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INNOVATE MICHIGAN!

2026 Innovation Fellowship

Feasibility Study and
Roadmap Development for
an Industry-Led Circular
Economy Council in
Michigan

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INNOVATION FELLOWSHIP FINAL REPORT

Michigan Industry Circular Economy Council (MICEC)

Evaluating the feasibility of establishing an industry-led collaborative platform to accelerate circular economy implementation across Michigan.

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Prepared for: Michigan State University
Center for Community and Economic Development

Contents

1. Executive Summary.....	3
2. Introduction.....	3
2.1 Background	3
2.2 Objectives	4
2.3 Methodology.....	5
2.3.1 Research Design	5
2.3.2 Industry Engagement and Data Collection	6
2.3.3 Organizational Model Evaluation	7
2.3.4 Pilot Exploration	8
2.3.5 Partnership Development and Ecosystem Evaluation.....	8
2.3.6 Data Analysis and Synthesis	9
3. Findings.....	10
3.1 Industry Interest Exists, but Organizations Require Clear Value.....	10
3.2 Circular Economy Implementation Challenges Are Highly Shared Across Organizations.....	11
3.2.1 Underdeveloped End Markets Limit Circular Economy Growth	12
3.2.2 Material Collection and Aggregation Challenges Limit Economies of Scale.	12
3.2.3 Infrastructure Investment and Economic Uncertainty Constrain Implementation	13
3.2.4 Limited Access to Information, Expertise, and Organizational Connections Slows Progress.....	14
3.2.5 Organizational Capacity and Resource Constraints Limit Implementation ..	15
3.3 Successful Industry Collaboration Depends Upon Organizational Trust, Credibility, and Clear Purpose	15
3.3.1 Industry Leadership Establishes Organizational Credibility	16
3.3.2 Neutral Facilitation Encourages Broad Participation	16
3.3.3 Trust and Confidentiality Enable Meaningful Collaboration	17
3.3.4 A Clearly Defined Purpose Supports Long-Term Engagement	17
3.3.5 Organizational Success Requires Continuous Alignment with Industry Needs	17

4. Recommendations.....	18
4.1 Establish an Industry-Led Governance Structure	18
4.2 Maintain a Clear Implementation-Focused Mission	18
4.3 Build Upon Existing Organizations and Resources	19
4.4 Develop Structured Processes for Collaborative Project Development	19
4.5 Establish Organizational Policies that Promote Trust and Confidentiality.....	19
4.6 Continuously Evaluate Industry Needs	19
5. Conclusion.....	20
6. Acknowledgments	20
Appendix A. Strategic Engagement Summary	22

1. Executive Summary

The Michigan State University Innovation Fellowship evaluated the feasibility of establishing an industry-led collaborative platform to accelerate circular economy implementation across Michigan. Using a qualitative research approach that included focus groups, stakeholder surveys, interviews, strategic engagement, and organizational model evaluation, the research gathered perspectives from manufacturers, recyclers, academic institutions, economic development organizations, government agencies, nonprofit organizations, and other stakeholders representing Michigan's circular economy ecosystem. The objective was to identify common implementation challenges, evaluate industry interest in collaboration, and determine the organizational characteristics necessary to support a sustainable statewide initiative.

The research found strong interest in increased industry collaboration, provided participation delivers clear organizational value. Despite representing diverse industries and sectors, participants consistently identified shared implementation challenges related to end-market development, material collection and aggregation, infrastructure investment, organizational capacity, and access to information, expertise, and collaborative partnerships. The research also found that long-term success depends on organizational credibility, industry leadership, neutrality, trust, confidentiality, a clearly defined purpose, and continuous alignment with evolving industry needs.

Based on these findings, the report recommends establishing an industry-led governance structure, maintaining an implementation-focused mission, building upon Michigan's existing circular economy organizations and resources, developing structured processes for collaborative project execution, establishing governance policies that promote trust and confidentiality, and continuously engaging industry to ensure the organization's priorities remain aligned with participant needs. Collectively, the findings provide an evidence-based foundation for developing an industry-led collaborative platform capable of strengthening collaboration, accelerating circular economy implementation, and enhancing Michigan's long-term manufacturing competitiveness and economic resilience.

2. Introduction

2.1 Background

The transition toward a circular economy has become an increasingly important strategy for improving resource efficiency, strengthening supply chain resilience, reducing waste, supporting domestic manufacturing, and advancing long-term economic and

environmental sustainability. Public and private organizations across Michigan are increasingly investing in research, technology development, workforce initiatives, economic development programs, recycling infrastructure, remanufacturing, and other activities that support the advancement of circular economy principles.

Michigan is uniquely positioned to advance these efforts due to its diverse manufacturing base, established research institutions, extensive supply chain network, and broad ecosystem of public, private, academic, and nonprofit organizations. These assets provide a strong foundation for innovation and collaboration while creating opportunities to accelerate the implementation of circular economy initiatives across multiple industries.

Despite these strengths, implementing circular economy initiatives frequently requires collaboration across organizations that operate with different missions, priorities, expertise, and resources. Manufacturers, recyclers, researchers, government agencies, nonprofit organizations, and economic development partners each contribute important capabilities; however, opportunities for coordination, knowledge exchange, and collaborative problem solving often extend beyond the scope of any single organization. Understanding how these organizations can work together more effectively represents an important opportunity to strengthen Michigan's circular economy ecosystem and improve implementation outcomes.

Because circular economy innovation is ultimately implemented within industry, manufacturers are responsible for transforming new technologies, processes, business models, and supply chain strategies into operational practice. An industry-led platform provides a forum where implementation challenges, operational priorities, technical expertise, and business needs remain the primary focus of discussion and decision-making. Positioning industry at the center of the platform ensures that collaboration is driven by the organizations responsible for executing circular economy solutions and achieving measurable outcomes.

2.2 Objectives

The Innovation Fellowship sought to evaluate the feasibility of an industry-led collaborative platform to support circular economy implementation across Michigan. The research focused on understanding industry's perspectives on circular economy, including organizational needs, challenges, opportunities, motivations, and willingness to participate in a collaborative organization. The fellowship also examined the organizational characteristics necessary to support the long-term success of such a platform and evaluated how it could create value within Michigan's broader circular economy landscape.

2.3 Methodology

2.3.1 Research Design

The Innovation Fellowship employed an exploratory qualitative research design to evaluate the feasibility of an industry-led collaborative platform supporting circular economy implementation in Michigan. Because no comparable statewide industry-led organization currently exists, the research was designed to explore stakeholder perspectives, identify recurring themes across diverse organizations, and evaluate organizational models capable of supporting long-term industry collaboration.

A multi-method research approach was selected to capture perspectives from organizations representing manufacturing, recycling, higher education, economic development, nonprofit organizations, government, and other sectors involved in Michigan's circular economy. Data were collected through facilitated focus groups, stakeholder surveys, structured interviews, strategic partnership meetings, conference engagement, pilot development activities, and ongoing discussions with subject matter experts. Each research activity was designed to investigate specific aspects of the fellowship's objectives while providing opportunities to validate observations across multiple stakeholder groups and organizational perspectives.

The research followed an adaptive design in which findings from each stage informed subsequent research activities. Early focus groups and stakeholder surveys established an initial understanding of industry priorities and implementation challenges, which informed the development of additional survey instruments, refinement of discussion topics, evaluation of organizational structures, exploration of pilot concepts, and expansion of stakeholder engagement. This approach enabled emerging themes to be continuously evaluated, challenged, and refined as additional data were collected throughout the fellowship.

The research emphasized thematic consistency across diverse stakeholder groups in place of statistical representation. Findings were considered significant when similar observations emerged repeatedly through multiple research methods and across organizations representing different industries, organizational types, and areas of expertise. This triangulation strengthened confidence that the findings reflected broader implementation challenges and opportunities rather than isolated participant perspectives.

2.3.2 Industry Engagement and Data Collection

Research participants represented a diverse cross-section of Michigan's circular economy ecosystem. Organizations participating in focus groups, surveys, interviews, and strategic engagement activities included representatives from:

- Manufacturing and automotive suppliers
- Remanufacturing organizations
- Technology development and software suppliers
- Material collection and aggregation companies
- Recycling and material recovery companies
- Packaging and materials organizations
- Higher education and research institutions
- Economic development organizations
- State government agencies
- Industry associations
- Nonprofit organizations
- Sustainability and circular economy consultants
- Technology and service providers

Collectively, participants represented organizations of varying sizes and maturity levels, ranging from small businesses to multinational manufacturers. This diversity provided perspectives spanning multiple industries, material streams, supply chains, and stages of circular economy implementation.

Industry engagement served as the primary data collection method for evaluating the feasibility of an industry-led collaborative platform and understanding the perspectives of organizations actively engaged in Michigan's circular economy. The research sought to identify common implementation challenges, organizational priorities, motivations, barriers to participation, and the characteristics participants considered essential for a collaborative organization to deliver meaningful value.

Data collection incorporated multiple complementary methods to capture both broad industry perspectives and detailed qualitative insights. Seven facilitated focus groups were conducted throughout the fellowship, bringing together representatives from manufacturing, recycling, higher education, economic development, nonprofit organizations, and other sectors engaged in Michigan's circular economy. Focus groups were structured to encourage collaborative discussion around shared challenges, organizational priorities, implementation barriers, governance concepts, pilot development, and opportunities for industry collaboration. The progression of these

discussions enabled findings from earlier sessions to be explored in greater depth during subsequent meetings while providing opportunities to validate emerging themes across a diverse group of participants.

Stakeholder surveys were developed and distributed to supplement qualitative discussions with structured feedback from a broader group of participants. The initial survey evaluated organizational priorities, implementation challenges, perceived opportunities, and factors influencing participation in an industry-led collaborative platform. As the research progressed, a second Pilot Alignment Survey was developed to investigate shared implementation challenges, evaluate potential pilot opportunities, and assess the degree of alignment required to support collaborative pilot execution. Survey findings informed subsequent focus group discussions and provided an additional mechanism for validating recurring themes identified through participant dialogue.

Research activities extended beyond formal focus groups and surveys to include structured discussions with participating organizations, follow-up meetings, and ongoing collaboration throughout the fellowship. These interactions provided additional context for interpreting survey and focus group findings, clarified organizational perspectives, and enabled emerging questions to be explored as the research progressed. Collectively, these engagement activities produced a comprehensive understanding of industry perspectives while establishing a robust qualitative dataset that forms the basis of the findings presented in the following section.

2.3.3 Organizational Model Evaluation

Evaluation of the organizational model was conducted to determine the structural characteristics necessary to support a sustainable, industry-led collaborative platform. Research activities examined governance approaches, organizational scope, participation models, confidentiality considerations, pilot development processes, and value propositions to identify the characteristics most likely to encourage long-term industry participation and organizational effectiveness.

Conceptual operating models were developed and presented throughout the fellowship as discussion tools rather than proposed organizational structures. Stakeholder input was used to evaluate alternative approaches to governance, organizational scope, participation expectations, pilot execution, and collaboration. Proposed models were refined throughout the research as additional information was gathered regarding industry priorities, implementation challenges, and organizational expectations.

Confidentiality and trust were also evaluated as critical organizational design considerations. Discussion topics included data governance, protection of proprietary

information, participant confidentiality, pilot project management, and mechanisms capable of supporting collaboration while minimizing competitive risk. Alternative approaches were assessed through participant discussion to determine the organizational safeguards necessary to encourage open participation among competing organizations.

2.3.4 Pilot Exploration

Pilot development activities were conducted to evaluate how an industry-led collaborative platform could facilitate implementation of circular economy initiatives beyond knowledge sharing and networking. The research examined the processes, organizational capabilities, and stakeholder alignment necessary to support collaborative projects involving multiple organizations while identifying the practical considerations required for successful execution.

Pilot concepts were developed throughout the fellowship as evaluation tools to assess project selection, participant engagement, governance, and implementation processes. Potential pilot opportunities were identified through focus group discussions, stakeholder engagement, and ongoing collaboration with participating organizations. Each concept was evaluated for relevance to shared industry challenges, anticipated value to participants, organizational feasibility, and potential to demonstrate measurable circular economy outcomes.

As the research progressed, pilot evaluation activities expanded to include development of project selection criteria, implementation frameworks, and methods for assessing organizational alignment. A Pilot Alignment Survey was developed to better understand shared implementation priorities across participating organizations and evaluate the characteristics of projects most likely to support successful collaboration. These activities provided additional insight into participant interests, implementation readiness, and the organizational processes necessary to support collaborative project execution.

Pilot development served as a research mechanism for evaluating how an industry-led collaborative platform could transition from organizational planning to practical implementation. The observations generated through these activities informed the evaluation of organizational design, implementation strategies, and long-term operational considerations presented in the findings.

2.3.5 Partnership Development and Ecosystem Evaluation

Strategic engagement with organizations across Michigan's circular economy ecosystem was conducted to evaluate how an industry-led collaborative platform could complement existing initiatives, strengthen cross-sector collaboration, and contribute to statewide circular economy advancement. These activities examined the roles, priorities, and

capabilities of organizations representing industry, academia, economic development, government, and nonprofit sectors to better understand how an industry-led organization could integrate within Michigan's broader circular economy landscape.

Meetings with economic development organizations evaluated opportunities to connect Michigan manufacturers with existing resources, funding programs, and technical assistance while identifying pathways for collaboration that supported statewide economic development objectives. These discussions also examined how an industry-led collaborative platform could complement existing programs by facilitating industry engagement, identifying implementation challenges, and serving as a resource for manufacturing organizations pursuing circular economy initiatives

Engagement with academic institutions and research organizations explored opportunities to strengthen collaboration between industry and higher education, improve access to technical expertise, and identify mechanisms for translating research into practical implementation. These activities also evaluated the role of educational institutions in supporting workforce development, applied research, and knowledge dissemination within an industry-led collaborative framework.

Discussions with government representatives examined opportunities for industry to contribute technical expertise that could inform future policy development while improving communication between policymakers and the manufacturing community. Additional engagement with manufacturing associations, nonprofit organizations, conferences, and industry events provided broader perspectives on organizational collaboration, statewide priorities, and opportunities to expand participation in future Council activities.

Collectively, these strategic engagement activities provided insight into how an industry-led collaborative platform could establish productive relationships with existing organizations, leverage complementary capabilities, and contribute to Michigan's evolving circular economy ecosystem without duplicating existing efforts..

2.3.6 Data Analysis and Synthesis

Data collected throughout the fellowship were synthesized to identify recurring themes, areas of consensus, differing perspectives, and relationships across multiple research activities. Information obtained through focus groups, stakeholder surveys, organizational discussions, pilot exploration activities, and strategic engagement was evaluated collectively to develop an integrated understanding of the opportunities and challenges associated with establishing an industry-led collaborative platform.

Analysis emphasized patterns that were consistently observed across multiple engagement methods and participant groups. Emerging themes were continuously

compared with information obtained through subsequent research activities to assess their consistency and identify areas requiring additional exploration. This approach strengthened confidence that the findings reflected broader industry perspectives while reducing the influence of isolated observations or individual viewpoints.

The findings presented in the following section represent synthesized conclusions derived from the collective body of research conducted throughout the fellowship. Evidence from multiple research activities was integrated to provide a comprehensive evaluation of the feasibility, organizational considerations, implementation opportunities, and strategic role of an industry-led collaborative platform within Michigan's circular economy ecosystem.

3. Findings

3.1 Industry Interest Exists, but Organizations Require Clear Value

The findings demonstrated strong interest among Michigan organizations in participating in a collaborative circular economy initiative. Across focus groups, surveys, stakeholder discussions, and strategic engagement activities, participants consistently expressed enthusiasm for increased collaboration and recognized the potential benefits of strengthening connections across Michigan's circular economy ecosystem. However, participation was consistently associated with the expectation that involvement would provide tangible value aligned with existing organizational priorities.

Organizations identified a wide range of potential benefits associated with participation, including access to new partnerships, technical expertise, implementation resources, funding opportunities, shared knowledge, and collaborative problem solving. While these opportunities generated significant interest, participants consistently emphasized that organizational resources, including staff time and funding, are limited. As a result, participation decisions are influenced by the ability of collaborative initiatives to demonstrate practical value that justifies continued organizational investment.

The findings also demonstrated that organizations participate in collaborative initiatives for different reasons depending on their missions, capabilities, and strategic objectives. Manufacturers frequently emphasized implementation support, operational problem solving, and opportunities to accelerate circular economy adoption. Academic institutions expressed interest in strengthening research partnerships, workforce development, and knowledge transfer. Economic development organizations focused on supporting business competitiveness, innovation, and statewide economic growth, while nonprofit organizations emphasized education, collaboration, and resource coordination. Although

these priorities differed, participants consistently identified opportunities where collaboration could generate mutual benefit across organizational boundaries.

The findings indicate that successful participation cannot rely solely on shared interest in circular economy principles. Long-term engagement requires a clearly defined value proposition that delivers measurable benefits to participating organizations while supporting their existing strategic objectives. This expectation emerged consistently across engagement activities and represents a foundational consideration for the design and long-term sustainability of an industry-led collaborative platform.

3.2 Circular Economy Implementation Challenges Are Highly Shared Across Organizations

The research demonstrated that organizations across Michigan's circular economy ecosystem face many of the same implementation challenges despite representing diverse industries, organizational sizes, and sectors. Although participants initially described their experiences from the perspective of their individual organizations, recurring themes consistently emerged across focus groups, stakeholder surveys, and strategic discussions. These findings indicate that many barriers limiting circular economy implementation are systemic rather than organization-specific.

While participants consistently identified common categories of implementation challenges, the underlying circumstances varied considerably depending on the organization's industry, material streams, business model, supply chain, and strategic objectives. For example, multiple organizations identified end-market development as a significant barrier; however, the specific factors contributing to market limitations differed based on the materials being recovered, available processing infrastructure, customer demand, regulatory considerations, and economic conditions. Similar variation was observed across other challenge areas, where organizations experienced common barriers through industry- and organization-specific circumstances.

Despite these differences, the consistency of the broader challenge categories across participating organizations demonstrates that many implementation barriers are shared throughout Michigan's circular economy ecosystem. This suggests that collaborative approaches can address common challenges while remaining sufficiently flexible to accommodate the unique needs of individual industries, organizations, and material streams.

3.2.1 Underdeveloped End Markets Limit Circular Economy Growth

The research identified underdeveloped or inconsistent end markets as one of the most significant barriers to circular economy implementation. Across multiple engagement activities, participants described challenges identifying stable markets capable of consistently utilizing recovered materials, secondary feedstocks, remanufactured products, and other circular economy outputs. Although many organizations demonstrated the technical capability to recover or process materials, uncertainty surrounding long-term market demand frequently limited the ability to expand recovery activities or justify additional investment.

Survey responses consistently ranked market development among the highest implementation priorities, while focus group discussions provided further context regarding the factors contributing to market immaturity. Participants described variability in customer demand, inconsistent material specifications, limited market awareness, transportation costs, pricing volatility, and competition with lower-cost virgin materials as common barriers affecting market development. Although these factors differed across industries and material streams, they collectively reduced confidence in long-term market stability.

The research further demonstrated that end-market challenges are closely interconnected with other implementation barriers. Organizations frequently indicated that uncertainty surrounding market demand limited their willingness to invest in collection infrastructure, processing capacity, and new technologies. Similarly, limited material availability often discouraged investment from potential downstream users, creating a cycle in which both supply and demand remained insufficient to support market growth.

These findings suggest that strengthening circular economy markets requires coordinated development across the entire value chain. Expanding material recovery alone is unlikely to achieve long-term success without corresponding efforts to increase market demand, improve buyer confidence, and strengthen connections between organizations generating recovered materials and those capable of utilizing them.

3.2.2 Material Collection and Aggregation Challenges Limit Economies of Scale

The research demonstrated that collecting and aggregating sufficient material volumes represents a significant implementation challenge across Michigan's circular economy ecosystem. Participants consistently identified material availability as a limiting factor affecting the economic viability of recycling, remanufacturing, reuse, and other circular economy initiatives. Although recoverable materials often exist within the marketplace,

organizations frequently encounter difficulty obtaining sufficient quantities to support efficient processing and long-term operational sustainability.

Survey findings identified material collection and aggregation among the highest implementation priorities, while qualitative discussions highlighted the diverse factors contributing to these challenges. Participants described fragmented supply chains, dispersed material sources, inconsistent return rates, transportation costs, limited storage capacity, and insufficient coordination among organizations as recurring barriers preventing efficient aggregation. While the specific circumstances varied across industries and material streams, the broader challenge of achieving economically viable material volumes was consistently observed.

Participants also emphasized that aggregation challenges frequently extend beyond the capabilities of individual organizations. Many opportunities require collaboration among manufacturers, recyclers, logistics providers, distributors, retailers, and other stakeholders to establish efficient material recovery networks capable of supplying sufficient volumes for downstream processing.

These findings indicate that collaborative approaches to material aggregation may provide opportunities to improve supply chain efficiency, reduce transportation costs, increase material availability, and strengthen the economic viability of circular economy initiatives across multiple industries.

3.2.3 Infrastructure Investment and Economic Uncertainty Constrain Implementation

The research identified infrastructure investment and economic justification as significant barriers affecting organizations' ability to advance circular economy initiatives. Participants consistently reported that implementing circular economy strategies often requires substantial investments in equipment, facilities, transportation systems, storage capacity, material sorting, handling, and processing, and supporting technologies. These investments frequently involve significant financial risk, particularly when long-term material supply, customer demand, or market conditions remain uncertain.

Survey responses demonstrated that organizations frequently evaluate circular economy investments alongside competing operational priorities, requiring projects to demonstrate clear financial value before resources can be committed. Focus group discussions further revealed that uncertainty surrounding future market conditions often delays investment decisions even when organizations recognize long-term strategic benefits.

Participants also noted that many circular economy investments depend upon multiple organizations making complementary investments throughout the value chain. This interdependence creates additional uncertainty, as organizations may hesitate to invest without confidence that suppliers, customers, processors, or logistics partners will develop corresponding capabilities.

These findings suggest that reducing investment uncertainty through stronger collaboration, improved market visibility, shared infrastructure, and access to funding resources may increase organizational confidence and accelerate implementation of circular economy initiatives.

3.2.4 Limited Access to Information, Expertise, and Organizational Connections Slows Progress

The research demonstrated that organizations frequently encounter difficulty identifying the information, expertise, and partnerships necessary to successfully implement circular economy initiatives. Although considerable knowledge and technical capability exist throughout Michigan's circular economy ecosystem, participants consistently reported challenges locating relevant expertise, identifying potential collaborators, understanding available resources, and determining where to begin implementation efforts.

Survey responses identified knowledge sharing and improved organizational connectivity as high-value opportunities for future collaboration. Participants expressed interest in better access to technical expertise, case studies, best practices, funding information, technology providers, regulatory guidance, and organizations with complementary capabilities. Focus group discussions further demonstrated that many organizations were unaware of existing initiatives already addressing challenges similar to their own.

Participants also described difficulty establishing connections across sectors that traditionally operate independently. Manufacturers, academic institutions, economic development organizations, nonprofit organizations, and government agencies each possess valuable expertise and resources; however, opportunities to connect these capabilities in support of shared implementation objectives remain limited.

These findings suggest that improving visibility of available expertise and strengthening connections among organizations could significantly reduce barriers to implementation while accelerating knowledge transfer and collaborative problem solving throughout Michigan's circular economy ecosystem.

3.2.5 Organizational Capacity and Resource Constraints Limit Implementation

The research demonstrated that organizational capacity represents a significant barrier affecting implementation across nearly every participating sector. Although participants consistently expressed strong interest in advancing circular economy initiatives, many organizations reported limited availability of staff time, financial resources, and specialized expertise necessary to pursue new opportunities while maintaining existing operational responsibilities.

Survey responses and stakeholder discussions indicated that implementation efforts frequently compete with day-to-day business priorities, making it difficult for organizations to dedicate sustained attention to longer-term strategic initiatives. This challenge was observed across organizations of varying sizes and sectors, suggesting that capacity limitations reflect broader organizational realities rather than isolated circumstances.

Participants also emphasized that resource limitations extend beyond funding alone. Access to knowledgeable personnel, technical expertise, project management capacity, and organizational leadership support were frequently identified as equally important factors influencing implementation success.

These findings indicate that collaborative organizations can create substantial value by reducing the burden placed on individual participants through shared resources, coordinated activities, technical support, and opportunities for collective problem solving that allow organizations to accomplish more than would be possible independently.

3.3 Successful Industry Collaboration Depends Upon Organizational Trust, Credibility, and Clear Purpose

While the research demonstrated strong interest in industry collaboration, participants consistently emphasized that participation alone would not guarantee long-term success. Across focus groups, surveys, and stakeholder discussions, organizations identified several organizational characteristics they believed were essential for establishing a collaborative platform capable of maintaining long-term participation, facilitating meaningful collaboration, and delivering value across Michigan's circular economy ecosystem.

Rather than focusing primarily on the programs or services offered, participants frequently emphasized how the organization should operate. Trust, transparency, industry ownership, neutrality, confidentiality, and a clearly defined organizational purpose consistently emerged as foundational characteristics influencing participants' willingness to engage.

Collectively, these findings indicate that organizational structure and governance are equally as important as the collaborative activities the organization seeks to facilitate.

3.3.1 Industry Leadership Establishes Organizational Credibility

Participants consistently emphasized that the collaborative platform should be industry-led while remaining inclusive of academia, government, nonprofit organizations, and economic development partners. Organizations viewed industry leadership as essential for maintaining relevance to real-world implementation challenges while ensuring that organizational priorities remain aligned with the needs of manufacturers and other practitioners actively advancing circular economy initiatives.

Participants also recognized that successful implementation requires contributions from organizations representing multiple sectors. Rather than limiting participation, respondents supported a collaborative governance approach that leverages the expertise of diverse stakeholders while maintaining industry as the primary driver of organizational direction and strategic priorities.

These findings suggest that industry leadership provides organizational credibility by ensuring that collaborative activities remain focused on practical implementation while creating opportunities for meaningful cross-sector collaboration.

3.3.2 Neutral Facilitation Encourages Broad Participation

The research demonstrated that organizations consistently valued the presence of a neutral entity capable of convening participants across industries, sectors, and competitive interests. Participants expressed greater willingness to engage in collaborative activities when discussions were facilitated by an organization perceived as operating in the collective interest of Michigan's circular economy ecosystem rather than advancing the priorities of any individual organization.

Neutral facilitation was viewed as particularly important for supporting collaboration among organizations that may otherwise have limited opportunities to work together due to competitive relationships, differing organizational missions, or sector-specific priorities. Participants indicated that an impartial facilitator could help coordinate activities, connect organizations with complementary capabilities, and maintain focus on shared implementation objectives.

These findings indicate that neutrality strengthens organizational legitimacy while creating an environment more conducive to open collaboration and long-term participation.

3.3.3 Trust and Confidentiality Enable Meaningful Collaboration

Trust consistently emerged as one of the most important organizational characteristics influencing participant willingness to collaborate. Organizations acknowledged that meaningful collaboration frequently requires discussion of operational challenges, technical expertise, implementation strategies, and other information that may be commercially sensitive or competitively significant.

Participants emphasized the importance of clearly defined expectations regarding confidentiality, data ownership, participation, and information sharing. Organizations expressed greater confidence in collaborative engagement when appropriate safeguards were established to protect proprietary information while still enabling productive technical discussion and collective problem solving.

These findings suggest that trust is not solely an outcome of collaboration but a prerequisite for meaningful participation. Organizational policies and governance structures that promote transparency, confidentiality, and accountability therefore represent foundational elements of a successful collaborative platform.

3.3.4 A Clearly Defined Purpose Supports Long-Term Engagement

The research demonstrated that organizations consistently sought clarity regarding the role, mission, and long-term objectives of a collaborative platform. Participants indicated that sustained participation depends upon a clearly articulated purpose that distinguishes the organization from existing initiatives while communicating how participation will create value for members and the broader circular economy ecosystem.

Organizations generally expressed limited interest in participating in a collaborative initiative focused primarily on networking or discussion. Instead, participants emphasized the importance of maintaining a mission centered on advancing implementation, strengthening industry collaboration, and addressing shared challenges identified throughout the research.

These findings suggest that a well-defined organizational purpose provides direction for governance, program development, partnership formation, and participant engagement while reinforcing the platform's long-term value proposition.

3.3.5 Organizational Success Requires Continuous Alignment with Industry Needs

Participants consistently emphasized that organizational priorities should remain responsive to the evolving needs of industry rather than being established independently of

participant input. Organizations expressed greater confidence in a collaborative platform capable of adapting its activities, priorities, and initiatives as new implementation challenges and opportunities emerge.

The research also demonstrated that maintaining participant engagement requires ongoing mechanisms for gathering industry feedback, identifying emerging priorities, and evaluating organizational effectiveness. This adaptive approach was viewed as essential for ensuring continued relevance within Michigan's rapidly evolving circular economy landscape.

These findings indicate that long-term organizational success depends not only on initial design decisions but also on establishing governance processes that enable continuous alignment with participant needs and implementation priorities.

4. Recommendations

The following recommendations are derived directly from the research findings and provide a framework for establishing and sustaining an industry-led collaborative platform for circular economy implementation in Michigan.

4.1 Establish an Industry-Led Governance Structure

The research consistently demonstrated that industry leadership is essential for establishing organizational credibility and maintaining long-term relevance. The collaborative platform should therefore be governed by industry while actively engaging representatives from academia, government, nonprofit organizations, economic development organizations, and other stakeholders as strategic partners. This governance structure ensures that organizational priorities remain aligned with implementation needs while leveraging expertise from across Michigan's circular economy ecosystem.

4.2 Maintain a Clear Implementation-Focused Mission

The platform should maintain a clearly defined mission centered on advancing practical implementation of circular economy initiatives rather than functioning solely as a networking or information-sharing organization. Activities should prioritize addressing shared implementation challenges, facilitating collaborative projects, strengthening organizational connections, and supporting measurable outcomes that create value for participating organizations.

4.3 Build Upon Existing Organizations and Resources

The research indicates that Michigan already possesses a strong network of organizations supporting circular economy advancement. Rather than duplicating existing programs, the collaborative platform should establish partnerships that leverage existing expertise, funding opportunities, technical assistance, research capabilities, workforce development programs, and economic development initiatives. Success will depend upon strengthening coordination among existing organizations while maintaining a distinct implementation-focused role.

4.4 Develop Structured Processes for Collaborative Project Development

Collaborative projects should provide organizations with opportunities to address shared implementation challenges while demonstrating measurable value. Establishing transparent processes for project selection, participant engagement, governance, confidentiality, resource allocation, and performance evaluation will help ensure collaborative initiatives remain aligned with participant priorities and organizational objectives.

4.5 Establish Organizational Policies that Promote Trust and Confidentiality

Because trust emerged as a prerequisite for meaningful collaboration, the collaborative platform should establish governance policies addressing confidentiality, intellectual property, data ownership, participation expectations, conflict resolution, and decision-making processes. Clearly defined organizational policies will strengthen participant confidence and encourage open collaboration among organizations representing diverse industries and competitive interests.

4.6 Continuously Evaluate Industry Needs

Long-term organizational success will depend upon maintaining alignment with evolving industry priorities. Regular engagement through surveys, focus groups, stakeholder meetings, and advisory committees should be incorporated into organizational governance to identify emerging implementation challenges, evaluate organizational effectiveness, and ensure that collaborative activities continue to provide measurable value for participants.

5. Conclusion

This research demonstrated that an industry-led collaborative platform is a feasible and valuable approach for advancing circular economy implementation across Michigan. Organizations consistently expressed interest in increased collaboration while identifying shared implementation challenges that extend beyond the capabilities of individual organizations. Although participants represented diverse industries and sectors, recurring themes highlighted common needs related to market development, material aggregation, infrastructure investment, organizational capacity, and access to expertise and partnerships.

The results further demonstrated that the long-term success of such a platform depends on organizational design as much as participant interest. Industry leadership, trust, neutrality, confidentiality, a clearly defined purpose, and continuous alignment with industry needs emerged as foundational characteristics necessary to support meaningful collaboration and sustained participation.

Collectively, these findings provide an evidence-based foundation for future development of an industry-led collaborative platform capable of strengthening circular economy implementation in Michigan. By fostering collaboration, leveraging complementary expertise, and addressing shared implementation challenges, such a platform has the potential to accelerate the adoption of circular economy practices while strengthening Michigan's manufacturing competitiveness, resource efficiency, and long-term economic resilience.

6. Acknowledgments

The author gratefully acknowledges the support, guidance, and collaboration provided throughout the Innovation Fellowship by Michigan State University's Center for Community and Economic Development (CCED), whose mentorship and partnership were instrumental in the development and execution of this research.

The author also recognizes the valuable contributions of the Michigan Economic Development Corporation (MEDC), the Michigan Manufacturers Association (MMA), Michigan Department of Environment, Great Lakes, and Energy (EGLE), and the many organizations and professionals who generously shared their time, expertise, and perspectives throughout the fellowship.

Special appreciation is extended to the organizations and individuals who participated in focus groups, surveys, interviews, strategic discussions, conferences, and collaborative

working sessions. Their willingness to openly share their experiences, challenges, and ideas formed the foundation of the findings presented in this report.

Appendix A. Strategic Engagement Summary

Strategic engagement with representatives from industry, academia, government, economic development, nonprofit organizations, and other stakeholders informed the research conducted throughout the Innovation Fellowship. These engagements are referenced throughout this report; Table 1 summarizes the principal organizations, individuals, and the purpose of each engagement.

Table 1: Strategic Engagement Summary Table

Organization	Individual	Title	Purpose of Engagement	Contribution to Research
Michigan State University – Center for Community and Economic Development (CCED)	Dr. Rex LaMore	Director, Center for Community and Economic Development	Fellowship mentorship and strategic guidance	Provided research guidance, facilitated stakeholder engagement, and supported evaluation of the collaborative organizational model.
Michigan State University – Center for Community and Economic Development (CCED)	Jenan Jondy	Innovation Fellow Coordinator / Community Engagement Specialist	Fellowship coordination and stakeholder engagement	Supported focus group facilitation, research planning, and development of stakeholder relationships throughout the fellowship.
Michigan State University – Center for Community and Economic Development (CCED)	Mary ZumBrunnen	Community Engagement Specialist	Fellowship transition support	Continued strategic guidance and stakeholder engagement during the latter portion of the fellowship.
Michigan State University – Research & Innovation (REI)	REI Fellowship Administration	Innovation Fellowship Program	Fellowship administration	Provided program oversight and support for applied research activities.
Michigan Economic Development Corporation (MEDC), Supply Chain Resiliency Team	Joe Tyler	Sector Development Analyst	Economic development and circular economy collaboration	Identified opportunities to connect manufacturers with existing economic development resources, funding programs, and statewide circular economy initiatives.
Michigan Economic Development Corporation (MEDC)	Samantha Schnettler	Executive Director Sanilac County Economic Development	Economic development and circular economy collaboration	Identified opportunities to connect manufacturers with existing economic development resources, funding programs, and statewide circular economy initiatives.
Michigan Economic Development Corporation (MEDC)	Sara Daligga	Business Development Manager	Strategic collaboration	Identified opportunities to connect manufacturers with existing economic development resources, funding programs,

				and statewide circular economy initiatives.
Michigan Department of Environment, Great Lakes, and Energy (EGLE) / NextCycle Michigan	Matt Flechter	Recycling Market Development Specialist	Circular economy and sustainability initiatives	Provided perspectives on state programs, funding opportunities, and opportunities to strengthen collaboration between industry and government.
Office of Senator Aric Nesbitt	Staff Representatives	Office of Senate Minority Leader	Legislative engagement	Discussed opportunities to improve communication between industry and policymakers regarding manufacturing competitiveness and circular economy implementation.
Michigan Manufacturers Association (MMA)	Delaney McKinley	Executive Vice President of Operations	Manufacturing engagement	Discussed manufacturing priorities, industry challenges, and opportunities for statewide collaboration.
Industry Manufacturers	Multiple Representatives	Executive Leadership, Engineering, Sustainability, Operations	Industry implementation	Validated recurring implementation challenges, governance expectations, organizational priorities, and collaborative value propositions.
Recycling, Remanufacturing, and Material Recovery Organizations	Multiple Representatives	Executive and Technical Leadership	Technical implementation	Provided practical perspectives regarding material recovery, end-market development, logistics, infrastructure, and collaborative implementation opportunities.
Higher Education Institutions	Multiple Faculty and Researchers	Research and Outreach	Applied research	Evaluated opportunities for research partnerships, workforce development, and technology transfer supporting industry implementation.
Nonprofit Organizations	Multiple Representatives	Program Leadership	Stakeholder collaboration	Provided perspectives on education, outreach, resource coordination, and cross-sector collaboration.

The MSU Center for Community and Economic Development Regional Economic Innovation (REI) seeks to identify and develop new economic development tools, models, policies, and practices to support innovative economic development, high-growth enterprises, and job creation in distressed regions across the state. REI is establishing a new economic development ecosystem to cope with the ever-changing global and regional dynamics. Through this ecosystem, REI engages innovative and creative minds which results in new economic development practices.

REI was established in 2011. In 2026, REI partnered with the following Michigan State University offices:

Office of the Provost
Office of the VPRI
MSU Jenison Fund
University Outreach & Engagement
College of Communication Arts and Sciences

