

MICHIGAN INFRASTRUCTURE ASSET MANAGEMENT PILOT EXECUTIVE SUMMARY

APRIL 2018

21st CENTURY
MICHIGAN INFRASTRUCTURE COMMISSION

PURPOSE OF THE ASSET MANAGEMENT PILOT

The state of Michigan must identify a strategic way to better manage our infrastructure in order to make more informed decisions. To improve Michigan's public and private infrastructure systems as we move through the 21st century, we must look at infrastructure in an integrated and holistic way. The Asset Management Pilot was created to enable local and regional infrastructure experts to advise and assist in creating a roadmap for the Michigan Infrastructure Council that covers the development, implementation and management of a statewide integrated asset management system. This system will result in better coordination, a longer term strategic approach, and more focused investment. These outcomes were identified and tested at the regional level through the Pilot and was proven successful to now be operationalized statewide.

This Pilot helped to identify existing infrastructure data and gaps, determine an appropriate comprehensive database system to house this data, and began collaboration between asset owners to encourage planning across infrastructure sectors. The Pilot achieved this through identifying regional infrastructure asset management processes and database system functionality across infrastructure types, including roads, water, sewer, stormwater, electric, gas, and broadband sectors.

ASSET MANAGEMENT PILOT VISION

- Build a culture of asset management across all infrastructure assets
- Perform a statewide assessment of transportation, water, sewer, and stormwater infrastructure
- Develop a long-term integrated asset management strategy that results in coordination and increased cost efficiencies for utilities and agencies of all sizes
- Identify the data and information needed to determine funding levels, incentives, and strategic infrastructure investments

"The Michigan Infrastructure Asset Management Pilot project set the stage for meaningful collaboration. This initiative engaged a wide range of communities and stakeholders to build a statewide culture of asset management. By understanding the varying conditions, personalities, needs, and nuances of our Michigan communities, we began to develop consistency in how we should approach statewide asset management standards and practices. We believe this methodology will open the door for successful problem solving on a statewide level.

The frequent contact amongst the communities and stakeholders has created a sense of comradery that opened the door for a more coordinated and intentional communication across the state. The process revealed a commonality among statewide asset management issues with agreement that coordinated planning efforts were critical to achieving statewide infrastructure improvement. Recognizing that "we are not in this alone" and "we can do better together" helped position the state to operationalize a comprehensive asset management database and system that will enable local communities to deliver effective asset management principles."

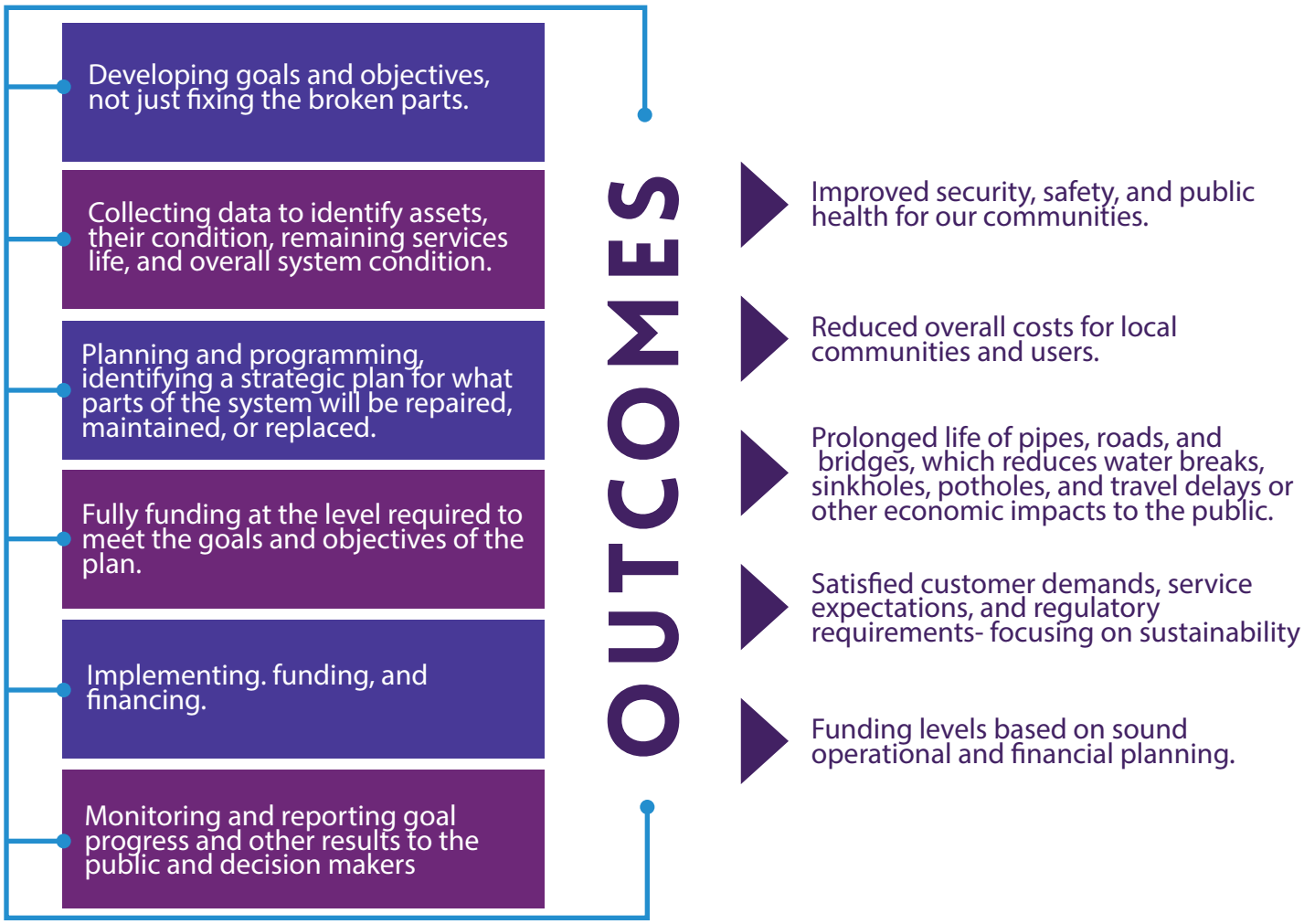
Mark Rambo
City of Kentwood

Keith McCormack
Hubbell, Roth & Clark

Jacob Eckholm
City of Muskegon Heights

ASSET MANAGEMENT AND IT'S IMPORTANCE

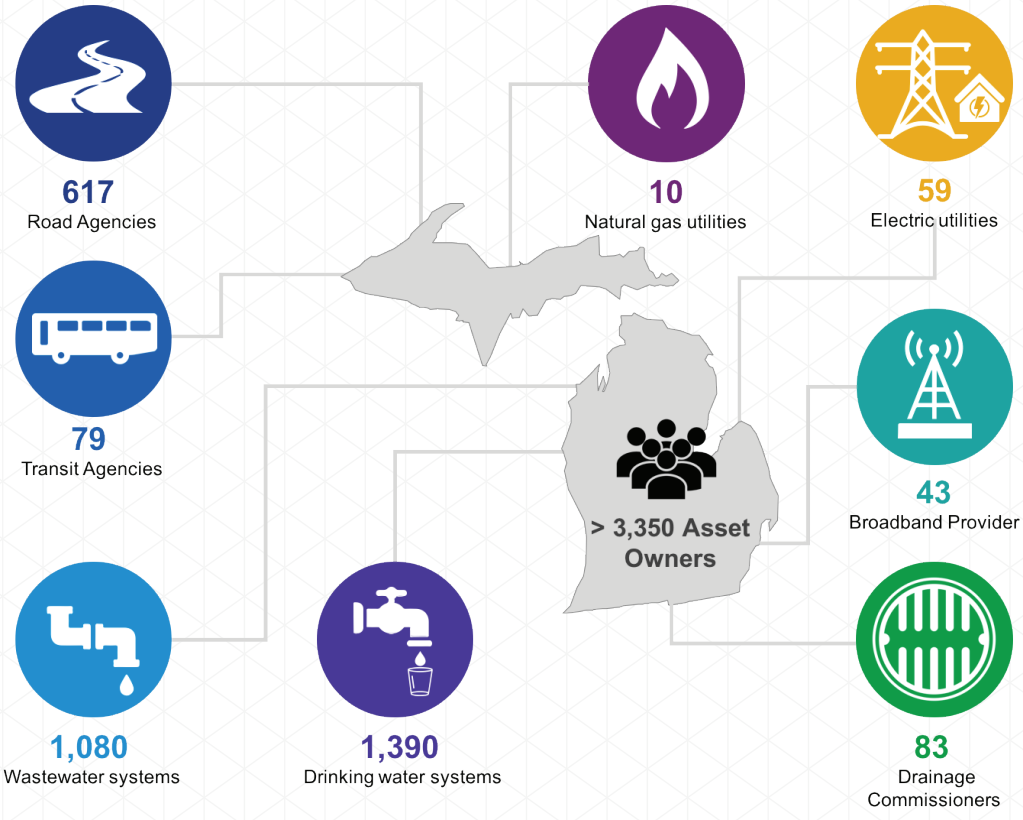
Asset management involves continually inventorying and assessing infrastructure condition so that planned maintenance can be done to the service life of an asset before it has to be replaced. This process makes it more economical to maintain performance and appropriate levels of service. The result is cost savings for local communities and users, satisfaction for customers, and improved security, safety, and public health for our communities. Implemented in a standardized and systematic way across infrastructure types, asset management can improve coordination and increase cost savings even further. The Pilot established the feasibility of this approach at a statewide level and developed a framework for its implementation.



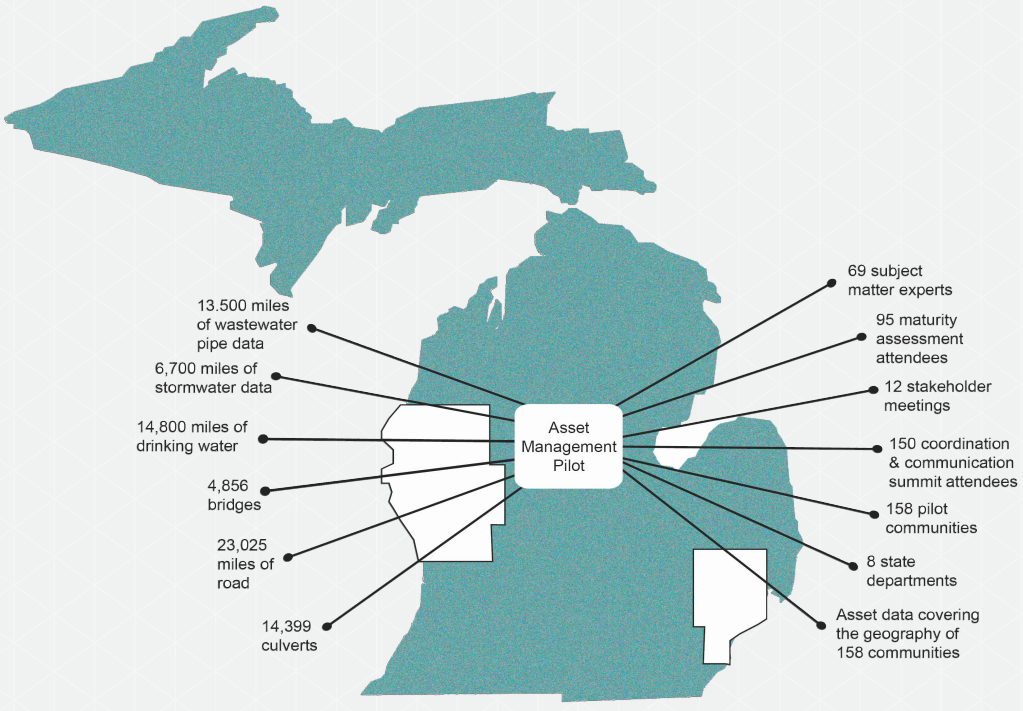
Michigan has over 3,350 infrastructure asset owners that operate and maintain hundreds of thousands of miles of roads, water pipes, gas lines and electric cables, all primarily on an individual basis. In addition, planning and funding cycles for different types of infrastructure are often not coordinated, and public and private infrastructure owners may not be aware of each other's planning and decision-making processes. Coordinating the way we plan for and manage infrastructure across and among levels of government and private utilities will reduce interruptions of infrastructure use by the public and save money.

ASSET MANAGEMENT PILOT SUCCESS

The Pilot has changed historical attitudes between communities and the state departments and between different areas of the state. What was thought to be impossible at the beginning of the Pilot in April 2017, with regard to two significantly different regions being able to work together has, a year later, exceeded expectations.



Through the Pilot a foundation for a culture of greater collaboration, focused on asset management has evolved. Many thought that a partnership between the varied groups would not be possible, but the Pilot has exceeded its goals and statewide implementation is a realistic goal.



KEY RECOMMENDATIONS

The Value Proposition

- Ensure that all participants in the statewide asset management database at the local, regional, and state level receive a benefit for participating, make it a 'win-win'.

- Clearly articulate to public and private asset owners submitting data to the system the value-add of participation including a better understanding of asset performance and cost in the State of Michigan as well as an increased ability to make better informed decisions that align with community priorities.

- Provide actionable infrastructure data on public assets to local, regional, and state level officials so that they can make more informed asset management and investment decisions.

- When possible, provide updated aggregate data and information directly back to the communities who submitted their information for increased access and usability of their data.

- Promote the value-proposition that participation in a statewide asset management program will inspire public confidence and will help residents understand the decisions being made with regard to investment in infrastructure, through increased transparency.

Building a Statewide Asset Management Culture

- Asset management is about more than data, it is about technical experts having the tools and information to make strategic, financial and tactical decisions about assets. Data is the starting point and foundation for making better strategic decisions as a state.

- The Michigan Infrastructure Council will need to build on the results of the Pilot to provide resources and education on asset management. It will be important for the Council to create a venue to share asset management best practices, accomplishments and innovations.

- Asset management education is important at all levels of government, from public officials to technical staff. Michigan is a leader in transportation asset management and must continue to build upon this legacy by increasing awareness of asset management best practices across all asset types.

Facilitating the Data Collection Process

- Data collected in the statewide asset management database should build on the work of the Pilot and will need to be of aggregated value at the local, regional, and state level.

- There is a wide variety of community systems from sophisticated GIS asset systems to less technical paper/ knowledge based approaches. The statewide asset management system, like the Pilot, must work to involve all communities who wish to participate regardless of their current technical capabilities or systems.

- The Pilot focused on determining baseline standardized data requirements necessary to encourage asset management at the local and regional level while also collecting the data necessary for high level analysis of asset condition. Further discussions should take place to determine what data should be collected, and data collection frequency.

- Many agencies have already recognized the value of data about the condition of existing infrastructure. To maximize return on investment it is critical to recognize that infrastructure exists to enable local, regional, or state goals for quality of life such as safety, public health, and economic activity. While condition is a good snapshot of today, in order to improve strategic investment, it is critical to collect, measure, and ensure decision makers see data that tracks progress toward strategic goals

- The focus of data collection should be on better understanding performance outcomes as opposed to only focusing on asset condition.

- Subject Matter Experts should continue to be engaged at all levels of government to prioritize future data collection, build out data governance structures and data standards.

KEY RECOMMENDATIONS

Creating a Statewide Integrated System

- The statewide asset management database should provide local communities the ability to collect, store, and make data driven decisions utilizing a geospatial format which is the industry standard. This will allow the Michigan Infrastructure Council and local asset owners to analyze data across asset types and jurisdictions. This will also lead to increased transparency for all residents in the state of Michigan.

- It is critical for the statewide database to provide the ability to enable coordinated, long term investment planning at the local, regional, and state level.

- In order for the statewide database to encourage a statewide asset management culture, training will need to be provided for users to fully take advantage of the system.

- To protect highly sensitive critical infrastructure data, all data submitted to the statewide database should be housed within the Michigan Geographic Framework.

- The Michigan Infrastructure Council must identify and remove barriers for communities of all sizes to participate in the system.

Enabling Coordination within the Public Right of Way

- Coordination and communication meetings should be held at the regional and local level between public and private asset owners to facilitate better project coordination. This will lead to financial savings for public and private asset owners and will provide residents of Michigan improved levels of service.

- The creation of a geodatabase of project information in conjunction with the statewide asset management database will enable integrated coordination to take place at the state, regional, and local level within the shared space of the public right of way.

- There is an opportunity to review current permitting practices for modernization opportunities, investigate a more standardized permitting process, and to facilitate long-term strategies to better coordinate short-term planning.

A copy of the full report can be found at
www.michigan.gov/documents/snyder/asset_management_report_621264_7.pdf

