# MICHIGAN OFFICE OF FUTURE MOBILITY & ELECTRIFICATION

# **OFME** Overview



Mobility refers to technologies and services that enable people and goods to move around more freely. Electrification refers to the range of technologies that use electricity to propel a vehicle.



At the end of 2019, a decade's worth of effort across state government had helped position Michigan as the global mobility leader.

To further support and solidify those efforts, Governor Whitmer created the Michigan Office of Future Mobility and Electrification (OFME) in February 2020.

OFME was designed to be both an air traffic controller, and a rocket booster, for all the good work already happening in mobility across the state.



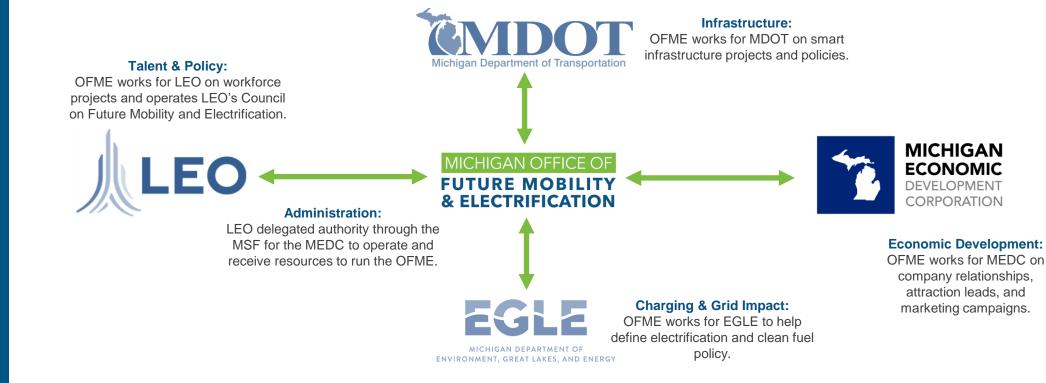
#### **OFME Vision:**

A stronger state economy through safer, equitable, and environmentallyconscious transport for all Michigan residents.

#### **OFME Objectives:**

- Increase Mobility Investment in MI.
- Lead the World in Mobility and EV Startups and R&D.
- Expand MI's Smart Infrastructure.
- Grow **EV Adoption** in MI.
- Further Enable MI's Mobility Workforce.
- Bolster MI's Mobility Manufacturing Core.

**Executive Directive 2020-1** from the Governor Whitmer charged the OFME with coordinating a statewide approach for future mobility and electrification that bolsters Michigan's economy, workforce, environment, and infrastructure priorities. That is why OFME is nestled between the four departments responsible for these priorities, creating the "tools" and "extra hands" necessary to help these teams maintain mobility leadership.





<u>Connectivity</u>	<u>Partnership</u>	<u>Investment</u>	Innovation
Expand the networks of industry players and government partners.	Mine newly-expanded networks for partnership opportunities between the public and private sectors.	Use new partnerships to develop projects that attract investors.	Turn new investment into statement wins for Michigan.
Over the past two years,	OFME worked with MEDC,	Working with MEDC, LEO,	Deep collaboration between

- Over the past two years, OFME has made over
  2,000 qualified introductions for 416 Michigan industry, university, and government partners.
- On average, OFME has made 4 introductions per business day for Michigan stakeholders since October 2020.
- OFME worked with MEDC, LEO, EGLE, MDOT, and EOG to generate **89 publicprivate partnerships** around the state. This comes to **3 per month since October 2020.**
- Deployments included rural EV charging solutions, EV workforce training, drone deliveries of food and medicine, better transit options, grid resiliency innovations, and AI for safer traffic intersections.
- Working with MEDC, LEO, MDOT, EGLE and EOG, OFME uncovered **nearly a half-billion (\$478,585,473)** to support future mobility projects in Michigan.
- On average, for every grant dollar OFME has awarded to deploy a new technology in a Michigan community, \$3,500 has been provided by industry as match to sustain the deployment.
- Deep collaboration between OFME, MEDC, LEO, MDOT, EGLE, and EOG to design the future of mobility has created **several dynamic firsts in only two years.**



#### OFME collaborations with MEDC, LEO, MDOT, EGLE, and EOG have averaged **one published article per business day** since October 2020. This amounts to over **500 local and national articles.**

## CBS NEWS

A road in Detroit will charge an electric car while driving

## **CAR**<sup>**AND</sup>DRIVER**</sup>

Michigan Will Build Out EV Charging Stations for Lake Michigan Road Trips

## FAST@MPANY

Why e-bike maker Vela is ditching China for Detroit

## Forbes

5 Reasons Michigan Has Become The "Silicon Valley Of Mobility Tech"



EV charging infrastructure proposed for 7 Michigan highways



Michigan plans to redesign a stretch of road for self-driving cars



Detroit lets automakers test smart parking technology in a real garage

## yahoo!finance

Ford International Airport Launches FLITE to Develop, Introduce New High-Tech Air Travel Solutions

## **The Detroit News**

Council recommends steps for Michigan to bolster mobility

## Detroit Free Press

National Park Service partners with Michigan to provide equitable access to national parks



5 Midwestern governors agree to create a network to charge electric vehicles

## CBC

Ontario and Michigan partner on cross-border drone study



Ford, Google are founding partners in Michigan Central Innovation District

sentinel scom

Whitmer helps launch EV charging stations at State Parks

## Automotive News

Why FLO chose Michigan to build EV chargers



Under Governor Whitmer's Leadership, Michigan has:

Michigan's mobility sector has momentum.

- Over 28,000 new jobs in the auto industry and maintained Michigan's position as America's #1 automotive R&D and manufacturing state.
- Made the largest education investment in state history to prepare future generations of Michiganders for careers in mobility and EVs.
- Set Michigan on a **path to carbon neutrality by 2050**, which includes a worryfree, statewide electric vehicle charging network before 2030.
- Continued to fix Michigan's roads, while also futureproofing with multiple American firsts like the first AV vehicle corridor, and first wireless charging corridor for electric vehicles.
- Led national mobility policy conversations that included the creation of the first 5state compact in the Midwest to focus on EV adoption and 7-state compact in the Midwest to focus on the development of a hydrogen economy.



Michigan's Biggest Mobility Challenges This Decade:

- Fierce competition for new mobility jobs.
- Fierce competition for new R&D and risk capital investment.
- Transitioning Michigan's workforce from traditional ICE skillsets to emerging AV and EV skillsets.
- **Transitioning Michigan's infrastructure and grid** from primarily serving ICE vehicles to also serving EVs and AVs.
- Ensuring that state regulatory environments keep pace with the domestic and global markets.
- As the lead source of emissions pollution, decarbonizing the transportation sector is key to fighting climate change.



But there are challenges ahead.

# **MI Future Mobility Plan**



To address these challenges, state leaders, with guidance from industry and academia, came together to construct the MI Future Mobility Plan.

- Executive Office of the Governor
- Michigan Office of Future Mobility and Electrification
- Michigan Council on Future Mobility and Electrification
- Michigan Department of Labor and Economic Opportunity
- Michigan Department of Environment, Great Lakes and Energy

- Michigan Department of Transportation
- Michigan Department of Natural Resources
- Michigan Department of Insurance and Financial Services
- Michigan Department of Treasury
- Michigan State Police
- Michigan Economic Development Corporation
- Michigan Public Service Commission



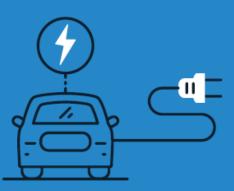
Michigan's Vision for Mobility and Electrification: Build a strong, vibrant economy through safer, more equitable and environmentally-conscious transportation for all people.





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Transition and Grow Our Mobility Industry and Workforce



- Create 20K new jobs by 2026 while increasing the median wage of mobility sector jobs.
- Add 7K workers with mobility credentials by 2030 while increasing diversity in the sector's workforce.
- Ensure Michigan maintains a resilient automotive manufacturing sector that supports at least 170K jobs through 2030.



# Detroit Free Press

## GM to invest historic \$7 billion in 4 facilities across Michigan, creating 4,000 jobs



Ford, Google, State of Michigan, and City of Detroit investing over \$850 million in a 1.2 million-square-foot campus focused on mobility innovation and startups.



Ford, Google are founding partners in Michigan Central Innovation District



Michigan's Vision for Mobility and Electrification: Build a strong, vibrant economy through safer, more equitable and environmentally-conscious transportation for all people.

Provide Safer, Greener and More Accessible Transportation



- By 2030, deploy 100K EV chargers to support 2M EVs and improve access to hydrogen infrastructure.
- Maintain at least 80% of EV charging off-peak to minimize impacts on the grid.
- Reduce congestion and traffic crash rates statewide by 2026.
- Provide residents with consistent access to mobility-as-a-service options across Michigan's 77 transit agencies by 2025.



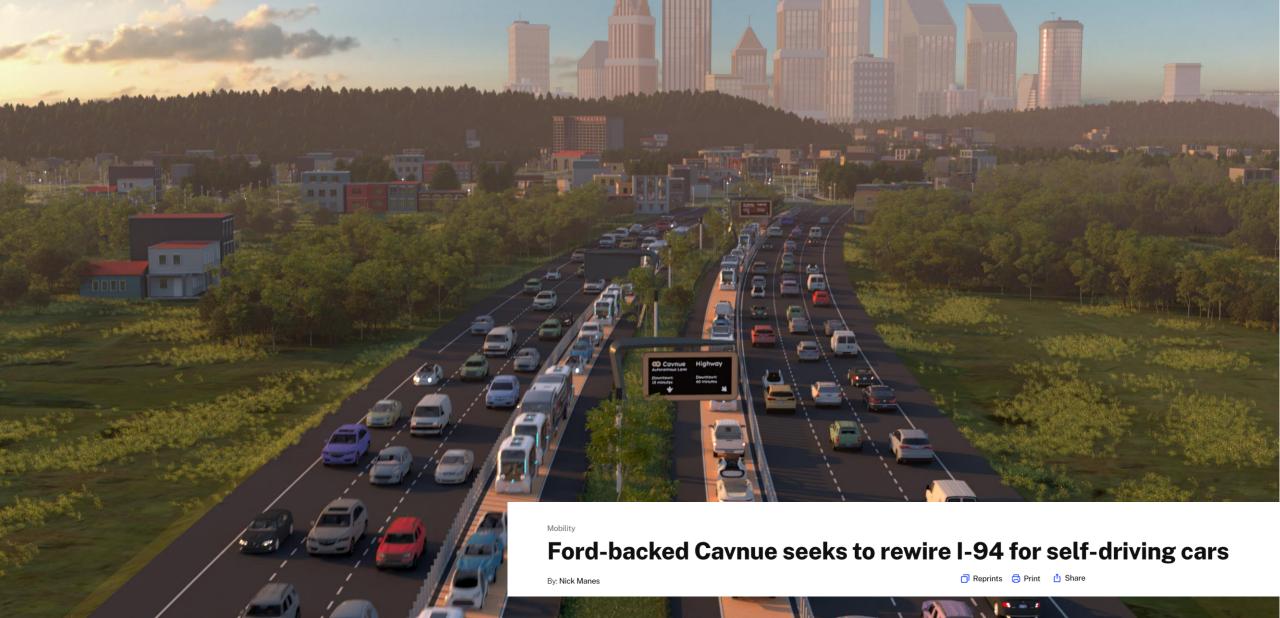
# yahoo!finance

Biden touts EV leadership, approves \$900 million for charger spending at Detroit Auto Show

"We're approving funding for the first 35 states, including Michigan, to build their own electric charging infrastructure throughout their state, and you all are going to be part of a network of 500,000 charging stations," Biden said.

# A FUTURE MADE IN AMERICA







Michigan's Vision for Mobility and Electrification: Build a strong, vibrant economy through safer, more equitable and environmentally-conscious transportation for all people.

Lead the World in Mobility Policy and Innovation



- Maintain #1 state ranking for mobility and electrification R&D spend.
- Become a top 10 state for growth in venture capital funding by 2026.
- Become a top 10 state for federal investments related to mobility and vehicle electrification.
- Lead the nation in electric and automated vehicle friendliness through responsive policies.



# **XIOS** This parking garage is a hightech research lab



Detroit Smart Parking lab

## Council on Future Mobility & Electrification

Public Members	Private and University Members	
State Dept – Labor (LEO)	University of Michigan	
State Dept – Transportation (MDOT)	Michigan State University	
State Dept – Environment (EGLE)	United Auto Workers	
State Dept – Energy (MPSC)	Ford	
State Dept – Insurance (DIFS)	General Motors	
State Dept – Police (MSP)	Stellantis	
State Dept – Investments (Treasury)	Toyota	
Senate Majority and Minority	Rivian	
Legislators	Waymo	
Clean Fuels Michigan		

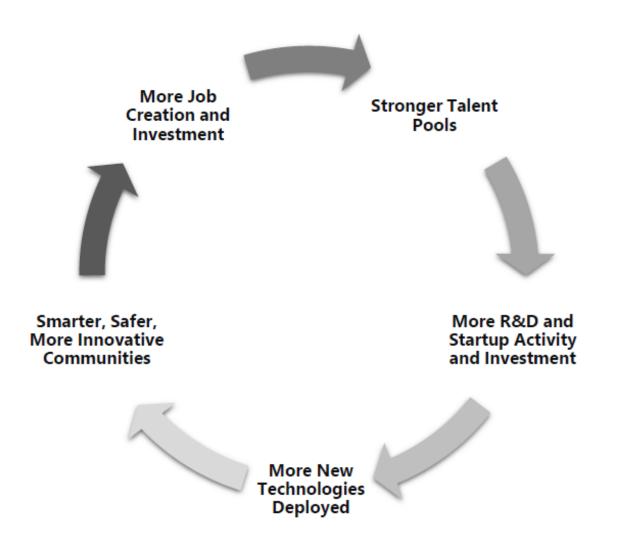
**Council on Future Mobility** & Electrification 2021 REPORT





# Implementation Approach:

Our approach is to launch and grow programs that create the right set of conditions for economic and community development

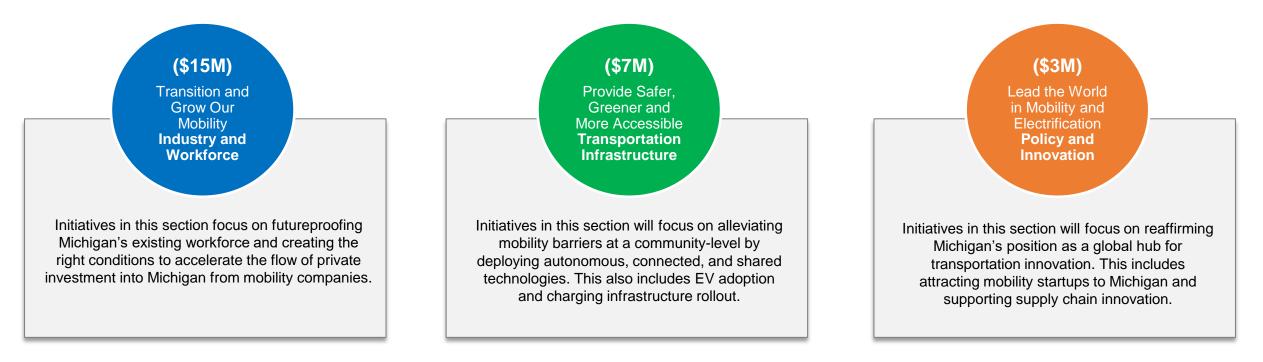


# **Mobility Futures Initiative**



To jumpstart the goals outlined in the state's mobility strategy, the Mobility Futures Initiative will leverage \$25M in the supplemental FY22 state budget to seed the launch of several transformational projects related to the future of transportation.

This will be a multi-agency effort that breaks down silos and increases efficiency. OFME will manage these funds and projects with guidance provided by the Governor's Office, Legislature, Council on Future Mobility and Electrification, LEO, MEDC, MDOT, EGLE and MPSC.





### Workforce Transition Focus (\$13M)

- Michigan EV Jobs Academy (\$4M): Scale to a statewide platform that grows the state's current EV-focused workforce and catalyzes the next generation of EV engineering talent by leveraging existing state assets in new ways.
- Michigan Charging Infrastructure Academy (\$4M): Augment the EV Jobs Academy with a version that focuses on charging infrastructure. Especially as Michigan becomes a destination for new charging infrastructure manufacturing and R&D. Partner to be determined.
- Electric Vehicle Transformation Impact Program (EVTIP) (\$5M): Provide analysis and transition strategy resources to communities affected by the closure of ICE employers because of EVs. This program is modeled after Treasury's Energy Transition Impact Program (ETIP).

### High-Tech Talent Focus (\$2M)

 Michigan High-Tech Talent Pipeline Program (\$2M): Work with MICHauto to launch a pilot project with Kettering University and Michigan Technical University to engage, track, guide, and retain students in statewide high school FIRST Robotics, Square One Network, and VEX programs in order to develop and retain the state's own high-tech talent pipeline.



#### **Smarter Transportation Infrastructure (\$2.5M)**

• Michigan Mobility Funding Platform (\$2.5M): Scale to address more complex urban and rural mobility and safety challenges around the state by leveraging new technologies. And help more companies get connected to Michigan test sites to validate tech before public deployment.

#### **Greener Transportation Infrastructure (\$2M)**

• Truck Stop of the Future (\$2M): A real-world prototype to test new EV charging technologies related to moving goods via long-haul, middle-mile, or last-mile routes. This positions Michigan as ground zero for companies seeking to build the future of clean freight and ground delivery.

#### **More Accessible Transportation Infrastructure (\$2.5M)**

- Michigan Mobility Wallet Program (\$2M): Pilot an electronic or card-based payment tool for public and private shared transportation services. This tool would provide users with access to rides, passes, best fares, and/or personalized credits. The goal is to make trip payment easier and more seamless across a range of mobility options.
- National Park Service Partnership (\$500K): Leverage Michigan's NPS assets to pilot new mobility technologies meant to improve EV capability, congestion, and visitor accessibility. This includes solving mobility and electrification challenges in surrounding NPS communities.

ECTRIFICATION

### Local Coordination (\$1M)

- Mobility Policy Research and Programming (\$500K): Relaunch CAV Working Group and EV Working Groups that were paused due to the pandemic. Enlist research support in developing CFME Annual Report.
- Mobility Startup and Investor Programming (\$500K): Develop strategic programming and partnerships that focus on mobility audiences driving and funding innovation. This includes pulling local mobility innovators together post-pandemic to re-establish a tighter-knit community that has been pivotal to driving deal flow and company creation in places like Austin, Boston, and Silicon Valley.

### **Global Coordination (\$2M)**

• Pilot Battery Alliance (First with Ontario) (\$2M): Catalyze cross-border innovation related to the EV and battery supply chain for Michigan and Ontario. Both sides will commit an equal amount to seed projects and collaboration around testing, research exchange between universities, and pilots between cross-border entities (e.g., corporates and startups) leading to commercial partnership.



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# **FUTURE MOBILITY & ELECTRIFICATION**

Thank you!

www.michiganbusiness.org/ofme