

Materials Advancement and Research Solutions Tech Hub

Consortium Planning

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MARS Hub Overview

The Materials Advancement and Research Solutions Tech Hub (MARS Hub) is a burgeoning regional technology hub for advanced materials science—specifically synthetic diamond and rare isotopes— in the Lansing area. These advanced materials are driving groundbreaking improvements in semiconductor chips, power electronics, defense and aerospace testing and components, medical imaging and sensing, quantum computing, and other applications essential to U.S. national and economic security. The Lansing region’s scientific leadership in synthetic diamond, rare isotopes, and particle accelerators; skilled workforce in advanced manufacturing; and record of successful collaboration to attract, grow, and scale advanced materials companies is the foundation of the MARS Hub.

MARS Vision

LEVERAGE OUR REGION'S UNIQUE EXPERTISE AND ASSETS TO DEVELOP A SUITE OF COORDINATED PROGRAMS, INCLUDING CORPORATE INNOVATION, BUSINESS INCUBATION AND ACCELERATION, TALENT RECRUITMENT, AND EQUITY-ORIENTED WORKFORCE TRAINING.

Phased Approach

The MARS Hub provides an applied research and commercialization platform that marshals the capital region's assets and capabilities to help advanced materials companies scale. It will include a multitenant facility that will house economic development and small business supports, shared lab and technology testing resources, classrooms for workforce and education training, coworking spaces for visiting companies, and community programming. The Michigan State University Research Foundation applied for and received a strategy development grant from the U.S. Economic Development Administration's Regional Technology and Innovation Hub program to serve as a catalyst for MARS Hub programming and accelerate its development. A portion of grant funds have been used to accomplish the first phase of project work, positioning the MARS Hub to move to the implementation phase of the project.

PHASE ONE

- Affirm MARS's vision
- Create strategic program priorities
- Form key partnerships
- Establish governance structures
- Set action plans for implementation



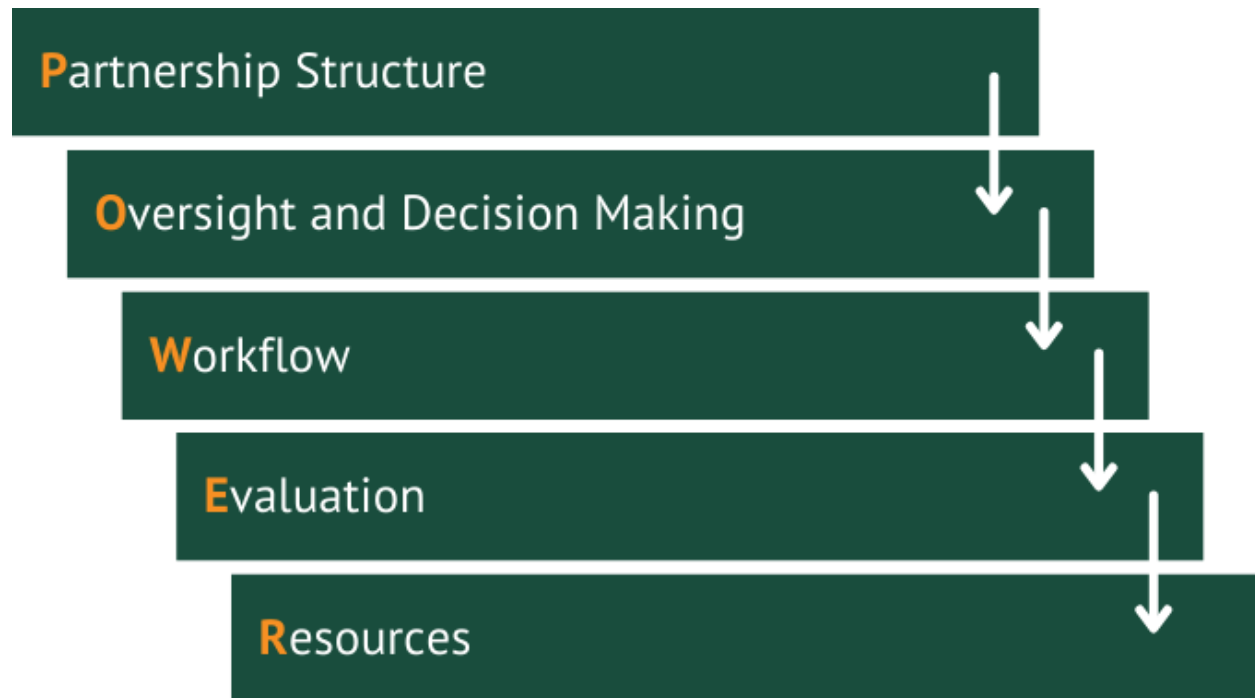
PHASE TWO

- Launch MARS programs
- Open MARS Hub facility
- Recruit participants
- Monitor progress



MARS Hub Consortium Governance Model

The MARS Hub has adopted an agile governance structure with clear decision-making protocols, lines of responsibility, and public-private industry representation. The region's assets provide the scaffolding to create a successful Tech Hub that will drive economic development of new and existing businesses. The Foundation will employ a POWER governance model, based on best practices identified in successful regional collaborations:¹



Partnership Structure, Oversight, and Decision Making

The MARS Hub strategy, operations, and implementation will be managed and informed by a lead entity/regional innovation officer (LE/RIO), steering committee, workgroups, taskforces, and advisors to ensure the MARS Hub creates and maintains a commitment to regional economic development focused on advanced materials technologies and manufacturing. The structure and functions of each participant type can be found below.

¹ <https://www.brookings.edu/articles/a-governance-framework-for-regions-competing-for-tech-hubs-and-other-new-federal-investments/>

Consortium Members

Lead Entity and Regional Innovation Officer



MICHIGAN STATE UNIVERSITY
RESEARCH FOUNDATION

Steering Committee



MICHIGAN STATE UNIVERSITY



Fraunhofer
USA



Workgroups

Technological innovation

Community engagement

Workforce development

Economic development

Task Force

Supports time-limited
strategic initiatives



Tech Hub Advisors

LE/RIO

The Foundation will continue to serve as the LE of the MARS Hub. The Foundation's director of research parks will serve as the MARS Hub's RIO. The LE/RIO is responsible for both strategic and operational objectives, including:

- **Ecosystem building:** Connect stakeholders, including entrepreneurs, investors, and business owners, to the services, supports, and programming available through the MARS Hub
- **Partnerships and collaboration:** Work with local, national, and international organizations to enhance the region's technological capabilities and visibility
- **Funding and resource allocation:** Identify and secure resources, including funding, facilities, and talent, to support innovation initiatives and tech development
- **Monitoring and evaluation:** Track the impact of innovation initiatives and programs, assessing their effectiveness, and making data-driven decisions to improve outcomes

Steering Committee

The steering committee comprises key leaders at partner organizations critical to the success of the MARS Hub's core functions. Committee members have demonstrated a region-first commitment to the MARS Hub's success and have spent the past few months establishing a working relationship of trust and mutual respect. The steering committee's role is to work with the LE/RIO to create an overarching vision and goals, identify key projects and program areas and necessary resource allocation, and ensure alignment across various workgroups.

The committee will facilitate collaboration, monitor the performance and impact of initiatives, and adapt strategies to address emerging challenges and opportunities. Additionally, the committee will develop policies, advocate for regional interests, and ensure effective communication and reporting to community and regional stakeholders.

STEERING COMMITTEE MEMBERS

Michigan State University Research Foundation
Michigan State University
Capital Area Michigan Works!
Lansing Economic Area Partnership
Capital Area Manufacturers Council
Fraunhofer USA Center Midwest

Workgroups

The role of MARS Hub workgroups is to develop and implement strategic action plans to advance **workforce development, economic growth, community engagement, and technology innovation**. Each workgroup is led by a steering committee member who coordinates efforts among various stakeholders, including businesses, educational institutions, and government agencies, to ensure alignment and collaboration. The workgroup identifies necessary resources, monitors progress, and adjusts strategies as needed to address challenges and seize opportunities. It also engages in capacity building, advocating for supportive policies, and promoting initiatives to enhance the MARS Hub's impact and effectiveness within the broader community and industry.

Task Force

The role of MARS Hub task force is to implement or execute time-limited strategic initiatives. The task force will comprise stakeholders who can support strategic outcomes and decision making.

MARS Hub Advisors

The MARS Hub has established a broad set of advisors that serve as advocates in the community, provide feedback on MARS Hub programming and concepts, and keep the Hub steering committee and workgroups apprised of trends and new developments in technology, economic, workforce, and community sectors.

Workflow

The Foundation, in partnership with the steering committee, has established expectations around workflow, meeting cadence, and responsibilities. This process will ensure clear accountability, support decision making, increase transparency, and reduce operational risks by creating a reliable and recurring structure to facilitate implementation and track progress. A summary can be found in Exhibit 1.

EXHIBIT 1. MARS Hub Participant Summary

Participant	Frequency of Workflow	Responsibility
Regional innovation officer / Foundation Staff	Ongoing	<ul style="list-style-type: none">• Vision and MARS Hub operations• Key decision making• Monitoring key evaluation metrics• Ongoing MARS Hub communications
Steering Committee	Bimonthly in-person meetings	<ul style="list-style-type: none">• Strategy/goal development• Partnership building• Identification of key collaborators• Recommendation for programs• Advocacy
Workgroups	Quarterly in-person meetings	<ul style="list-style-type: none">• Implementation planning• Performance metrics• Partnership building• Quarterly updates to steering committee• Recruiting program participants
Task force	Monthly/quarterly as needed	<ul style="list-style-type: none">• Opportunistic project strategy development• Implementation planning• Deliverable based updates to steering committee
Advisors	Semiannual webinar Ad hoc individual meetings	<ul style="list-style-type: none">• Advocacy• Identifying project feasibility• Proving MARS Hub with sector updates• Recruiting program participants

Evaluation

Key MARS Hub projects will be managed by multiple stakeholders in the region, including economic and workforce development organizations, intermediate school districts, and innovative manufacturers. Given this diverse set of players, robust program evaluation support will be essential to ensure the programming aligns with the overall MARS Hub goals and continues to meet the region's needs.

The RIO/LE and workgroups will support the evaluation of key MARS Hub programming by providing expertise and insight in relevant areas to help define meaningful program metrics. They will also ensure that program metrics are aligned with the overall strategy of the MARS Hub. Program leads will work with their corresponding workgroup to identify key performance indicators (KPIs) such as participant engagement, business growth, technology acquisition, and workforce skill attainment. Program participants will be responsible for providing quarterly progress and annual program reports to the steering committee, who will review and make suggestions for refinement as needed. The Hub will use the following evaluation framework to assess each program area (Exhibit 2).

EXHIBIT 2. MARS Hub Program Evaluation Framework

Key Activities
Establish data collection processes <ul style="list-style-type: none">• Identify data source for each KPI• Determine when to collect data for each indicator• Create data sharing agreements for each indicator, as needed• Assess technical needs with database administrators• Review existing data collection efforts for alignment (e.g., survey, focus group, state reporting)• Create standardized reports and queries
Establish feasible goals for each indicator using year-one baseline data <ul style="list-style-type: none">• Review prior year's data, if feasible• Determine long-term (five- to ten-year) goal• Create annual growth targets for each indicator
Collect and analyze evaluation data for each indicator <ul style="list-style-type: none">• Collect data for each indicator• Analyze collected data to identify trends, patterns, and areas for improvement• Review progress toward goals
Implement continuous improvement <ul style="list-style-type: none">• Share quarterly progress and annual evaluation results to steering committee• Steering committee will use evaluation results to make necessary adjustments to the training and technical assistance programs and funding decisions• Gather stakeholder feedback on the data collection process• Continually iterate and refine approach based on feedback

Resources

The Foundation currently provides an array of programming including venture creation and investing, research parks and innovation centers, and managing grant programs to support new and growing entrepreneurs, researchers, and inventors. This experience will be vital in supporting the MARS Hub’s long-term sustainability and financial health. By serving as the LE/RIO of the MARS Hub, the Foundation can deploy its expertise, relationships, and systems to create a funding model that sustains MARS Hub operations beyond federal planning and implementation grants. The MARS Hub plans to build on existing partnerships and regional assets, adapting or supplanting current programming with MARS Hub–specific resources. Funding streams could include:

EXHIBIT 3. MARS Hub Funding Strategy

Source	Type
MARS Hub short- and long-term facility tenants <ul style="list-style-type: none">• Two to three anchor tenants• Five to ten incubator businesses• Business supports• Meeting space	Rent
MARS Hub programming <ul style="list-style-type: none">• Equipment and lab certification training• Workforce development programs	Program fees Going Pro Talent Fund
Mission-aligned regional businesses <ul style="list-style-type: none">• Going PRO Talent Fund	Program sponsorships
Federal grant funding, including NSF, DOE, DoD and EDA opportunities	Grants
State of Michigan Department of Labor and Economic Opportunity	Grants
Michigan Economic Development Corporation	Grants and low-interest startup funds
Michigan and mission-aligned philanthropic organizations	Grants

Action Planning

The MARS Hub activities were launched in April 2024 and included multiple meetings with an extensive list of stakeholders (Appendix A). From this group, the Foundation identified key organizations/leaders to serve as members of the steering committee. The steering committee participated in visioning and strategic planning sessions to identify specific objectives that the MARS Hub will pursue to ensure success, including:

- A diversified funding model that includes sustainable revenue streams

- Well-defined programmatic strategies that support technology advancement, maturation, and transfer; workforce development; business and entrepreneurial development; and intentional community engagement
- Identification of three to eight projects that support MARS Hub development and position it as a leader in advanced materials

Steering committee members led workgroups in economic development, technological innovation, workforce development, and community engagement to identify strategies and potential programming to accomplish each objective. Steering committee and workgroup objectives and corresponding strategies are summarized in Exhibit 4.

EXHIBIT 4. MARS Hub Strategy Summary

Objective	Strategy	Responsible Party
A diversified funding model that includes sustainable revenue streams	Create a tenant agreement strategy including space for anchor businesses, smaller startup businesses, and related business-to-business services	Steering committee
	Monitor and apply for applicable state and federal grant opportunities	LE/RIO
	Identify sponsorship opportunities for key program areas such as education and outreach	Steering committee
	Cultivate relationships with private philanthropy/foundations that have aligned missions in STEM education, economic and workforce development, technology	LE/RIO and steering committee
Identification of three to eight projects that support the development of the MARS Hub and position it as a leader in advanced materials	Create and distribute a request for proposals for projects that prioritizes identified MARS Hub and workgroup objectives	LE/RIO
	Create a project selection committee, including steering committee members	LE/RIO
	Review and select proposals using project rubric	Project selection committee
Well-defined programmatic strategies that support technology advancement, maturation, and transfer; workforce development; business and entrepreneurial development; and intentional community engagement	Technology Advancement <ul style="list-style-type: none"> • Provide existing businesses with low-risk opportunities to explore new technologies • Expand partnerships with the Michigan State University Facility for Rare Isotope Beams and Fraunhofer USA Center Midwest to identify and support commercialization of new technologies as appropriate • Engage with regional and national partners to assess emerging technologies and corresponding MARS Hub supports 	Technology workgroup

Objective	Strategy	Responsible Party
	Workforce Development <ul style="list-style-type: none"> Engage local manufacturers and engineering firms to identify skills needed to align with manufacturing needs, from entry level to engineering Partner with employers to design training programs that reflect the latest industry standards and technologies Increase access to career and technical education programs in high schools, offering students hands-on experience in fields such as advanced manufacturing, engineering, and materials science Collaborate with universities and community colleges to offer more degree programs and specialized certifications that align with the needs of advanced materials manufacturing 	Workforce development workgroup
	Economic Development <ul style="list-style-type: none"> Create and staff a unified “one-stop-shop” to support companies entering Michigan in the advanced materials sector Develop supports to scale local and regional advance material startups Create a foreign direct investment strategy that includes a formal soft-landing zone to ease barriers to entry Develop program to foster contract research, commercialization, and private sector support for aligned university research programs Increase success of tenants and MARS related businesses by providing onsite support services aligned with business development 	Economic development workgroup Technology workgroup
	Community Engagement <ul style="list-style-type: none"> Support K–12 education by creating an onsite multiuser robotics lab for middle and high school robotics across the region Partner with teachers and other regional organizations to provide lesson-plans and engagement opportunities for K–12 students Highlight MARS Hub technologies through community-based programs, such as facility tours, visiting lecture series, workshops, and interactive exhibits Establish a central space for community members, educators, and local businesses including common meeting spaces, rotating commercial kitchen space, amphitheater and playground 	Community engagement workgroup

Supporting Communications Strategy

Throughout the MARS Hub development and implementation phases, consistent and transparent communication will be vital to ensuring ongoing community support and partnerships. The following communications strategy will support the Foundation in engaging with community members, businesses, and economic developers, as well as other stakeholders with interest in the facility's development. This strategy will:

- Inform stakeholders benefits and activities that will be realized through the MARS Hub facility
- Gather feedback on program strategies, site benefits, and community needs
- Update stakeholders of the status of the MARS Hub facility development

Stakeholders

A variety of community and regional stakeholders will benefit from the MARS Hub's generation of economic opportunities and technology innovation. The following provides background on why each stakeholder group will want to be engaged in the new facility's development.

Neighboring residents: Surrounding residents want to know how the facility's proximity will affect them, including concerns about increased traffic, environmental impacts, and how it will benefit their community.

Regional manufacturers: Manufacturers need to be educated on how the MARS Hub could improve their production capabilities and how they can partner to access this technology.

K–12 educators: Educators want to understand how they can partner with the MARS Hub to provide hands-on learning experiences students interested in pursuing tech-based careers (e.g., robotics teams).

Postsecondary educators: Colleges and universities are interested in how their curriculum can align with industry needs and collaboration opportunities for students (e.g., internships and research).

State agencies: Agencies such as the Michigan Department of Labor and Economic Opportunity and Michigan Economic Development Corporation have a vested interest in helping the MARS Hub attract funding and partnerships so it can meaningfully contribute to economic growth, business and talent attraction, and job creation.

Tactics

The Foundation and its consortium partners will use a variety of tactics to keep stakeholders updated on MARS Hub development. These tactics will be deployed prior to the launch of the facility to provide regular progress updates and create feedback opportunities for stakeholders.

Elevator Pitch

The steering committee will develop an elevator pitch that will be used by consortium members when talking to potential stakeholders about the MARS Hub and its significance to the region. While advanced technologies at the facility will have broad significance outside of the STEM fields, the MARS Hub's purpose may not be understood by stakeholders without a science or engineering background. Additional context and benefits can be added to suit any given audience based on their interests and values.

The elevator pitch will be extended to be a part of a promotional toolkit for consortium members that includes more robust talking points, plug and play content, and supporting imagery for sharing across their communication channels (e.g., social media, newsletters, etc.).

Website Updates

When: By December 2024

The current MARS Hub webpage focuses on the Lansing region's bid for designation as an Economic Development Authority (EDA) Tech Hub. It highlights the broad range of applications that the MARS Hub will support, the partners involved, and the evaluation criteria used for scoring the application to the EDA.

Additions to the website will include highlighting the MARS Hub's progress and potential. It should articulate how the facility will drive innovation, spur economic growth, and foster community partnerships. The webpage will emphasize the specific benefits for key stakeholders and outline how they can engage with the initiative. Additionally, it will include details on the consortium's current activities and provide a sign-up form for visitors to receive updates on the project.

Email Marketing

When: Bimonthly, starting in January 2025

The Foundation will issue an email communication every two months to keep stakeholders informed about the MARS Hub's progress and impact. The email could include content such as:

- **Project updates:** Latest milestones, new partners, and progress toward site selection and construction
- **Stakeholder spotlight:** Short Q&A article with a featured consortium or community member that highlights their excitement around the initiative, their role, and how they will benefit
- **Events:** Upcoming events that the consortium is hosting or attending and how others can get involved
- **In the news:** Links to articles that feature the MARS Hub or help to justify its importance to the region and future benefits to the region
- **Call to action:** Specific ways email recipients can provide input on the MARS Hub or share information about it with others

Public Webinars

When: Quarterly, starting in February 2025

The MARS Hub consortium will host quarterly webinars to engage with stakeholders that can benefit from the facility. The webinar format will include an introduction from a consortium member, presentations or discussions with guest speakers such as industry experts or community members, and interactive polls or Q&A to gather feedback. Webinar themes will include:

- **Quarter one:** MARS Hub vision and progress
- **Quarter two:** Industry benefits
- **Quarter three:** Community engagement
- **Quarter four:** Facility development and design preview

The webinar will be promoted through the bimonthly newsletter and consortium member communication channels.

Media Outreach

When: Based on major milestones, at least twice annually

The Foundation will partner with local and statewide media to feature stories about major facility or initiative milestones. This will include achievements such as EDA designation or securing funding, site selection, facility design plan finalization, and breaking ground. These stories will strike a tone that conveys enthusiasm about the project's impact on technology, industry innovation, the economy, and the local community. While the Foundation can serve as the primary media contact for this outreach, additional steering committee and workgroup members and stakeholders will be tapped to provide quotes or be interviewed, depending on the intent of the article. This will include scientists, local business or municipal leaders, community members, educators, manufacturers, economic developers, or elected officials. Media outlets for these stories may include:

- [Bridge Michigan](#)
- [Crain's Detroit Business](#)
- [Detroit Free Press](#)
- [Detroit News](#)
- [Lansing State Journal](#)
- [Michigan Business Network](#)
- [Michigan Public](#)
- [MLive](#)
- [MSU Today](#)
- [WILX](#)
- [WKAR](#)
- [WLNS](#)

Event Participation

When: At least six between February and December 2025

To generate interest and engage with potential stakeholders and partners, steering committee and workgroup members will represent the MARS Hub at both local and national events—especially those that they regularly attend. These events will provide opportunities for networking, sharing information about the facility’s capabilities and development progress, and uncovering ways that it can serve both organizations inside and outside of the Lansing region. Examples of industry events for consideration include:

- [International Conference on Advanced Materials Science and Engineering](#)
- [MedTech Conference](#)
- [Michigan Defense Expo](#)
- [International Manufacturing Technology Show](#)
- Semiconductor Day at [Oakland University](#) and [Wayne State University](#)

Organizations that may host events of interest may include:

- [Automation Alley](#)
- [Capital Area Manufacturing Council](#)
- [City of Lansing](#)
- [Detroit Regional Chamber](#)
- [Lansing Regional Chamber of Commerce](#)
- [Michigan Aerospace Manufacturers Association](#)
- [Michigan Economic Development Corporation](#)
- [Michigan Manufacturing Technology Center](#)
- [National Defense Industrial Association Michigan Chapter](#)

Consortium members will be surveyed to generate a more comprehensive list of events. Selection criteria will include the presence of key stakeholders and the event’s relevance to specific industry sectors that could benefit from the facility. Events offering speaking opportunities for consortium members to highlight the MARS Hub will also be prioritized.

Leave-Behind

When: Produced in February 2025

The Foundation will develop a concise one-page designed document (front and back) that clearly outlines the opportunity the MARS Hub presents, background on how the initiative started, benefits to potential users of the facility, and a clear call to action on how to get involved—driving people back to the webpage. This one-pager will be distributed at industry events, shared with partners, and used in media outreach to ensure clear, consistent messaging by all consortium members.

Timeline

Tactic	Timeline	Key Actions
Website updates	December 2024	<ul style="list-style-type: none"> Develop content (October-November 2024) Design updates (November-December 2024) Launch refreshed site (December 2024)
Email marketing	Bimonthly starting January 2025	<ul style="list-style-type: none"> Create template (December 2024) Content development (Three weeks prior to send date) Distribution (Every other month)
Quarterly webinars	Quarterly starting February 2025 (quarterly)	<ul style="list-style-type: none"> Invite guest speakers (Eight weeks prior) Webinar registration setup and promotional content development (Six weeks prior) Promote (In bimonthly emails) Execute webinars (Quarterly)
Media outreach	Twice annually (based on milestones)	<ul style="list-style-type: none"> Identify key milestones to promote (Quarterly) Develop press release (Two weeks prior to news release) Partner with media (Ongoing)
Event participation	February–December 2025	<ul style="list-style-type: none"> Survey consortium members (January 2025) Develop event calendar (February 2025) Register and determine event supply needs (Ongoing)
Leave-behind	February 2025	<ul style="list-style-type: none"> Develop content (January 2025) Design one-pager (February 2025) Finalize and print (February 2025)

Appendix A: MARS Hub Consortium Stakeholders and Advisors

Air Force Research Laboratory
Automation Alley
Capital Area District Library
Capital Area Manufacturing Council
Capital Area Michigan Works!
Capital Region International Airport
Centrepolis Accelerator
City of East Lansing
City of Lansing
Clinton County Regional Educational Service Agency
Eaton County Regional Educational Service Agency
Fraunhofer USA Center Midwest
Great Lakes Crystal Technologies
Hemlock Semiconductor
Ingham Intermediate School District
Ionetix
Lansing Community College
Lansing Economic Area Partnership
Lansing Economic Development Corporation
Lansing Regional Chamber of Commerce
Lansing Regional SmartZone
Lansing Public School District

LIFT: Manufacturing USA
Meridian Township
Michigan Defense Center
Michigan Department of Labor and Economic Opportunity
Michigan Economic Development Corporation
Michigan State University
MSU Facility for Rare Isotope Beams
MSU Innovation Center
MSU Regional Economic Innovation
MSU Research Foundation
MSU Research Foundation - Red Cedar Ventures
Niowave, Inc.
Progressive Companies
Shiawassee Economic Development Partnership
Tri-County Regional Planning Commission
United Way of South Central Michigan, Capital Area
University of Michigan
University Research Corridor
University of Michigan Innovation Partnerships
Waverly Community Schools



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