

# Management Committee Work Group

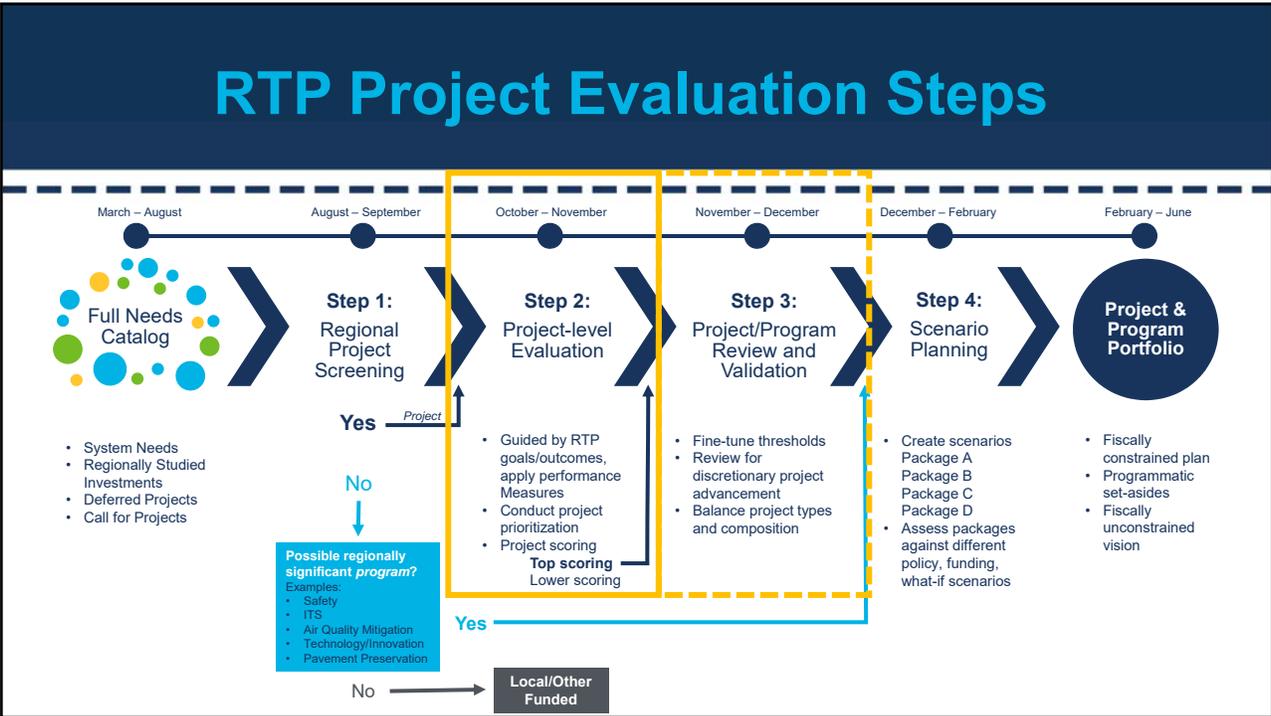
July 29, 2020



## Agenda

- Welcome
- Updates and Announcements
- Feedback from Member Agencies
- **Performance-Based Evaluation Framework:  
Project-Level Evaluation Criteria**
- **Scenario Planning Workshop**
- Look Ahead: Upcoming Policy Committee Items
- Other Items

# Summary: Performance Homework Assignment Feedback



## Key Takeaways

### Goals

- Mobility, Safety and Prosperity ranked higher importance
- Weighting important relative to modal category

### Project Evaluation Frameworks

- No major “gaps” identified in project evaluation framework
- General support for identified outcomes, evaluation criteria and performance measures
- Emphasis to priority outcomes/criteria/measures



## Freeway/Highway Framework Feedback

### Emphasis

- Prosperity: existing, future employment
- Mobility: bottlenecks, level of service (\*safety)

### Others

- Mobility: future residential growth
- Responsiveness: can support/accommodate multimodal
- Prosperity: connects major activity centers (e.g., medical, education)

### Weighting

Mobility, safety, prosperity



## Arterial Framework Feedback

### Emphasis

- Safety: locations with crash history (including bike/ped)
- Prosperity: existing, future employment

### Other

- Safety: complete street considerations (e.g., pedestrian and bicyclist considerations)
- Mobility: future residential growth; connects with educational establishments

### Weighting

Safety, Mobility, Prosperity, Preservation



## High-Capacity Transit Framework Feedback

### Emphasis

- Mobility: transit propensity analysis (Regional Transit Framework Study Update) including population density, transit-dependent populations (including zero car households), critical populations (e.g., aging, disabled), etc.

### Others

- Connections to activity centers (e.g., medical, education, entertainment)
- Connection(s) to existing/planned HCT, existing transit service
- Serve existing, future high density residential

### Weighting

Mobility



## Other Feedback

- Livability Goal
  - Strong support for application in program identification (notably active transportation and air quality)
  - Growth and development patterns (e.g., sprawl, access to services)
- Step 3: Project/Program Review and Validation
  - Consider if composition of investments has balance across region
  - Consider giving historic/legacy projects extra consideration, priority
  - Consider opportunity for jurisdictions to identify their highest priority project(s)
- Step 4: Scenario Planning
  - Consider if high capacity transit projects are in adopted plans with local funding commitments
  - Consider alternative funding options, such as leveraging private sector investments



## Other Feedback, continued

- Implementation
  - Emphasis on flexible programming, **ability to respond to change**
  - Project development ideas:
    - Consider secondary impacts during implementation (e.g., corresponding improvements to arterial/collectors adjacent to freeway project)
    - Recognize connected transportation to high capacity investments (e.g., first/last mile solutions, micro mobility, pedestrian and bicycle access,)
    - Consider important regional considerations to be included in project scopes (e.g., wrong-way drivers, lighting, etc.)
- Preservation
  - Lower scored goal
  - Remains an important consideration in program development



## Next Steps: Finalize Performance Assessment and Beta-Test

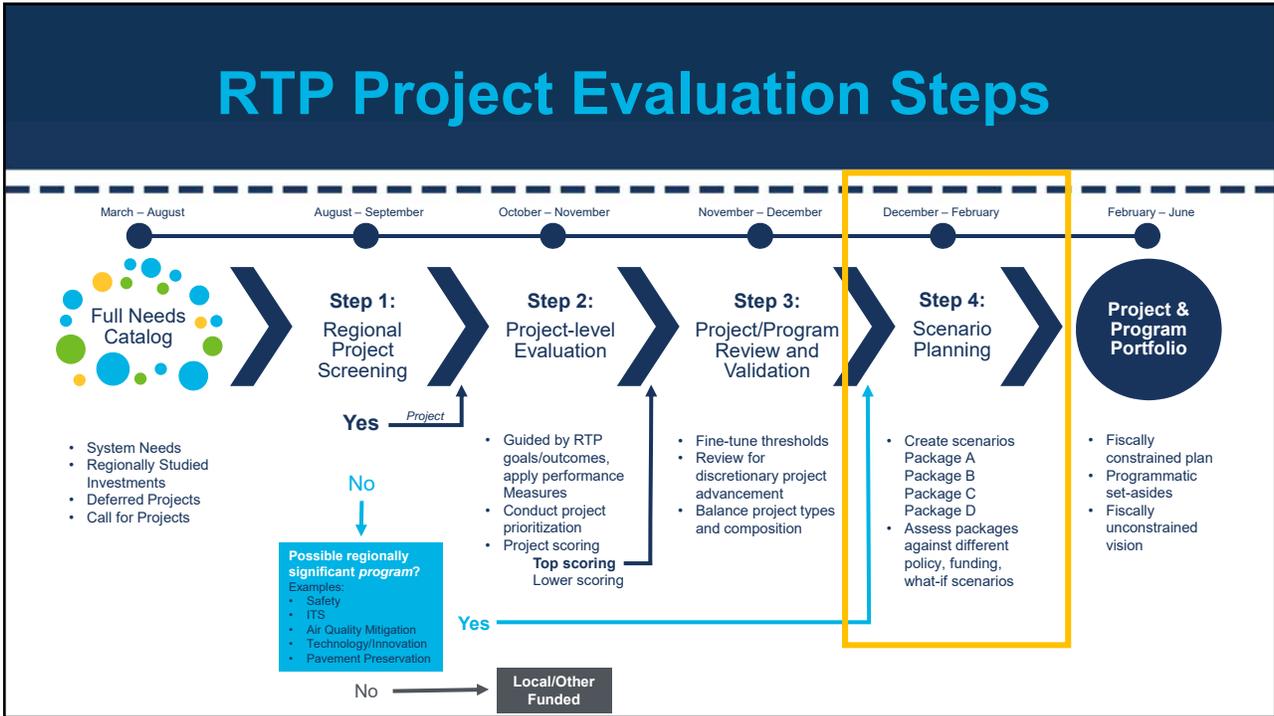
- Incorporate Homework Assignment Feedback
  - Finalize modal performance framework measure selection
  - Implement individual evaluation criteria weights
- Conduct Beta-Test and Refinement
- Present Refined Project-Evaluation Framework
  - September 9<sup>th</sup> Managers Working Group Meeting



## Scenario Planning Workshop

## Scenario Planning Workshop

- Scenario Planning Team Introductions
- National Trends in Metropolitan Transportation
- Scenario Planning in the RTP Process
- Discussion
  - Shared Community Goals
  - Potential Scenarios
- Scenario Planning Team Next Steps



## Scenario Planning Team Intro

- Steven Duong  
*Urban Planning Director*
- Tatum Lau  
*Senior Urban Designer*
- Jamie DeAngelo  
*Urban Planner*
- Megan Keith  
*Urban Planner*

## National Trends

### Connected, Automated, Shared, and Electric (CASE)

- Commercial delivery
- Personal travel
- Internet of Things

#### Implications

- Congestion management
- Working while commuting
- Vehicle gas tax

#### You said:

We are engaged in planning for the potential of new mobility technologies or innovations as evidenced by our partnership with Waymo, initiating a microtransit study, implementing a first-mile last-mile partnership with Lyft, and having a technology savvy transportation masterplan that plans for future technologies such as autonomous vehicles.

[We are launching]... a pilot program on autonomous vehicles, installing improved signal technology, and implementing new targeted fixed route connector bus service.



Image Source: Daniel Lawrence Lu, CC BY-SA 4.0

# National Trends

## Mobility as a Service (MaaS)

- Personal mobility
- Last-mile connections
- Mode-to-mode transfer

### Implications

- Vehicle ownership
- Funding
- Inequitable distribution of infrastructure

### You said:

Mobility as a Service (MaaS) has a primary function of shifting passengers away from personally owned vehicles towards transportation/mobility provided as a service – something which can be achieved through existing and future transit services.

[We are launching]...an on-going Micro-Mobility Pilot Program to work cooperatively with transportation providers such as Bird and Lime.

It is essential to ensure our residents have transportation options that provide reliable, timely and safe travel to and from all parts of the MAG region.



Image Source: Whim App

# National Trends

## Work from Home

- Teleworking
- 5G
- Digital divide

### Implications

- Office space
- Decoupling land from land use
- Sprawl

### You said:

Our experiences today prove that increased telecommuting and work from home is improving/reducing travel demands, congestion and air quality which has immediate and long lasting effects on economic development and quality of life.

More so than ever, telecommuting is now being reevaluated in the calculation for all aspects of how we deliver city services and a new lifestyle experience for our community.



Image Source: Adobe Spark

# National Trends

## Freight & Commercial Shipping

- Just in time delivery
- Drones

### Implications

- Retail
- Curb management
- Safety

### You said:

SkyBridge Arizona, housed on the premises, hosts U.S. & Mexican customs for ease of international transportation of goods and services.

Fiber, internet, broadband, 5G and other types of connectivity need to be incorporated into our regional and local infrastructure plans.



Image Source: Adobe Spark

# National Trends

## Climate & Weather

- Rise in heat deaths
- Increased wear and tear on infrastructure
- Flooding and drought

### Implications

- Urban design
- Vulnerable populations
- Brownouts
- Economic

### You said:

Private development within our community will likely have the biggest impact on our future. Beyond the general economic development impacts, these types of projects will impact traffic flows within the town and impact our need for transportation and infrastructure improvements.

The management and discussion of key environmental issues that will shape both the region and our communities, including addressing challenges from the urban heat island effect and managing water rights and other water related issues.

Environmental Heat Deaths in Maricopa County, 2006-2018

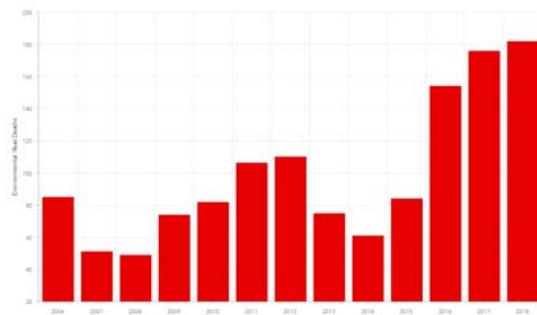


Image Source: Maricopa County Public Health

# National Trends

## Generational Preferences

- Gen Z
- Millennial
- Gen X
- Baby Boomers

### Implications

- Living arrangements
- Car and home ownership

### You said:

The city is developing strategies to implement a 20-minute city. Important destinations identified by all population groups can be accessed by bus, walking and bicycles within 20 minutes.

We also have our own, city specific Livability Goals. Included in this is the notion of Integrated Transportation, which intends to create a range of mobility options that are safe and efficient for all types of users.

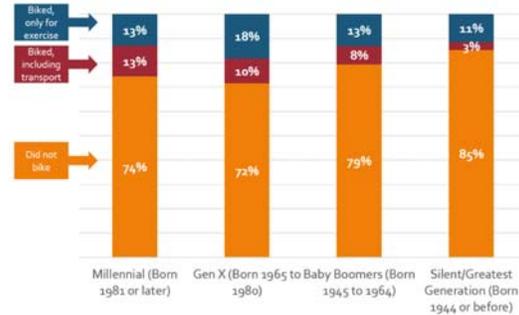


Image Source: Transportation Education and Research Center

# What We Heard From You

## Transformative Opportunities and Challenges

### We asked:

What do you think are the most notable opportunities or issues that may transform **your town or community**?

### You said:

- New development along major freeways and arterials.
- Increased walkability and active transport.
- Increased transit options connecting to employment centers.
- Reducing single-occupancy vehicular use.
- Deploying new technologies to understand and manage traffic flow.

## What We Heard From You

### Transformative Opportunities and Challenges

**We asked:**

What do you think are the most notable opportunities or issues that may transform **the MAG Region**?

**You said:**

- Major growth in areas such as ASU campuses and airports.
- The future of the ½ cent regional sales tax.
- New job centers centered around mixed uses and multi-modal connections.
- New transportation technology at scale.

## What We Heard From You

### New Technologies

**We asked:**

Has your town or community begun planning for the potential of new mobility technologies or innovations, such as vehicle electrification or Mobility as a Service (MaaS)? If so, what are those plans?

**You said:**

- Yes!
- Common areas of overlap include electric vehicles, micro-mobility, autonomous vehicles.
- Early forms of MaaS and unified payment platforms.
- Supporting technology infrastructure such as fiber, Intelligent Transportation Systems, and real time data.

## What We Heard From You

### New Technologies

#### We asked:

Have you considered the potential impact that increased telecommuting/work from home might have in your community?

If so, what are those considerations?

#### You said:

- Unsure if telecommuting is an acute event or longer-term trend.
- Is the effect more about flattening peak congestion or are overall vehicle miles traveled (VMTs) down? How does it affect trip time?
- City of Tempe/ASU study on telecommuting in progress.
- Are there unintended effects on retail, shopping, and employment?
- If telecommuting is the future, we need better digital infrastructure paired with better active transport in communities to support a different lifestyle.

## What We Heard From You

### Long-Range Planning

#### We asked:

Aside from participation with MAG and your General/Comprehensive Planning efforts, is your community actively engaging in additional long-range planning efforts? If so, what?

#### You said:

- There is a lot of transportation and general planning related efforts happening across the region.
- These plans need to be considered and incorporated, if possible, into the overall MAG RTP effort.

## What We Heard From You

### Policy

#### We asked:

Are there any specific policy issues that are especially important to consider during this process?

#### You said:

- Incorporate priorities of each member agency into a shared philosophy or vision.
- Funding distribution: ensure regional funding decisions are equitable.
- Funding sources: balance existing funding sources and identify new ones.
- Funding intent: new capacity or operations & maintenance?
- Flexible and responsive policies that can help the region adapt to future conditions.

## What We Heard From You

### Shared Need or Goal

#### We asked:

Please give an example of something you view as a shared need or goal between the MAG region and your community.

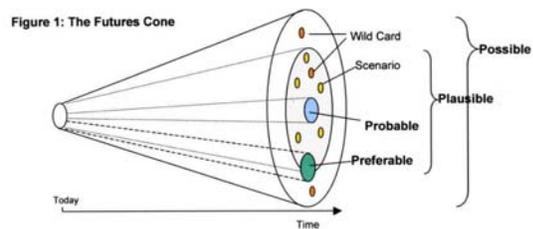
#### You said:

- Improve existing freeway facilities within the region.
- Incorporate discussion of new technologies, such as 5G or electric vehicle charging, into regional and local infrastructure plans.
- Add more mobility options and increased active transportation.
- Manage key environmental issues, such as air quality, water quality, and urban heat island effect.
- Help member agencies better adapt to handle changing shifts in technology.

## Scenario Planning in the RTP Process

### What is scenario planning?

- Scenario planning is a form of long-term strategic planning that creates representations of multiple, plausible futures.
- It is used to manage risk, understand trade-offs, and make decisions.
- There are three types of scenario planning:
  - predictive (what will happen)
  - exploratory (what can happen)
  - normative (how a specific target can be reached)



The Futures Cone, Voros, 2003.

## What Scenarios Are, and Are Not



### Are:

- Explorations of trends
- Composed of plausible outcomes that are feasible
- Built from input
- Based on priorities and areas of greatest concerns
- Broad guidance for policy making and choices in the future
- Iterative and flexible



### Are Not:

- Predictions of the future
- Composed of highly unlikely or implausible outcomes
- Built in a black box
- Based on pre-set technical assumptions and processes
- Narrow decisions about, or commitments to, specific policies
- Conclusive or fixed

# Why Scenario Planning?

## The Limits of Traditional Planning

- Dresden, Germany, after the fall of the Berlin Wall experienced rapid population fluctuations.
- The city used incorrect assumptions about population growth and decline.
- Assumptions had real world impacts on construction of housing and land use decisions.

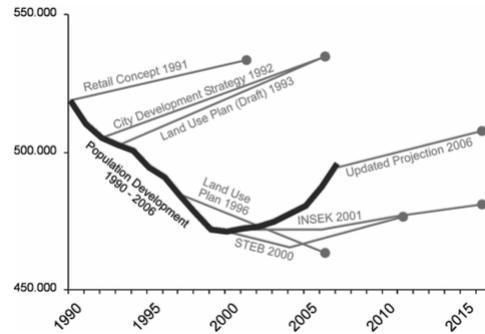


Chart Source: Wiechmann, 2018

# Scenario Process Overview

## There are four main steps to the scenario planning process:

1. Identify '**driving forces**', major trends you expect to impact your area.
2. Identify **critical uncertainties**-- trends you are most concerned about exploring.
3. Develop **plausible scenarios** that test these critical uncertainties in different combinations and levels of intensity.
4. **Discuss implications** of scenarios, and if desired evaluate scenarios using key performance indicators (KPIs.)

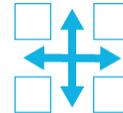
Identify Driving Forces



Identify Critical Uncertainties



Develop Plausible Scenarios



Discuss Paths & Implications



# Scenario Development

## The Oregon Department of Transportation defines the Scenario Process with 6 steps:

1. Create a **Framework** for the scenario process.
2. Set **Evaluation Criteria**.
3. Set up for scenario planning: evaluation tools, data, and building blocks.
4. Develop and evaluate **base-year** conditions and a reference case.
5. Develop and **evaluate alternative** scenarios.
6. **Select or create the preferred scenario.**

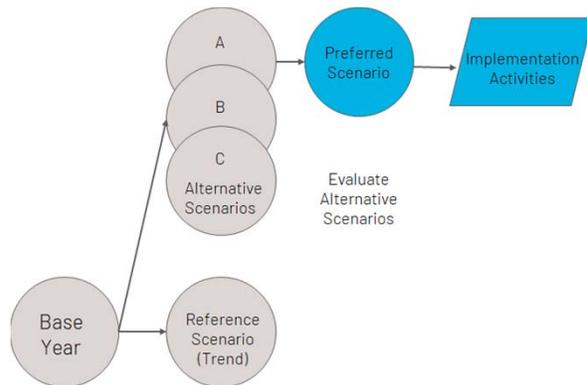


Chart Source: Goodspeed, 2020

# Constructing Alternative Scenarios



# Example Scenario

**Meet Maria & Juan**  
(Couple in their 40's)

Moved to City of Sun Valley from out of state due to **great communities** that cater to **raising a family** and **good quality of life**.

They each find medium wage white color tech jobs in a neighboring city and **commute on a daily basis**.

**Population**  
The Phoenix region continues its growth trajectory and momentum

**Technology**  
Adoption of technologies such as ridesharing and work from home rapidly accelerate

**Transportation Projects**  
½ cent tax continues, and revenue remains largely the same

**Working from Home**  
Maria's office job is using remote work. This likely means less commuting trips

**Transportation**  
Juan uses ridesharing services for household errands and their kids use Uber instead of driving. Does this lead to more trips?

**Uncertain Impacts?**  
Do the sum of these changes due to technology make something like MaaS more financially preferable than car ownership?

# Case Study 1: Futures 2040, New Mexico

- In 2013, the Albuquerque MPO used scenarios to create its long-range metropolitan transportation plan (MTP).
- Stakeholder committee **developed a framework for alternatives based on key regional challenges and needs.**
  - Climate change
  - Jobs-to-housing balance
  - Water scarcity

The diagram illustrates the Futures 2040 Metropolitan Transportation Plan (MTP) process. It starts with 'Goals' leading to 'Objectives'. 'Objectives' feed into 'Scenario Planning', which includes 'Challenges' and 'Guiding Principles'. 'Scenario Planning' leads to 'Implementation', which is divided into 'Programs (TIP / LRTS)' and 'Recommendations (Action Steps)'. A feedback loop labeled 'Performance & Monitoring' connects the bottom of the implementation stage back to the 'Objectives' stage.

Chart Source: The Futures 2040 Metropolitan Transportation Plan (MTP)

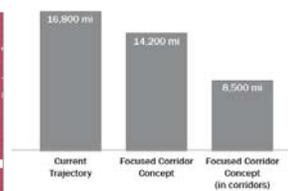
## Case Study 2: Ohio insight2050

- Insight2050, led by Mid-Ohio Regional Planning Commission (MORPC), is a region-scaled scenario planning process that will inform development of the RTP.
- Like many projects, **the process uses key performance indicators to compare outcomes for different alternative scenarios and the base case.** For example, vehicle miles traveled (VMTs) were examined for both the current trajectory and alternative scenarios.

Daily Vehicle Miles Traveled (VMT) per Household in Focused Corridor Concept

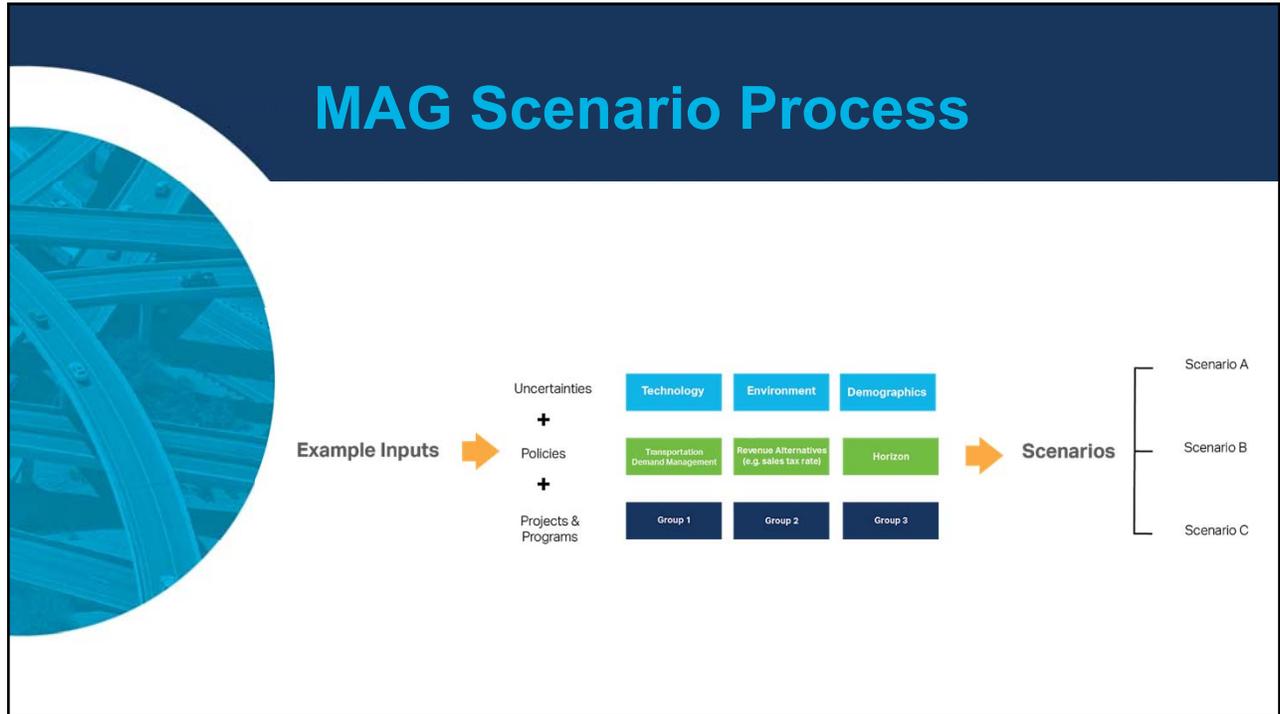


Vehicle Miles Traveled per Household, Annual in 2050



Map Source: Mid-Ohio Regional Planning Commission

## MAG Scenario Process





# Shared Community Issues/Concerns



### Economics:

Retention and attraction of industries that create long-term economic benefit  
Lack of retail/entertainment activities to generate tax revenue and attract short-term visitors  
Competition for market share  
Shortage of skilled labor (high dependence on service industry)



### Environment:

Rising temperatures  
Sustained droughts  
Localized flooding  
High wind events/dust storms  
High fire risk  
Preservation of natural areas and open spaces  
Air pollution and air quality



### Demographics:

Aging populations  
Lower educational attainment levels  
High rates of obesity, diabetes, and asthma  
Preservation of community culture and traditions



### Transportation:

Long commute times  
Lack of connectivity within communities (all modes)  
Costly infrastructure investments/maintenance  
Weak public transportation infrastructure



### Housing:

Lack of housing variety  
Lack of affordable housing  
Housing supply/demand imbalance  
Increasing rates of homelessness  
Housing + Transportation Index

Information sourced from member agency planning documents

# Shared Community Issues/Concerns



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Housing supply/demand imbalance  
Increasing rates of homelessness  
**Housing + Transportation Index**

Information sourced from member agency planning documents

## Discussion

- Are there specific ‘uncertainties’ you want to test?
- Are there any additional policy issues that are especially important to consider during this process that were not covered by the survey?
- In reflection of today’s conversation, are there any key questions that you’d like to get feedback from the public on?

## Scenario Planning Team Next Steps

- Unpacking everything we have heard today and through prior work
- Begin to develop scenario planning framework and appropriate methodologies
- Scenario narrative options and KPIs



