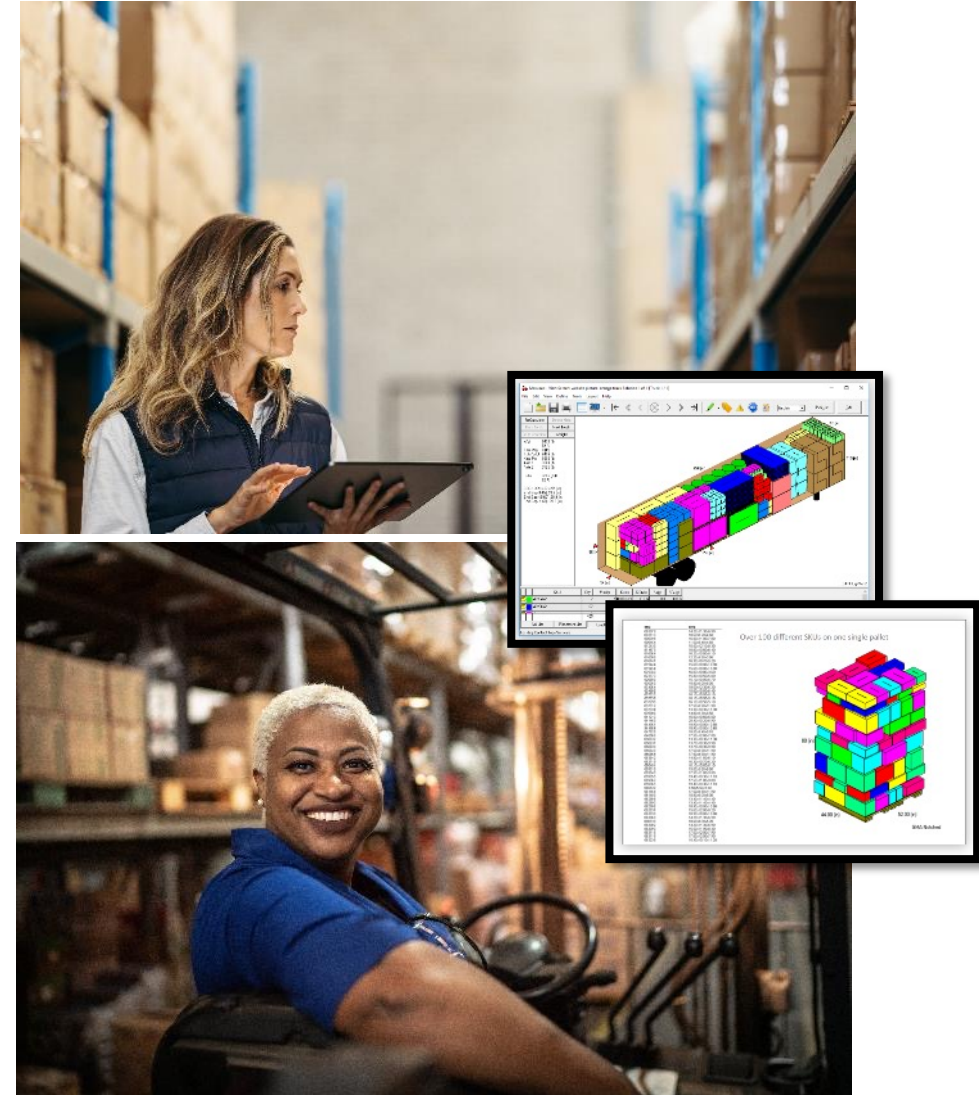
Technology Examples


- Sensor Integration:
 - Add sensors to machinery
 - Real-time data: performance, temperature, usage
 - Monitor equipment remotely through dashboard
 - Alarms to cell / smart devices



Technology Examples

- Use software to:
 - Manage Inventory
 - Integrate inventory data with production schedules
 - Minimize excess stock
 - Optimize raw materials
 - Analyze Customer Order Trends
 - Create Stable Mixed Pallets
 - Plan for Container Shipments





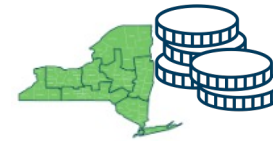
The technology opportunities are **endless**

- **Augmented / Virtual Reality**
- **Digital Twin / Simulations**
- **Data Analytics**
- **3D printing**
- **& more...**

How can we help?

- NYS Industry 4.0 Advanced Manufacturing Initiative

- Mini-Grants: Direct Technical Assistance



- Tech Exchange: A Working Group for Manufacturers



- Webinars



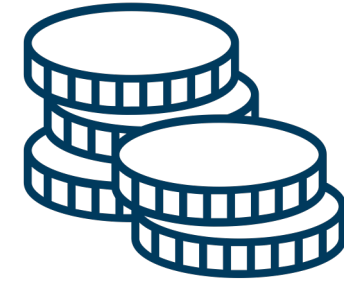
Mini-Grant Projects

- **Projects may include:**
 - Technology strategy plans
 - Proof of concept tests
 - Consulting services
 - Solution selection
 - Implementation
 - Training



Mini-Grant Funding Available

- NY Manufacturer
- Less than 500 employees total in New York State
- **Up to \$20,000 grant award per application**
- Manufacturer Matching min. 50%
- **Hardware costs are not eligible under the grant, but can be used as match**



Which type of Technology?

- Interested but not sure what types of technology apply to you?
 - Contact local MEP center
- **Advance You Forward**
 - From Any Starting Point



Benchmark Others

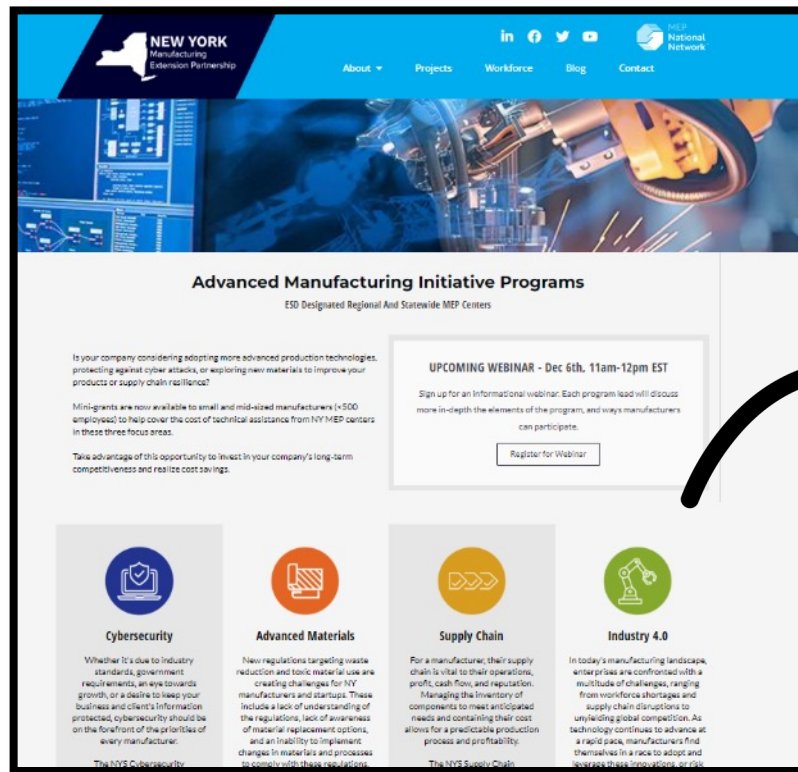
- Case Studies
 - Write-ups and/or Videos
 - Cover ROI – before and after
 - Highlight practical & cost-effective solutions
- Webinars & Working Groups
 - Technology topics
 - Best practices



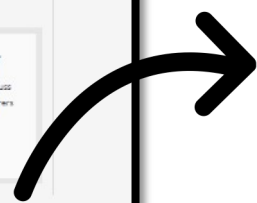
Grant Information Online

NY MEP Website
www.newyorkmep.org/advanced-mfg-initiative/

i4.0 Landing Page
@ AMT Website
www.amt-mep.org/industry4/



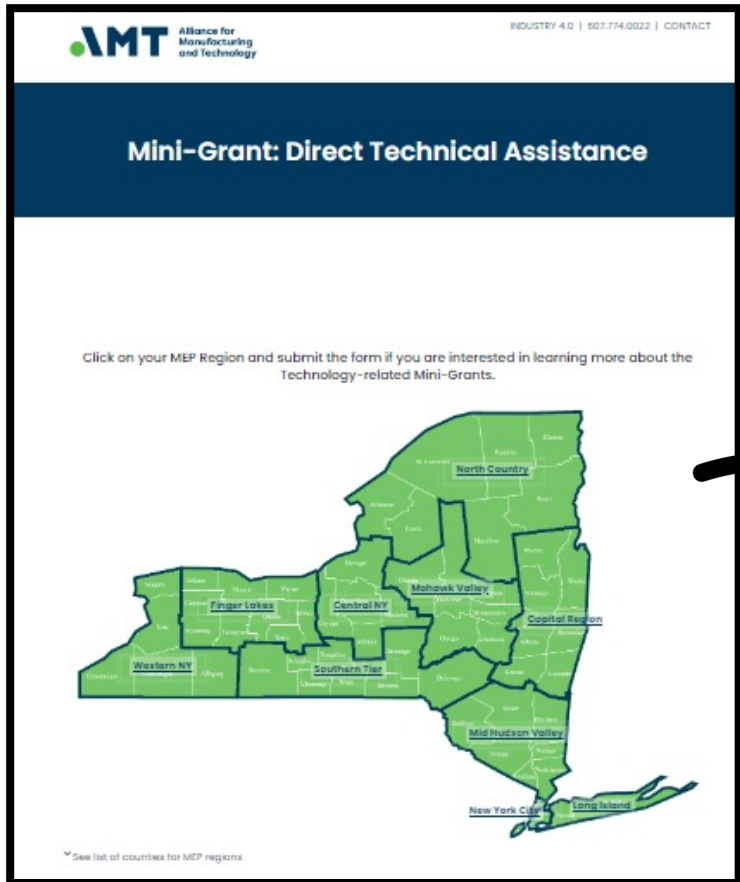
The screenshot shows the NY MEP website's homepage. At the top, there is a navigation bar with the NY MEP logo and social media icons. Below the navigation bar is a large image of a factory interior. The main content area is titled "Advanced Manufacturing Initiative Programs" and includes a section for an "UPCOMING WEBINAR - Dec 6th, 11am-12pm EST" with a "Register for Webinar" button. At the bottom, there are four icons representing different focus areas: Cybersecurity, Advanced Materials, Supply Chain, and Industry 4.0.



The screenshot shows the AMT website's "New York State Industry 4.0 Manufacturing Initiatives Grant" landing page. The page features a dark blue header with the AMT logo and navigation links. The main content area is titled "New York State Industry 4.0 Manufacturing Initiatives Grant" and includes a section for "ABOUT THE PROGRAM" with a green circular icon of a robotic arm. Below this is a section for "PROGRAMS OFFERED" which lists two programs: "Mini-Grant: Direct Technical Assistance" and "TechEx: A Working Group for Manufacturers".

Grant Information Online

Request More Info.



Regional
MEP



Regional MEP
Will Contact
You

Need Support?

Contact AMT

Amanda Cave Jackson

- Ajackson@amt-mep.org
- 607-206-6400





Up Next...

Advanced Materials

Eric Fasser



Advanced Materials

Technical Assistance Program

CHALLENGES

New regulations

- Waste Reduction
- Toxic Material Use

Lack of awareness

- Compliance requirements
- Replacement materials
- Business impact

Implementation

- Technical Knowledge
- Funding

Advanced Manufacturing Initiative Programs

ESD Designated Regional And Statewide MEP Centers

Cybersecurity	Advanced Materials	Supply Chain	Industry 4.0
 <p>Whether it's due to industry standards, government requirements, an eye towards growth, or a desire to keep your business and client's information protected, cybersecurity should be on the forefront of the priorities of every manufacturer.</p> <p>The NYS Cybersecurity Manufacturing Initiatives Grant has been designed to help manufacturers address common cybersecurity needs and issues in a practical and understandable way through in-person assessments by professionals who specialize in working with small and medium manufacturers, as well as to provide funding assistance for both assessment and implementation projects.</p> <p>Learn More</p> 	 <p>New regulations targeting waste reduction and toxic material use are creating challenges for NY manufacturers and startups. These include a lack of understanding of the regulations, lack of awareness of material replacement options, and inability to implement changes in materials and processes to comply with these regulations.</p> <p>The Advanced Materials Technical Assistance Program has been designed to provide education, technical assessments, and funding opportunities for NY MEP Centers to assist manufacturers who are looking to replace materials in their products with more sustainable options.</p> <p>Learn More</p> 	 <p>For a manufacturer, their supply chain is vital to their operations, profit, cash flow, and reputation. Managing the inventory of components to meet anticipated needs and containing their cost allows for a predictable production process and profitability.</p> <p>The NYS Supply Chain Manufacturing Initiatives Grant has been designed to help manufacturers understand and assess their management of suppliers, internal buyers, inventory, and communication to stakeholders against established best practices.</p> <p>Learn More</p> 	 <p>In today's manufacturing landscape, enterprises are confronted with a multitude of challenges, ranging from workforce shortages and supply chain disruptions to unyielding global competition. As technology continues to advance at a rapid pace, manufacturers find themselves in a race to adopt and leverage these innovations, or risk falling behind.</p> <p>Our Industry 4.0 Advancing Manufacturing Initiative is here to provide a guiding light, offering funding opportunities for technology projects that address the pressing issues faced by manufacturers. Additionally, we can assist you in demystifying the complexities of Industry 4.0, ensuring that you can harness these innovations effectively.</p> <p>Learn more</p> 

Advanced Materials

Technical Assistance Program

newyorkmep.org

- Overview
- Guidelines
- Project Inquiry
- Accelerator Inquiry
- Upcoming Events



The screenshot shows the website for the New York State Advanced Materials Manufacturing Initiative. The top navigation bar includes the New York Manufacturing Extension Partnership logo, social media icons for LinkedIn, Facebook, Twitter, and YouTube, and the MEP National Network logo. The main header features the text "NEW YORK STATE ADVANCED MATERIALS MANUFACTURING INITIATIVE" over a background of glowing blue and yellow molecular structures. Below the header is a yellow navigation bar with links for HOME, FUNDING, MANUFACTURING ACCELERATOR, and WORKSHOPS & EVENTS. The main content area is titled "Technical Assistance Grant" and includes a "PROGRAM OVERVIEW" section. This section explains that FuzeHub is administering the program, which provides grant funding for NY MEP Centers to assist industry partners in replacing materials with sustainable options. It lists services such as identification of sustainable material options, prototype refinement, design for manufacturing, negotiating partner and supplier agreements, retooling, and support for transition to new materials. Below this is an "APPLICATION REQUIREMENTS" section, which states that applications must be submitted by a NY MEP Center in conjunction with a qualified industry partner. At the bottom of the page, there are three call-to-action buttons: "Discuss a Potential Project >" (yellow), "Join the Advanced Materials Accelerator >" (dark blue), and "Check out the upcoming Advanced Materials Workshops and Events >" (light blue).

NEW YORK STATE ADVANCED MATERIALS MANUFACTURING INITIATIVE

[HOME](#) [FUNDING](#) [MANUFACTURING ACCELERATOR](#) [WORKSHOPS & EVENTS](#)

Technical Assistance Grant

PROGRAM OVERVIEW

FuzeHub is administering an Advanced Materials Technical Assistance Program, which provides grant funding opportunities for NY MEP Centers to provide assistance to Industry Partners who are looking to replace materials in their products with more sustainable options.

This funding is available directly to NY MEP Centers to engage small to medium sized manufacturing prospects and provide services for relevant projects, including:

- Identification and selection of sustainable material options
- Prototype refinement
- Design for manufacturing (including design for sustainability and design for regulatory consideration)
- Negotiating partner and supplier agreements and managing logistics
- Retooling to handle new or refined processes as a result of a material replacement
- Support to transition to new materials and/or manufacturing processes
- And more.

APPLICATION REQUIREMENTS

Applications must be submitted by a NY MEP Center, in conjunction with a qualified Industry Partner. If you are a NY-based startup or manufacturer with less than 500 employees and would like to connect to your local NY MEP Center to discuss a potential grant application, please click the button below. [Read full grant guidelines.](#)

[Discuss a Potential Project >](#)

[Join the Advanced Materials Accelerator >](#)

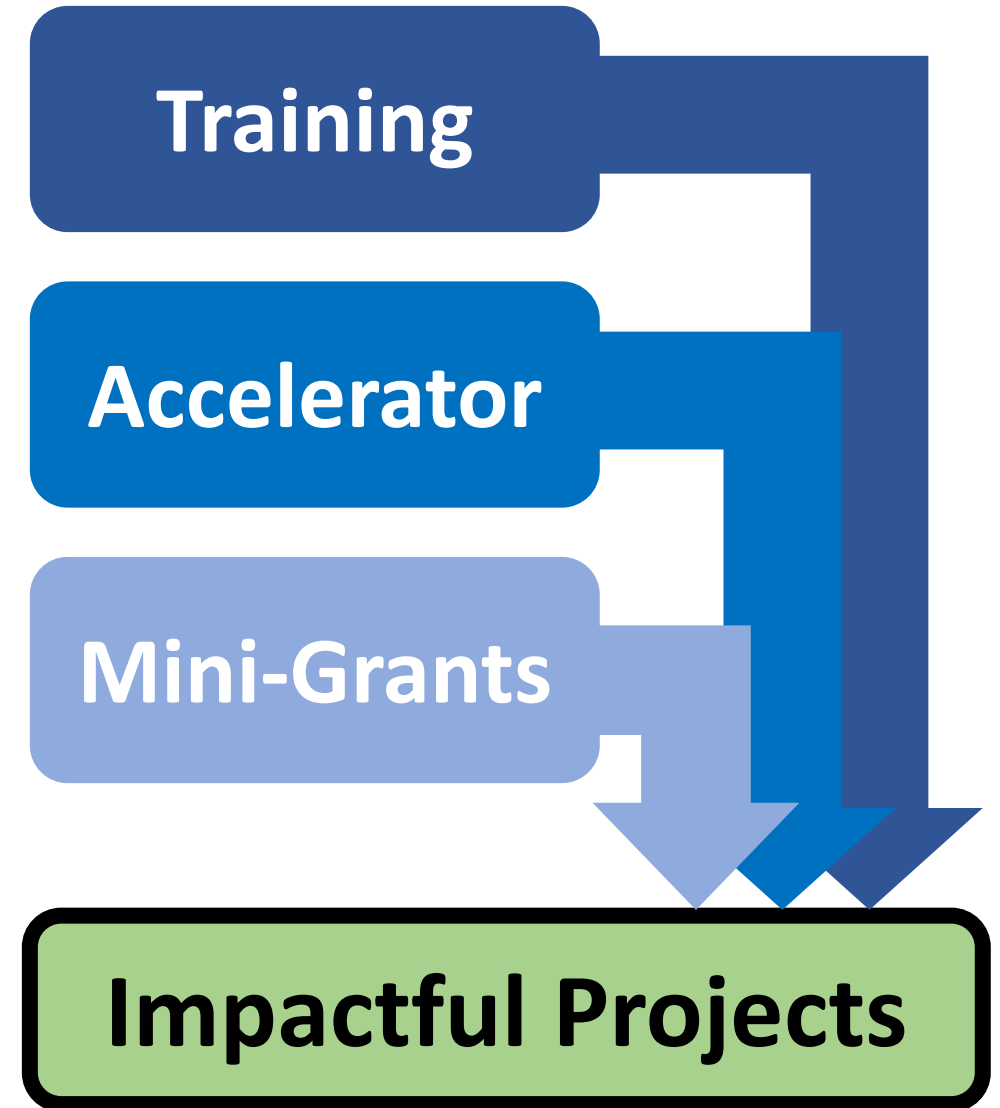
[Check out the upcoming Advanced Materials Workshops and Events >](#)

Advanced Materials

Technical Assistance Program

Program combines 3 elements:

- **Workshops/Webinars**
Events and training to learn about and leverage materials-related resources
- **Accelerator**
Manufacturing Readiness Cohort
- **Mini-Grants**
Up to \$20,000 in NY MEP assistance



Advanced Materials

Technical Assistance Program

Funding Details:

- **Company Requirement**

NY-Based, <500 employees, valid DUNS and manufacturing-related NAICS

- **Application**

Must work with a NY MEP Center

- **Awards**

10 awards, maximum \$20,000 each with 1:1 matching requirement, to support a 12 month project

Grant

Match

**\$20k
Max**

**\$10k
Cash**



**\$10k
In-Kind**



\$40k Total Project



Up Next...

Advanced Materials

Mike Marvin (NextCorps)

NextCorps is the New York State Finger Lakes Region Manufacturing Extension Partnership Center

NextCorps Manufacturing Accelerator

Virtual Materials with Individualized Support

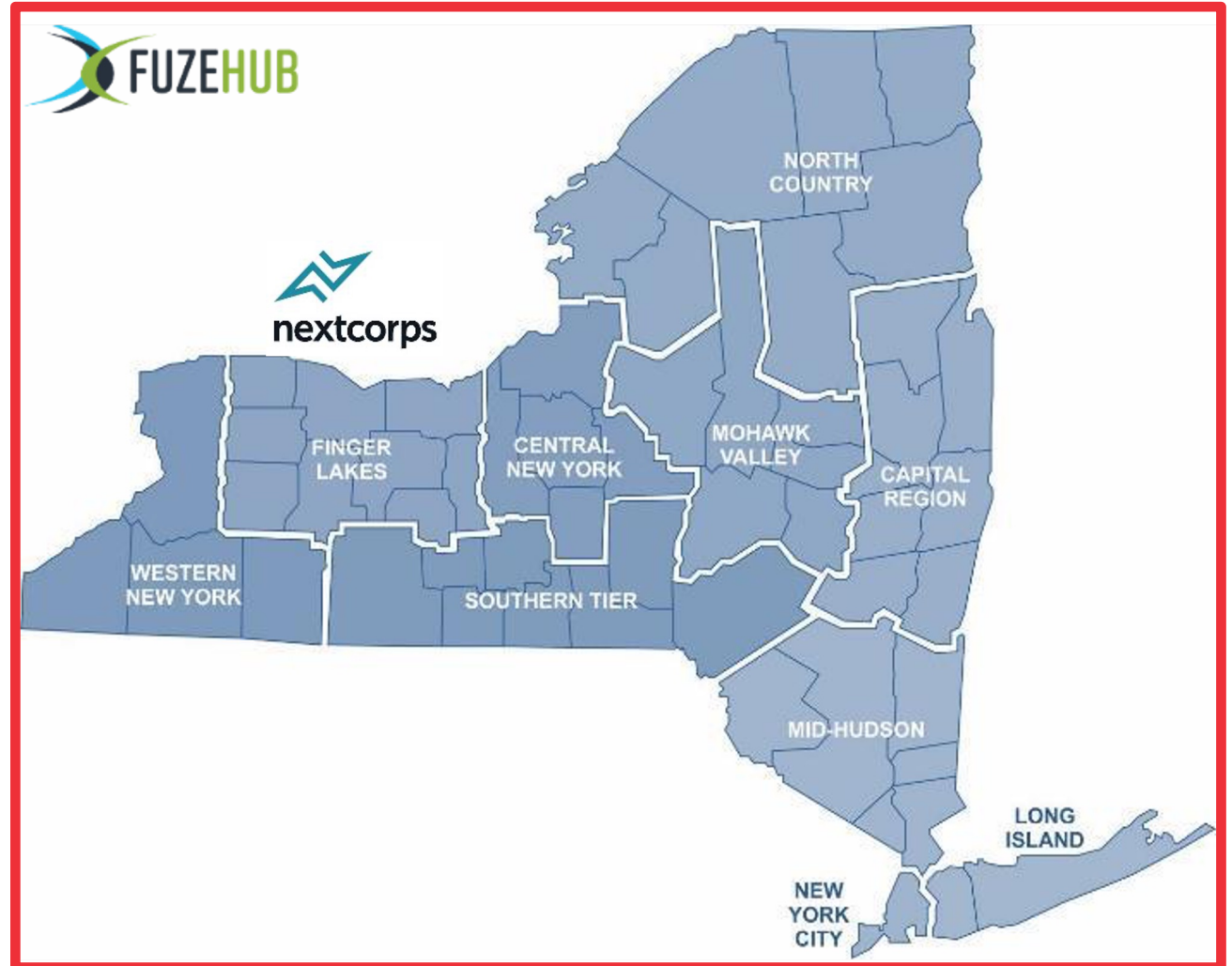
The program provides new product teams with a path to go from where they are on a step-by-step basis toward controlled, predictable production at scale suited for market needs

Mike Marvin - mike.marvin@nextcorps.org



**MEP • MANUFACTURING
EXTENSION PARTNERSHIP**

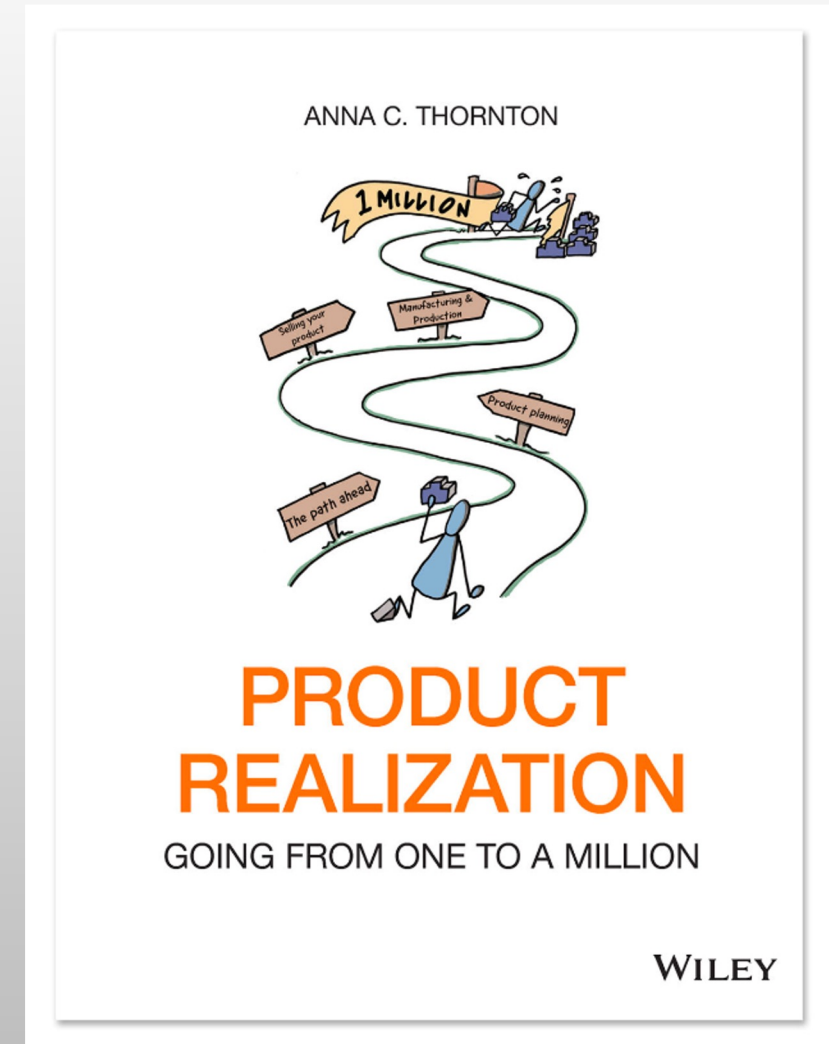
NATIONAL INSTITUTE OF
STANDARDS AND TECHNOLOGY
U.S. DEPARTMENT OF COMMERCE



Program Content

NextCorps Manufacturing Accelerator

- Materials developed by NextCorps, RIT, Innovation Works, and CCMR
- U.S. Department of Defense (DoD) MRL metrics (dodmrl.com)
- Materials derived from the U.S. Department of Energy (DoE) Build4Scale curriculum (build4scale.org)
- *Product Realization: Going From One to a Million* by Anna C. Thornton



NextCorps Manufacturing Accelerator

Virtual Materials with Individualized Support

A Product stage assessment is used to begin the program

This helps teams acknowledge the work they have completed and plan for the work yet to be done

Includes steps that are often invisible to those that don't have extensive experience in manufacturing

<https://www.surveymonkey.com/r/WHZSNPH>

NextCorps Hardware Product Stage Assessment (v1.1.1)

Welcome! This assessment will estimate your hardware product's stage of development, manufacturing readiness level (MRL), and technology readiness level (TRL).

After completing it, you'll receive an email with a personalized **product roadmap tool** that looks like the one below. It will include your recommended next steps to reach manufacturing.

Total questions: 38

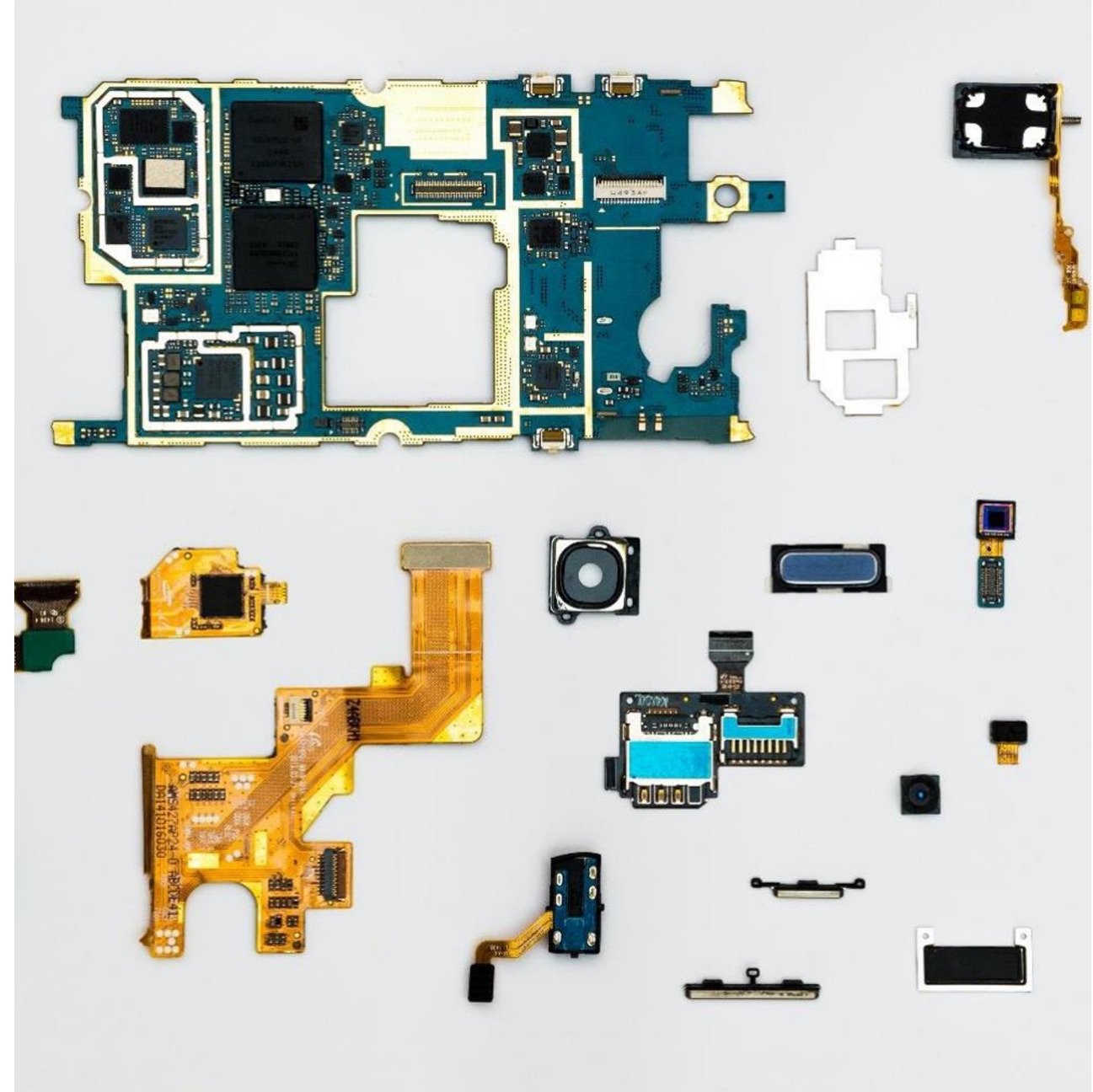
Approximate time to complete: 15 minutes

Product roadmap tool preview:

NEXTCORPS MANUFACTURING ACCELERATOR PRODUCT ROADMAP									
Approx. TRL	Approx. MRL	Product Stage	Prototype Stage	Testing Stage	Task	Task Status	Plan to Complete Task	Team Lead	Due Date
1	1	Concept / Idea / Research	Pre-Engineering Prototype (Pre-EP)	MVP / Pre-Alpha	Target customer with specific problem identified.	Complete	Learn team date all areas, connector addressing	ABC	10/20
					Customer requirements defined and translated into technical specifications.	Complete	Learn team date all areas, connector addressing	ABC	10/20
					Initial research on selected product design and manufacturing processes.	Complete	Learn team date all areas, connector addressing	ABC	10/20
2	2	Proof-of-concept / Lab / Benchtop	Pre-Engineering Prototype (Pre-EP)	MVP / Pre-Alpha	Technical concept based on a single build, no sub-components.	N/A	Learn team date all areas, connector addressing	ABC	10/20
					Full sub-components built independently as a proof of concept.	Complete	Learn team date all areas, connector addressing	ABC	10/20
					All sub-components into a single build file & write the product customer requirements, including the full product.	Complete	Learn team date all areas, connector addressing	ABC	10/20
3	3	Working Prototype	Engineering Prototype (EP)	Alpha	Full build of sub-components with all production quality testing.	In Progress	Learn team date all areas, connector addressing	ABC	10/20
					Product engineering tested and verified the product specifications meeting goals.	Unsure	Learn team date all areas, connector addressing	ABC	10/20
					Build file & write the full product customer requirements, including the full product.	To Do	Learn team date all areas, connector addressing	ABC	10/20
4	4	Working Prototype	Engineering Prototype (EP)	Alpha	Build production process and test parts to customer needs.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Write plans to customer needs.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Write plans to customer needs.	To Do	Learn team date all areas, connector addressing	ABC	10/20
5	5	Working Prototype	Engineering Validation Test (EVT)	Alpha	Full build of sub-components with all production quality testing.	In Progress	Learn team date all areas, connector addressing	ABC	10/20
					Product engineering tested and verified the product specifications meeting goals.	Unsure	Learn team date all areas, connector addressing	ABC	10/20
					Build file & write the full product customer requirements, including the full product.	To Do	Learn team date all areas, connector addressing	ABC	10/20
6	6	Working Prototype	Engineering Validation Test (EVT)	Alpha	Build production process and test parts to customer needs.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Write plans to customer needs.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Write plans to customer needs.	To Do	Learn team date all areas, connector addressing	ABC	10/20
7	7	Pre-Production / Pilot Line / Production Representative	Production Validation Test (PVT)	Pilot	Final official production run at a selected quantity (1,000-10,000) of full units meet requirements to be available to customer.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Quality assurance and process controls in place.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Product design frozen.	To Do	Learn team date all areas, connector addressing	ABC	10/20
8	8	Production / Manufacturing	Production Validation Test (PVT)	Pilot	Manufacturing processes and testing verified, confirmed to meet all customer needs, including customer requirements.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Learn team date all areas, connector addressing.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Learn team date all areas, connector addressing.	To Do	Learn team date all areas, connector addressing	ABC	10/20
9	9	Production / Manufacturing	Production Validation Test (PVT)	Pilot	Manufacturing processes and testing verified, confirmed to meet all customer needs, including customer requirements.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Learn team date all areas, connector addressing.	To Do	Learn team date all areas, connector addressing	ABC	10/20
					Learn team date all areas, connector addressing.	To Do	Learn team date all areas, connector addressing	ABC	10/20

10-Week Curriculum

1. Product Development & Specifications
2. BOM and BOP
3. Cost and Risk Management
4. Introduction to Quality
5. Design for Manufacturing
6. Design for Sustainability – at RIT
7. Advanced Materials – at Cornell
8. Working with Manufacturers & Suppliers
9. Quality / Testing / Certifications
10. Considerations for Scale



NextCorps Manufacturing Accelerator

Virtual Materials with Individualized Support

Participants in the program will produce materials needed for manufacturing their product, including:

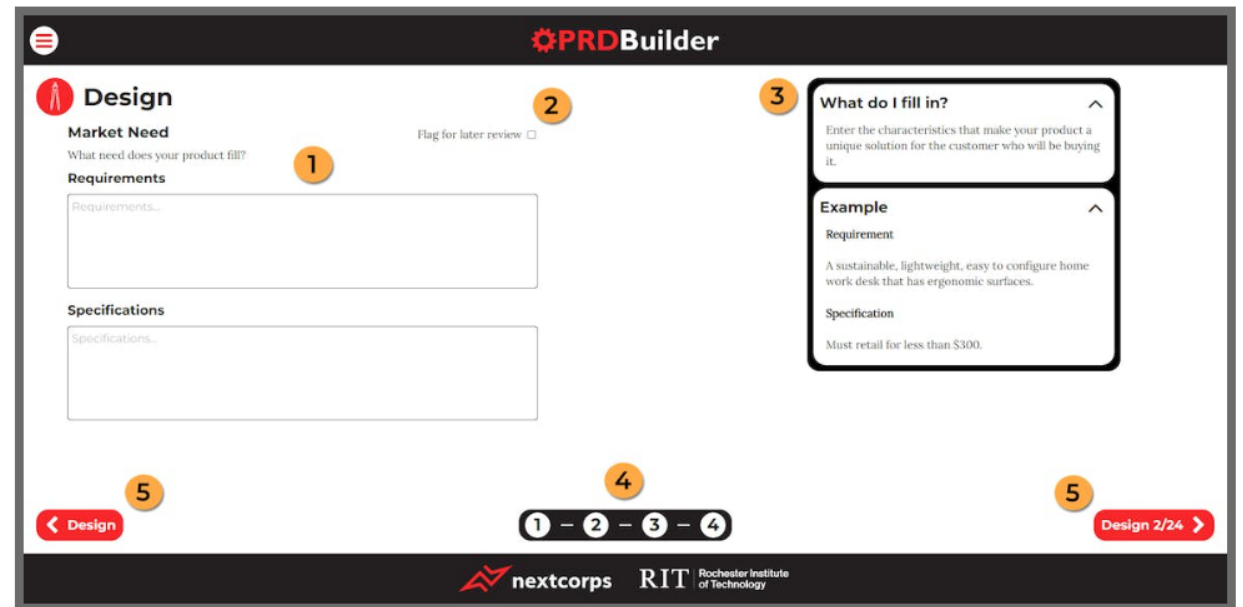
1. **Product Requirements Document**
(includes customer requirements and business requirements such as product cost targets and production volumes)
2. **Bill Of Materials**
3. **Technical Drawings with dimensions and tolerances**
4. **Bill Of Process / Assembly Instructions**

PRD Builder



Help Along the Way

- 1 Here you will fill out information for each section of the PRD. Some sections have different layouts, but most follow the "Requirements" and "Specifications" layout here. See the "Market Need" section for more information.
- 2 You can check this box to "flag" a question for later. This will place a flag next to it in the sidebar menu and mark the section in the final review page.
- 3 To the side of each section there are a number of FAQ style questions with more information for the section as well as an example.



What you'll be prepared to do

The Manufacturing Accelerator Program provides participants with the knowledge to create roadmap projects and engage suppliers and contract manufacturers

Roadmap projects

MRL Assessment pinpoints priority areas to
Provides a framework for creating the roadmap
based on priorities

Engaging contract manufacturers and suppliers

Learn the basics of Intellectual Property
Speak the language of manufacturing
Understand the needs of other manufacturers

Manufacturing Readiness Level (MRL)

Developed by the Department of Defense (DOD) to assess the maturity of manufacturing processes

Material Solutions Analysis				Technology Development		Engineering and Manufacturing Development		Production and Deployment	Operations and Support
Basic manufacturing Implications Identified	Manufacturing Concepts Identified	Manufacturing Proof of Concept developed	Capability to produce the technology in a laboratory environment	Capability to produce prototype components in a production-relevant environment	Capability to produce a prototype system or subsystem in a production-relevant environment	Capability to produce systems, subsystems or components in a production-representative environment	Pilot line capability demonstrated. Ready to begin low-rate production	Low-rate Production demonstrated. Capability in place to begin Full-rate Production	Full-rate Production demonstrated and lean production practices in place
1	2	3	4	5	6	7	8	9	10

Manufacturing Readiness Level (MRL) Tools

The Manufacturing Accelerator Program provides tools to assist participants in assessing their MRL's so that they can know where the risks are for the company and allocate resources effectively

Product Stage Assessment

15 minute survey

Includes TRL, MRL & Prototype Levels

Detailed MRL Assessment

Pinpoints Manufacturing Readiness

Nine “threads”, 22 sub-threads, 10 Readiness Levels

Indicates level of risk for production scaling

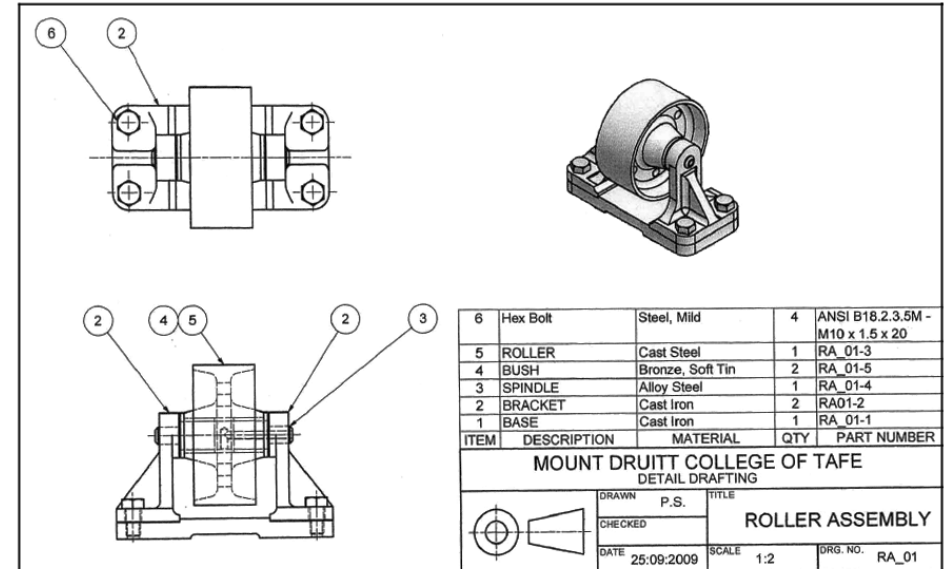
Example Roadmap

Project Number	Project Name	Status	Due Date	Team Lead	Project Description	Suppliers & Costs	Sub-Thread	Start MRL	End MRL	Start Prototype Level	End Prototype Level
1	Engineering Prototype Development	To Do	2/25/2022	Product Lead	1. Complete Product Requirements Document (PRD)	Contract Manufacturer #1 (\$10,000)	A.1	2	3	Pre-EP (Pre-Engineering Prototype)	EP (Engineering Prototype)
					2. Complete Bill of Materials (BOM) & drawing package		A.2	2	3		
					3. Assemble systems into single looks-like & works-like prototype		B.1	2	3		
							B.2	3	4		
2	Quality Consulting	To Do	3/23/2022	Operations Director	1. GD&T Drawings	Quality Consulting Group #1 (\$7,500)	F.1	4	5	EVT (Engineering Validation Test)	EVT (Engineering Validation Test)
					2. Define testing and acceptance criteria		F.2	4	5		
					3. Document Manufacturing Quality Plan		H.1	4	5		
3	Manufacturing Assessment, Consulting & Cost Analysis	To Do	10/13/2022	Product Lead	1. Manufacturing cost analysis	Contract Manufacturer #1 (\$15,000), Consultant #2 (\$4,000)	A.1	5	7	EVT (Engineering Validation Test)	DVT (Design Validation Test)
					2. Production-ready design for all parts and tooling		A.2	5	7		
					3. First build of multiple units with production-quality tooling		C.1	3	5		

Engaging Contractors and Suppliers

Be Prepared at your first meeting with a prospective contract manufacturer

- Treat contract manufacturers like they are prospective investors – they are experts at deciding if your business is worth their time
- They want to be sure you know who your customers are
- Have **evidence** that you've done your homework for product design, quality metrics, required regulatory approvals and certifications, and have sufficient financial resources to pay tooling costs, component materials inventory and distribution channel costs



Manufacturing Accelerator Application



- Use this link to Register
<https://forms.gle/P2kWZk4o2NMEHfGA6>

Thank You!

Mike Marvin

mike.marvin@nextcorps.org



Advanced Materials

Technical Assistance Program

Next Steps:

- Check newyorkmep.org
- Now – Apply for Accelerator
- Jan 1 – Mini-Grant Applications Open
- Jan 24 – First Event (Webinar):
Advanced Materials: Transforming Every Aspect of Life



The screenshot shows the website for the New York State Advanced Materials Manufacturing Initiative. The header includes the New York Manufacturing Extension Partnership logo and social media icons for LinkedIn, Facebook, Twitter, and YouTube. Navigation links include 'About', 'Adv Manufacturing Initiative', 'Projects', and 'Resources'. The main banner features the text 'NEW YORK STATE ADVANCED MATERIALS MANUFACTURING INITIATIVE' over a background of glowing blue and yellow molecular structures. Below the banner is a navigation bar with links for 'HOME', 'FUNDING', 'MANUFACTURING ACCELERATOR', and 'WORKSHOPS & EVENTS'. The main content area is titled 'Technical Assistance Grant' and includes a 'PROGRAM OVERVIEW' section. The overview text states that FuzeHub is administering an Advanced Materials Technical Assistance Program, providing grant funding opportunities for NY MEP Centers to assist industry partners in replacing materials with more sustainable options. It also mentions that funding is available directly to NY MEP Centers for small to medium-sized manufacturing prospects and lists several services provided, such as identification of sustainable material options, prototype refinement, design for manufacturing, negotiating partner and supplier agreements, retooling, and support for transition to new materials. Below the overview is an 'APPLICATION REQUIREMENTS' section, which states that applications must be submitted by a NY MEP Center in conjunction with a qualified industry partner. At the bottom of the page, there are three call-to-action buttons: 'Discuss a Potential Project >', 'Join the Advanced Materials Accelerator >', and 'Check out the upcoming Advanced Materials Workshops and Events >'.

NEW YORK
Manufacturing
Extension Partnership

in f t y

MEP
National
Network

About ▾ Adv Manufacturing Initiative ▾ Projects Resources ▾

NEW YORK STATE ADVANCED MATERIALS MANUFACTURING INITIATIVE

HOME FUNDING MANUFACTURING ACCELERATOR WORKSHOPS & EVENTS

Technical Assistance Grant

PROGRAM OVERVIEW

FuzeHub is administering an Advanced Materials Technical Assistance Program, which provides grant funding opportunities for NY MEP Centers to provide assistance to Industry Partners who are looking to replace materials in their products with more sustainable options.

This funding is available directly to NY MEP Centers to engage small to medium sized manufacturing prospects and provide services for relevant projects, including:

- Identification and selection of sustainable material options
- Prototype refinement
- Design for manufacturing (including design for sustainability and design for regulatory consideration)
- Negotiating partner and supplier agreements and managing logistics
- Retooling to handle new or refined processes as a result of a material replacement
- Support to transition to new materials and/or manufacturing processes
- And more.

APPLICATION REQUIREMENTS

Applications must be submitted by a NY MEP Center, in conjunction with a qualified Industry Partner. If you are a NY-based startup or manufacturer with less than 500 employees and would like to connect to your local NY MEP Center to discuss a potential grant application, please click the button below. [Read full grant guidelines.](#)

[Discuss a Potential Project >](#)

[Join the Advanced Materials Accelerator >](#)

[Check out the upcoming Advanced Materials Workshops and Events >](#)

Advanced Manufacturing Initiative

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