

PLANNING FOR AUTOMATED TRAVEL

MONTREAL DELEGATION VISIT
APRIL 29, 2019



MAG REGION



64% of State Population
69% of State Tax Collections

Population: 4.5 million

REGIONAL COUNCIL MEMBERS



Gail Barney, Chair
Mayor of Queen Creek



Mark Mitchell, Vice Chair
Mayor of Tempe



Jerry Weiers, Treasurer
Mayor of Glendale



Jackie Meck, Past Chair
Mayor of Buckeye



Kenneth Weise, At-Large
Mayor of Avondale



John Giles, At-Large
Mayor of Mesa



Robin Barker
Councilmember, Apache Junction



Les Peterson
Mayor of Carefree



David L. Smith
Councilmember, Cave Creek



Kevin Hartke
Mayor of Chandler



Alexis Hermosillo
Mayor of El Mirage



Tara Walter
Mayor of Florence



Pres. Bernadine Burnette
Fort McDowell Yavapai Nation



Ginny Dickey
Mayor of Fountain Hills



Tommy Sikes
Mayor of Gila Bend



Gov. Stephen Roe Lewis
Gila River Indian Community



Jenn Daniels
Mayor of Gilbert



Georgia Lord
Mayor of Goodyear



Valerie Molina
Mayor of Guadalupe



Thomas Schoaf
Mayor of Litchfield Park



Christian Price
Mayor of Maricopa



Steve Chucri
Supervisor, Maricopa County



Jerry Bien-Willner
Mayor of Paradise Valley



Cathy Carlat
Mayor of Peoria



Todd House
Supervisor, Pinal County



Kate Gallego
Mayor of Phoenix



President Martin Harvier
Salt River Pima-Maricopa I.C.



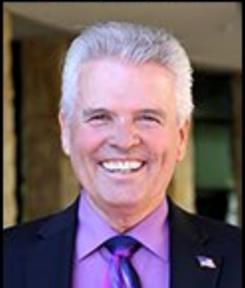
Sam Elters
State Transportation Board



Jack Sellers
State Transportation Board



W.J. "Jim" Lane
Mayor of Scottsdale



Skip Hall
Mayor of Surprise



Anna Tovar
Mayor of Tolleson



Everett Sickles
Mayor of Wickenburg

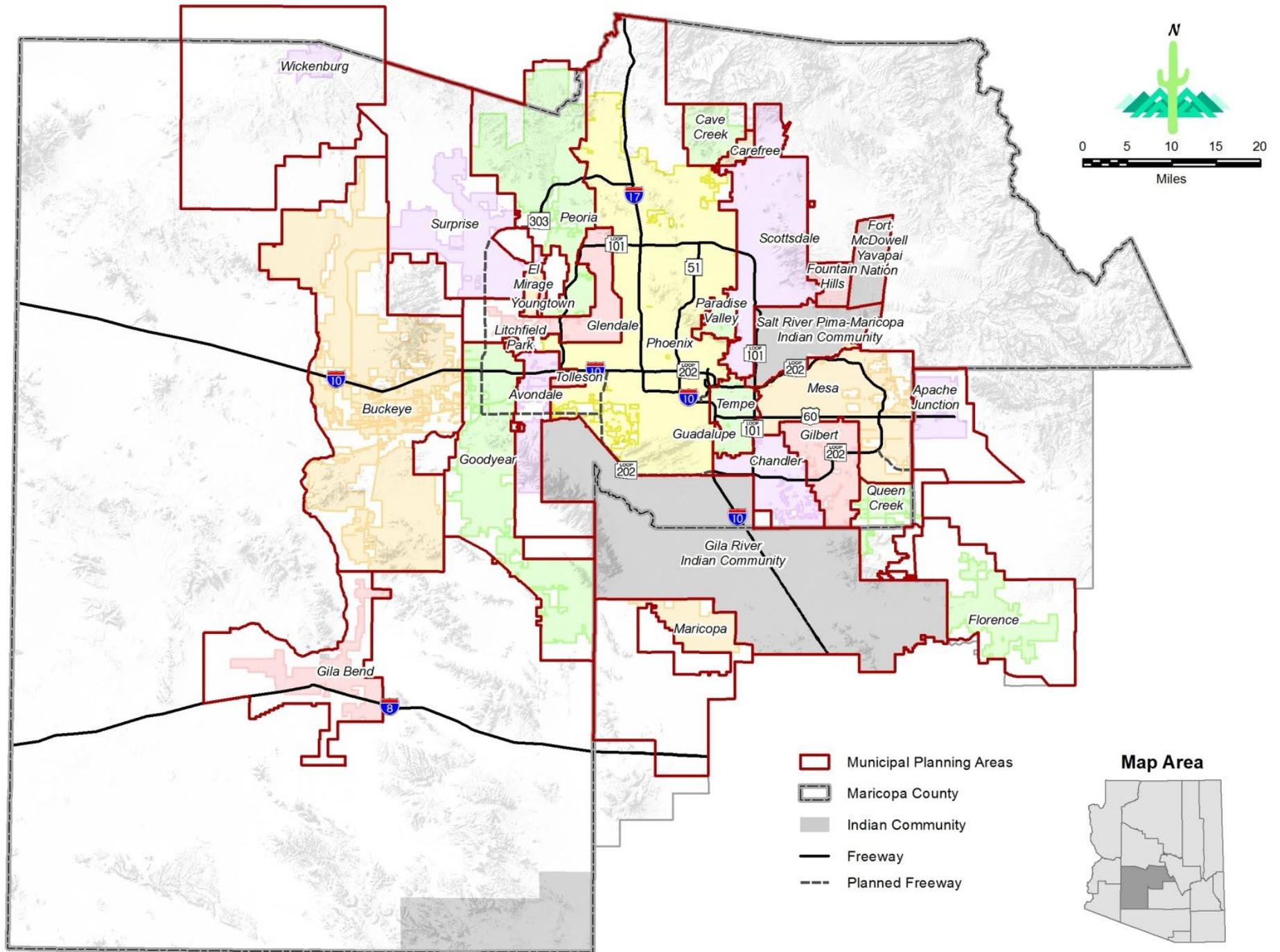


Michael LeVault
Mayor of Youngtown

**MARICOPA
ASSOCIATION of
GOVERNMENTS**

2019

MAG Membership

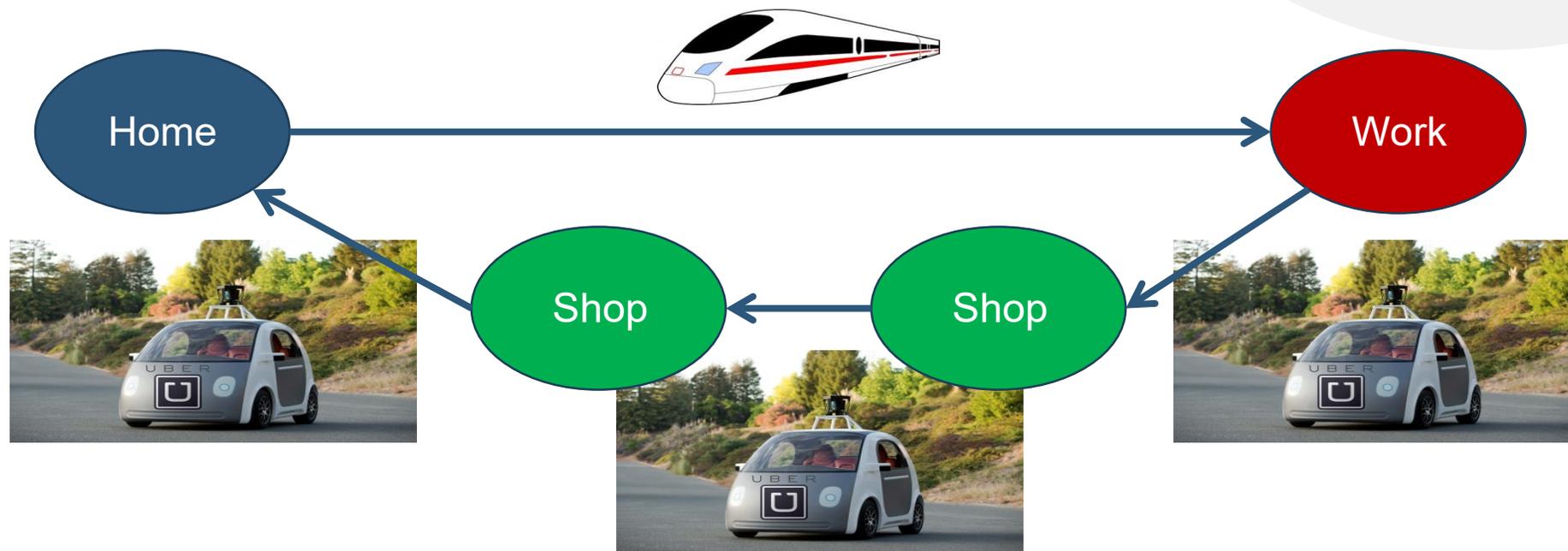


HOW VEHICLES ARE USED

- *Elderly, youth, disable, anøthers without a driver licensenow have access.*
 - Mode choice
 - Escorting needs reduced or completely eliminated
- *Cars becomeubiquitous: availableat any locationat any time.*
 - Mode choice and multi-modal tour mode combinations
- *Empty repositioning trips made by AVs facilitate intrahousehold sharing of cars.*
- *Easeto order a shared AV fromTransportation Network Company (TNC):*
 - Mode choice: increase in “Taxi” share of trips
 - Impact on car ownership

CARS AVAILABLE AT ANY LOCATION ANY TIME, NOT NECESSARILY FROM HOME FOR ENTIRE TOUR

- ABM: Trip mode combinations on the tour less restrictive with any sequence of auto (AV) and transit



HOW PEOPLE VIEW TRAVEL

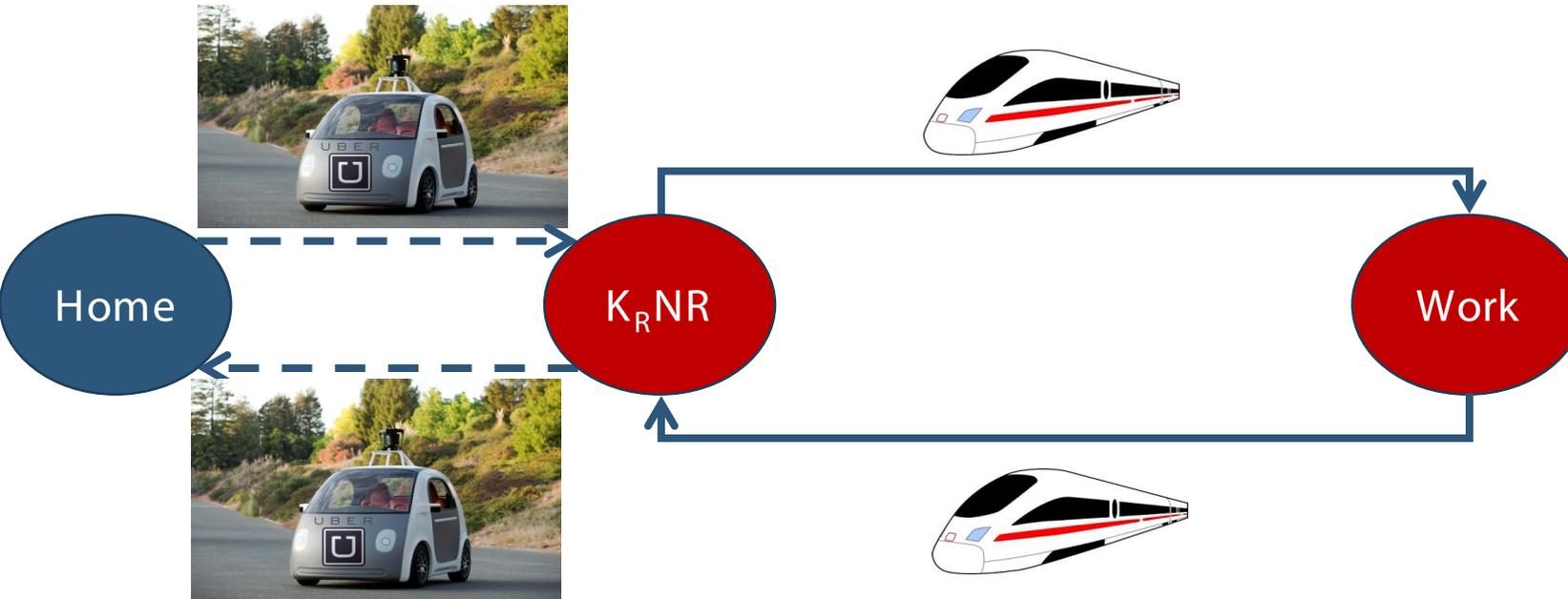


- *In-Vehicle Time Productivity*
 - Mode choice: reductions in in-vehicle time coefficient for AVs can range from 15% to 50.
 - Effects of convenient and productive travel time.
 - If people can do other things in the car, they might be willing to travel more or further.

Kiss Robot and Ride

GENERAL CONVENIENCE OF AV-K_RNR VS. PNR KNR & WALK ACCESS/EGRESS

- ABM: K_RNR convenience parameters equalized to auto



- *AV as an access mode to transit*
 - AVs create a new mode of transportation Kiss Robot & Ride
 - Combined advantages of Park-and-Ride (PNR) and Kiss-and-Ride (KNR) modes.
 - Mode choice (can work in favor of rapid transit)
- *Plagues of transit access today*
 - Walk too long
 - PNR needs parking and extra car
 - KNR needs driver
- *AV solves all 3!*

VEHICLE CONNECTIVITY AND AUTOMATION WORKING GROUP

Association of Metropolitan Planning Organizations (AMPO)

Meeting since April 2017



AMPO NATIONAL FRAMEWORK
FOR REGIONAL CONNECTIVITY
AND AUTOMATION PLANNING

RELEASED APRIL 25, 2019

ADDRESSING 16 RELEVANT TOPICS



ADDRESSING 16 RELEVANT TOPICS



BENEFITS AND OPPORTUNITIES

Provide a mechanism to build technical, institutional, and policy capacity of MPOs and their partner state and local agencies to leverage the benefits of deployment of vehicle connectivity and automation to the performance based planning and programming process.



CHALLENGES AND RISKS

Address knowledge gaps and provide a forum for MPOs with their partner state and local agencies engaged in transportation planning to educate and expand awareness of the nature and status of vehicle connectivity and automation deployment, current and emerging technical planning issues, and institutional and policy challenges.



PROCESS CONSIDERATIONS

Support the U.S. DOT outreach and engagement by providing a mechanism for support and provide feedback on planning-related guidance, research, and training and technical assistance needs associated with deployment of vehicle connectivity and automation.

TRANSLATING TO THE MAG REGION



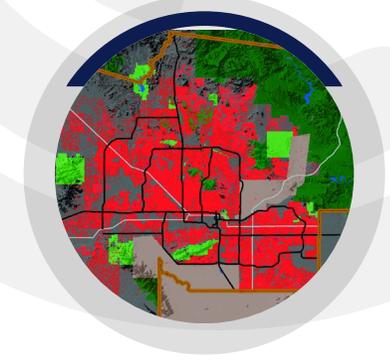
CONTEXT

Notes current Regional Transportation Plan goals and objectives and recent state and local policy decisions context.



APPLICABILITY

Describes specific activities by MAG related to the AMPO National Framework's 16 relevant topics.



ACTIONS

Suggest opportunities for MAG to consider in planning for automated travel as part of the region's future transportation system.

SPECIFIC RELEVANT TOPICS



SAFETY

Impact on performance management and target setting.



SECURITY

Consider MPO role when funding technology projects.

SPECIFIC RELEVANT TOPICS



OPERATIONS

Implications for the existing congestion management process.

Impact on performance management and target setting.



NEW SERVICE MARKETS

Consider the impact on mode-share and planning for share mobility services.

SPECIFIC RELEVANT TOPICS



INFRASTRUCTURE REQUIREMENTS

Support update or existing or development of federal guidance or standards that enable cohesive, consistent national deployment.

Incorporation into investment through the metropolitan transportation plan, transportation improvement program, and/or project prioritization.



FREIGHT

Impact on performance management and target setting.

SPECIFIC RELEVANT TOPICS



EQUITY

Equity incorporated into the transportation planning process.

Support equitable deployment scenarios.



ENGAGEMENT AND COORDINATION

Evolving roles and responsibilities of transportation agencies, industry, and the federal government.

Strategies for engagement and outreach to MPO policy boards and committees.

Strategies for building partnerships.

CONTINUING ACTIVITIES

- Transportation Research Board.
- Association of Metropolitan Organizations.
- American Association of State Highway and Transportation Officials.
- Member Agency Committees.
 - Tempe.
 - Peoria.
- FHWA Peer Exchange on Modeling CAVs
- FHWA TMIP Peer Review of Robust Decision Making
- MAG Public University Task Force
- MAG partnership in Smart Region and A-related initiatives



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