

Semiconductor and Automotive Industries: Increasing Interdependencies

Dave Coulter, Oakland County, Michigan, County Executive

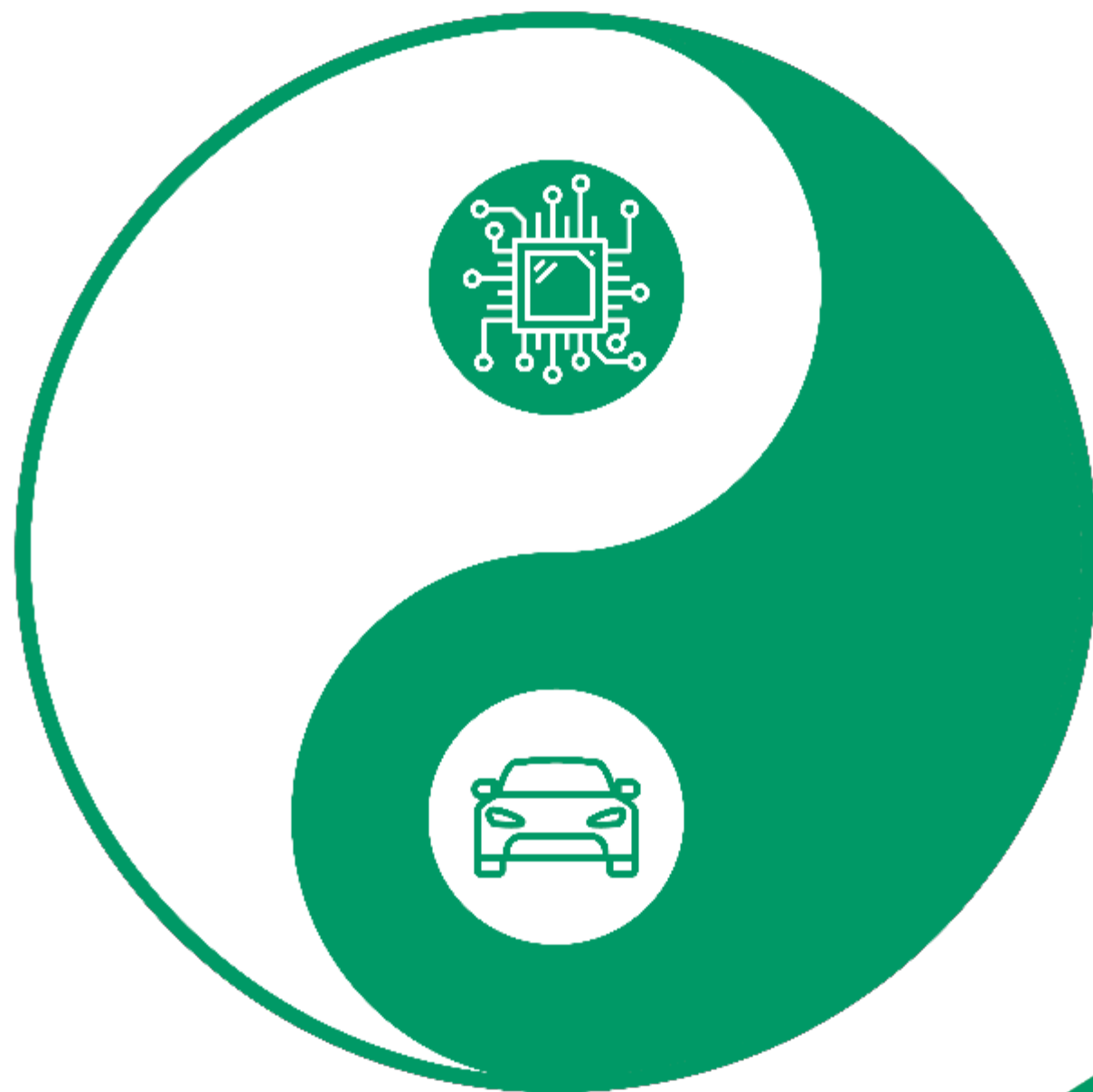
Ingrid Tighe, *Director Economic Development, Oakland County, Michigan*

November 16, 2022

Global Appeal

Innovation Powerhouse

Skilled Workforce

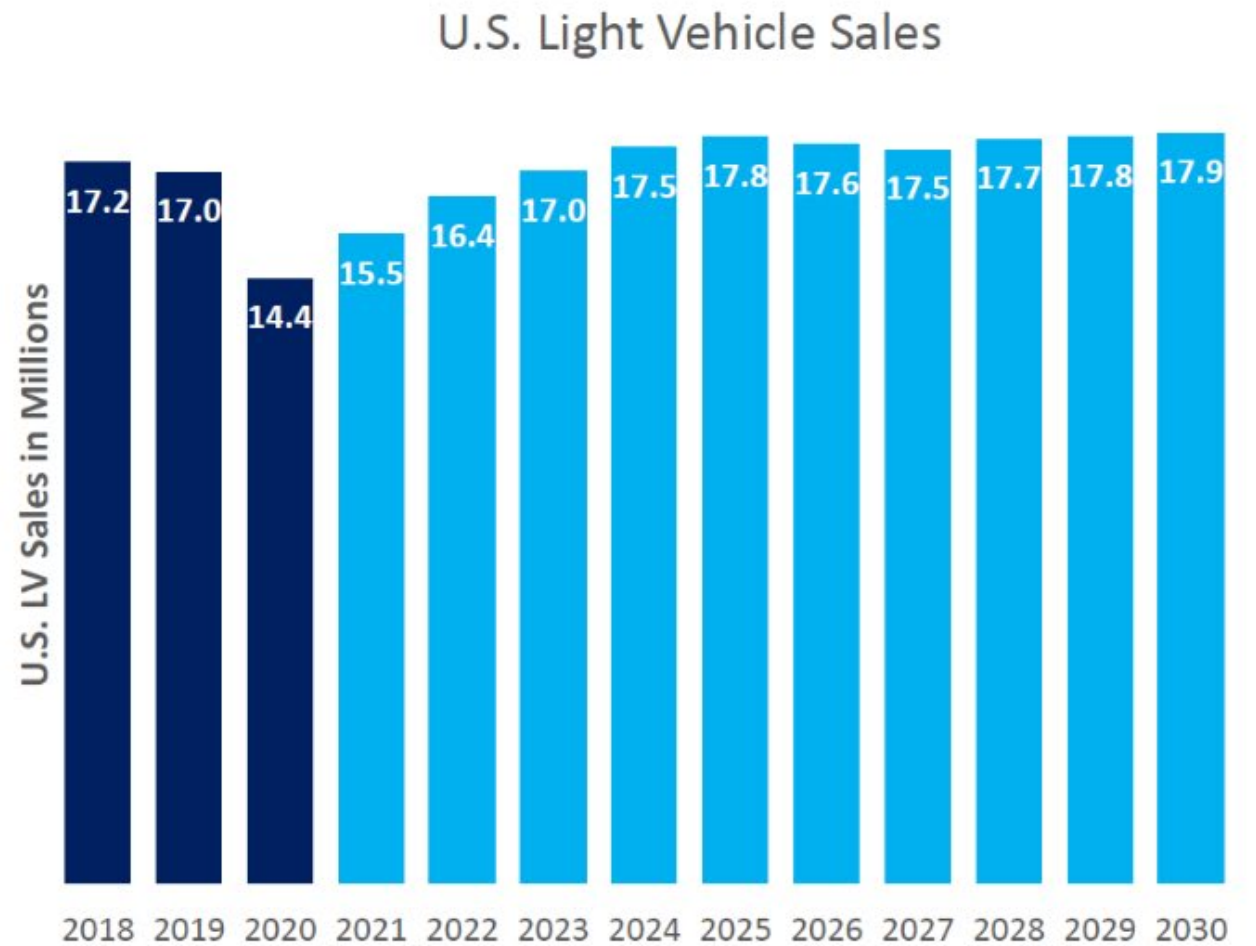




Growing Auto Demand for Chips



CAR's U.S. Light Vehicle Sales Forecast 2021-2030





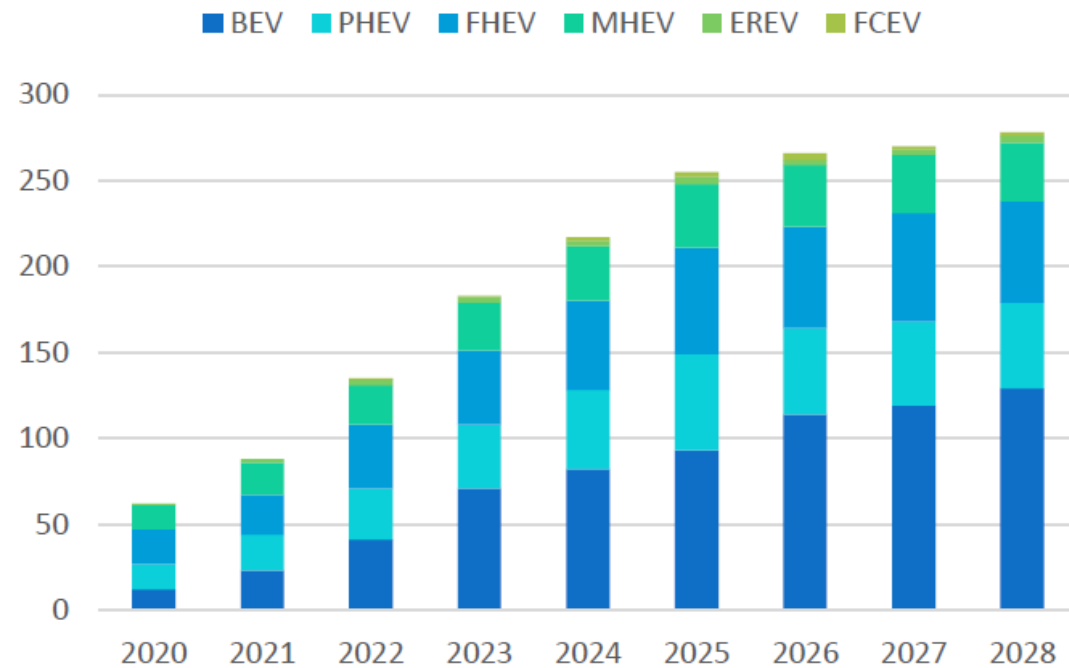
Federal Funding Support for Electrification

- *Infrastructure Investment & Jobs Act:*
includes funding for updating the electrical grid plus \$7.5 billion US for installation of EV charging stations (goal 500,000 charging stations)
- *Build Back Better*, which funds a wide array of social, economic programs, & environmental programs, includes:
 - Uncapped 10-year EV consumer tax credit of \$7500 US for purchase of most battery electric and plug in hybrids, with additional funding for US and union-built models and battery cells
 - Up to 30% credit for public chargers

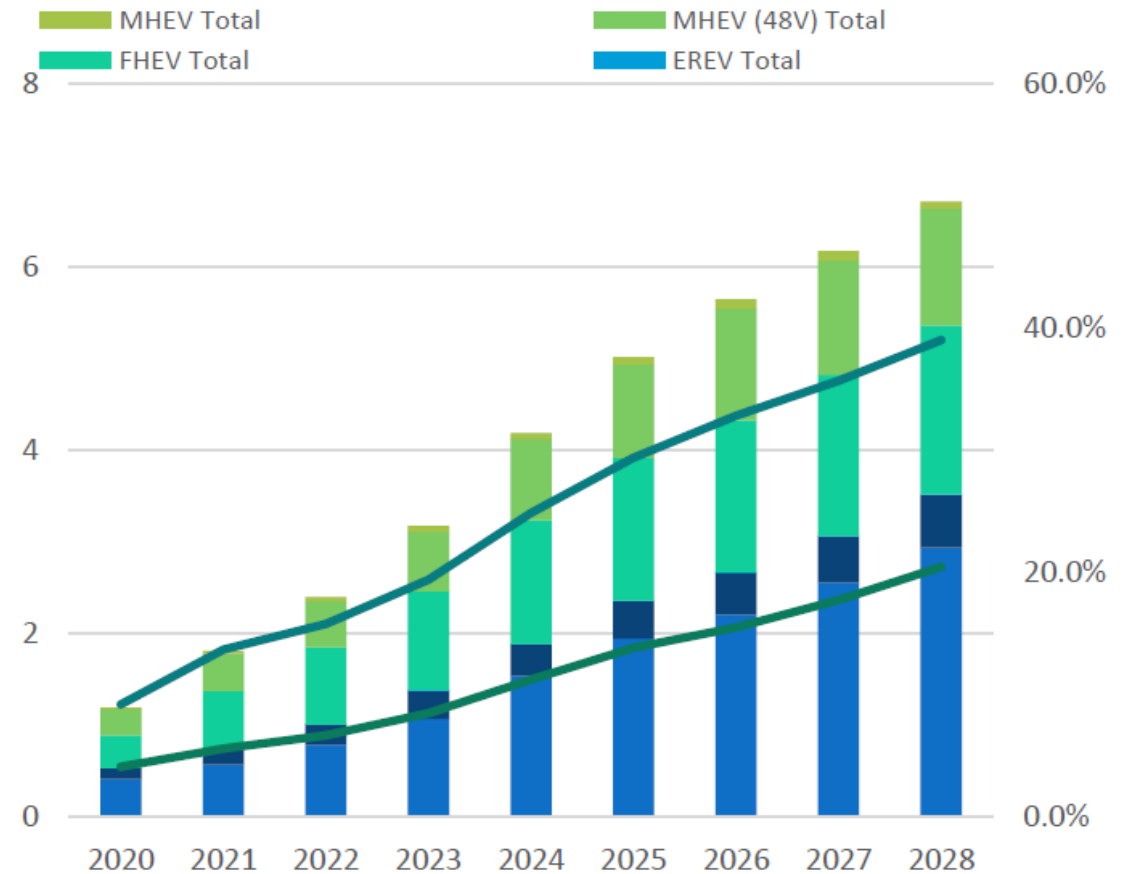
North American Electric/Electrified Vehicle Production Models & Volumes Projected to Grow Substantially

2020 – 2028 Forecast

NUMBER OF ELECTRIC/ELECTRIFIED
NAMEPLATES
PRODUCED IN NORTH AMERICAN
PLANTS



TOTAL ELECTRIC/ELECTRIFIED VEHICLES
PRODUCED IN NORTH AMERICAN PLANTS





The CHIPS Act Will Promote New Chip Investment

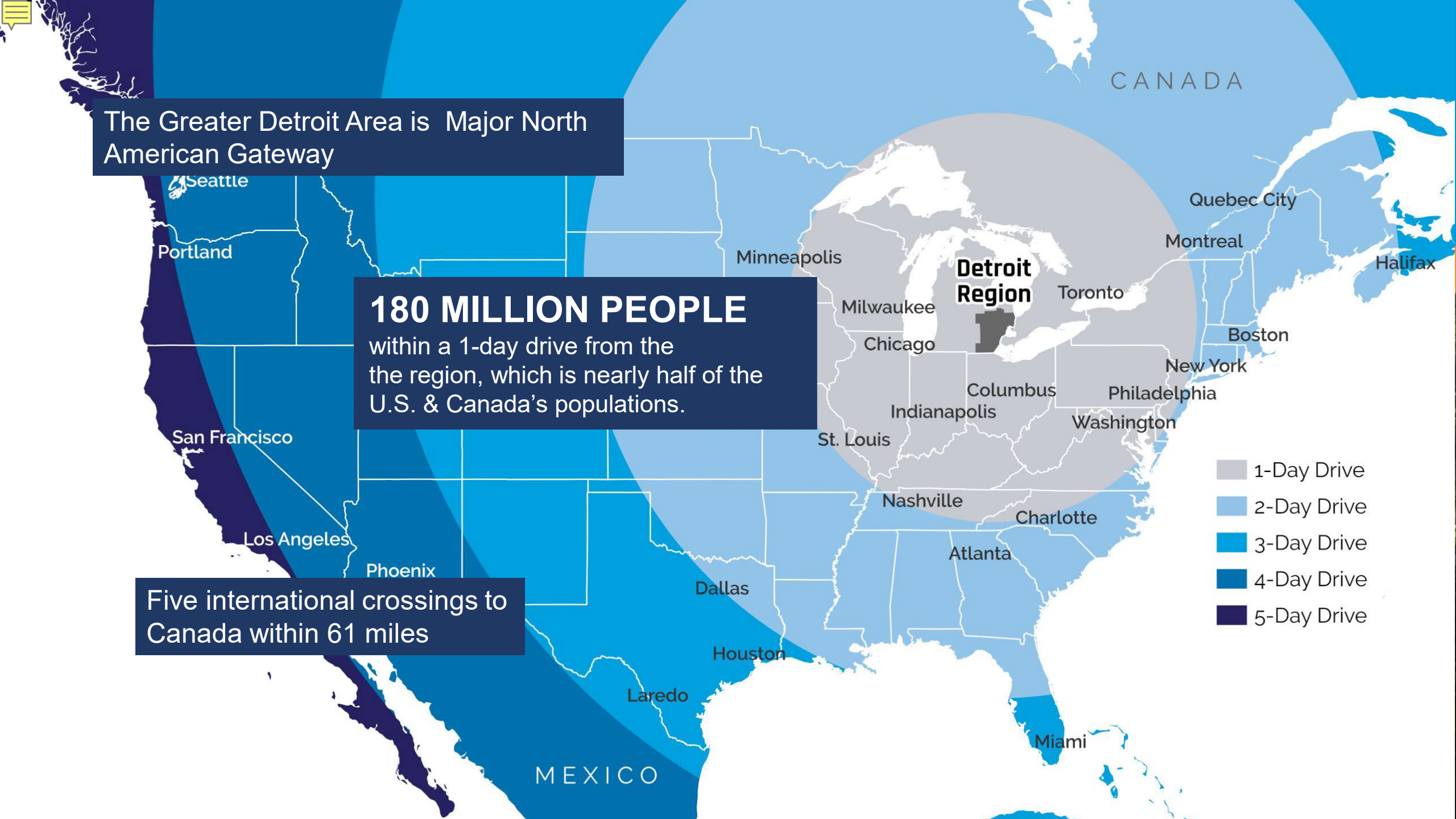


Michigan, United States

The Greater Detroit Area is Major North American Gateway

180 MILLION PEOPLE
within a 1-day drive from the
the region, which is nearly half of the
U.S. & Canada's populations.

Five international crossings to
Canada within 61 miles



North American EV Production

Volume of EV/PHEV/HEV/MHEV Vehicles

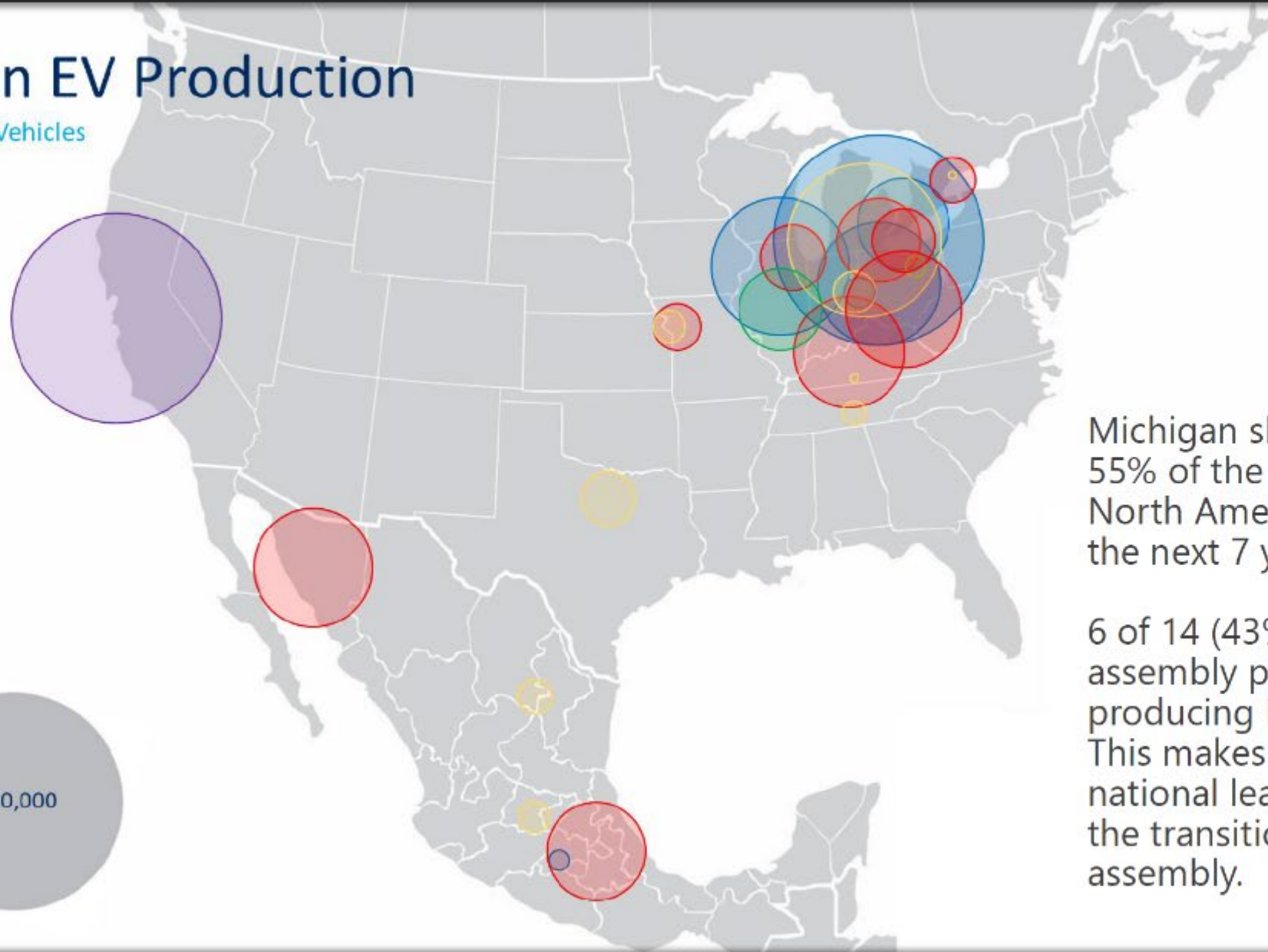
2025

- Faraday
- Fiat Chrysler Automobiles
- Ford Group
- General Motors Group
- Lordstown Motors
- Rivian
- Tesla Motors
- Workhorse

10,000

450,000

Legend



Michigan should produce 55% of the Detroit Three's North American EVs over the next 7 years.

6 of 14 (43%) of Michigan assembly plants will be producing BEV's by 2025. This makes Michigan a national leader in making the transition to BEV assembly.



The future of mobility will impact more than automotive transportation. But Michigan can leverage its clear advantage in automotive-based technologies to drive other transportation modes forward.

The mobility industry will grow to over \$3.3 trillion USD by 2030, but vehicles are only a portion of the market.

Fleet, traffic and Infrastructure,
\$1.13T

Services, Systems and Data,
\$1.12T

Maintenance and Aftermarket,
\$359B

Smarter, Cleaner Vehicles,
\$719B



Midwest Region





State of Michigan





Michigan recognized as Automotive Hub





New Semiconductor Production Will Require More Suppliers





Michigan Companies Supporting the Semiconductor Industry

SIEMENS

rexroth
A Bosch Company



NIKON METROLOGY
VISION BEYOND PRECISION





Greater Detroit Region



Greater Detroit Region: R&D Hub





Greater Detroit Region: Skilled Workforce





Greater Detroit Region: Engineering Capabilities



24 OEMs



2,200 Global EV and AV Suppliers



Hundreds of New Companies

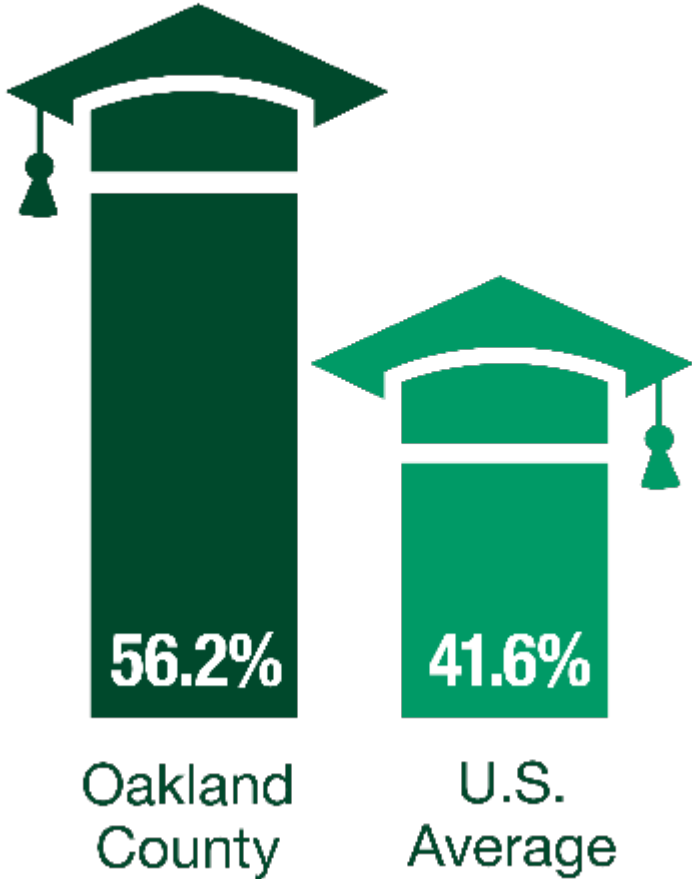


Greater Detroit Region: Robotics





Percentage of Residents with College Degrees





Oakland County is located in the center of the Southeast Michigan Region



-  Links to Canada
-  Automation Alley
-  Detroit
-  Airports
-  Vehicle Testing Facilities
-  Dedicated I-94 Autonomous Lane
-  Truck Platooning I-69
-  Oakland University
-  Lawrence Technological University
-  Wayne State University
-  University of Michigan

Oakland County

Regional Mobility Assets

Oakland County

Tier 10 Automotive Companies



Oakland County firms Provide a Variety of Support to the Semiconductor Industry





Automotive production
requires a broad range
of capabilities and
technologies





Automotive
technologies can
translate to other
applications



World Economic Forum: Centre for Advanced Manufacturing



US CENTRE FOR ADVANCED MANUFACTURING

A Partner of the World Economic Forum Network
for the Fourth Industrial Revolution





Oakland County's Sustainability Focus





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