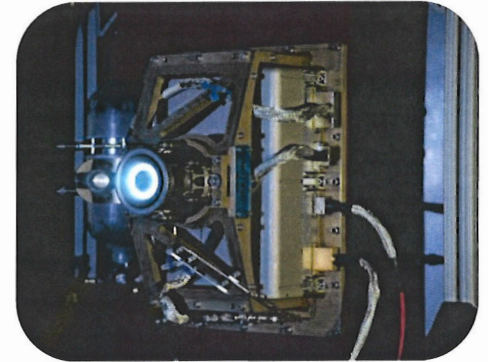


## The Commercialization Gap - R&D / Pilot Facilities

The Upper Peninsula of Michigan has a strong base of small and medium size advanced manufacturing companies. In addition, Michigan Technological University spins out a consistent pipeline of manufacturing/materials high-tech startups through innovators from engineering, advanced materials, material processing and other disciplines. Orbion Space Technology is one such startup.

MTEC SmartZone, serving both client bases, is consistently unable to provide one essential type of resource for these clients to enable successful commercialization - access to pilot and commercial demonstration facilities.



### Facts <sup>1</sup>

While large firms often have their own in-house pilot lines, SMEs typically cannot spend their limited funds to build and operate their own pilot line. Thus, SMEs secure third party-controlled pilot line capacity to meet their testing and validation needs. This is not an option in the Upper Peninsula of Michigan.

- Shortage of shared pre-industrial-scale production facilities in the U.S. at both the R&D- and pilot-scale production capacity ranges.
- Extends product development and qualification timelines for producers at every step of the supply chain.
- There are currently no shared pilot-scale facilities of this nature in the U.S.
- Meanwhile, Europe has developed a robust ecosystem of shared pilot-scale production lines (LiPLANET).

### Benefits & Impact

Federal/State Program Qualifications: Michigan HUB Zone; Michigan 48C energy community (per Metropolitan Statistical Areas); Justice40 adjoining area census tract. <sup>2</sup>

**Economic Growth** - Attracting new businesses, fostering innovation, and encouraging companies to establish local operations to provide meaningful career opportunities

**Industry Collaboration** - Foster collaboration between manufacturers including new technology, best practices and processes. JM Longyear seeks to collaborate with high-tech startups & advanced manufacturing companies in this facility. Revex Technologies will use the facility to further develop permanent solutions to mine tailings that will be suitable for mining companies like Highland Copper and Eagle Mine while supplying critical minerals via advanced technology applications.

**Workforce Development** - Enhance the skills of the local workforce through workshops, training programs, and certification programs. *A well-trained workforce is crucial*

**Applied Research & Development** - Attracting new businesses, fostering innovation, and encouraging companies to set up local operations

**Supply Chain Enhancement** - Strengthen the supply chain for various industries, which is valuable during disruptions or market fluctuations and vital for national security.

**Attracting Investment** - Companies are seeking to leverage advanced materials or explore innovative manufacturing methods. For instance, JM Longyear is pursuing investment in high-tech startups that will utilize this facility.

Sources 1) Li-Bridge 2) SBA HubZone Map: <https://tinyurl.com/47tsk8af>

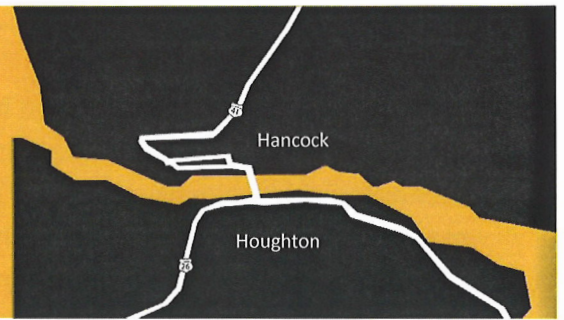


## Advanced Manufacturing & Materials Innovation Center (AMMIC)

### MTEC SmartZone with the support of Michigan Tech University Announce Economic Development Initiative

**PROJECT: Pilot Flex-Space Facility** to address nationwide gap in commercialization pathway

TOTAL ESTIMATED PROJECT COST = \$17.5M



### Michigan – Identified Commercialization Gap

Shared pilot facilities are open access test sites that bring innovations from the laboratory into industrial practice.

- Currently no shared pilot-scale facilities in the region.
- Pilots are a critical stage of development towards commercialization.
- State of Michigan has an opportunity to lead the way.

### MTEC SmartZone & MTU Immediate Pilot Needs

We have the entrepreneurs but are missing the key physical space and shared facilities needed

- Six university spinout startups- plastic recycling, hardwood timber, med-tech, battery recycling, others
- A leading space-tech manufacturing company
- Controlled Unclassified Information Center
- Wet lab space is needed to support emerging tech.

We do not want to lose these companies to other states.

### Solution – Flexible Pilot Manufacturing Facility

MTEC & Michigan Tech (\$100M+ R1 research) are pursuing development of an Advanced Manufacturing & Materials Innovation Center (AMMIC) to accommodate late-stage R&D, pilot-scale & commercial demonstrations.

### MTEC SmartZone

MTEC SmartZone is one the most successful Smart Zones in the state commercializing new startup technology companies.

In the last year, our clients have generated \$105.9 million in sales and \$32 million in investment, with a total \$597 million follow on funding since 2003.



Rendering of the proposed Advanced Manufacturing & Materials Innovation Center



*This facility will not only create jobs but also foster a vibrant ecosystem for advanced materials and advanced manufacturing companies. By leading this effort, we will support long-term prosperity for our community and for the state of Michigan”*

### David Rowe

CEO, MTEC SmartZone  
mtecsz.com  
drowe@mtecsz.com  
(720) 252-4209