

# Innovative Solutions for Regional Transportation: Regional Resilience Track

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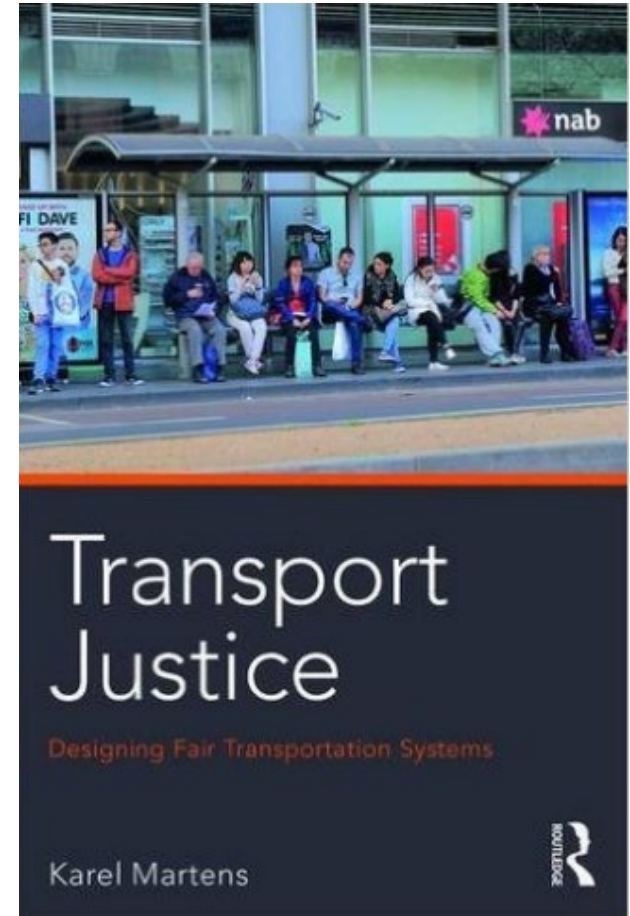
[andihamre.com](http://andihamre.com)

# Key Concept: Resilience

- Resilience originated in ecology as a way to describe the **capacity** or **ability** to **survive** or **maintain** basic functions in the face of **stress** or **disturbance** ([Holling 1973](#))
- **Resilience capacity** may be understood as ([LSE 2022](#)):
  - Shock absorbing and coping
  - Evolving and adapting
  - Transforming
- **Response diversity** is the number of **available options** for responding effectively to a stressor/disturbance/shock ([LSE 2022](#))

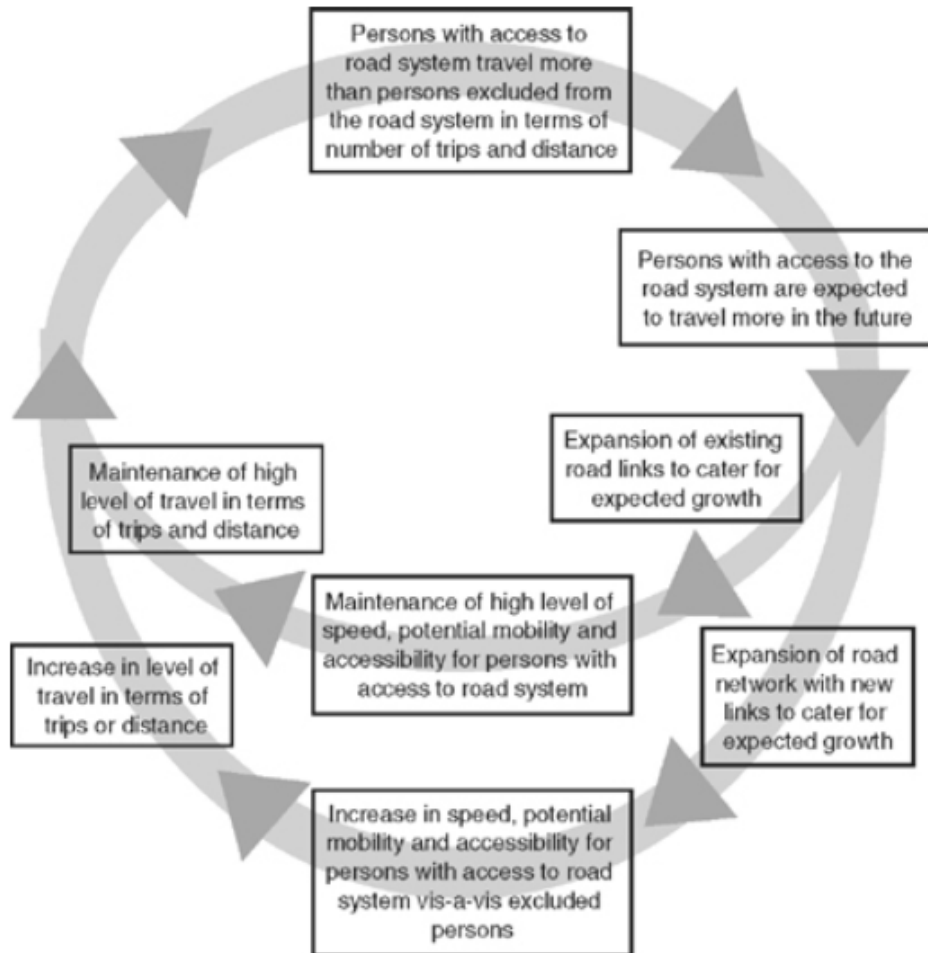
# Key Concept: Transport Justice

- Martens argues that transportation's "social meaning" is access, which has a unique "enabling character" that makes it "an indispensable resource shaping one's life path"
- Martens applies the Sen/Nussbaum capability approach to emphasize the experience of agency, choice, and opportunity in leading a dignified life
- Martens argues that a just society will protect its citizens from "the exclusionary violence that is embedded in non-inclusive transportation systems."

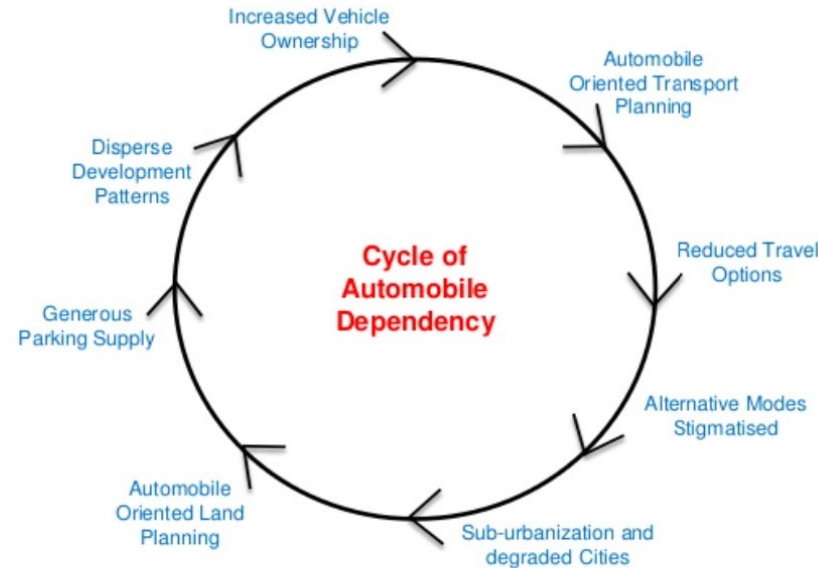


“Put simply, accessibility – connections between people and opportunities – is the most important economic and social benefit created by a transportation system and it facilitates participation in activities that individuals need to lead a meaningful life” – Karner, Levine, Dunbar, and Pendyala (2023)

# Key Concept: Transport Justice

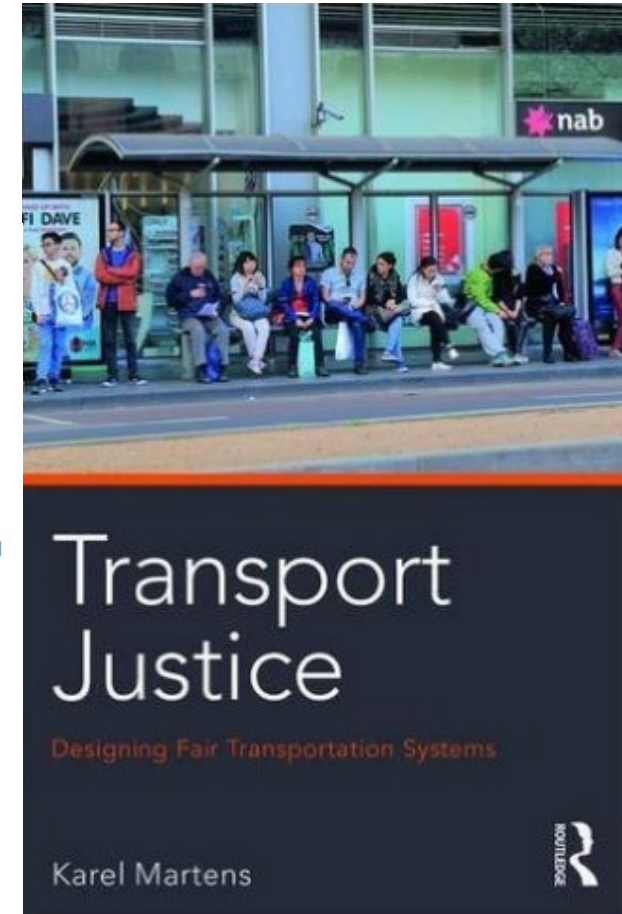


## Automobile Dependency and Sprawl



Victoria Transport Policy Institute, "Evaluating Transportation Land Use Impacts"

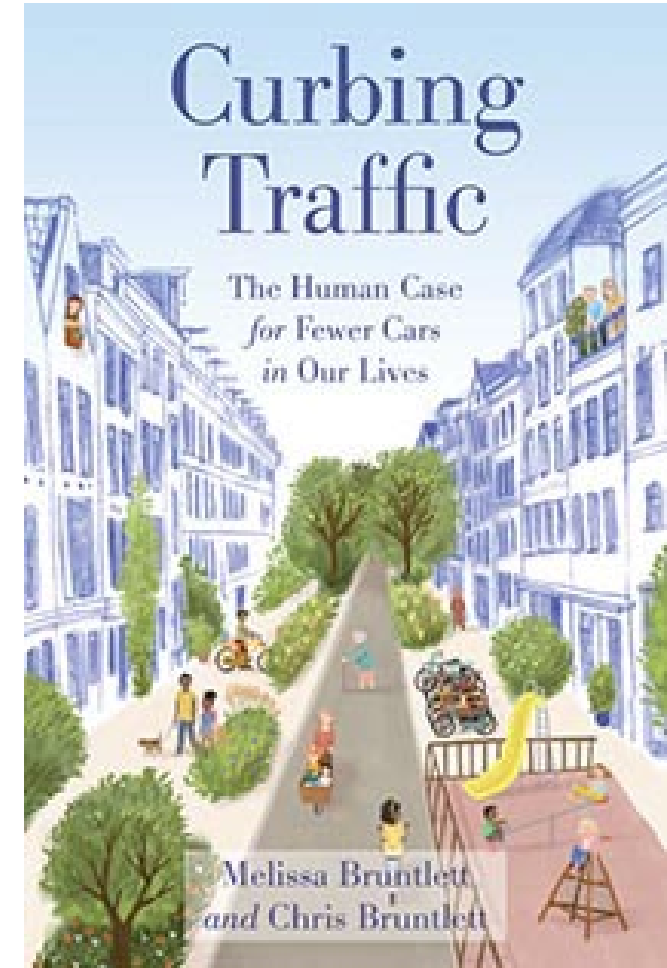
Litman, [Breaking the Cycle of Automobile Dependency](#), Planetizen (2019)



Traditional transport planning "at best maintains existing differences in all dimensions and at worst leads to a continuous growth in inequalities in terms of travel speed, potential mobility, accessibility, and revealed mobility, between persons with access to, and persons excluded from, the dominant car-road system"

# Key Concept: Transport Justice

When car-centric environments are viewed through this lens [of disabling environments - places that exclude people, or make their participation more difficult or more expensive compared to that of others], it becomes clear that they do not benefit everyone equally. Car-first planning, at its essence, perpetuates the idea that transport networks are provided for those with motor vehicles, who are therefore freely mobile with their choices. It is exclusionary, overlooking the needs of portions of the population: children, the elderly, those living on a limited income, and, importantly, individuals with a physical disability.



Bruntlett and Bruntlett ([2021](#)); see also Cathy Tuttle's work on car master planning (<https://usa.streetsblog.org/2022/06/07/the-brake-why-every-city-needs-a-car-master-plan/>) and [https://pdxscholar.library.pdx.edu/trec\\_seminar/224/](https://pdxscholar.library.pdx.edu/trec_seminar/224/))

# Key Concept: Public Transportation

- A system of services that are organized, run, and/or paid for by the government, available to the general public, and dedicated to the transport (movement, conveyance) of people
- Beyond these general parameters, the definition of public transit is **up to us** and a reflection of **our shared values (ideals, goals, & priorities)**

Don't tell me what you value, show me your budget, and I'll tell you what you value.  
– President Biden

What is transit's purpose?

What counts as adequate and useful transportation?

What kind of city do you want?

You, and your community, get to choose “what” you want and “why”

-Jarret Walker, Human Transit (2012)



# Key Concept: Public Transportation

## Purpose

Social Service

*Enable Upward Mobility, Enhance Quality of Life*

Resource-Efficient Movement

*Enable High Utilization of Assets*

*Limit Space Needed for Travel Lanes & Parking*

Catalyst for Economic Development

& Land Use Changes

*Stimulate Densification, Transit-Oriented  
Development*

## Performance Measures

Activity Participation

Trips Per Capita

Riders Per Hour

Cost Per Vehicle Hour

Cost Per Trip

Emissions Per Trip

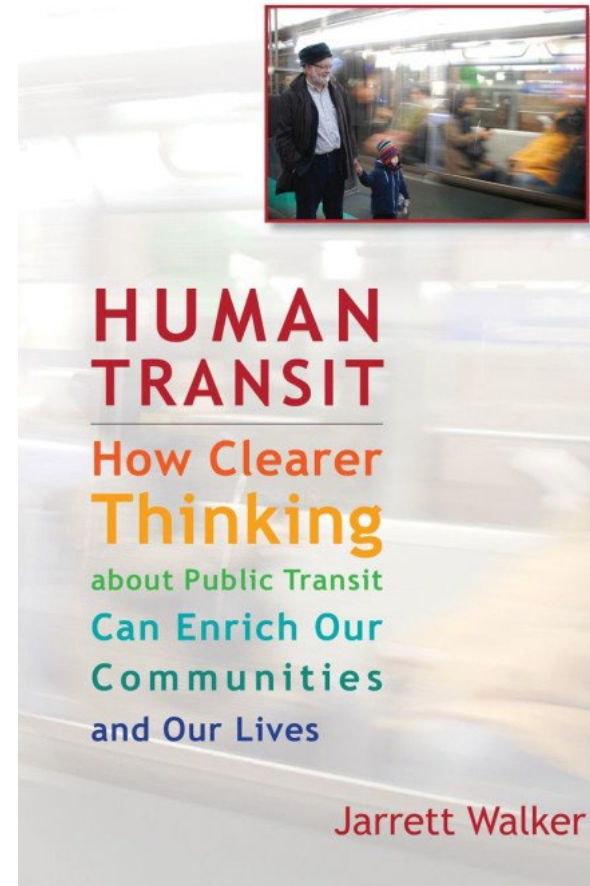
Foregone Parking Expansion

Retail Sales

Dwelling Units Per Acre

# Key Concept: Public Transportation

- Seven Demands of **Useful Transit**
  - It takes me *where* I want to go
  - It takes me *when* I want to go
  - It is a good use of my *time*
  - It is a good use of my *money*
  - It *respects* me in the level of safety, comfort, and amenity it provides
  - I can *trust* it
  - It gives me *freedom* to change my plans



Frequency is Freedom

The Essential Task of Transit: Abundant Personal Mobility Without Personal Vehicles Over Distances Too Far To Walk

-Jarret Walker, Human Transit (2012)



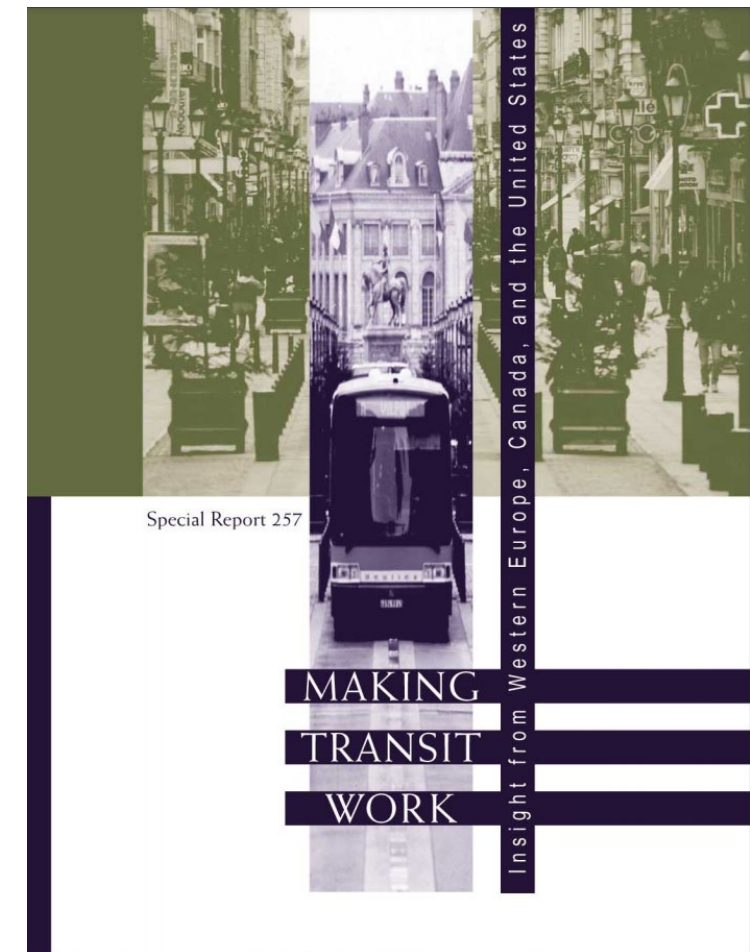
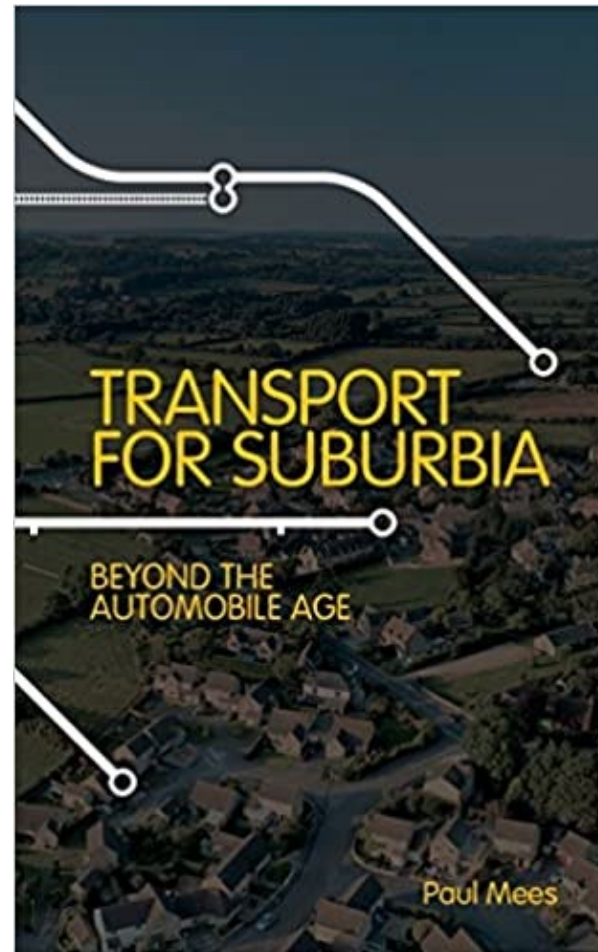
# Key Concept: Public Transportation

It *can* be safe, dignified, sustainable, resource-efficient, affordable, convenient, seamless, broadly appealing & widely used – we know this to be true, because we have many world class domestic & international examples

This week we're joined by Professor [Ralph Buehler](#) of Virginia Tech, who talks with us about the German transport concept of Verkehrsverbund. The word translated to English means "transport network." We discuss where the first Verkehrsverbund was formed and how more integrated systems could make transport in the United States more efficient and connected. There's also a discussion about docked bike share as well as how we can think about mobility as a service platforms in the future and their relationship to existing transport systems.



Sources: <https://usa.streetsblog.org/2018/11/15/talking-headways-podcast-verkehrsverbund-a-seamless-journey/> and <https://onlinepubs.trb.org/onlinepubs/sr/sr257.pdf>



# Key Question: What Problems Are you Trying to Solve?

Are you asking the right questions? Are you asking the questions *you* want to be asking?

How do we make safer cigarettes? → How do we free ourselves from smoking?



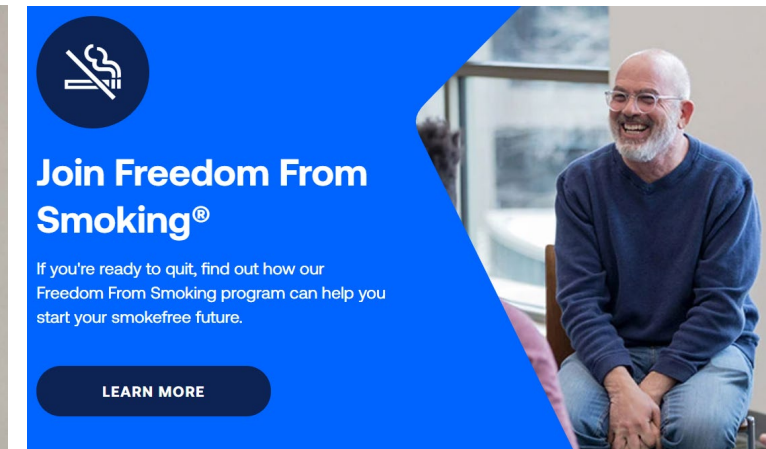
The image shows two cigarette advertisements side-by-side. The left advertisement is for Lucky Strike, featuring a portrait of a smiling man with glasses holding a pack of cigarettes. The text reads: "20,679\* Physicians say 'LUCKIES are less irritating' 'It's toasted' Your Throat Protection against irritation against cough." The right advertisement is for Camel, featuring a portrait of a man in a suit holding a cigarette. The text reads: "He's one of the busiest men in town. While his door may say Office Hours 2 to 4, he's actually on call 24 hours a day. The doctor is a scientist, a diplomat, and a friendly sympathetic human being all in one, no matter how long and hard his schedule. According to a recent Nationwide survey: MORE DOCTORS SMOKE CAMELS THAN ANY OTHER CIGARETTE. DOCTORS in every branch of medicine—113,597 in all—were queried in this nationwide study of cigarette preferences. These leading research organizations made the survey. The gist of the query was—What cigarette do you smoke, Doctor? The brand named most was Camel! The rich, full flavor and cool mildness of Camel's superb blend of costlier tobaccos seem to have the same appeal to the smoking tastes of doctors as to millions of other smokers. If you are a Camel smoker, this preference among doctors will hardly surprise you. If you're not—well, try Camels now. Your 'T-Zone' Will Tell You... T for Taste... T for Throat... that's your proving ground for any cigarette. See if Camels don't suit your 'T-Zone' to a 'T.' CAMELS Camel Tobaccos



STOP SMOKING  
START REPAIRING

- In 1 week: your sense of taste and smell improves
- In 1 month: skin appearance is likely to improve
- In 3 months: your lung function begins to improve
- In 5 days: most nicotine is out of your body
- In 12 hours: excess carbon monoxide is out of your blood
- In 12 months: your risk of heart disease has halved
- Today: quit before getting pregnant and your risk of having a pre-term baby is reduced to that of a non-smoker
- In 1 year: a pack-a-day smoker will save over \$8,300

EVERY CIGARETTE YOU DON'T SMOKE IS DOING YOU GOOD



Join Freedom From Smoking®

If you're ready to quit, find out how our Freedom From Smoking program can help you start your smokefree future.

LEARN MORE

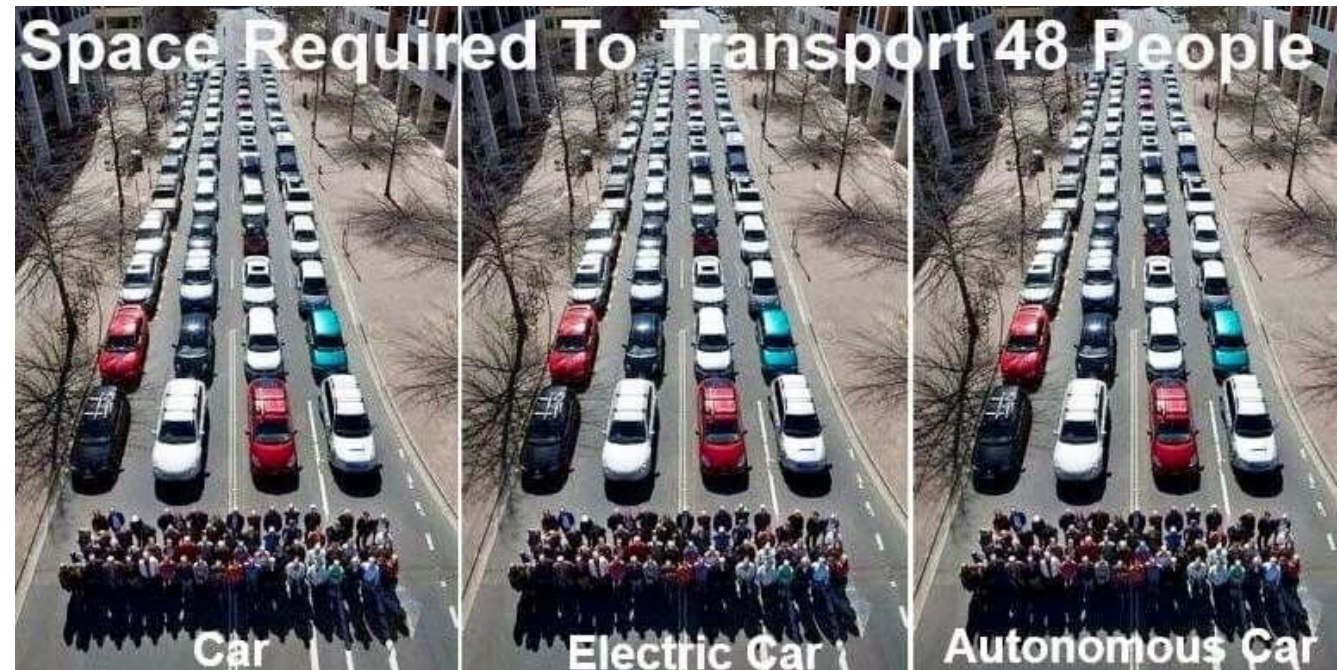
Hat tip to Professor Peter Norton, [The Dangerous Promise of the Self-Driving Car](#), CityLab (2021)



# Key Question: What Problems Are you Trying to Solve?

Are you asking the right questions? Are you asking the questions *you* want to be asking?

How do we make car dependency work? → How can we free ourselves from car dependency?



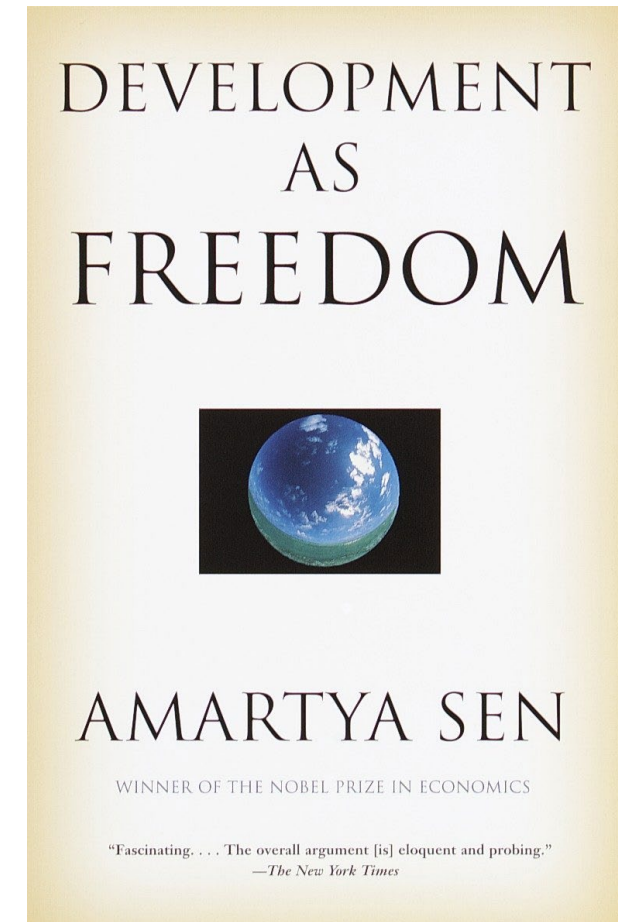
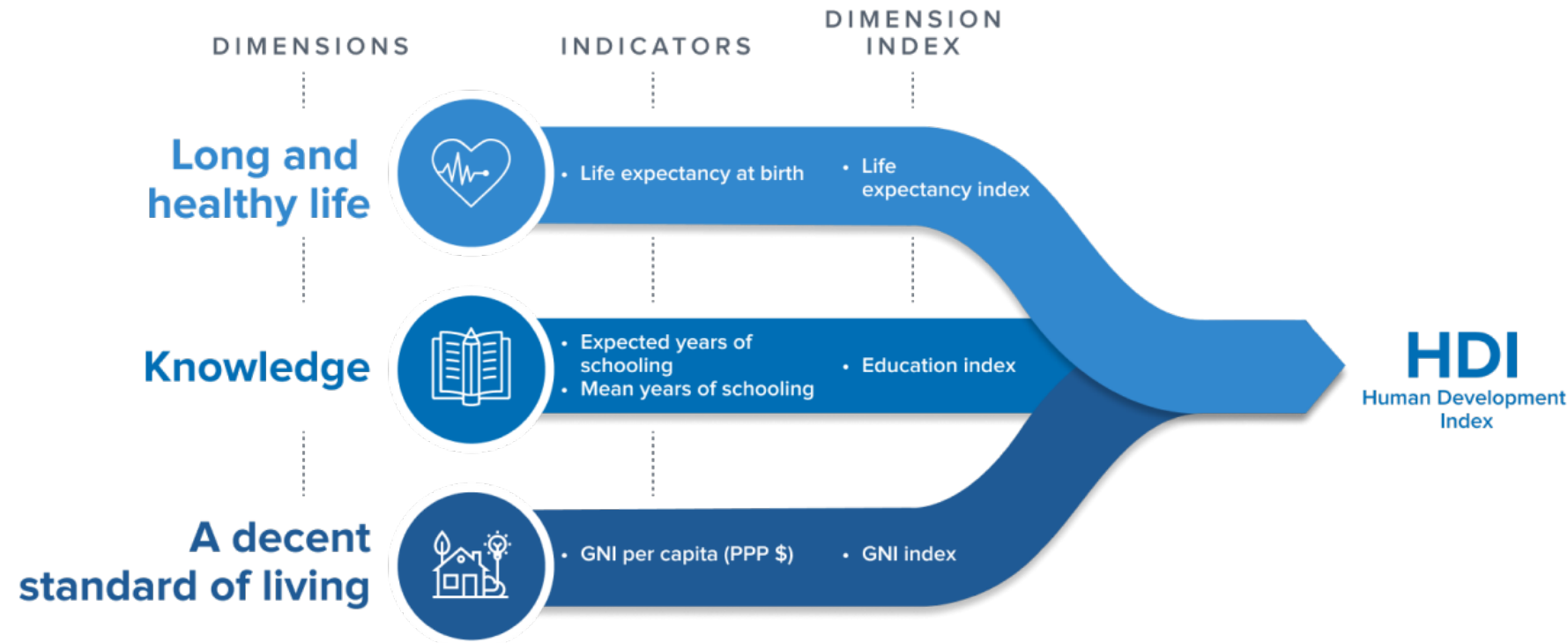
“EVs are here to save the car industry, not the planet, that is crystal clear”  
– Jason Slaughter, [CBC News \(2022\)](#)

Hat tip to Professor Peter Norton, [The Dangerous Promise of the Self-Driving Car](#), CityLab (2021)

# Key Question: What Problems Are you Trying to Solve?

Are you asking the right questions? Are you asking the questions *you* want to be asking?

How do we help people accumulate more stuff? → How do we help people experience more freedom?



Sen & Nussbaum's capability approach helped broaden and shift development accounting, from income-centered (eg GDP/capita) to people-centered measures (eg HDI)



# Key Question: How can you raise expectations for transportation and quality of life in your community?

Are there forces lowering expectations?

Few with whom we spoke held up Uber as a real solution to D.C.'s transportation, racial, economic, or employment challenges. Yet their expectations of the city and its democratic institutions were even lower. These people did not trust Uber to solve problems of racial polarization, stalled economic mobility, or concentrated poverty, but neither did they expect that such problems might be solved through public provision, urban public policy, or – dare we say – “politics.” This is the foundation of the book’s argument: that Uber’s success in D.C. and elsewhere hinges on exploiting a political and infrastructural vacuum and, in so doing, redefining what people expect from cities and the urban public realm.”

“...the ride-hailing industry’s growth has never been a sign of urban economic strength or urban innovation and has always been a sign of urban weakness, desperation, and low expectations.”



# Key Question: How can you raise expectations for transportation and quality of life in your community?

Are there forces lowering expectations?

Alternative approaches to community and economic development (Asset-Based Community Development, the Community Capitals Framework, the Rural Wealth Creation and WealthWorks model, and Comprehensive Rural Wealth Framework) as well as insights from Rural Placemaking and the New Ruralism Initiative have helped to reorient and broaden our efforts to support resilient and thriving rural communities

Traditional Approach	Alternative Approach
<b>Narrower Focus on Capital Types</b> <ul style="list-style-type: none"><li>• Financial</li><li>• Physical (or Built)</li></ul>	Broader Focus on Capital Types <ul style="list-style-type: none"><li>• Financial</li><li>• Physical (or Built)</li><li>• Cultural</li><li>• Individual (or Human)</li><li>• Intellectual</li><li>• Natural</li><li>• Political</li><li>• Social</li></ul>
<b>Identify Deficiencies to Assess Needs</b> <b>Building Jobs to Address Weaknesses</b> <b>Supply-Driven</b> <b>→Focus on Supply Chains</b>	Identify Capacities to Map Assets Building Jobs Around Strengths Demand-Driven →Focus on Wealth Creation Value Chains

“Building jobs on our strengths” – New Ruralism Initiative (2020)



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Traditional Approach	Alternative Approach
<b>Narrower Focus on Economic Activities</b>  <b>Strategies Focused on Creating a “Business-Friendly Environment</b> <b>→Tax incentives to attract/retain employers and reduce labor costs</b>	Broader Focus on Economic, Social, Cultural, and Environmental Activities Strategies Focused on Creating a Higher Quality of Life →Investments to make a place attractive to live, work, and do business in

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Traditional Approach	Alternative Approach
<b>Narrower Focus on Growth</b> <b>Shorter-Term (Turnover, Extraction)</b> <b>Narrower Goals &amp; Measures</b> <ul style="list-style-type: none"><li>• <b>Retain Existing Businesses &amp; Jobs</b></li><li>• <b>Attract New Business &amp; Create Jobs</b></li><li>• <b>Increase Per Capita Income</b></li><li>• <b>Increase Local Tax Base</b></li></ul>	Broader Focus on Development Longer-Term (Sustainable Wealth Creation) Broader Goals & Measures <ul style="list-style-type: none"><li>• Retain Existing Businesses &amp; Jobs</li><li>• Attract New Business &amp; Create Jobs</li><li>• Increase Per Capita Income</li><li>• Increase Local Tax Base</li><li>• Increase Quality of Life &amp; Sense of Place</li><li>• Strengthen Community Pride</li><li>• Build Stronger Regional Networks</li></ul>

# Key Takeaways

- **Tradeoffs:** Driving can be incredibly convenient, practical, useful, customizable, & empowering, but it is also the most energy-intensive & least sustainable way to get around, takes up a lot of space that could be used for other things (eg housing, businesses, parks), is expensive, requires vision & other motor & cognitive skills, & annually leads to approximately 40,000 deaths domestically & over 1 million deaths globally plus many more serious injuries
- **Balance:** A more balanced approach to transportation supports energy efficiency, sustainability, and resilience, as well as goals for livability, affordability & stewardship of public resources, equity, health & safety, & access to open spaces
- **Outlier:** The U.S. is an outlier in the degree to which we rely on driving for personal travel, and is diverging from our peer nations in trends for key energy, sustainability, health & safety outcomes

# Key Transportation Strategies to Support Resilience Capacity and Response Diversity

- University Basic Mobility & Mobility Wallets
- Capping or Eliminating Transit Fares
- Vehicle Subsidy Programs (Electric Bicycles and Cars)
- Sidewalk Network Improvements
- Public Transportation Improvements
- Traffic Calming
- Additional Reforms
  - Equity-Based Emergency Management & Disaster Response
  - Reallocation of Roadway Space to Improve Transit, Bicycling, and Walking
  - Parking and Road Use Pricing

Hamre and Kack, [Insights to Support Transportation Equity in Rural America: A Primer and Practical Compilation of Concepts, Resources, Tools, and Reforms](#), 2023

# Key Transportation Strategies to Support Resilience Capacity and Response Diversity

- **Microtransit** modernizes the rural transit toolbox, which in the past has often been limited to the choice between low-performing and circuitous one-way fixed route loops or inconvenient dial-a-ride services that require advance reservations and long wait times.
- Its on-demand nature makes it a type of flexible transit, but its emphasis on the pooling of trips distinguishes it from taxi or ridehailing services.

# Key Transportation Strategies to Support Resilience Capacity and Response Diversity

## Fixed Transit:

- Public Transportation Based Upon Set Stops, Routes, and Schedules
- No Advance Reservations
- Excels in Traditional Output-Focused Performance Measures
  - (Service Efficiency & Effectiveness)
- Best Suited for Areas of Higher Density and Demand
- ADA Complementary Paratransit Requirement



## Flexible Transit:

- Public Transportation Based Upon Variable Stops, Routes, and Schedules
- Requires Advance Reservations
  - Phone (Dial-a-Ride) or App-Based (Microtransit) Ride Requests
- Excels in Quality-Focused Performance Measures
  - (Transit Availability, Comfort & Convenience)
- Best Suited for Areas of Lower Density and Demand
- No ADA Complementary Paratransit Requirement



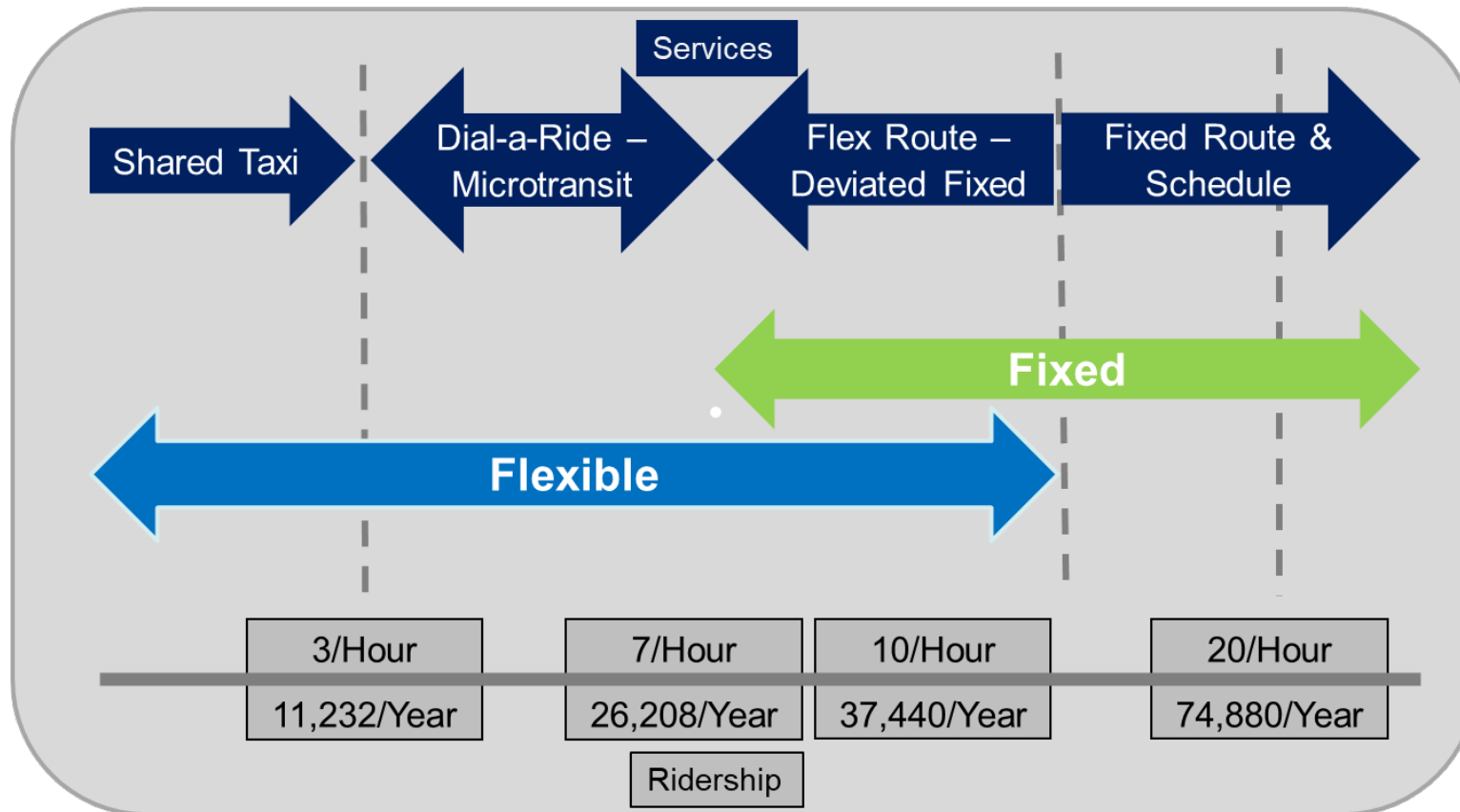
**Fundamental Tradeoff: Capacity vs Coverage**

The *only* places where flexible service is the *most* efficient way to achieve ridership are places with very, very low transit demand, like small towns, rural areas, and the lowest-density suburbs. If there is no demand for fixed routes that could carry more than 4 boardings per driver hour, you might as well run flexible – Jarett Walker, 2019, (emphasis in original)



# Key Transportation Strategies to Support Resilience Capacity and Response Diversity

## Sample Spectrum of Flexible and Fixed Transit Services In Relation to Ridership



Note: Graphic created by WTI based upon information for the Dallas Area Rapid Transit system provided in the 2013 Transit Capacity and Quality of Service Manual (Exhibit 2-26: DART Criteria for Fixed-Route and DRT Service). Riders per hour translated into annual estimates by WTI based upon 12 revenue hours per day, 6 days of service per week, and 52 weeks of service per year.

## What not always choose fixed route transit?

- Significant Access Burdens
  - Only Useful for Trips Starting/Ending Near Fixed Stops or For Those Willing/Able to Undertake Access Trips
  - Riders Must Adhere to Schedules & Stop Locations
- Efficiency Depends on Load Factors
  - Empty or Mostly Empty Buses Can Be As Resource Intensive As SOVs
  - Most Communities in the US Remain Reluctant to Reduce Parking
  - Complementary Paratransit Required by ADA
- Densification Takes Time
  - Auto Ownership Remains High Even in Many Transit Rich Areas
  - Complementary Investments May Get Stalled

## When is microtransit the right fit for your community?

- Improve Upon Traditional Dial-a-Ride Demand Response
  - Attract New Riders
  - Meet On Demand Customer Expectations
- Provide Service and Test the Market In Areas or At Times of Low Demand
  - Test Previously Unserved Market
  - Replace Underperforming Fixed Route
- Provide Equal Access Across a Service Area
- Provide Service In Areas With Inadequate Infrastructure for Fixed Routes (e.g. Sidewalks, Lighting)
- Get Started
  - Incremental, Customizable, Rapidly Deployed

“Set realistic goals. This is a low ridership service for low-density and low-demand areas or times.”  
-TCRP Synthesis 141 (Volinski, 2019)

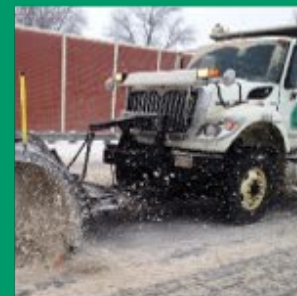
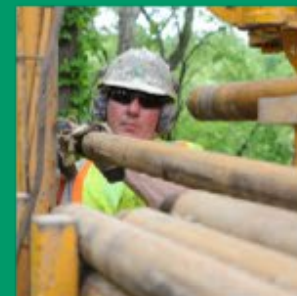
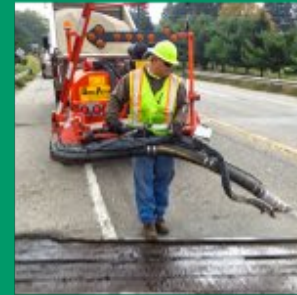
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# NATIONAL ASSOCIATION OF DEVELOPMENT ORGANIZATIONS



OHIO DEPARTMENT OF  
TRANSPORTATION

# OUTLINE

- The beginning: RPOs to RTPOs
- Roles and Responsibilities
- Organization and Funding
- Looking back: Benefits, challenges and keys to Ohio's success

# HISTORY OF REGIONAL PLANNING IN OHIO

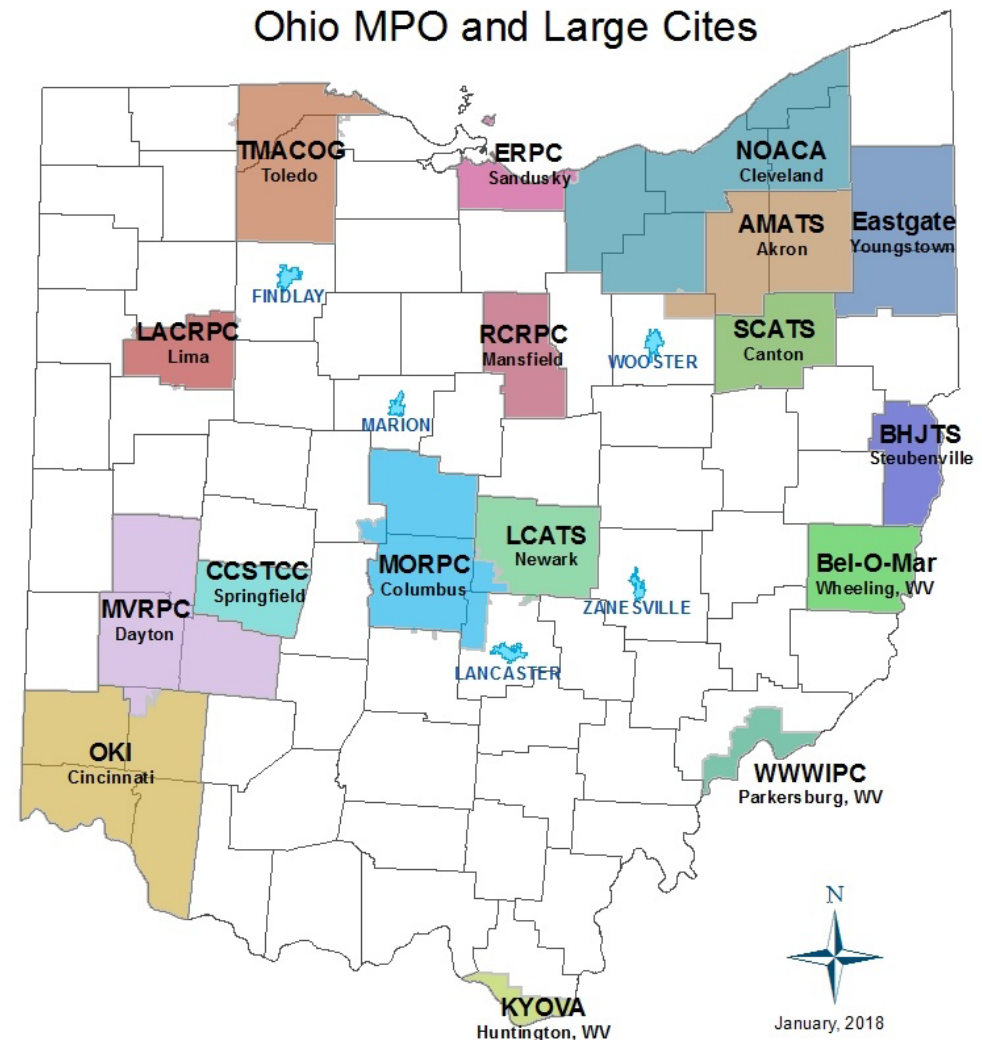
2012 - Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) allowed states to formally designate Regional Transportation Planning Organizations (RTPOs)





# HISTORY OF REGIONAL PLANNING IN OHIO

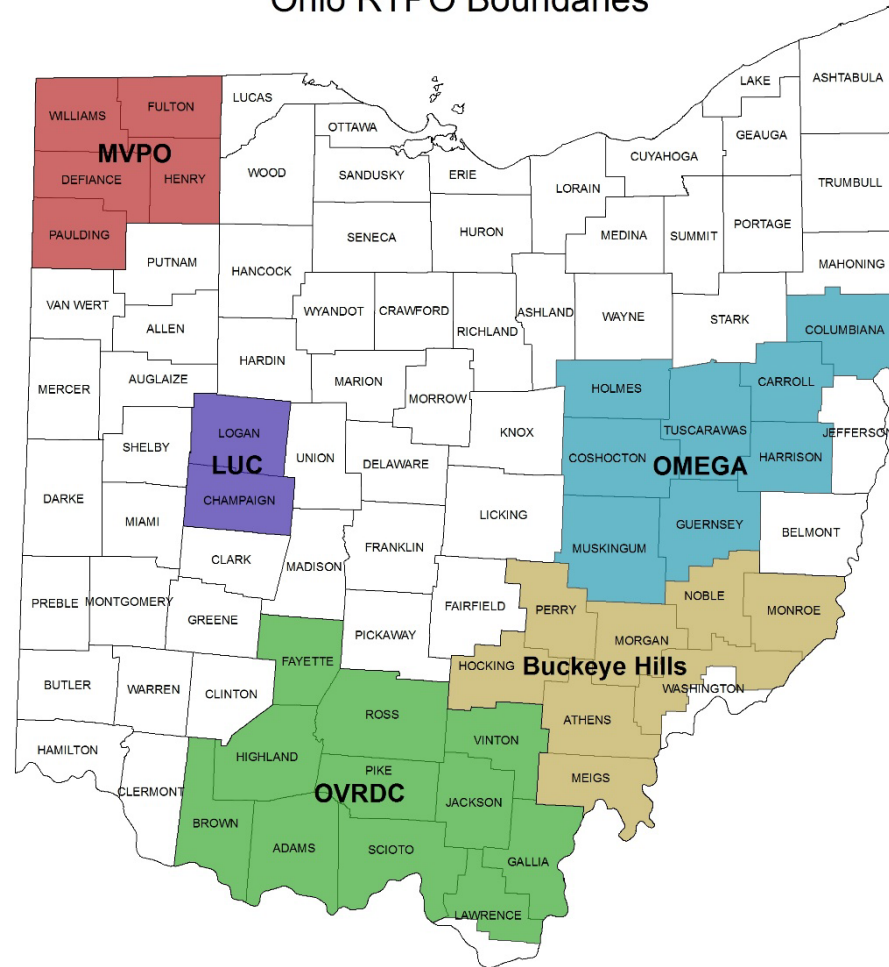
Prior to July 2013,  
regional transportation  
planning was done by 17  
Ohio MPOs (30 of 88  
counties)



# WHERE COULD ODOT TURN? OHIO'S EXISTING RPO'S

## Ohio Regional Planning Organization Boundaries

Ohio RTPO Boundaries



# HOW ARE RPOs SET UP?

- State requirements:
  - Regional Planning Commission - RPC (*ORC § 713.21 and 713.23*), or
  - Council of Governments - COG (*ORC § 167*)
  - Association of Counties - (*ORC § 307*)
- Federal requirements:
  - Have support from a public entity that serves as its financial agent (*23 USC 135(m) and 23 CFR 450.210(d)*)

# HOW IT STARTED

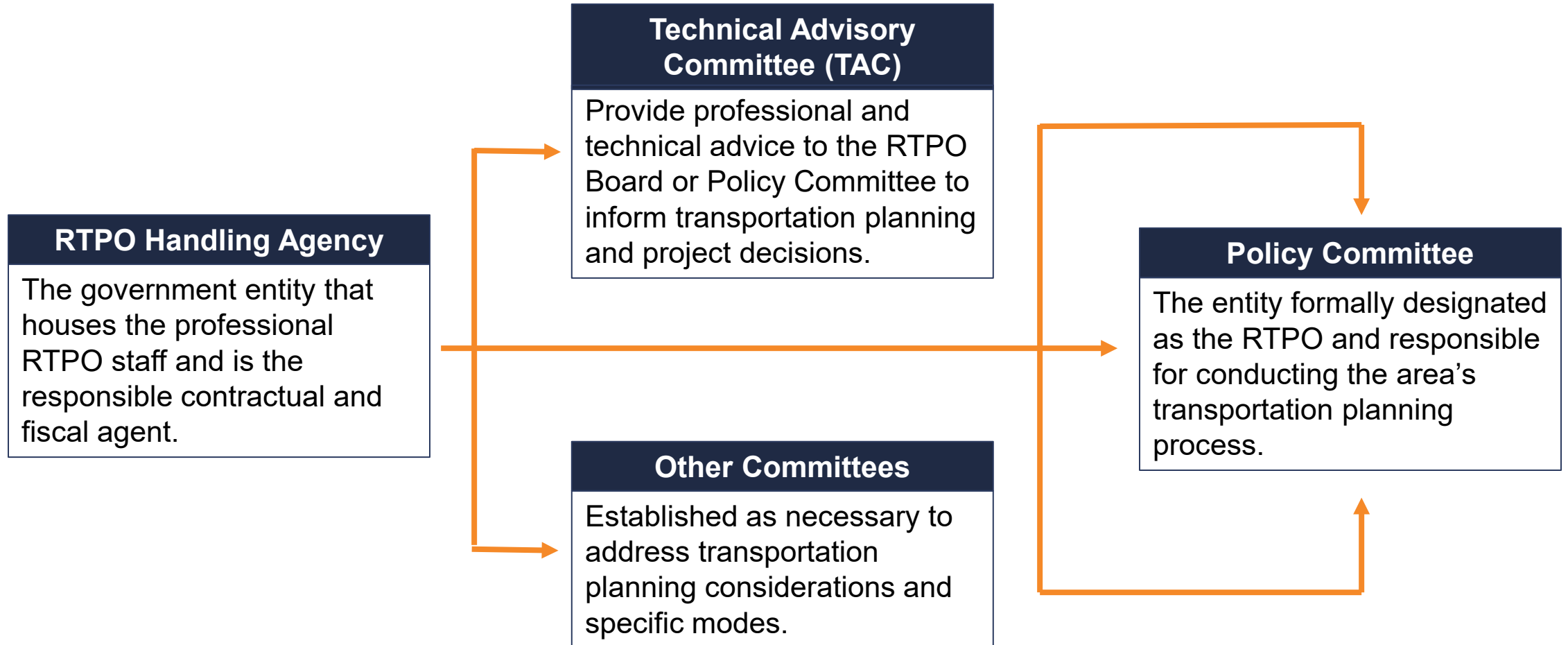
- In 2013, ODOT issued a RFP for a pilot program
  - Offered planning funds to two (2) RPO's
  - All five existing regional planning agencies applied
  - ODOT awarded planning grants to all five RPOs!
- Two-year pilot program initiated in July 2013
  - Covered an additional 34 counties

# TWO YEAR PILOT PROGRAM

- Key components:
  - Provide interagency consultation and stakeholder outreach
  - Development of transportation planning expertise
  - Development of a multimodal long-range transportation plan



# RTPO STRUCTURE

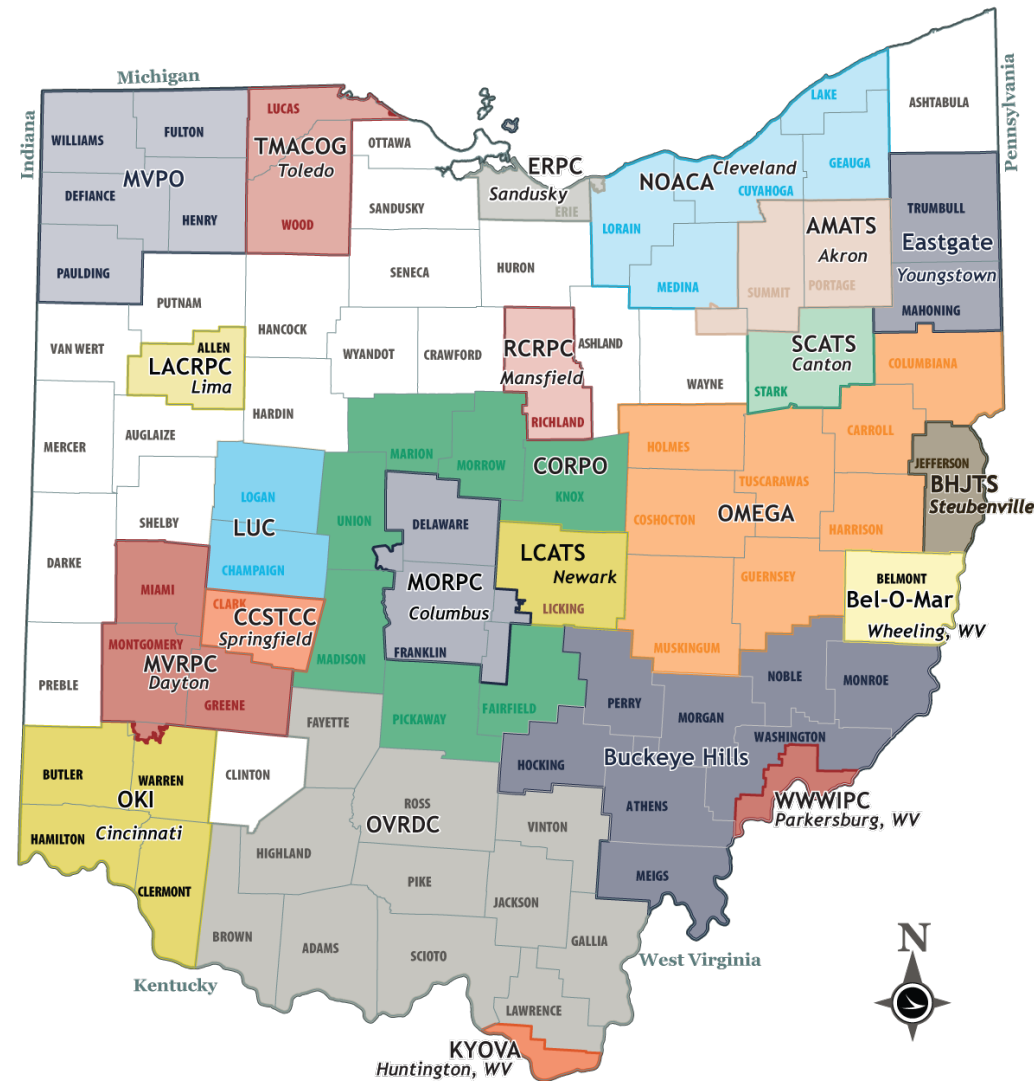




# WHAT AUTHORITY DO RTPO HAVE?

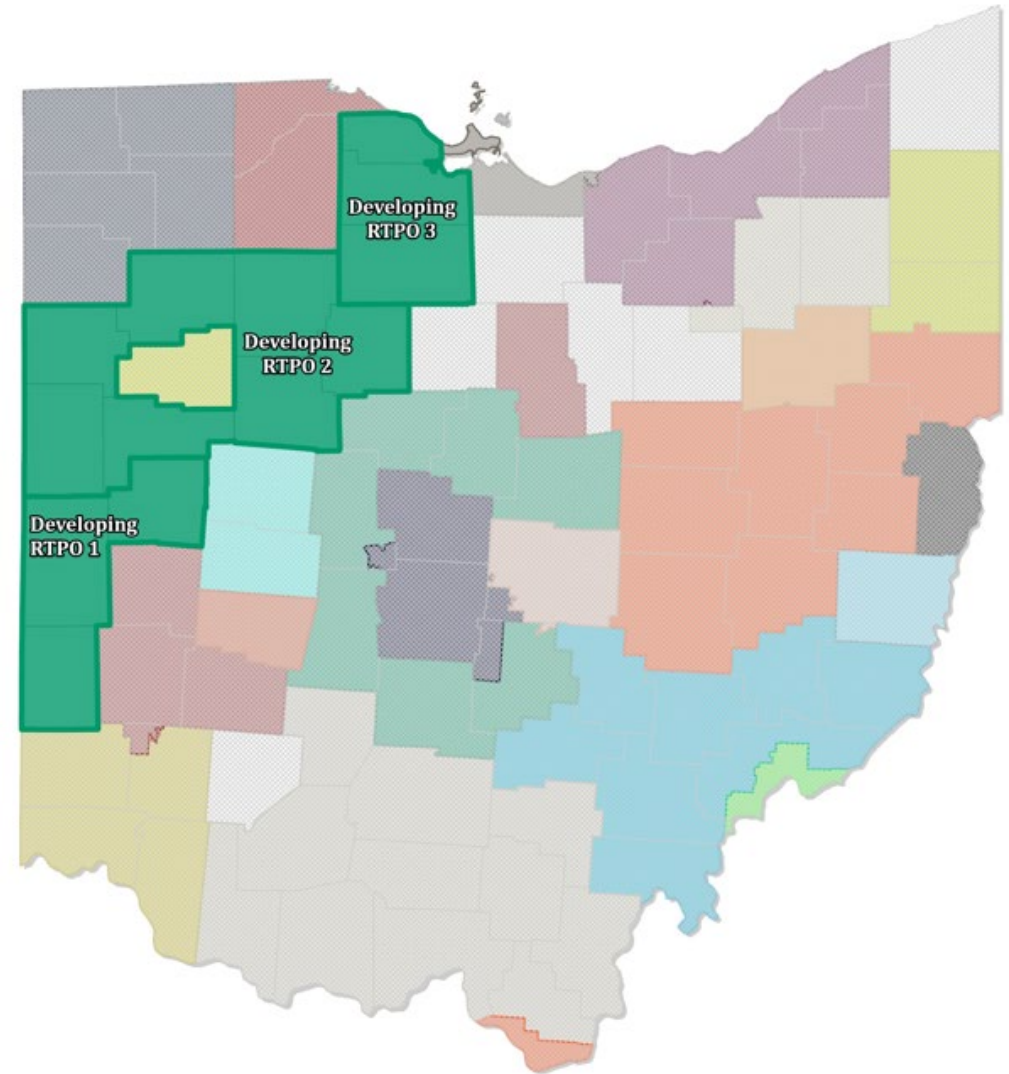
- Based on their organization under Ohio law:
  - RPOs/RTPOs are voluntary organizations
  - They exist to serve their member agencies
  - There are no statutes requiring specific products or functions
  - ODOT's official partner in rural consultation

# CURRENT RTPOS IN OHIO



# CONTINUED RTPO DEVELOPMENT

- Three new RTPOs in development
- If successful, 82/88 Ohio counties would have regional transportation planning representation

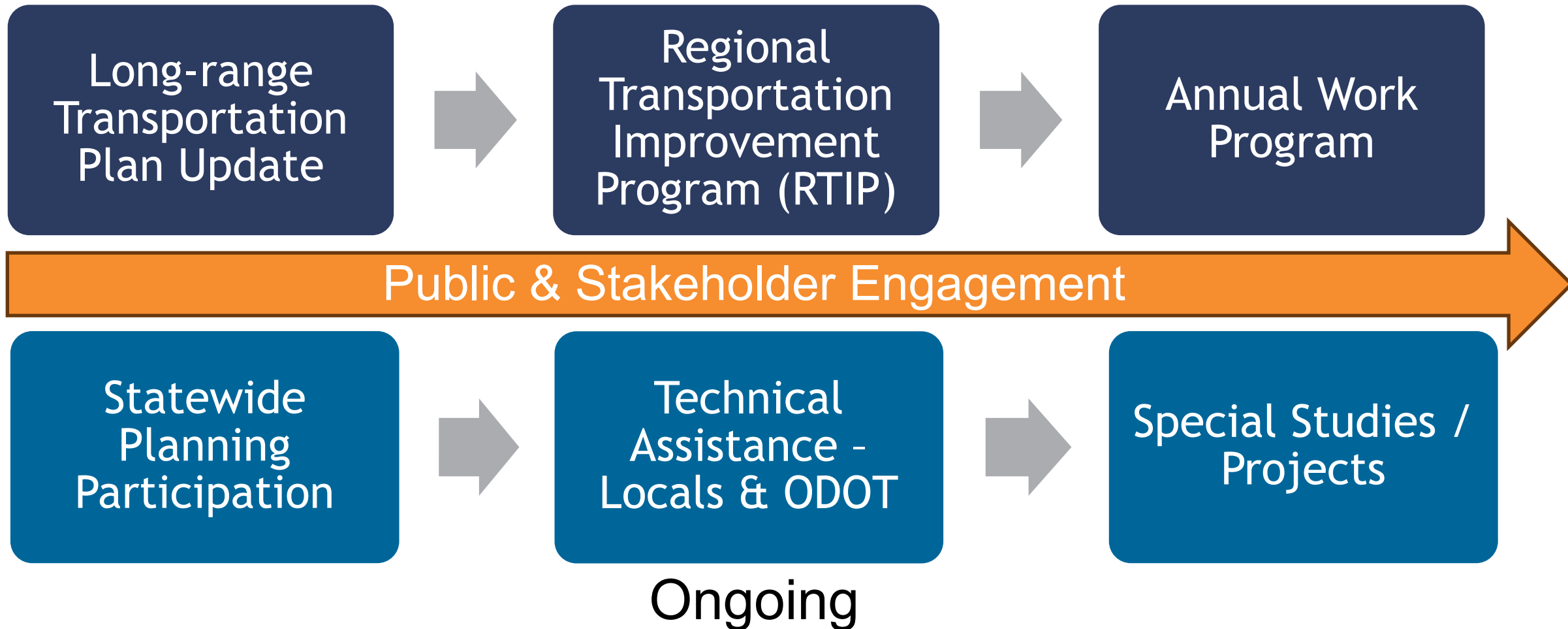


# HOW DOES AN RPO BECOME AN RTPO?



# RESPONSIBILITIES AFTER BECOMING AN RTPO

## Core Work Products



# RTPO ROLES AND RESPONSIBILITIES

- Long-range planning - 20-year horizon, updated every five years
  - Regional Vision, Goals and Objectives
  - Public/ Stakeholder Engagement
  - Existing/ Future Conditions and Regional Trends
  - Recommended Strategies and Projects
  - Transportation Equity / Environmental Justice
  - Financial Plan
  - Systems Performance Report

## 23 U.S.C. 450 – Planning Factors

- (1) Support economic vitality
- (2) Increase the safety of the transportation system for motorized and non-motorized users;
- (3) Increase the security of the transportation system
- (4) Increase accessibility & mobility of people & freight;
- (5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- (6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- (7) Promote efficient system management and operation;
- (8) Emphasize the preservation of the existing transportation system;
- (9) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- (10) Enhance travel and tourism.



# RTPO ROLES AND RESPONSIBILITIES

- Additional planning (optional):
  - Safety and/or corridor studies
  - Safe Routes to School Plans
  - Active Transportation Plans
  - Asset Management/Data Collection
  - Transit Planning
  - Coordinated Public Transit-Human Services Transportation Plans
  - Freight Planning
  - Grant writing/funding app assistance





# ODOT ROLES AND RESPONSIBILITIES

## ○ Central Office

- Planning Program Oversight
- Fiscal Oversight
- Technical Assistance
- Liaison Designation



## ○ Districts

- RTPO Policy Board Member
- Planning Process Participation
- District Capital Program Priorities



# PLANNING PROGRAM FUNDING ALLOCATION

- Annual Planning Program Budget
  - SFY 2024 - \$1,292,705
    - 80% Federal SPR - Part 1
    - 10% State
    - 10% Local Match (dues)
- Federal/State allocated based on:
  - \$60,500 per RPO/RTPO
  - Balance distributed proportionally
    - 50% pop / 50% area

RTPO	Total
BUCKEYE HILLS	\$207,588
CORPO	\$223,262
LUC	\$122,991
MVPO	\$166,731
OMEGA	\$276,272
OVRDC	\$295,861
TOTAL	\$1,292,705

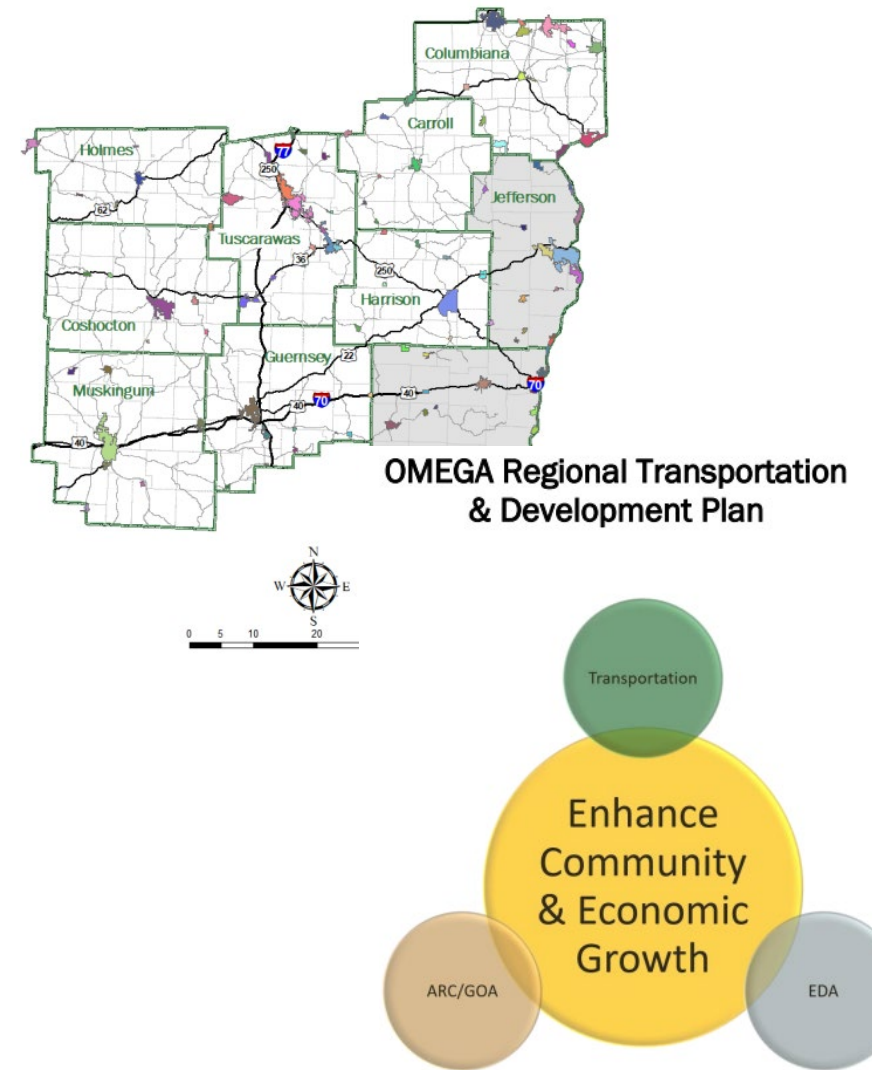
# CAPITAL PROGRAM FUNDING ALLOCATION

- Capital Program Funding
  - State Budget Appropriations
  - SFYs 2024-2025 - \$10 million
    - SFY 2024 - \$5 million
    - SFY 2025 - \$5 million

RTPO	SFY 2024 \$	SFY 2025 \$
BUCKEYE HILLS	\$766,179	\$766,179
CORPO	\$1,002,003	\$1,002,003
LUC	\$310,720	\$310,720
MVPO	\$548,416	\$548,416
OMEGA	\$1,133,025	\$1,133,025
OVRDC	\$1,239,655	\$1,239,655
TOTAL	\$5,000,000	\$5,000,000

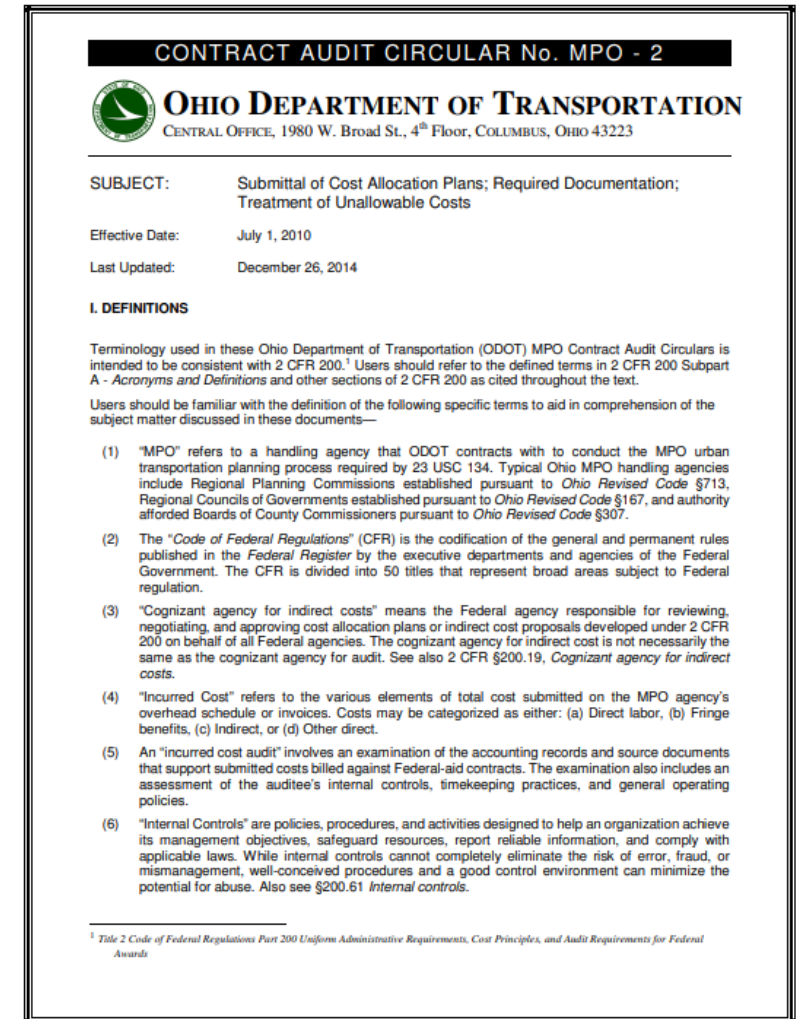
# BENEFITS

- Adopted comprehensive LRTP and RTIP
- Data systems
- Increased interregional coordination - RPO/MPO and RTPO responsibilities
- Engagement of local/appointed officials
- Recognized role in ODOT planning and project implementation
- Established priorities for greater success in securing resources
- Funding allocations



# CHALLENGES

- Sustained interest/responsiveness
  - Local/regional leadership and elected officials
  - DOT leadership and districts
- Staff attraction and retention
- Federal/State compliance requirements
- State oversight and administration resources
- Insufficient resources





# KEYS TO OHIO'S SUCCESS

- Existing RPO standing
- MPO / ODOT mentorship
- Central liaison and district structure
- RTPO Administrative Manual
  - Agreements, expectations, and procedures
- Recurring coordination
  - Ohio Association of Regional Councils (OARC)
- ODOT Planning Contracts
- Legislative support



# QUESTIONS



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***Last updated DATE***