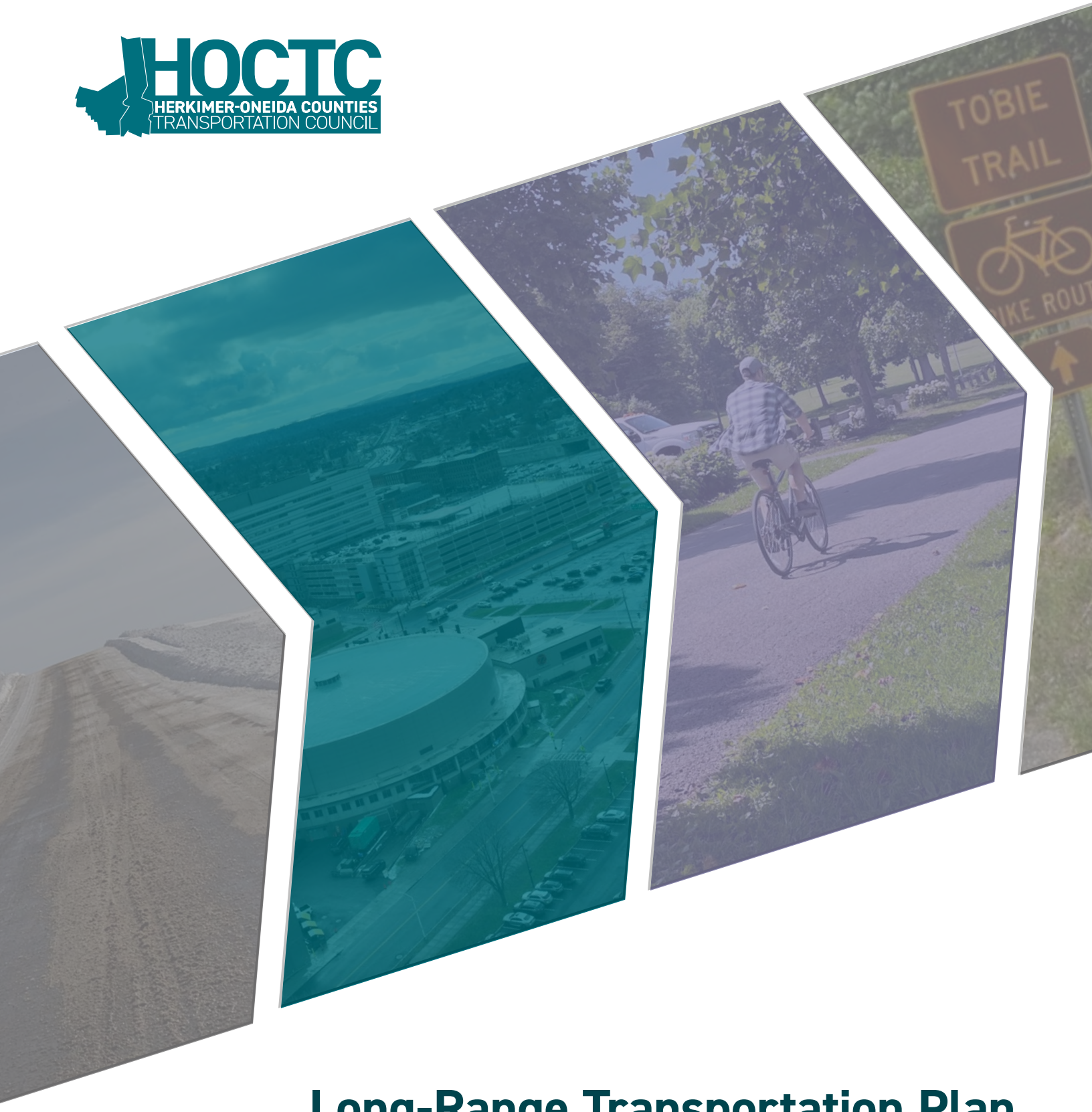
HOCTC
HERKIMER-ONEIDA COUNTIES
TRANSPORTATION COUNCIL




# Long-Range Transportation Plan

## *Scenario Planning White Paper*

**November 2026**

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# **SECTION 1.** SCENARIO PLANNING OVERVIEW

Scenario planning is a process that helps us prepare for multiple futures by imagining the possibilities together.

This process differs from a traditional planning process, where we plan for the future by examining past and present data and trends. In scenario planning, we explore what's happening now, what could change, how it could change, how that would affect our region's future, and what strategies we should take to prepare for those impacts. The scenario planning process helps us get out of reacting to the past and present and more towards thinking expansively about the future.

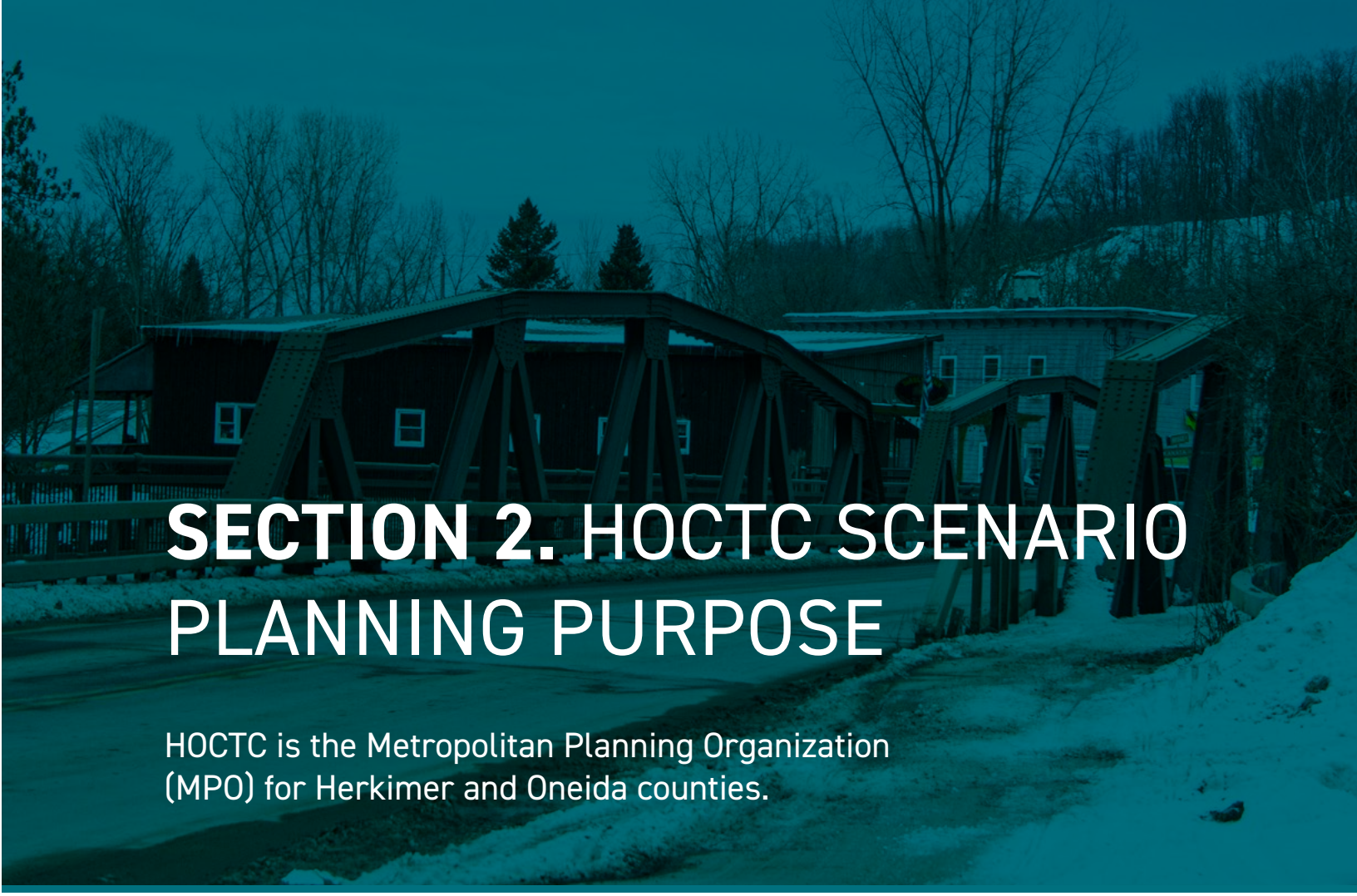
There are several types of scenario planning and processes that a region can undertake. Types of scenario planning include:

- **Normative**—where a community has a clear vision of the future they want
- **Predictive**—where a community wants to predict the most likely future
- **Exploratory**—where a community wants to explore multiple alternative futures

Regions may choose to do one or a combination of scenario planning types. The planning process, the technical analysis conducted, and the tools used will depend on the region's goals for the scenario planning process.

For this project, Herkimer-Oneida Counties Transportation Council (HOCTC) used an exploratory scenario process to identify a range of future driving forces and uncertainties. The exploratory process benefitted HOCTC because the agency brought a clear vision of regional transportation goals while also recognizing that the future does not unfold in a predictable way.  Exploring a range of futures offered an expansive examination of the many potential ways that HOCTC could meet area goals when confronted with a range of possible conditions.

HOCTC staff collaborated with staff from local, regional, and state organizations to prioritize driving forces and examine how potential futures shaped by those forces could impact the success of HOCTC's long-range transportation plan (LRTP) goals and strategies. Through the exploratory process, participants helped identify strategies that are likely to work across a range of uncertain futures as well as implementation steps that can help improve the success of the adopted strategies.



# **SECTION 2.** HOCTC SCENARIO PLANNING PURPOSE

HOCTC is the Metropolitan Planning Organization (MPO) for Herkimer and Oneida counties.

As an MPO, HOCTC manages the region's transportation system by distributing federal funds and coordinating certain transportation planning activities, including developing a long-range transportation plan (LRTP). HOCTC's most recent LRTP, Going Places 2045, was completed in December 2024 and identified five goals to guide the region's transportation planning activities and priorities into the future (Table 1). HOCTC's work is influenced by state-level guiding principles, which emphasize preservation, connectivity, maximizing return on investment, and environmental sustainability.

Scenario planning strengthens LRTP goals by developing a set of robust, responsive strategies that can be implemented across a variety of futures. The scenario planning process recognizes that a lot can change in the 20-year time horizon of HOCTC's LRTP. Through the process, regional goals were tested against a wide range of future conditions, and participants were asked to consider: if this is the future, and we want to achieve LRTP goals, what specific strategies can help us get there?

Figure 1 shows the individual steps of the process; these steps are further described in this report.

*Table 1. Regional Goals, Going Places 2045*

| | |
|---|---|
| **Mobility & Accessibility** | Use a strategic approach to provide mobility and accessibility opportunities. |
| **Safety in Transportation Options** | Proactively address existing safety deficiencies and strategically integrate safety elements into future projects for all roadway users. |
| **System Preservation** | Invest in preserving the transportation system to make the most sustainable use of existing assets, services, and resources. |
| **Transportation & Land Use Planning Coordination** | Develop a transportation system that is supported by and supports regional land use, economic development, and sustainability policies and plans. |
| **Environmental Impacts** | Avoid and/or mitigate negative environmental impacts while protecting the region's transportation infrastructure from environmental threats. |

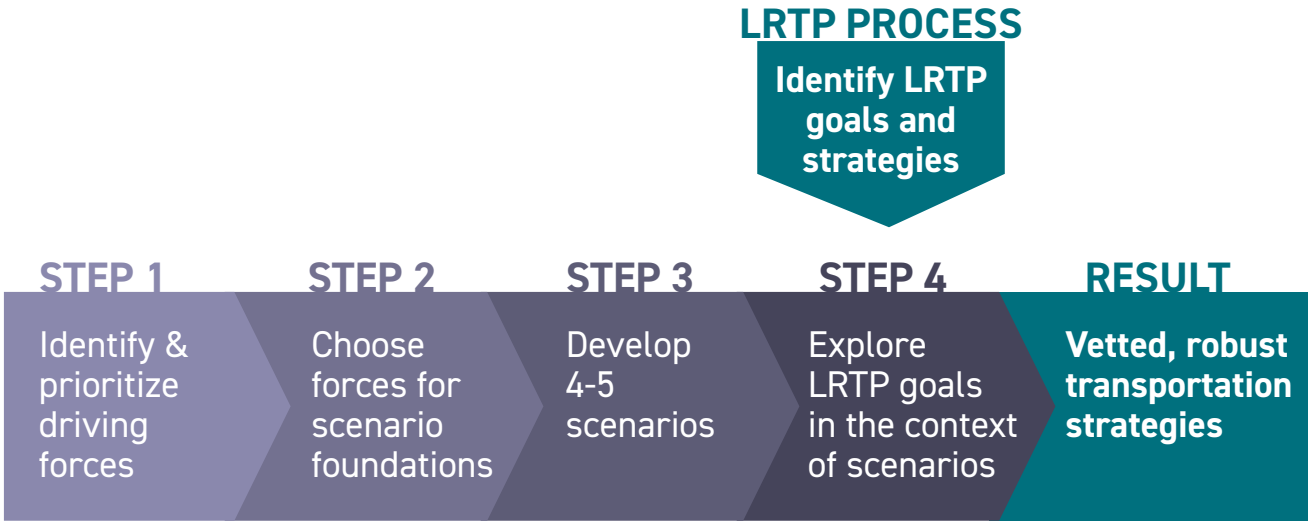
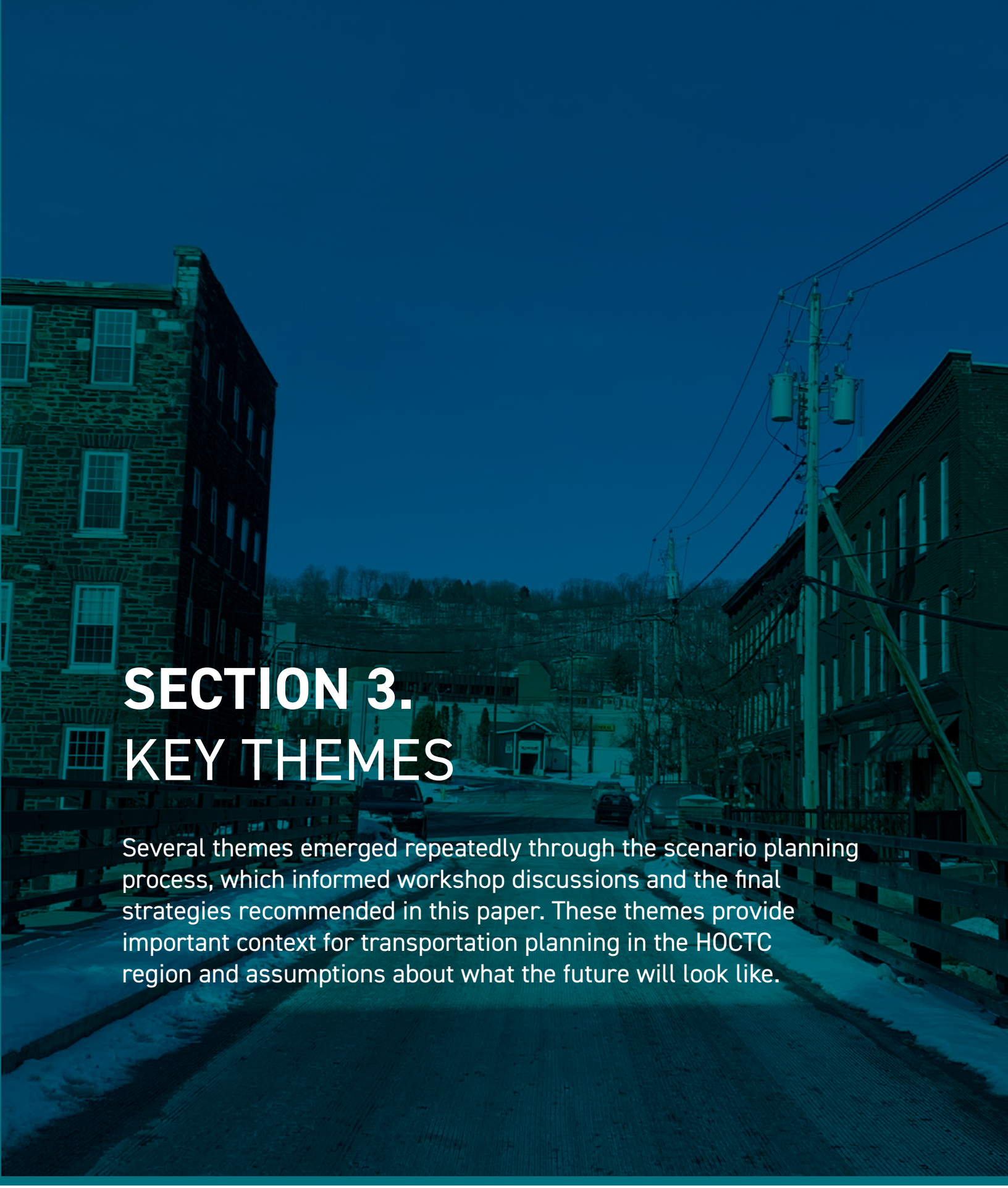



*Figure 1. Scenario planning process*



# SECTION 3.
# KEY THEMES

Several themes emerged repeatedly through the scenario planning process, which informed workshop discussions and the final strategies recommended in this paper. These themes provide important context for transportation planning in the HOCTC region and assumptions about what the future will look like.

## Coordination Across Agencies

Improved coordination between local, county, regional, and state agencies is needed. As an MPO, HOCTC is well positioned to act as a regional convener, bringing together local and state agencies as well as private stakeholders around a single vision of transportation in Herkimer and Oneida counties.

## Funding Uncertainty and Shifting Priorities

Participants in the scenario planning process did not expect funding for transportation projects to increase or become easier to access in the future; the general expectation was that funding amounts will decrease and grants will become more difficult to secure.

## Aging Infrastructure and State of Good Repair

System preservation is a main goal of HOCTC's LRTP and of the New York State Department of Transportation. Participants recognize that future funding will prioritize maintaining a state of good repair over making significant investments in other modes and that state of good repair does not necessarily mean maintaining all assets. To meet LRTP goals, the region will need to balance the funding requirements of aging infrastructure and the demand for that infrastructure with creating opportunities for new transportation options, where possible.

## Rural and Urban Contexts

The HOCTC region contains diverse geographic areas, each of which faces unique challenges that may require different solutions. The region's transportation system—and the communities who use it—should not be treated as a monolith, and participants recognized that strategies should be evaluated for their impact and applicability in rural, suburban, and urban contexts.

## Home Rule

Home rule affects HOCTC's involvement in land use decisions and the extent to which HOCTC can influence local zoning, development, and broader transportation connectivity in the region. While a connection between transportation and land use planning exists, it is often indirect and fragmented. HOCTC's role in land use planning is primarily advisory, though it can promote intermunicipal coordination to help achieve a unified regional vision and improve connections between communities.

## Connectivity

Improving the connectivity of communities across the region was identified as an important part of HOCTC's role as an MPO. There is a desire to improve connectivity by providing more transportation options than are currently feasible, particularly for pedestrians, cyclists, and transit users. Participants also recognized that transportation options and connectivity benefit the region's tourist economy.



# SECTION 4.
# KEY STRATEGIES

The scenario planning process produced a robust set of strategies to help meet LRTP goals. This section describes the broad, overarching strategies that reflect regional priorities. The full list of strategies for each LRTP goal can be found in Section 6. Strategies to Achieve LRTP Goals, and strategies are further broken out into discrete tasks that HOCTC can complete independently as internal capacity allows in Section 7. Strategy Matrix.

## Complete a Transportation Asset Inventory

HOCTC can establish an inventory of transportation assets across the region. This inventory is a necessary first step for many other strategies, as it will help HOCTC understand current conditions and make informed decisions about which assets to prioritize. While HOCTC may not be able to complete the inventory prior to the next LRTP update cycle, HOCTC may be able to develop a work plan. The work plan will identify the asset structure and data needs, current local practices, what efforts are needed to bridge the gaps between the two, what funding is needed to create and maintain the inventory, and the timeline for initial inventory development.

## Develop a Triage Plan

Based on the findings of the transportation asset inventory, HOCTC can develop a plan or evaluation framework for making decisions about which assets to prioritize based on regional needs (as opposed to prioritizing projects based entirely on age or condition). For example, HOCTC may choose to prioritize key freight corridors, knowing that freight volumes are expected to increase in the future, to reduce interruptions to this regionally significant economic factor.

## Evaluate Intelligent Transportation Systems

HOCTC can evaluate the applicability and feasibility of intelligent transportation systems (ITS) in the region, in coordination with NYSDOT Region 2. The result of this strategy would be a study that, at minimum, includes:

- Existing technologies and case studies from peer agencies,
- Areas where the HOCTC region could benefit from ITS (from addressing specific challenges to more broadly improving transportation system effectiveness),
- Short- and mid-term ITS solutions to address these areas,
- Evaluation and prioritization of potential ITS solutions,
- Recommendations about how ITS can be implemented in Herkimer and Oneida counties.

## Pilot Shuttles and Microtransit

HOCTC can consider supporting flexible, short-term transportation investments, like weekly shuttle and microtransit pilot programs, rather than large investments in any one mode. For example, this could include shopper shuttles that connect rural residents to popular shopping centers or grocery delivery services that reduce rural residents' need to make trips. For this strategy, HOCTC would provide support to municipalities, non-profit organizations, and the private sector, and would not take responsibility for the provision of these services.

## Develop Safety Education Campaigns

HOCTC can lead regional transportation safety education efforts, particularly promoting pedestrian and cyclist safety by targeting local schools.

## Conduct a Micromobility Study

HOCTC can consider how it can support micromobility, like electric bikes and electric scooters, in the region. A micromobility study would define available technology and its feasibility in the region, current trends and usage, and opportunities to expand use in ways that align with LRTP goals.

## Update Signage and Wayfinding

Non-infrastructure investments in transportation signage and wayfinding can improve the usability of the region's transportation system for residents and visitors alike.

## Implement Low-Cost Safety Measures

In the short term, HOCTC can identify where relatively low-cost safety measures like restriping and street lighting are needed and help identify funding for these improvements.

## Evaluate Rideshare Programs

HOCTC can study the feasibility of rideshare programs to reduce traffic volumes. This could include carpool or vanpool programs for certain trip types, such as commuting, or focus on certain populations, such as rural older adults, and could be volunteer based.

## Prioritize Green Infrastructure Upgrades

As HOCTC invests in its transportation infrastructure, it can consider where to prioritize coordination with regional partners to include culverts, bioswales, and other green infrastructure to manage runoff pollution from roads, highways, and bridges.

## Make Recommendations about Investments in Intelligent Transportation Systems

HOCTC may make recommendations about investments in Intelligent Transportation System technologies like sensors to monitor water depth and other conditions. For example, this information could be used by maintenance crews to prioritize work orders and by EMS dispatchers to reroute vehicles.

## Invest in Mobile Services

HOCTC can help improve rural residents' access to essential services without direct infrastructure investments by working with partners (including local governments, non-profits, and other organizations that provide social services) to support mobile service programs like health clinics and food vans.

## Consider Zoning Code Updates

HOCTC can develop model zoning code language to incentivize infill and transit-oriented development and preserve agricultural land. For example, a purchase of development rights program that can be facilitated or promoted through Farmland Protection Plans. This language could be developed as part of a one- or two-county Comprehensive Plan or as a stand-alone project. In addition, local land use policies such as promoting cluster zoning and mixed-use development can accommodate development in a manner that preserves more open space and/or agricultural land.




# **SECTION 5.** HOCTC SCENARIO PLANNING PROCESS

HOCTC's scenario planning process brought together local, regional, and state partners to consider how they can work collectively to meet LRTP goals across a range of potential futures.

## Identifying and Prioritizing Driving Forces

Two driving forces brainstorming sessions were held on Zoom in May of 2026. The purpose of brainstorming was to make sure HOCTC considers the full range of potential driving forces that will impact how the community grows and changes. The sessions included diverse experts across multiple fields - from public health and environment to housing and economic development. Participants spent 30 minutes sharing existing, emerging, and potential future driving forces likely to impact the transportation system or to be impacted by it.

After the sessions, the project team integrated participant feedback with analysis of existing planning documents and studies to identify 13 categories of driving forces.

Participants were asked, through an online poll, to choose the top three driving force categories that they thought should be explored through the scenario planning process. Land use and development patterns; housing affordability, type, and location; and personal and public transportation access, modes, and networks received the most votes. This ranking helped the project team understand stakeholder priorities from the outset.

### *Transportation System Driving Forces*

- *Agriculture and rural economies*
- *Climate change, environment, and resilience*
- *Energy systems and stability*
- *Freight, logistics, and industrial corridors*
- *Housing affordability, type, and location*
- *Industry trends, major employers, and work patterns*
- *Inequality, poverty, and social safety nets*
- *Land use and development patterns*
- *Personal and public transportation access, modes, and networks*
- *Population, migration, and household change*
- *Public finance, funding, and governance*
- *Public health, healthcare, and community well-being*
- *Technology, artificial intelligence, and automation*

# Workshop #1 - Choosing Forces for the Scenario Foundations

## Background and Process

The first scenario planning workshop was held on June 23, 2026, at the Innovare Advancement Center in Rome, New York. The purpose of this workshop was to determine which driving forces should be explored further through the development of future scenarios. Collectively and in small groups, workshop participants assessed driving forces and evaluated each according to uncertainty, likelihood of impact, and magnitude of impact.

Seventeen attendees—representing 12 local, regional, and state organizations—participated in the first workshop (not including HOCTC or consultant staff). This workshop involved a live polling activity in which participants were asked, for each driving force factor, to rate the likelihood that a given factor will change in the future, the likelihood that a given factor will impact the transportation system, and the level of impact that a given factor would have on the transportation system.

After the polling exercise, participants were divided into five groups, and each group was assigned two or three driving force categories to consider. For each driving force, small groups discussed:

- What could this mean for the transportation system?
- How might this driving force interact with other driving forces?
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)

Each small group then shared key points from their conversations, which was followed by a full-group discussion.

### *Workshop #1*

***When:*** *June 23, 2026*

***Where:*** *Innovare Advancement Center, Rome, NY*

**17** External Attendees

**12** External Agencies

## Developing Four Future Scenarios

At the first workshop, participants considered 56 factors across the 13 driving force categories. Through the live polling exercise, small group discussions, and full group discussions, a subset of factors emerged that were more important to workshop participants and applicable to the region. These factors formed the foundations of the draft scenarios, with specific regional examples and lower priority factors woven in.



### SCENARIO 1. SHIFTING GROUNDS

This scenario describes a future in which the region is responding to significant external shifts. These shifts put HOCTC and local municipalities in a reactive, rather than proactive, planning position, as they are largely outside of local and regional control and difficult to predict.

State and federal funding is unreliable and does not meet regional transportation needs. According to LRTP projections, federal funding is estimated to account for between 70–77% of the region's total transportation budget between 2023 and 2045. In this scenario there is greater volatility year-over-year, impacting HOCTC's ability to think long term about the region's transportation system. Local municipalities generally assume that funding will decline over time and must prioritize projects based on significantly strained budgets. This leaves little room for anything beyond the maintenance and repairs required to keep roads, bridges, and sidewalks open and in acceptable condition.

## *Key Themes*

Similar themes came up across small- and full-group conversations.

### Aging Infrastructure

Participants noted that aging infrastructure will be a challenge across many future scenarios, in terms of updating infrastructure to accommodate pedestrians and cyclists and meet Americans with Disabilities Act requirements, securing funding for the maintenance and repairs needed, and making decisions about which assets should be prioritized.

### Funding Availability

Funding for transportation is expected to decrease into the future, and state priorities are expected to shift toward maintaining a state of good repair rather than investing in new infrastructure that could better serve pedestrians, cyclists, or transit users.

### Transportation Options

Participants generally viewed transit and active transportation favorably but recognized that meaningfully promoting these transportation alternatives would require significant infrastructure investments and land use changes. Those changes may be challenging given the realities of available and expected funding.

Knowing that state and federal funding is unstable, municipalities increasingly explore new ways to raise revenue and work collaboratively to address transportation challenges on a regional level, with HOCTC playing a key role in this coordination. Public-private partnerships are preferred but limited, and residents are broadly opposed to tax increases. Municipalities must also balance the varying transportation needs of urban and rural areas within a funding environment where there is less to go around and less certainty about where dollars will come from.

Nationally, the costs associated with vehicle ownership rise and become unaffordable for many households. As a response to increased vehicle and fuel costs, urban residents in the HOCTC region drive less and can more easily shift to other modes, like walking and biking, than rural residents. However, active transportation is not a feasible option for some residents for certain trips, for example large grocery trips or trips during extreme weather. Conflicts between pedestrians and other modes increase due to the need to share existing infrastructure. Public transportation ridership increases, making service more financially efficient and boosting farebox revenue.

Rural residents in Herkimer and Oneida counties feel the increased vehicle costs most acutely, as they are more reliant on personal vehicles to access services and have longer commutes than urban residents. In response, rural residents make fewer trips overall. This is due to trip chaining—making multiple stops during a single trip to and from home—which saves gas, as well as rural residents choosing to cancel trips. Rural residents who don't qualify for special transportation services but cannot afford their private vehicle must make decisions about which trips are the most important, at the expense of others. Increasingly, their daily needs are not being met with existing transportation options.

At the same time, the region's agricultural economy is thriving and attracting new private sector investment. Growth provides new employment opportunities for existing residents but does not attract significant numbers of new residents from outside the



region. Agribusiness expansion causes increased freight traffic along major corridors between rural and urban areas, strains supportive infrastructure like utilities, and requires additional land for warehouses to process and store goods.

Herkimer County's outdoor recreation economy—centered around recreational opportunities in the Five Ponds Wilderness and other parks and nature preserves—expands noticeably, though the seasonality of this economy is not enough to spur major investments. Still, the value of these areas, both economically and socially, is codified through regional commitments to conserve wetlands and other wildlife areas. Agritourism, which includes attractions like family farms, farmers markets, and Christmas tree farms, is thriving and growing.



## SCENARIO 2. BOOMTOWNS

This scenario describes a future in which the region experiences overall population growth rather than decline, though growth and development are concentrated in existing urban areas. This leads to further densification of cities like Rome and Utica and along Interstate 90 in the Mohawk River Valley corridor, which allows for the removal or decommissioning of aging and low-volume infrastructure that becomes underutilized. In turn, funds that would be used to maintain and repair these assets can be redirected to other transportation projects.

Growth is spurred by industries that are easier to locate in urban areas, specifically professional services, hospitality, healthcare, and education. Large corporate campuses like the Griffiss Business and Technology Park in Rome also develop close-in to cities, allowing for direct and short commutes and creating jobs that attract new residents from outside the region. Investment from New York State and Oneida County in the Triangle site at the Griffiss Business and Technology Park pays off, and the semiconductor industry expands; the Chobani manufacturing facility creates over 1,000 new jobs and strengthens the regional agricultural sector through partnerships with nearby dairy farms.

The Chobani manufacturing facility creates over 1,000 new jobs and strengthens the regional agricultural sector through partnerships with nearby dairy farms. Proposed mixed-use projects like the West Street Impact Center in Utica's Cornhill neighborhood and the St. Luke's Hospital redevelopment in New Hartford contribute to densification and walkability. Increasingly, residents live and work within their neighborhoods, and traffic volumes decline overall, leading to fewer traffic conflicts and crashes.

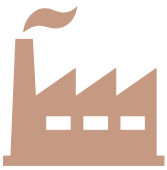
There is competition among local municipalities to attract major employers, and a given municipality's leverage depends on their ability to provide cost breaks and other incentives that would draw private investment.

The region's population increasingly concentrates around these urban employment centers and remote work opportunities expand, reducing urban residents' reliance on personal vehicles to access employment, services, and amenities. Employment opportunities allow the region to retain younger residents, which slows the overall aging of the urban population. The mode shift away from private vehicles and towards walking, biking, and public transportation is facilitated by both densification and value

capture strategies, the costs of which are passed on to renters and consumers. The percentage of sidewalks that meet Americans with Disabilities Act standards increases in areas with concentrated development, while sidewalk conditions are poorer outside of these areas.

Emerging walkable, amenity-rich neighborhoods are attractive to new residents, driving demand for housing and, by extension, driving up housing costs. While this increases tax bases of growing cities, meaning more public investment, households with lower incomes are increasingly shut out of central housing markets. Income disparities and varying levels of access to new amenities emerge along spatial/geographic lines, with higher income urban areas benefiting from aesthetic and safety improvements like murals, green spaces, high visibility crosswalks, and pedestrian lighting.

In contrast to concentrated urban growth, rural areas lose employers and population, resulting in a lower tax base and reduced federal formula funding for transit services. Younger rural residents move to urban areas to be closer to employment and education opportunities. Essential services and infrastructure cannot be sustained with rural budgets. Because development is concentrated in urban areas, agricultural land is largely preserved; however, due to poor economic conditions in rural areas, this land is also underutilized.



### SCENARIO 3. THE ELECTRIC SPRAWL

This scenario describes a future in which municipalities are having to respond to growth in land- and energy-intensive industries, including continued growth in primary metal manufacturing and machinery manufacturing. Population growth and employment opportunities expand significantly but unevenly across the region, creating large-scale shifts in land use patterns. Urban areas do not experience significant densification, and farmland is lost from development, industrial uses, and energy infrastructure.

New and expanded work sites attract people from outside the region and the overall population increases, but these sites are dispersed and put intense pressure on agricultural land. The state's moratorium on data centers ends, and some of this sprawling, resource-intensive development is attributed to relaxed regulations. Development is low density and land uses are largely siloed, meaning that residential areas are not co-located with emerging work sites, and emerging work sites are not located near existing urban centers. Rather than resulting in densification in urban areas, residential development extends outward from cities through the conversion of agricultural land. This creates scattered, low-density suburbs connected by vehicle-only roadways (rather than corridors that can accommodate multiple transportation modes) to urban areas and work sites. Because of the distance between communities, pedestrian infrastructure is not prioritized and the region's reliance on driving is further ingrained. With more vehicles on the road more often, traffic incidents and crashes increase.

As the region's population grows and commute times increase, the road network experiences greater traffic congestion, and it becomes more expensive for municipalities to maintain a state of good repair. Road conditions are further degraded by expanded freight needs, as

dispersed work sites require heavy duty container trucks to travel farther, and the region struggles to maintain, modernize, or decommission key freight assets due to the spatial distribution of these assets. Local municipalities rarely coordinate to plan for connectivity between emerging work sites or address traffic volumes across the region, leading to fragmented communities and varying levels of infrastructure investment, as independent towns and villages have the authority to develop their own land use ordinances and zoning codes. New traffic bottlenecks emerge due to competing freight and commuter needs.

Sprawling development and the rapid electrification of the transportation sector creates demand for electricity beyond the capacity of the existing energy grid. This is largely driven by shifts in state and federal policy that incentivize and heavily subsidize private fleet electrification, causing new freight technologies to be taken up rapidly. The cost of utilities, particularly energy and transportation, goes up significantly for households in the region as new work sites and industries have high energy demands and require longer commutes. Broadband access expands to previously unserved parts of Herkimer and Oneida counties, supporting telehealth in areas with limited access to medical centers.

The electrification of transportation extends beyond fleet vehicles to personal mobility, and residents have broader access to electric vehicles, bikes, and scooters. This is partially due to residents purchasing these technologies for personal use, and partially due to the expansion of private micromobility companies that provide per-mile or per-minute e-bike and e-scooter rentals. Conflicts between electric micromobility and other transportation modes increase, forcing local municipalities to quickly respond by regulating micromobility use. Municipalities are also pressured to install public electric vehicle charging stations and dedicate most of their grant writing capacity to identifying and applying for these funds.



## SCENARIO 4. WEATHER OR NOT

This scenario describes a future in which daily life is increasingly shaped by climate change, while economic and demographic trends largely unfold as currently projected. Short-, medium-, and long-term transportation revenue generally aligns with projections from the LRTP, meaning that highway funding is sufficient to maintain a state of good repair for roads, but the amount of funding available for bridge replacement and transit services does not meet what is needed.

Flooding and other extreme weather events become more acute and cause significant, recurring disruptions to road networks, making roads and bridges occasionally difficult or impossible to navigate. Bridge projects currently funded through BridgeNY are completed as planned, and municipalities continue to seek funding for the other identified bridge projects. Climate events compound the effects of normal wear and tear as bridge projects await funding, making certain bridges temporarily or indefinitely impassable. In turn, connectivity is intermittently impacted, limiting access to economic hubs, recreation, shopping, and medical centers. Emergency services vehicles are occasionally rerouted due to flooding on roads and bridges, increasing response times and making it more

difficult to respond to rural calls. This, in turn, worsens health outcomes for people needing emergency medical services.

The vast majority of transportation investment in the region is dedicated to preserving the existing roadway network, though complete street principles are increasingly incorporated in urban areas where possible. Funding for dedicated active transportation infrastructure, while increasingly desired by urban residents, is primarily dependent on competitive grants and is not approached at a system-wide level. Staff capacity to pursue competitive grant opportunities is limited in smaller agencies, but without significant targeted investment and coordinated planning, the percent of commuters who walk, bike, or take transit regularly remains low.

Even as the region itself is increasingly impacted by extreme climate events, the Mohawk River Valley corridor sees an influx of climate refugees—people who have had to leave their homes because the effects of climate change have made them uninhabitable—resulting in demand for more non-driving options in Rome, Utica, and smaller urban areas as well as greater demand for housing and social services generally. The influx of climate refugees occurs in addition to the region's current refugee resettlement patterns centered around Utica, compounding existing barriers related to employment and transportation.

The region's rural population ages and declines in number, continuing the trend from previous years. Most older adults in rural areas choose to age in place. This creates demand for travel options that are responsive to the special transportation needs of older adults, for example connecting rural Herkimer County residents to services in Herkimer, Rome, and Utica. Population decline is more pronounced in largely rural Herkimer County, which reduces the amount of FTA Section 5310 and 5311 formula funding available to support transportation services for older adults, people with disabilities, and rural residents.

Agribusinesses and agritourism (including family farms, farmers markets, and Christmas tree farms) face operational challenges caused by the increase in extreme climate events like flooding, both in terms of what farms can cultivate and in the logistical difficulties of transporting goods across flooded bridges and roadways. The associated risk and instability cause these businesses to reduce their workforce, making agriculture and related sectors a smaller portion of the region's overall economy.



# Workshop #2 - Exploring LRTP Goals in the Context of Future Scenarios

## Background and Process

The second scenario planning workshop was held on August 4, 2026, at Mohawk Valley Community College in Utica, New York. The purpose of this workshop was to explore regional recommendations from HOCTC's Long Range Transportation Plan in the context of four alternative futures and:

- **Identify** which transportation strategies and investments may be 'no regrets' approaches that could succeed under multiple future scenarios;
- **Consider**, for transportation strategies and investments that may succeed under certain scenarios but not others, what can be done to impact negative outcomes or improve chances of success; and
- **Develop** new recommendations based on discussions across groups.

Thirteen attendees—representing nine local, regional, and state organizations—participated in the second workshop (not including HOCTC and consultant staff). Participants were divided into four groups, and each small group was tasked with identifying the transportation investments or strategies that would best help the region meet LRTP goals in the context of their given scenario. For each investment or strategy, groups considered:

- The timing of the strategy for maximum effectiveness—whether some strategies need to be started immediately to be viable for completion in the future.
- Who are the likely beneficiaries of the strategy, and who is likely to be negatively affected.
- Who would be responsible for developing and implementing the strategy, and whether there are other supports needed in place for it to succeed.

Each small group then shared their strategies and the assumptions associated with each, followed by a full group discussion about strategies that may be successful across different futures, assumptions that were highlighted across different futures, and strategies that may become valuable in the future if specific conditions exist or trends begin to emerge.

### *Workshop #2*

***When:*** *August 4, 2026*

***Where:*** *Mohawk Valley Community College, Utica, NY*

**13**
**External Attendees**

**9**
**External Agencies**

# *Key Themes*

Several key themes emerged through this workshop and informed the development of specific, actionable strategies.

## Asset Identification

Across the different goals, the discussion frequently turned to the need to understand assets across the entire region as the basis for any kind of prioritization in the future. While different jurisdictions have undertaken projects of different scales in the past, the need to standardize and integrate data collection efforts came up frequently as the foundation for other strategies.

## Coordination

Some of the liveliest conversations were around topics that require extensive regional coordination and/or are outside of the purview of HOCTC or HOCTC alone. Strategies in this vein included policy stacking with respect to farmland protection, coordinating comprehensive plans, developing a regional freight network, leveraging planned projects to integrate other needs (such as technology, bike/ped, improved lighting, wayfinding) and planning for ITS investments to support preservation, climate change response, and AV deployment.

## Data-Driven Investment Prioritization

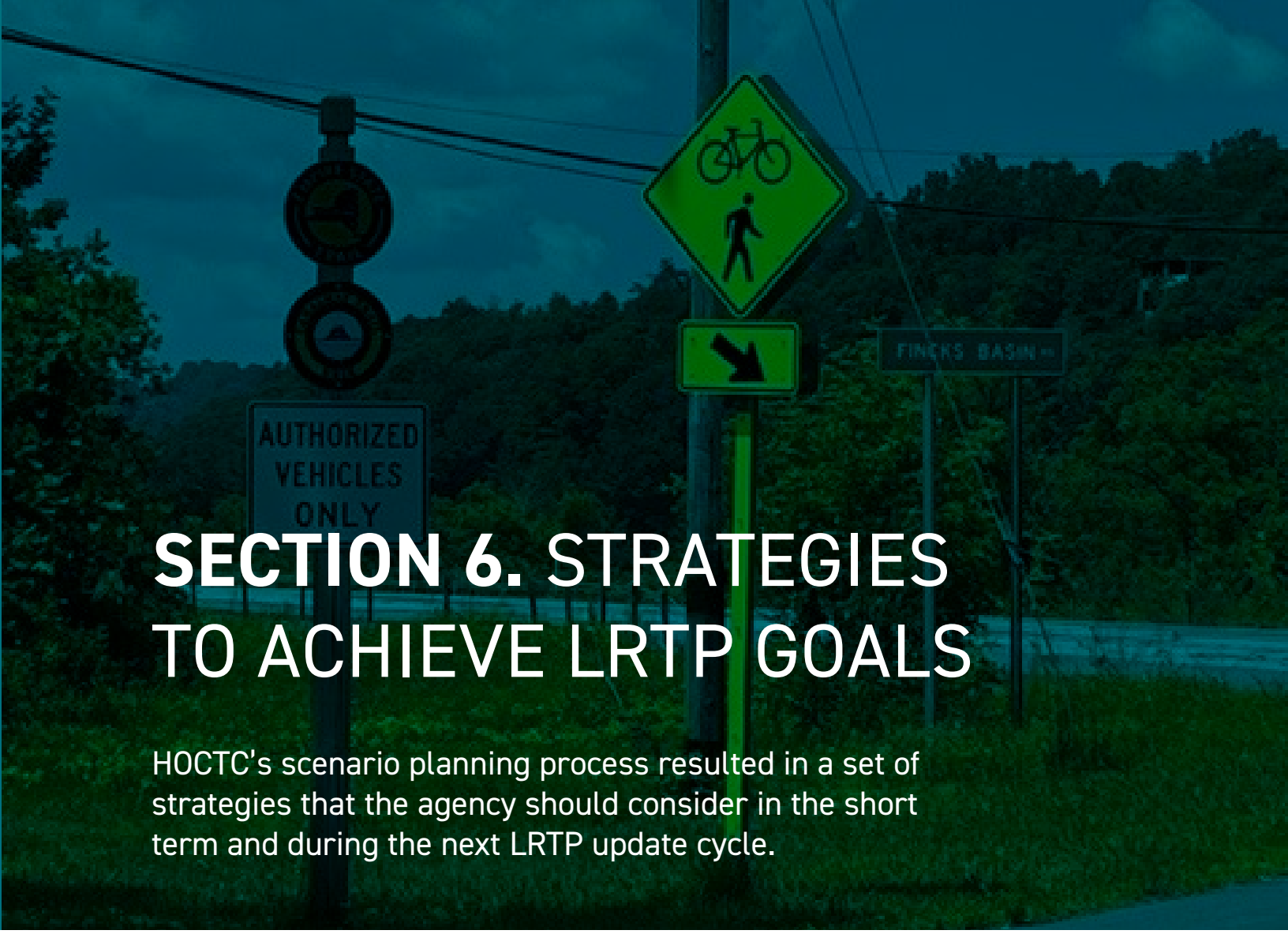
Groups recognized the extensive trade-offs that will be required to ensure a functional transportation system in the future, no matter what future scenario they were assigned. Preservation, while still a priority, needs to be examined with respect to real need, with the understanding that some preservation should not be like for like (for example, some signals should be upgraded when it is time to replace them) while other infrastructure should be considered for decommissioning. These decisions require a holistic picture of the network, though, relying on the asset identification previously noted.

## Triage

Related to data-driven investment prioritization, but worth noting as its own theme, is triage. With climate change and freight currently impacting the network and expected to increasingly impact the network in the future, participants discussed a triage approach, particularly with respect to bridges and other infrastructure that is not redundant or could create major network bottlenecks.

## Low-Cost Infrastructure and Non-Infrastructure Approaches

Given the funding constraints and right-of-way constraints that were either explicitly described in the scenarios or assumed by the groups, major new investments were not as widely discussed as low-cost infrastructure and non-infrastructure approaches. These included everything from better striping upkeep and wayfinding signage to education (of public and decisionmakers) and enforcement (of traffic laws and environmental regulations).




# **SECTION 6.** STRATEGIES TO ACHIEVE LRTP GOALS

HOCTC's scenario planning process resulted in a set of strategies that the agency should consider in the short term and during the next LRTP update cycle.

While key strategies were shared in Section 3, many other ideas emerged (under other agencies' jurisdiction, at different levels of complexity and cost, and across multiple sectors) that HOCTC and regional partners should consider as part of the LRTP and other future planning and funding efforts. These strategies will help ensure that HOCTC can achieve its LRTP goals across a range of future economic, socio-demographic, and environmental conditions. For each goal, strategies are further divided into non-infrastructure and infrastructure approaches.

# Mobility and Accessibility

## NON-INFRASTRUCTURE APPROACHES

- Fund shopper shuttles in collaboration with non-profits.
- Purchase additional buses that are ADA accessible and can accommodate bikes.
- Promote employer-sponsored transportation (carpool/vanpool).
- Invest in mobile services (libraries, clinics, veggie van, basic necessities van).
- Deploy tourist-oriented buses.
- Hire a mobility manager to coordinate stakeholders around common goals.
- Encourage dense, mixed-use development through financial incentives and zoning regulations.
- Expand bus routes.
- Work with employers to provide transportation options to their employees.

## INFRASTRUCTURE APPROACHES

- Install bike racks at key destinations to promote transportation options.
- Enhance and expand trail networks; repurpose unused infrastructure for biking and walking trails.
- Use saved/allocated funds from decommissioned infrastructure maintenance to support transportation options like transit and active transportation infrastructure.
- Invest in ADA upgrades to sidewalks to improve rural mobility.
- Integrate transportation planning with broadband access, utilities extensions, and other infrastructure investments.
- Prioritize infrastructure investments to accommodate increased traffic volumes.
- Enhance snow storage, greenery, and wind barriers to improve roadway conditions.
- Invest in technology to manage stormwater and prevent flooding from occurring.

# Safety in Transportation Options



### NON-INFRASTRUCTURE APPROACHES

- Develop targeted safety campaigns, especially for rural areas and schools.
- Implement driver education focused on sharing the road with bicyclists and other slow-moving vehicles.
- Create better signage and wayfinding.
- Develop a volunteer rideshare program.
- Improve E-bike/scooter regulations.
- Evaluate current freight traffic patterns.
- Develop rideshare/vanpool-type programs to reduce traffic volume.

### INFRASTRUCTURE APPROACHES

- Invest in smart technology in high crash locations.
- Prioritize low-cost safety measures like restriping, signage, and lighting.
- Improve pedestrian and cyclist infrastructure.
- Develop dedicated freight corridors.
- Invest in emergency notification systems, especially for rural and offline residents.

# System Preservation

## NON-INFRASTRUCTURE APPROACHES

- Develop clear investment criteria/priorities.
- Advertise and provide incentives for using public transportation.
- Streamline design/ construction processes.
- Address issues on a system-wide level, not case-by-case.
- Develop a digital inventory of existing assets, condition, and use to prioritize preservation.
- Remove parking standards.
- Identify specific routes for heavy vehicles to reduce impact on other parts of the network.
- Introduce new levies to fund system needs.
- Develop a plan to prioritize/ triage maintenance needs.
- Help municipalities increase grant writing capacity.
- Provide CDL training courses to encourage young people to work in the region and potentially fill a gap in transportation services.

## INFRASTRUCTURE APPROACHES

- Invest in stormwater infrastructure.
- Upgrade traffic signal detection, consider roundabouts.
- Install culverts and drainage technology during preservation projects.
- Develop multimodal hubs around existing train stations.
- Prioritize maintaining roads that heavy vehicles use.
- Expand use of canal/rail systems.

# Transportation and Land Use Planning Coordination



## NON-INFRASTRUCTURE APPROACHES

- Restrict sprawl with zoning code updates.
- Work with tourism organizations to provide non-driving options for tourists (shuttles).
- Expand transit service span to encourage mode shift.
- Leverage public-private partnerships.
- Update zoning and comprehensive plans.
- Pursue pro-housing certification and technical assistance.
- Incentivize downtown infill development and mixed-use redevelopment.
- Protect agricultural land using development regulations.
- Support mode shift for agricultural products from truck to rail to reduce impact on highway network.
- Develop farmland protection plans.
- Update zoning codes to allow for transit-oriented development, mixed-use.
- Cluster zoning to preserve open space.
- Implement Purchase of Development Rights programs.

## INFRASTRUCTURE APPROACHES

- Invest in/prioritize solar power in new developments.
- Utilize canal/rail to reduce freight impact on roadways.

# Environmental Impacts

### NON-INFRASTRUCTURE APPROACHES

- Increase enforcement and fines for environmental regulations.
- Promote transportation alternatives through bike and scooter rental programs.
- Make large industries pay for energy consumption.
- Require new development projects to build underground power lines.

### INFRASTRUCTURE APPROACHES

- Invest in green infrastructure.
- Expand broadband to promote remote work.
- Prioritize roundabouts instead of traffic signals to reduce energy usage and vehicle idling.
- Invest in alternative energy sources without consuming green space or agricultural land.
- Invest in culverts and floodplain management.
- Implement green infrastructure along roadways.



# SECTION 7.
# STRATEGY MATRIX

This matrix organizes the strategies from Section 6 into larger strategies and then breaks those down into smaller, actionable tasks that HOCTC can complete independently as agency capacity allows.

Tasks allow HOCTC to move forward with improvements in its transportation system without requiring a significant, long-term commitment. For example, an important objective that emerged through the scenario planning process was completing a digital inventory of all assets in the region to help guide investments. However, recognizing that this would require significant time and money to complete, a more manageable but related subtask that HOCTC could complete in the short term would be a survey of existing asset inventories completed by smaller agencies within the region.

### STRATEGIES

Each strategy is an investment that could be made in the HOCTC region to improve the transportation system. While HOCTC may not be the agency making the investments directly, it can support these strategies through activities described in subsequent columns.

### TASKS

Each task is a necessary precursor for achieving a given strategy. Tasks lay the foundation for effective, well-informed investments and are within the scope of HOCTC's authority/role in the region.

### COMPONENTS

Components provide the information needed to complete tasks. HOCTC needs a clear understanding of each component to, ultimately, prioritize investments.

### CONSIDERATIONS

Considerations are questions that HOCTC will need to answer related to each component. Thinking through these questions at the beginning of the process and moving forward with clear answers will ensure that decisions are documented and traceable.

***Table 2:*** *Strategy Matrix*

| STRATEGY 1: Improve regional capacity to identify, prioritize, and fund transportation solutions | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Develop regional asset management system to support local and regional asset management and investment priorities. | Determine what data are available. | • What data points have been collected?<br>• Which parts of the region have inventories? |
| | Determine quality of existing data. | • How complete are existing inventories?<br>• When were they last completed? |
| | Develop technical framework for integrating existing asset inventories. | • What does HOCTC want to know?<br>• Do existing asset inventories have comparable data? |
| | Develop maintenance and governance framework for regional asset management system. | • Who "owns" the asset management system?<br>• How is new data QA'd? How frequently are data updated (annually)?<br>• What is the process for maintaining the system?<br>• How do municipalities notify HOCTC if they have new data? |
| Develop regional vision for transportation to support future revenue-raising efforts. | Identify a compelling long-term vision for the region. Rather than focus on the transportation network itself, develop the transportation vision based on the community's overall vision of how they want the regional to look in the future. | This effort will bring together the public, local business, community leaders, and other regional stakeholders, consider how towns & cities develop; employment, education, and recreation opportunities in the region; and overall quality of life in the region. This effort has the added benefit of understanding how the community values agriculture and open space for future land use considerations. |
| Develop regional grants and fundraising program. | Identify community partners that can benefit from grant-writing support. | • Could HOCTC support municipal grant applications by providing technical support?<br>• Do we need a municipal grant circuit rider?<br>• Where would this position be hosted? |
| | Facilitate grant requests across the region to improve coordination among jurisdictions and ensure proposed projects address multiple community needs. | • Who would sponsor applications?<br>• Where does the local match come from?<br>• Who administers the project or final grant award?<br>• How do applications align with regional priorities?<br>• How does grant program guidance fit the local need?<br>• How can HOCTC advocate for better alignment of federal and state programs? |
| Identify infrastructure that should be considered for decommissioning. | Determine what factors make infrastructure a candidate for decommissioning. | • What is the current traffic volume, condition, maintenance cost/backlog?<br>• How has land use around/original purpose of the infrastructure changed over time? |
| | Evaluate potential candidates against factors. | • How will HOCTC prioritize infrastructure to decommission? Is traffic volume the main determinant? Cost to maintain? Other factors |

| STRATEGY 2: Invest in ADA upgrades | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify where curb cuts, sidewalks, and crossings exist; evaluate their quality/condition. | Determine how these assets will be evaluated. | • Which conditions will be measured?<br>• How will conditions be measured (what is poor, fair, good)? |
| Identify non-ADA compliant curb cuts, sidewalks, and crossings. | Determine process for evaluating whether infrastructure is non-compliant. | • Existing checklist? Regionally developed guide?<br>• What parameters will be used to consider where full compliance is not possible? |
| Identify potential solutions to improve ADA compliance. | Determine the range of potential ADA solutions across contexts (i.e., urban vs. rural). | • Are there best practices regarding which solutions fit which contexts? |
| Prioritize ADA infrastructure improvements. | Determine how improvements will be prioritized. | • By traffic volume? By proximity to transit stops? By proximity to major employers or destinations? By ease of implementation or cost? |

| STRATEGY 3: Invest in active transportation infrastructure and programs | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Determine where bicycle infrastructure (for example, bike racks) and pedestrian infrastructure (for example, sidewalks or walking paths) are needed. | Identify current patterns of bicycle use and pedestrian activity. | • How will patterns be identified? Big data, surveys, bicycle counters? |
| | Determine where bicycle and pedestrian infrastructure currently exists. | • What is the condition of this infrastructure? Can HOCTC partner with other municipalities to gather this data and have a centralized map? |
| | How will need be measured? | • For example, by population group, by safety/ risk of travel corridor, by destination? By potential to eliminate greenhouse gases or other environmental sustainability factors? |
| Identify potential regional mobility hubs. | Identify areas of high bicycle, pedestrian, and transit activity. | • Which methods will HOCTC use to determine existing activity levels? Can HOCTC take counts, or use a software to make informed estimations?<br>• Which methods fit HOCTC's resource availability and staff capacity (i.e., could staff coordinate volunteer traffic counts)?<br>• What time of year and day(s) of the week would be representative of typical travel patterns?<br>• Should HOCTC only identify current hubs, or areas with potential to become them? |
| | Evaluate locations for feasibility of developing mobility hubs. | • Where are current employment centers and shopping areas? Where are current residential districts? Where are future planned districts?<br>• Can HOCTC make recommendations based on walk-ability or active transportation data where future development would most and least accommodate active transportation needs? |

| STRATEGY 3: Invest in active transportation infrastructure and programs | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify opportunities to promote active transportation. | Determine how zoning codes can encourage dense development. | • Are there best practices regarding zoning language that can support active transportation?<br>• Identify regulatory parameters. How else can we pair land use and active transportation? |
| | Develop model zoning code language that municipalities can adopt to support complete streets, TOD, and active transportation. | • Examine peer examples that reflect similar regulatory, demographic, and development environments.<br>• How can this be delivered and promoted effectively to municipalities in a way that educates officials on active transportation options that fit their communities?<br>• Are there any resources that can be offered to entice communities to reconsider how their development patterns work? |
| | Determine when it may be appropriate to remove parking standards. | • Is usage tracked? What data are available? Are there opportunities to examine parking capacity versus peak usage with drone flights over lots? Which trails are most popular and why?<br>• What are best practices for mitigating parking requirements, such as shared parking agreements?<br>• How can parking reform be made attractive to communities and municipal governments? |
| | Determine where low-cost safety and comfort measures may be appropriate. | • Where might restriping, improved lighting, or other solutions provide increased safety and comfort for people walking and biking? |
| Determine feasibility of e-bike and scooter rental programs. | Determine where there may be demand for e-bike and scooter rental programs. | • Do programs already exist? What is the demand?<br>• What works well? What does not work well? |
| | Identify parameters of pilot program(s). | • Where would existing infrastructure support e-bikes and scooters?<br>• Are there case studies regarding how regional agencies coordinate with local municipalities and private partners to build these programs? |
| Identify opportunities for safety campaigns/ education. | Evaluate current and recent Safe Streets for All efforts. | • What were the results?<br>• What did these efforts recommend?<br>• Where could process changes improve outcomes? |
| | Determine where to target pedestrian/cyclist safety campaigns. | • High-conflict corridors? Schools? Targeted at pedestrians, cyclists, and/or drivers? Targeted at rural communities or urban communities? |

| STRATEGY 4: Invest in public transit and other community transportation options | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify and evaluate existing public transit and community transportation options. | Evaluate transit need and transit/travel demand against existing options. | • Where are people traveling to/from? At what times?<br>• Are there demographic, temporal, or destination patterns?<br>• How well do existing options meet these needs?<br>• How can trips not taken be accounted for? |
| Identify and evaluate context-sensitive transit and community transportation solutions. | Determine potential solutions to address the gaps in identified transit and travel needs versus solutions. | • When would weekly shopper shuttles be the preferred alternative to grocery deliveries in rural areas?<br>• When would employer-sponsored transportation be the preferred alternative to volunteer carpool programs?<br>• When would mobile services (i.e., mobile clinics) be the preferred alternative to transporting people to key services? |
| | Evaluate solutions to identify preferred options. | • Based on existing provider interest and capacity? Potential market demand to support new providers? Opportunities to leverage different funding streams to improve or add services? |
| Prioritize opportunities to expand regional transportation options. | Determine which solutions are most important to prioritize. | • By cost? By type of project? By area within the region? By connectivity to other modes? By places of employment? |

| STRATEGY 5: Invest in road maintenance to support freight movement | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify heavy vehicle routes/traffic patterns. | Determine key origins/ destinations for heavy vehicles. | • How does volume fluctuate? Are there peak days/times/periods? |
| Identify roadway conditions. | Determine how to measure roadway condition. | • Are there additional parameters that can be measured while road scoring? |
| Develop triage plan. | Determine how projects will be triaged. | • By freight flow tonnage? By severity of bottlenecks? By roadway importance for other uses (i.e., commutes, emergency evacuation routes)? |
| Identify whether a regional rail plan is needed. | Examine outcomes of state rail plan. | • What do we want to know? Did the state rail plan answer those questions? |

| STRATEGY 6: Invest in Intelligent Transportation Systems | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify and evaluate existing ITS in the region. | Determine how existing systems are working. | • What's working well? What's working poorly? How do systems compare to goals/expectations for use? |
| Identify regional needs. | Determine existing and potential future corridors, road sections, and intersections that could benefit from new or improved ITS solutions. | • Identify the range of challenges that ITS solutions can address - for example, related to safety, travel reliability, emergency management.<br>• Identify areas of the network that experience these challenges. |
| Develop and prioritize projects. | Determine appropriate solutions based on needs. | • Are there best practices regarding which solutions fit which contexts?<br>• In which contexts are which types of ITS solutions most useful?<br>• How will projects be prioritized? For example, by traffic volume? By severity of bottlenecks? By main roadway uses (i.e., commutes, emergency evacuation routes)? By connectivity to key destinations?<br>• Identify the regulatory parameters related to road and ROW ownership. |
| Develop a regional ITS plan. | Determine regional standards for interoperatibility, accessibility, and data sharing. | • Will technologies be coordinated across borders?<br>• What key features are needed to ensure a regional approach? |

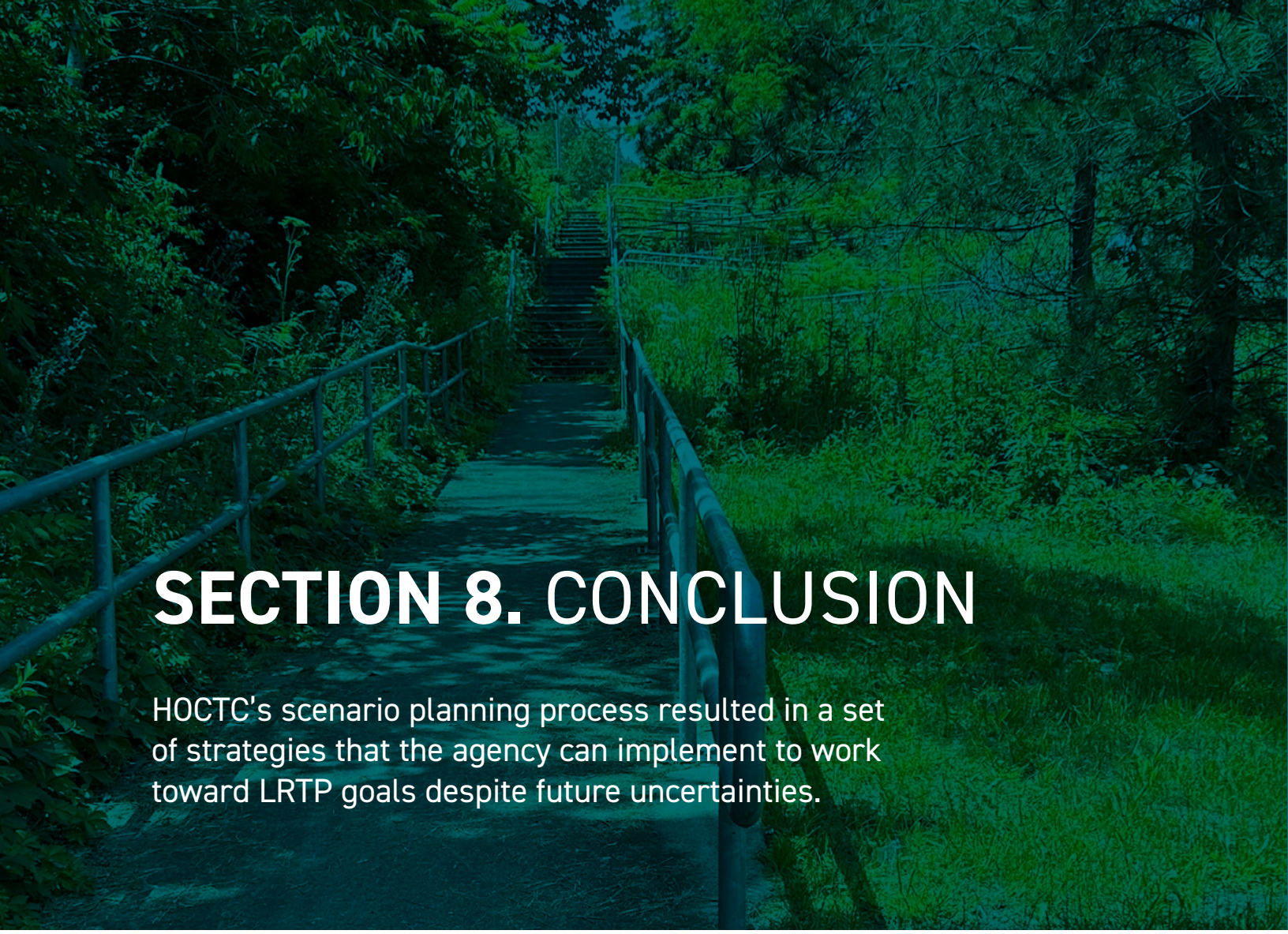
| STRATEGY 7: Invest in stormwater/snow management/green infrastructure. | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify and evaluate existing stormwater/ green infrastructure in the region. | Determine condition of existing green infrastructure. | • Where are repairs needed and when?<br>• What does routine maintenance involve and how often? |
| | Determine how existing infrastructure is working. | • What is working well? What's working poorly? Where are needs not being met?<br>• How do systems compare to goals/expectations for use? |
| Identify and evaluate existing snow storage and wind barriers on roadways. | Determine the condition of existing snow storage and wind barriers. | • What are the current maintenance requirements?<br>• What are the expected/future maintenance requirements?" |
| | Determine how existing infrastructure is working. | • How do these systems work? Are they achieving their intended purposes? |
| Identify regional needs. | Determine existing and potential future corridors, road sections, and intersections that could benefit from new or improved stormwater/ snow management/green infrastructure. Identify opportunities to integrate solutions (such as solar panels) that may have regional benefit but not directly impact transportation system. | • Identify the range of challenges that these solutions can address - for example, related to safety, travel reliability, emergency management, reduced maintenance costs.<br>• Identify areas of the network that experience these challenges. |

| STRATEGY 7: Invest in stormwater/snow management/green infrastructure. | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Develop priority projects to integrate into transportation plans. | Determine appropriate solutions based on needs. | • Are there best practices regarding which solutions fit which contexts?<br>• In which contexts are which types of infrastructure most useful?<br>• Which vegetation can be installed to survive without intensive maintenance? What regular maintenance will be needed and how often? Who is responsible for maintenance?<br>• What will maintenance require (labor, tools/ equipment)? Does that apply to the HOCTC region? |

| STRATEGY 8: Invest in signage/wayfinding improvements | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify where signage/ wayfinding currently exist in the region. | Determine who is responsible for managing signage. | • Are there existing signage inventories? When was signage last updated?<br>• What kind of signage is the region interested in upgrading? Is this trail signage, bicycle-oriented signage, placemaking signage, etc? |
| Identify where there is a need for improved signage/wayfinding. | Determine where there are opportunities to point people toward destinations, bike paths, trails, etc. | • Which destinations would benefit from better wayfinding? Is the goal to promote active transportation, tourist attractions, other destinations<br>• In which cases should wayfinding be directed toward residents? In which cases should wayfinding support tourism? |
| Understand opportunities for regionally-integrated and standardized signage. | Identify how signage design varies across region and process for determining sign standards. | • Do some communities already have a design language for their wayfinding signage? Are there locations where LEP must be considered?<br>• Analyze peer examples of regional wayfinding and signage programs.<br>• identify local, regional, and state signage regulations or standards. |
| Develop standardized signage recommendations. | Determine the feasible scope of a regional signage program and extent of regional partners.<br>Develop clear design guidelines for signs within the identified scope of the program. | • Which agencies can HOCTC partner with to develop and promote a regional signage program?<br>• Where is there interest in this program? |

| STRATEGY 9: Invest in regional trail networks | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify existing trails and usage. | Determine condition of existing trails. | • Who maintains trails? What is involved in maintenance?<br>• Which trails are paved/unpaved?<br>• Which trails have lighting?<br>• Which trails have mile markers, signage, and other wayfinding? |
| | Determine how trails are used. | • Is usage tracked? What data are available?<br>• Which trails are most popular and why? |
| Determine where trail network could be enhanced or expanded. | Determine where improvements could be made. | • Where could connectivity be improved?<br>• Where could trail condition be improved?<br>• Where could wayfinding be improved?<br>• Where could safety be improved? |
| | Identify gaps in trail network. | • Are there unused assets that could be repurposed as trails?<br>• Who owns those assets?<br>• What is the process for converting these assets? |
| Prioritize trail improvements. | Determine how trail projects will be selected for investment. | • For example, by cost? By type of project? By current levels of use? |

| STRATEGY 10: Invest in tourism-oriented transportation | | |
|---|---|---|
| **Tasks** | **Components** | **Considerations** |
| Identify existing tourism-related transportation needs in HOCTC region. | Determine major tourist attractions/destinations. | • How many tourists visit annually?<br>• When are peak seasons?<br>• How do tourists access these destinations? What are their options?<br>• How is trail usage tied to tourism? Where are the opportunities to use the region's trail system to attract and connect tourists? |
| Identify potential service solutions. | Determine the range of potential solutions and evaluate their likely outcomes. | • Examine peer examples, case studies from similar regions and/or destination types. |
| Identify potential partners. | Determine who provides transportation options that tourists currently use or is interested in providing transportation options. | • What works well? Where are there gaps?<br>• How are other regional planning organizations supporting the tourist economy? |
| Develop pilot program(s). | With interested partners, identify pilot program(s) parameters, funding sources, and evaluation measures. | • How will success be measured?<br>• How will partners decide if pilot programs should continue? |



# SECTION 8. CONCLUSION

HOCTC's scenario planning process resulted in a set of strategies that the agency can implement to work toward LRTP goals despite future uncertainties.

Through this process, participants considered a wide range of potential conditions and developed responsive approaches that can be implemented now and into the future. The range of time horizons and levels of investment will allow HOCTC to remain flexible in the strategies it chooses to prioritize based on available funding and internal capacity. Looking forward, HOCTC can draw on the set of strategies developed in this exercise to improve the region's transportation system.

HOCTC
HERKIMER-ONEIDA COUNTIES
TRANSPORTATION COUNCIL

# **APPENDIX A.** DRIVING FORCES PRESENTATION



# HOCTC SCENARIO PLANNING

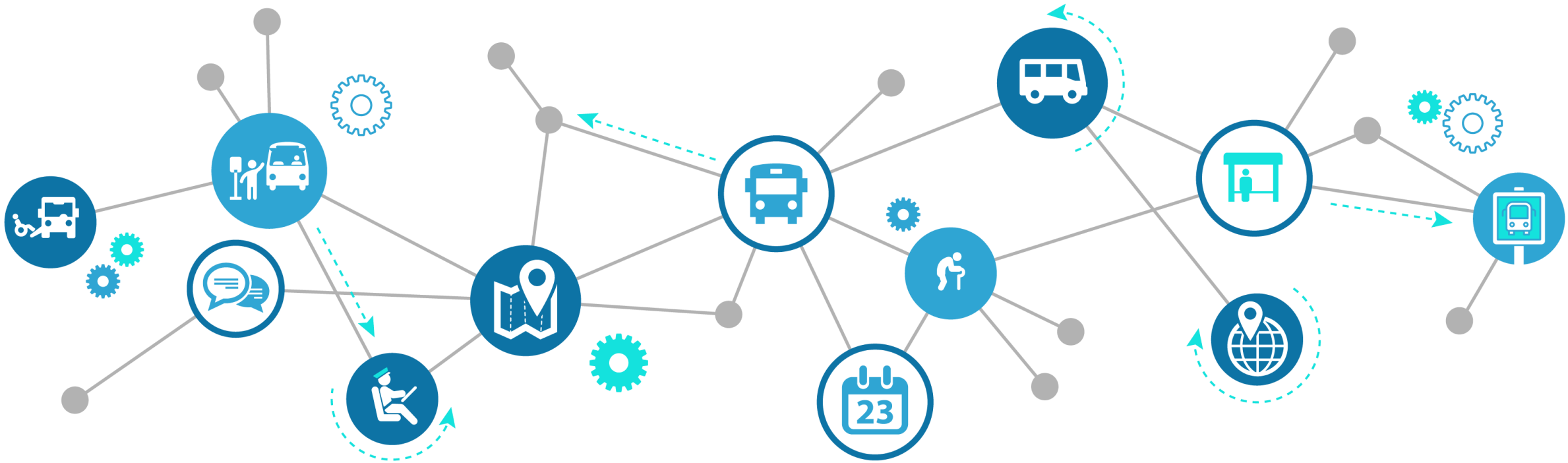
## Identifying Future Driving Forces

May 6th & 7th, 2026

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WHAT TRANSPORTATION CAN BE.

# PRESENTATION OUTLINE

1. Scenario Planning Overview
2. Scenario Planning Process
3. Identifying Driving Forces
4. Next Steps



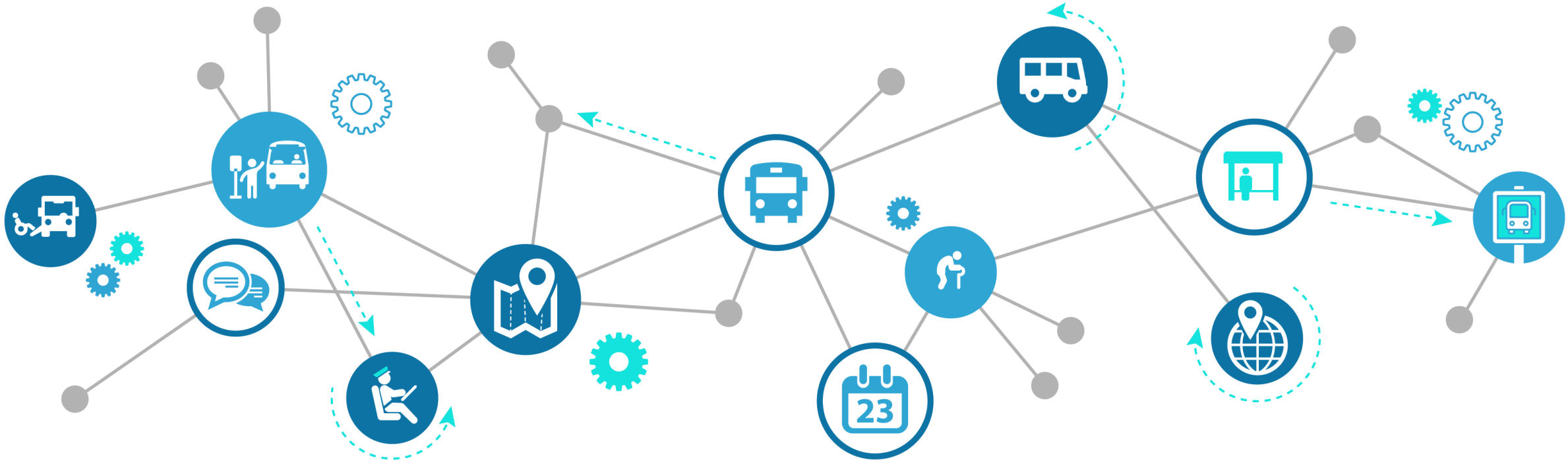

# WHAT IS SCENARIO PLANNING?

# WHAT IS SCENARIO PLANNING?

- Prepare for multiple futures by imagining possibilities together.

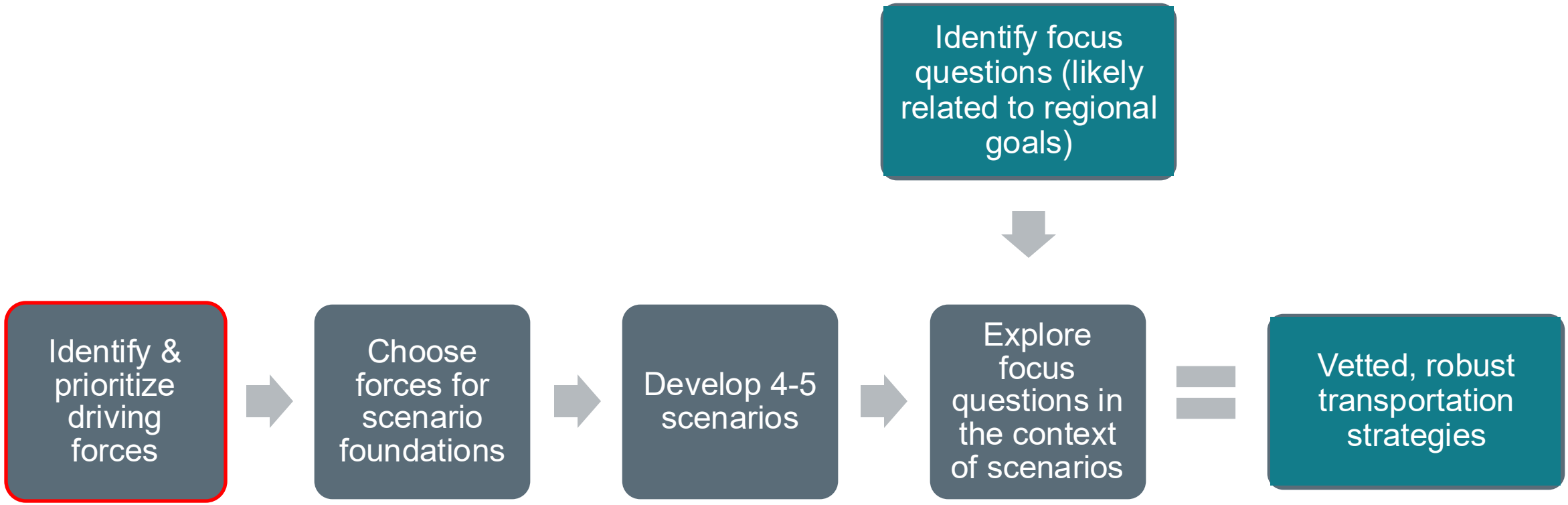
- Explore what's happening now, how it could change, how that would affect our region's future, and what strategies we should take to prepare for those impacts.

- Three general types:
  - Normative – a community has a clear vision of the future they want
  - Predictive – a community wants to predict the most likely future
  - **Exploratory** – a community wants to explore multiple alternative futures




# EXPLORATORY SCENARIO PLANNING PROCESS

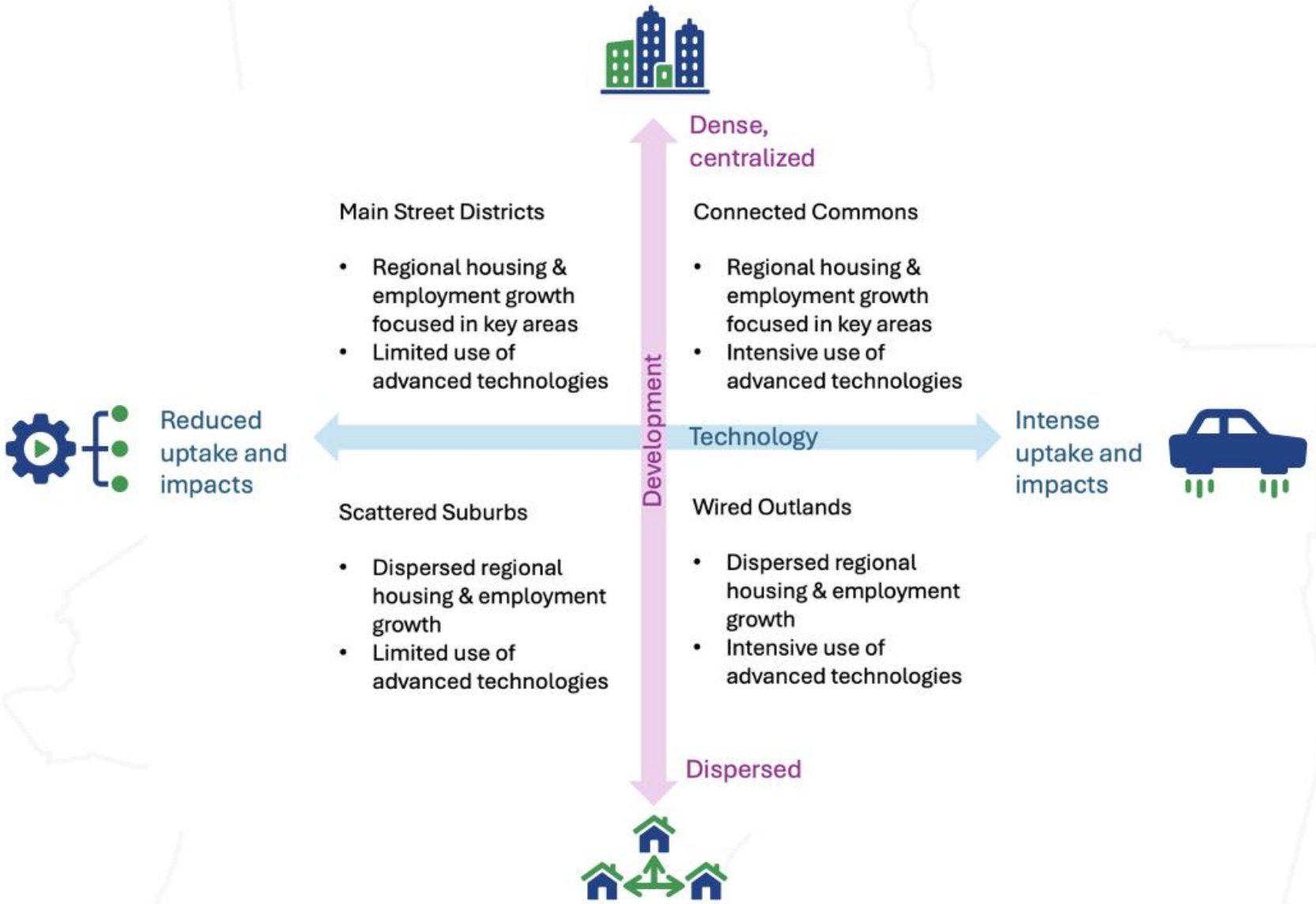
# EXPLORATORY SCENARIO PLANNING PROCESS






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# EXAMPLE FROM ALBANY REGION

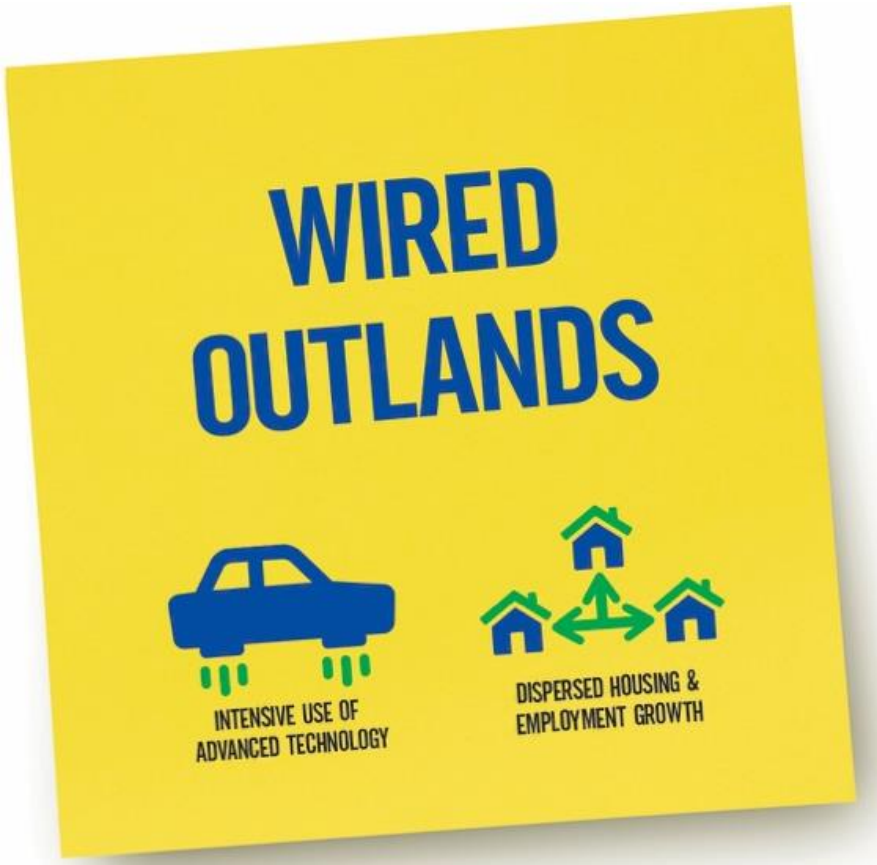



Overall focus question

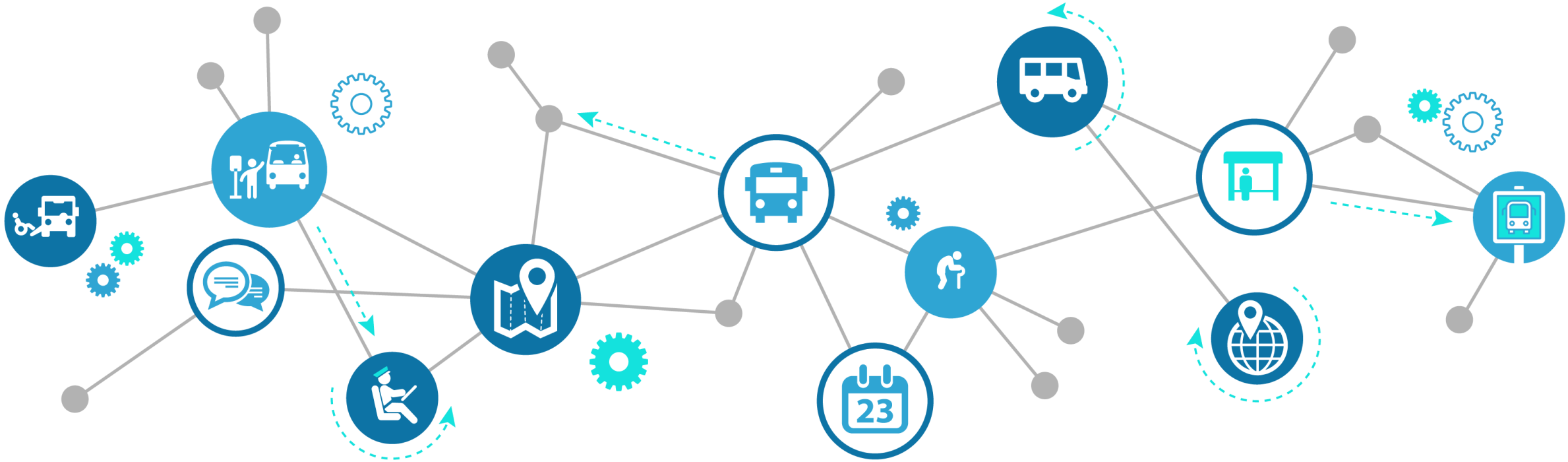
"How can our transportation investments most effectively provide the same or better transportation service to the existing community while attracting talent (new businesses, workers, and residents)?"

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# EXAMPLE FROM ALBANY REGION




- sprawling region, advanced technologies enables isolated development, separation of uses, and car-dependency
- high specialization throughout the region, and traditional downtowns reflect this trend, no true center of the region
- regional economy shifted towards tech manufacturing and digital services
- State government operations have been decentralized, most work done remotely
- semiconductor, biotech, quantum computing, and advanced materials facilities have developed across the region, supported by data centers and the energy production (renewable and advanced nuclear) needed to operate them




# IDENTIFYING DRIVING FORCES

# EXAMPLE CATEGORIES AND FACTORS

- Categories: Technology, Society, Public Health, Economy, Environment, Politics & Policy
- Factor examples:
  - What if in-migration of immigrants and/or refugees increases or decreases sharply?
  - Future of unmanned aircraft systems - stays niche, becomes mainstream
  - Farmland conversion versus preservation
  - Global pandemic
  - Local versus regional implementation & coordination

# FREE YOUR MIND



# IDENTIFY DRIVING FORCES

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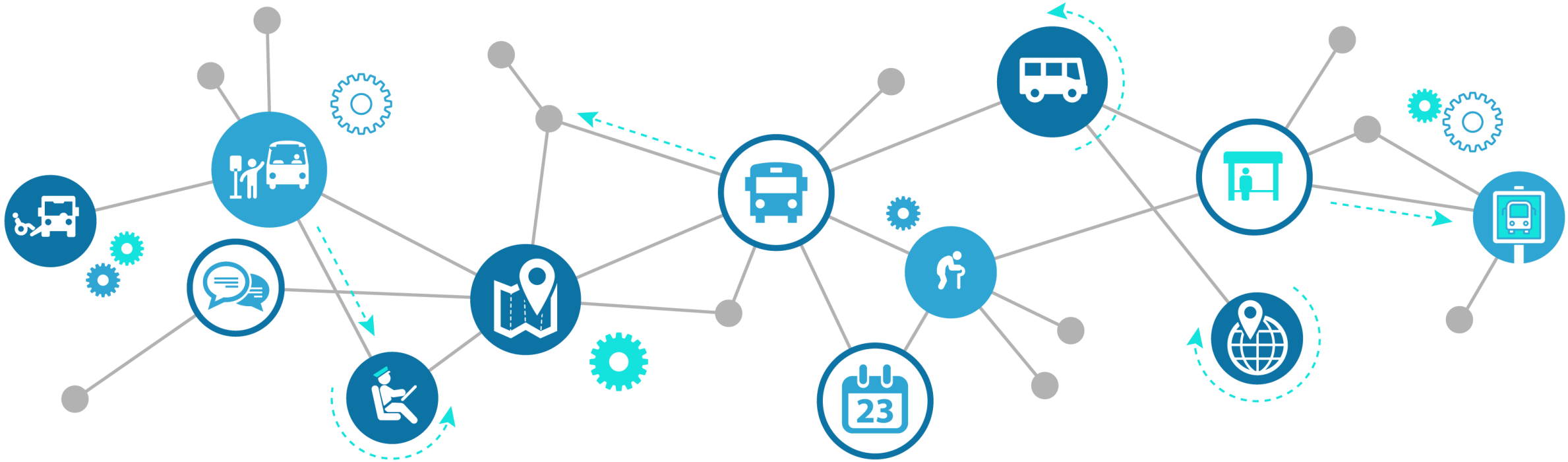
6568 6650

What driving forces do you think will be most impactful in the next 25 years?

Join at menti.com
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# NEXT STEPS

# COMING UP

- We'll take today's ideas & get them to a manageable number – consolidating, identifying themes
- We'll ask you to prioritize them through a quick online poll
- Scenario Planning Workgroup will meet to determine which driving forces should be explored through the development of the future scenarios (June 23rd)
- We'll develop 4-5 scenarios based on Workgroup input
- Scenario Planning Workgroup will meet to identify 'no-regrets' strategies likely to work across multiple uncertain futures and or other strategies that could be used to improve the likelihood of success (early August)

# **APPENDIX B.** DRIVING FORCES BRAINSTORM MENTIMETER OUTCOMES

# What driving forces do you think will be most impactful in the next 25 years?

14 / 14 · 56

- Growth concentrated in city centers or spread out?
- Future of Autonomous vehicles and micromobility (ebikes, scooters, autonomous delivery drones)
- East coast freight traffic changes have an impact to warehousing & flows through the region
- People moving to cities vs suburbs & rural areas
- Technology, Climate Change
- Urban/suburban concentrations of housing and employment
- Population changes, aging population or younger college students start to stay
- health care
- Push for electrification and building the grid to support it
- Federal energy policy sharply increases the cost of fuel for transportation - reduces private vehicle use? makes transit more expensive over time?
- trained workforce
- An increase in agricultural related traffic due to Chobani
- Competition for curb space with deliveries, ride share, transit, future modes like scooter and bikeshare
- AI, politics, wages and unemployment, housing, infrastructure
- Housing close to places of employment
- Don't concentrate commercial development in only one area of county
- I think AI data centers, battery storage developments will challenge the way cities are zoned.
- consolidation of government services
- wealth gap, health care
- Less dependent on vehicles, more bike friendly
- Don't rely on residents to be responsible for sidewalks.
- Help farmers to expand their crop portfolios to plan for climate change and diversify crops grown in NYS to support a local food economy.
- Safe and secure school systems with nutritional meals and an abundance of extracurricular activities. Increase the length of school day and have school year round with quarterly one week breaks.
- Increase indoor and outdoor swimming locations.
- Incentivize food supply chain to stop packaging products in plastic. Chobani could supply schools with yoghut in wax paper or glass containers. Glass containers could be reused at Chobani plant.
- Rising cost of fossil fuels
- Impacts of climate change on tourism, i.e. less snow impact on snowmobiling
- Economic development at Turning Stone
- Climate change, industrial builds (micron, chobani) Technology
- Priority of resiliency and adaptability in communities
- Federal subsidies for housing, transportation are reduced or curtailed sharply, or increase
- I think GIS, UAVS are going to be essential in prediction. LiDAR for infrastructure can build digital city models down to the centimete - we will be more efficient in responding to needs of citizens.
- Loss of fossil fuels and environmental impacts including extreme weather events
- Climate refugees move into Upstate NY seeking land with stable water sources
- Availability of state and federal funding for projects
- Bus rapid transit Utilize the rail lines to connect Utica to Marcy and Utica to southern communities New City Centers - Old St. Luke's Campus Online ordering vs shopping plazas
- aging population
- Rise of AI will make people less creative in tough problems. We often forget that AI is not human and cannot predict how people will respond to shifts.
- Aging infrastructure
- Land use development coordination with transportation- whether it remains hyperlocal, or if regional planning increases or NYS begins to intervene
- Connecting Trail systems to communities Complete streets on Genesee Street Utica to New Hartford Build out sidewalk network
- Affordable micromobility expansion
- AI, Politics, (US and Global), Climate, the middle class, smart lawnmowers, psylicybin for medical and pyloric well being.
- Environmental factors make road maintenance more expensive - increase focus on good repair and potentially reducing network
- Large recession/housing crash (AI bubble), white-collar jobs reduced
- Think on a small community scale rather than trying to be the biggest development.
- Global supply chain concerns result in on-shoring of more industry, potentially increasing industry, freight traffic, training needs
- Fill in parking lots with green space and multi-use developments. Sangertown and New Hartford Shopping Center.
- Preserve NYS natural resources over accepting large manufacturing from depleting or damaging them.
- Increase Amtrak schedule to allow for commuters to use between cities during the work day.
- Increase availability of daycare centers and before/ after school programs.
- Help kids and adults prevent sun cancer by providing shade structures on sidewalks, trails, and at parks.
- Geothermal heated sidewalks in all cities or high pedestrian environments.
- Food and housing insecurity
- Increased freight volume on aging network
- Redesign of I/90 Exit 31 and redevelopment of gateway to Adirondacks

Families living together on same property, housing affordability

Less funding, more technology, demographic changes,

Concern that the new transportation bill will not incorporate multimodal and active transportation options as a focus

increase in natural disasters and increase in cost of transportation infrastructure maintenance

Energy

access to transportation

Suburban expansion versus concentrated development in cities and village centers

Increased freight activity on aging infrastructure.

Career driven migration in/out of region

Increased micro mobility and autonomous transit tech- autonomous vehicles/taxis, e-bike improvements

Housing and employment concentration development in urban/suburban areas

Perhaps share transportation that cross county lines. A bus from ol d gorge to route 12, then a second bus to get to Utica.

Artificial Intelligence

Technology moving from wearable devices (such as smartphones) to small chips

Increased connectivity in the active transportation network

Politics and affect on Federal vs.. State Funding Cost of Energy amount of available power

1. Electrification

Bring back the trolley system

Finding resources diminished or not available

diversification of energy sources

Perhaps having people work for agencies in the more populated agencies but from remote locations.

Immigration policy

Lack of staff in agencies that provide personal care will make it harder to keep elderly in their own homes.

decreasing prevalence of qualified tradespeople

reduction in federal spending on transportation/ housing

Jobs become more remote vs in person.

Aging residents in rural communities: issues with accessibility and connectivity to services. Climate Change/sustainable transportation challenges Federal spending cuts

Aging populations. Making the community more attractive to bring in young families who want to raise their children here and become leaders in their communities.

Price of housing increases/decreases.

New data centers bringing in tax revenue versus the negative environmental impacts

Increased WFH/hybrid work for larger companies Increased relocation to rural areas Automotive manufacturing needs Climate change Natural resources Family dynamics

Focus on preserving farmland.

Decreasing access to private vehicles (affordable). Increased development of sprawling workforce development/affordable housing.

1. Climate change 2. Mass migration internally and globally 3. Increased population locally 4. Increasing poverty 5. Food shortages 6. Increased homelessness

Movement toward decommissioning bridges with less volume

Housing crash, increasing financialization of housing and unaffordability of single family suburb development.

Housing crisis

In the Mohawk Valley, aging infrastructure (bridges, roadways, dams, rail) and ongoing repairs/ maintenance

Declined population

Redevelopment or removal of aging infrastructure

autonomous transportation

Power grid crisis

on-shoring and/or globalization

attracting of new large employment centers to the region

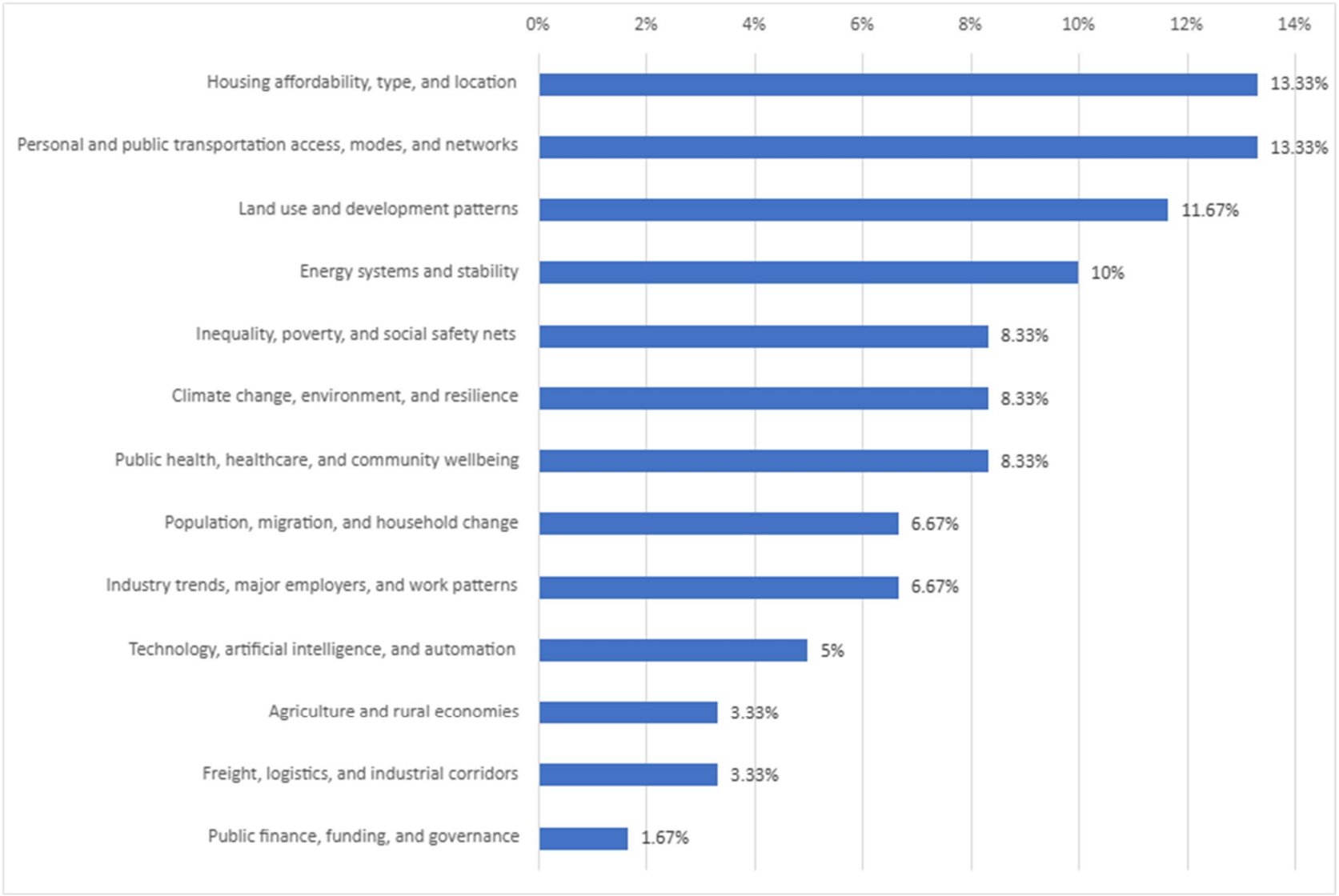
Regional non motorized connectivity

avoidance of traditional health care providers due to declining quality of services

environmentally-friendly development patterns: infill development, adaptive reuse, avoidance of sprawl

difficulty attracting young talent because of lack of walkable neighborhoods, elder housing crisis

# **APPENDIX C.** DRIVING FORCES PRIORITIZATION OUTCOMES


0%
2%
4%
6%
8%
10%
12%
14%
Housing affordability, type, and location
13.33%
Personal and public transportation access, modes, and networks
13.33%
Land use and development patterns
11.67%
Energy systems and stability
10%
Inequality, poverty, and social safety nets
8.33%
Climate change, environment, and resilience
8.33%
Public health, healthcare, and community wellbeing
8.33%
Population, migration, and household change
6.67%
Industry trends, major employers, and work patterns
6.67%
Technology, artificial intelligence, and automation
5%
Agriculture and rural economies
3.33%
Freight, logistics, and industrial corridors
3.33%
Public finance, funding, and governance
1.67%

# **APPENDIX D.** WORKSHOP #1 HOMEWORK PACKET

# Herkimer-Oneida Counties Transportation Council (HOCTC)

Long-Range Transportation Plan

Scenario Planning Workshop #1

Developing Futures

*June 23, 2026*

# Workshop purpose

The purpose of this workshop is to determine which driving forces should be explored through the development of future scenarios. Collectively and in small groups, workshop participants will assess the highest-ranked driving forces and will be asked to evaluate each according to uncertainty, likelihood of impact, and magnitude of impact. This evaluation will happen in real time, and the forces identified as high impact will move forward in the scenario planning process.

# Agenda

- **10:00–10:15am**: Introductions + icebreaker (15 minutes)
- **10:15–10:25am**: Agenda overview + homework packet review (10 minutes)
- **10:25–11:20am**: Full group—live polling + talk through each of the high priority driving forces (55 minutes)
    - How likely are these category patterns to change?
    - If these category changes happen, how likely are they to impact the transportation system?
    - If these category changes happen, what is the level of impact they will have on the transportation system?
- **11:20–11:30am**: Lunch shows up—grab & get into small groups (10 minutes)
- **11:30am–12:45pm**: Small groups assigned 1–3 driving forces to examine (75 minutes)
    - What could this mean for the transportation system?
    - How might this driving force interact with other driving forces?
    - What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
- **12:45–12:55pm**: Break (10 minutes)
- **12:55pm–1:50pm**: Full group conversation (55 minutes)
    - Small group report-back
        - Which forces and/or their potential impacts most stood out?
        - How do you think your forces interact with others?
    - Group discussion
        - Are there forces or combinations of forces that should be prioritized in the scenario development?

# Introduction: What is scenario planning?

Scenario planning is a process that helps us prepare for multiple futures by imagining the possibilities together. This process differs from a traditional planning process, where we plan for the future by examining past and present data and trends. In scenario planning, we explore what's happening now, what could change, how it could change, how that would affect our region's future, and what strategies we should take to prepare for those impacts. The scenario planning process helps us get out of reacting to the past and present and more towards thinking expansively about the future.

There are several types of scenario planning and processes that a region can undertake. Types of scenario planning include:

- Normative—where a community has a clear vision of the future they want
- Predictive—where a community wants to predict the most likely future
- **Exploratory—where a community wants to explore multiple alternative futures**

Regions may choose to do one or a combination of scenario planning types. The planning process, the technical analysis conducted, and the tools used will depend on the region's goals for the scenario planning process.

For this exercise, we are using an **exploratory scenario process** to help identify a range of future driving forces and uncertainties. Through the process, the Futures Workgroup (that's you!) will identify and prioritize driving forces and examine how potential futures shaped by those forces could impact the success of the LRTP goals and strategies. Through this workshop and the next, the Workgroup will help identify strategies that are likely to work across a range of uncertain futures and implementation steps that may help improve the success of the adopted strategies and projects.

# Driving forces

In this workshop, we will review the driving force categories below to determine which forces should be included in the alternative future scenarios. The results of the initial poll show that the top three driving force categories are: land use and development patterns; housing affordability, type, and location; and personal and public transportation access, modes, and networks. We will consider the uncertainty, impact, and likelihood of each driving force, with a focus on the highest priority forces. The examples included under the driving force categories below are intended to get participants thinking about possible factors, not to be limiting.

## Agriculture and rural economies (4% of votes)

- Farmland is lost through pressures from development, industrial uses, and energy infrastructure rather than preserved
- Local agricultural food production shifts due to climate change
- Regional agribusinesses grow significantly
    - Agribusiness includes all sectors involved in agriculture, from production to distribution.
- The health of rural economies declines, reducing the ability to maintain services and infrastructure

## Climate change, environment, and resilience (9% of votes)

- Extreme weather and natural disasters become more severe and/or frequent
- Climate change affects tourism, agriculture, and natural resources
- The region experiences an influx of climate refugees
    - Climate refugees are people who have had to leave their homes because the effects of climate change have made them uninhabitable. This can be due to acute climate events like hurricanes or flooding, as well as longer-term events like droughts or extreme heat.
- Policies and investments prioritize green infrastructure and environmental protection
    - Green infrastructure refers to measures that reduce the volume of rainwater runoff entering sewers. This can include rain barrels—which connect to a downspout and collect water from gutters—bioswales, and permeable pavement.

## Energy systems and stability (10% of votes)

- The cost of energy goes up significantly and/or the availability of energy becomes limited
- The pace of electrification outstrips the capacity of the energy grid
    - Electrification is the process of shifting energy use toward electricity and away from other sources like fossil fuels. This can include adopting electric alternatives for heating, cooling, and appliances, as well as the use of electric vehicles and the required charging infrastructure.
- There is a rapid diversification of energy sources
- Energy decisions are made with a focus on long-term environmental stewardship over supporting energy intensive industries

## Freight, logistics, and industrial corridors (4% of votes)

- Conflicts between freight needs and neighborhood livability increase

    - Conflicts can include, for example, air and noise pollution from industrial corridors and increased land taken up by distribution centers
- New freight modes and technologies are taken up rapidly
    - New modes and technologies could include dynamic routing, autonomous trucks, delivery robots or drones, or battery-electric or hydrogen vehicles that require charging infrastructure
- Freight volumes and patterns have a negative impact on aging infrastructure
- The region struggles to maintain, modernize, or decommission key freight assets

## Housing affordability, type, and location (12% of votes)

- Housing becomes increasingly unaffordable, impacted by increased profit/value extraction from the financial sector
- Housing development occurs as infill and/or densification rather than through suburban or rural expansion
    - Infill housing is developed on vacant or underutilized land in existing neighborhoods, resulting in urban areas with denser populations, less unused space, and housing that is a variety of sizes and ages.
- Housing is developed close to major work sites rather than distant from work sites
- Residents age in place rather than moving to group homes/facilities

## Industry trends, major employers, and work patterns (7% of votes)

- Major employment centers grow and new employment centers develop
- Industries experience increasing globalization rather than on-shoring
    - Globalization results in the outsourcing of labor, materials, and other aspects of day-to-day operations.
- Remote and/or hybrid work becomes an increasingly larger proportion of employment
- Trained workers are increasingly attracted/retained in the region

## Inequality, poverty, and social safety nets (9% of votes)

- The wealth gap continues to increase
- Poverty, homelessness, and food insecurity rise
- Access to health care and quality of health care decline
- The availability of daycare and/or after school programs decreases
- Investments in environmental justice areas address inequities
    - Environmental justice areas experience disproportionate environmental harms and risks through their proximity and exposure to pollution sources. People with low incomes and people of color are more likely to live in environmental justice areas than people who are white and/or have higher incomes. New York State's

Office of Environmental Justice, for example, provides funding for local community-based organizations to address environmental hazards.

- Private vehicles become increasingly unaffordable

## Land use and development patterns (12% of votes)

- Future development concentrates in compact, mixed use centers instead of sprawling development and single-use corridors
    - Mixed use: Combines residential, commercial/retail, entertainment, cultural, and/or institutional land uses within a given area.
    - Sprawl: A low-density land use pattern that extends outward from a denser urban center. Sprawling development is typically characterized by areas that are zoned for only one use, such as single-family residences.
- Coordination of land use and transportation policies and investments happens at a hyper local level instead of a regional level
    - As a result, local jurisdictions compete with each other and there is no unified regional strategy guiding growth or investments.
- Big box and mall sites get reused
    - Big box stores and mall sites often have large parking lots, are not co-located with other land uses, and take up a lot of space. Reuse of these sites can be impacted by zoning restrictions, but there are opportunities to transform them into mixed use centers.
- Residents and decision makers have positive attitudes toward community growth and larger scale/higher intensity development

## Personal and public transportation access, modes, and networks (12% of votes)

- There is a significant mode shift away from private vehicles and towards walking, biking, and public transit use
- Basic pedestrian infrastructure coverage and condition is significantly improved
    - Pedestrian infrastructure includes sidewalks, crosswalks, curbs, and any other infrastructure that is for pedestrian use.
- Aging infrastructure is removed or redeveloped and low volume infrastructure is decommissioned
- People with low incomes, older adults, rural residents, and people with disabilities have significantly improved transportation access
    - These groups are more likely to have special transportation needs that are not met through the use of a personal vehicle or standard public transit service.

## Population, migration, and household change (7% of votes)

- The region experiences overall population growth rather than decline
- Climate change drives migration to/from the region
- Refugees make up an increasing portion of migration to the region
- The population is increasingly made up of older adults
- Young people and families are increasingly attracted to and/or staying in the region
- More households are made up of multi-generational families and/or include caregivers

## Public finance, funding, and governance (2% of votes)

- State and federal funding for transportation, housing, and social programs become more volatile/less available
- Local fiscal capacity and staffing/consolidation of services reduces capacity to win and administer grants
- Local and regional decision-making focuses on 'right-sizing' the network and state of good repair

## Public health, healthcare, and community well-being (7% of votes)

- Healthcare workers and personal care staff are increasingly unavailable
- Negative health trends, like mental health diagnoses and substance abuse increase
- The quality of education and safety of school decreases
- Access to recreation and active living infrastructure improves
    - Active living infrastructure promotes opportunities for walking, biking, and rolling not just for exercise but in all areas of life (i.e., the ability to walk to grocery stores, appointments, etc.).
- There is a notable shift in preference for walkable, bike-friendly, amenity-rich neighborhoods

## Technology, artificial intelligence, and automation (5% of votes)

- The availability of personal mobility technology increases rapidly
    - Personal mobility technology includes electric bicycles, scooters, wheelchairs, and other small, lightweight forms of mobility.
- AI and automation, including in manufacturing, increases rapidly
- AI-related data centers, battery storage, and digital infrastructure increase rapidly
- The use of geographic information systems, unmanned aerial vehicles, and digital twins for infrastructure monitoring increases rapidly
    - Geographic information systems (GIS) are used to manage and visualize spatial information and create maps.

- Digital twin technologies monitor, model, and simulate the lifecycles of physical assets like tunnels, bridges, and roads.

## Next steps

Through this workshop, the workgroup will determine the top driving forces to be incorporated into 4–5 alternate futures. For each future, the project team will develop high-level characteristics and a story-like narrative to help participants better immerse themselves in the potential future.

A second workshop will explore regional recommendations from the Long-Range Transit Plan in the context of the identified alternative futures. The purpose of testing LRTP recommendations against the alternative futures is to, 1. understand how LRTP recommendations may be enhanced to improve their success under a given future, 2. consider whether there are LRTP recommendations that will support one future but not others and the magnitude of these impacts, and 3. identify additional recommendations based on a given alternative future.

Based on the outcomes of the second workshop, the project team will finalize the set of alternative futures and describe the potential relationship of each to LRTP goals and strategies. The result will be a vetted, robust set of transportation strategies (Figure 1).

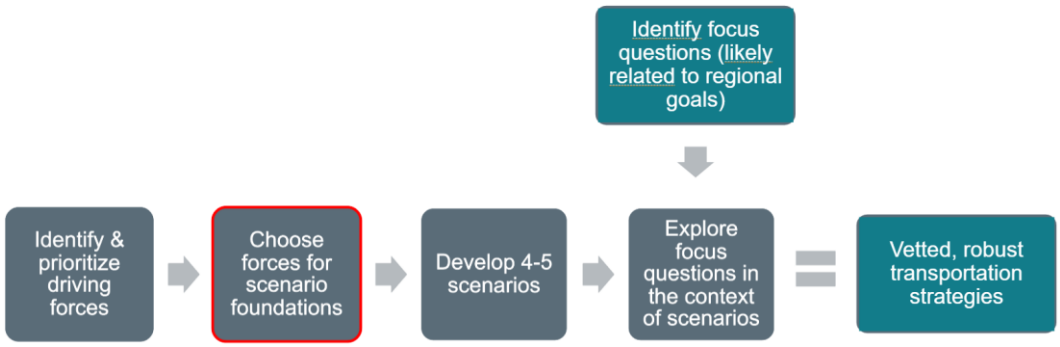



*Figure 1. An overview of the scenario planning process. At the first workshop, we will choose forces for scenario foundations.*

# **APPENDIX E.** WORKSHOP #1 PRESENTATION



# HOCTC SCENARIO PLANNING

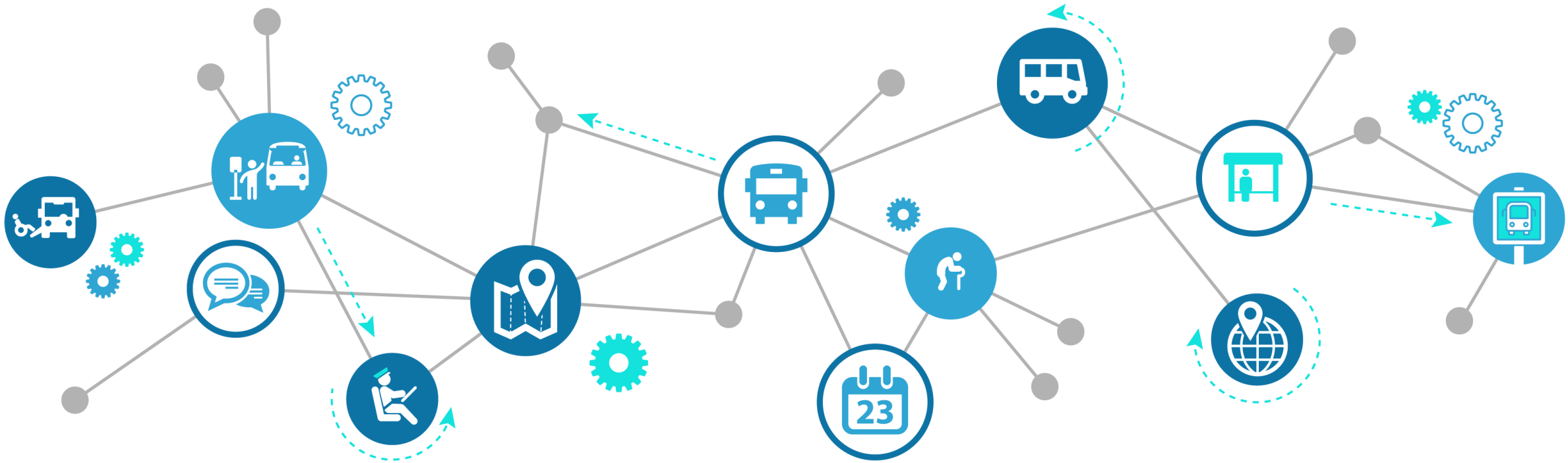
## Examining Driving Forces for Scenario Development

June 23rd, 2026

transpogroup
WHAT TRANSPORTATION CAN BE.

# PRESENTATION OUTLINE

1. Project Overview
2. Introductions & Icebreaker
3. Agenda
4. Next Steps




# WHAT IS SCENARIO PLANNING?

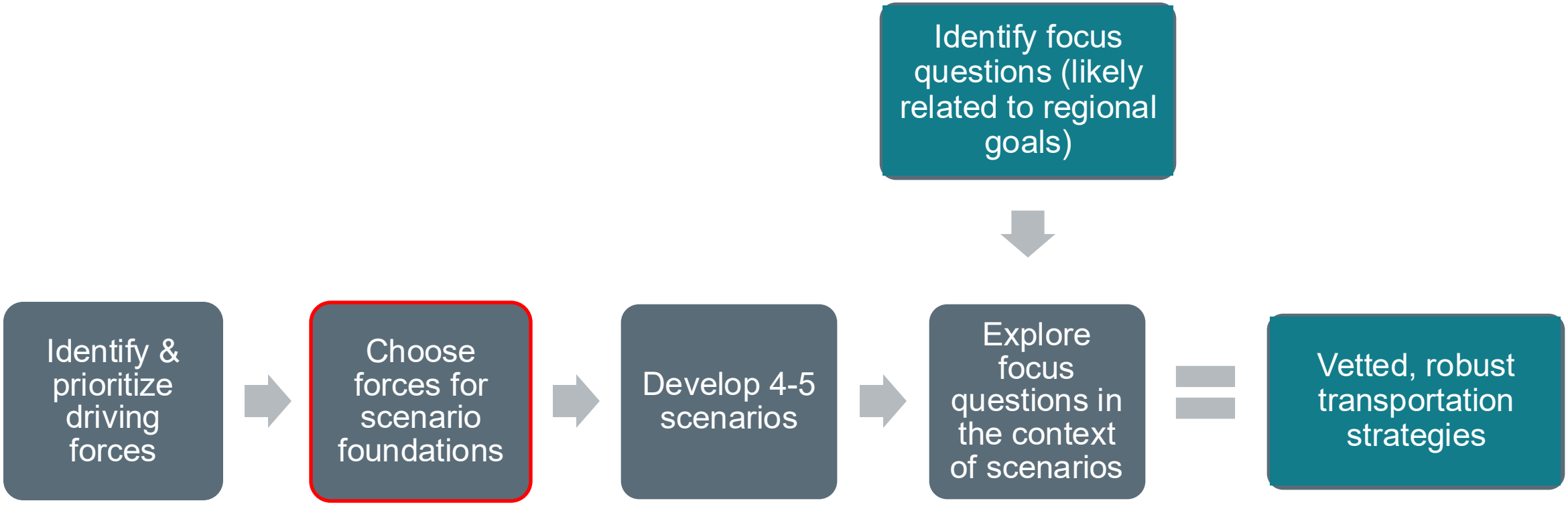
# WHAT IS SCENARIO PLANNING?

- Prepare for multiple futures by imagining possibilities together.

- Explore what's happening now, how it could change, how that would affect our region's future, and what strategies we should take to prepare for those impacts.

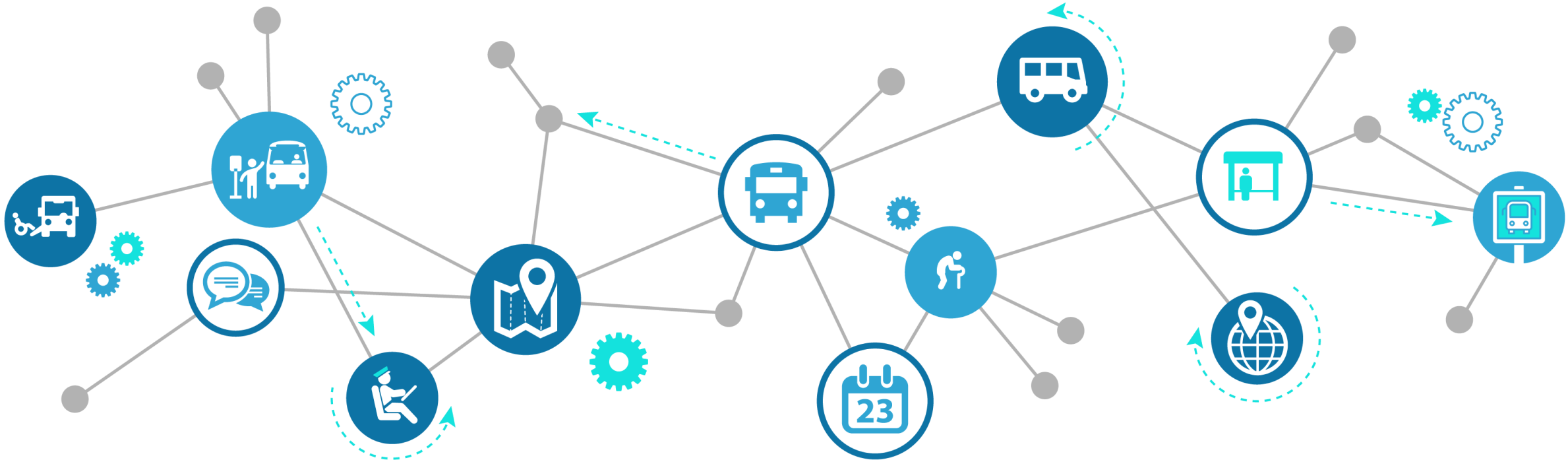
- Three general types:
  - Normative – a community has a clear vision of the future they want
  - Predictive – a community wants to predict the most likely future
  - **Exploratory** – a community wants to explore multiple alternative futures

# EXPLORATORY SCENARIO PLANNING PROCESS






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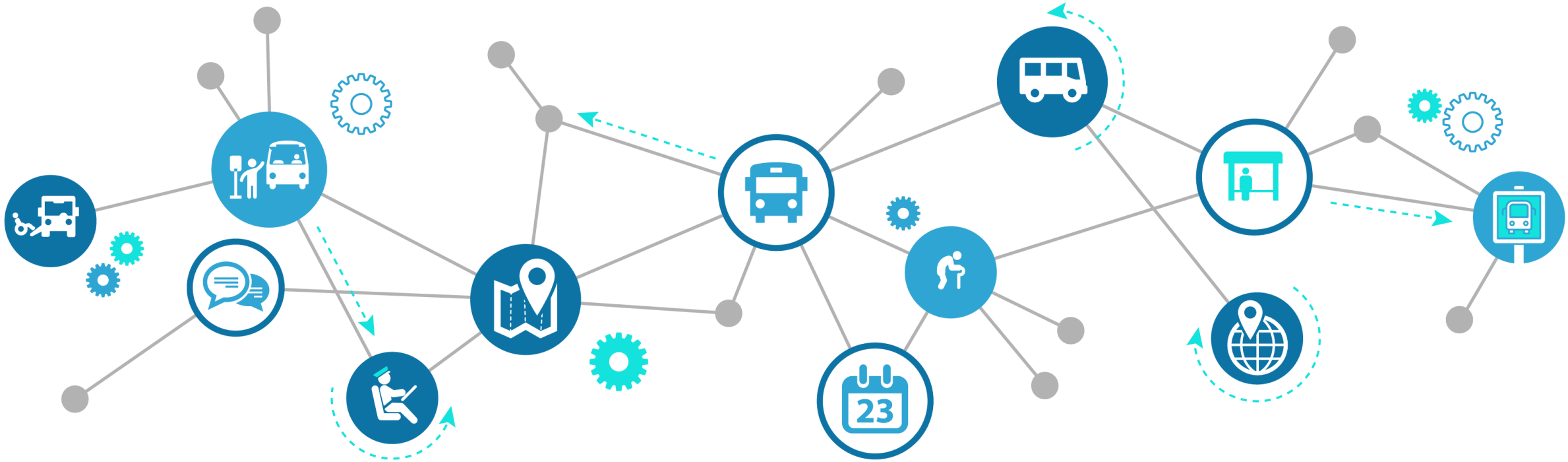

# INTRODUCTIONS & ICEBREAKER

# INTROS & ICEBREAKER

- Name
- Organization
- One boring fact about you



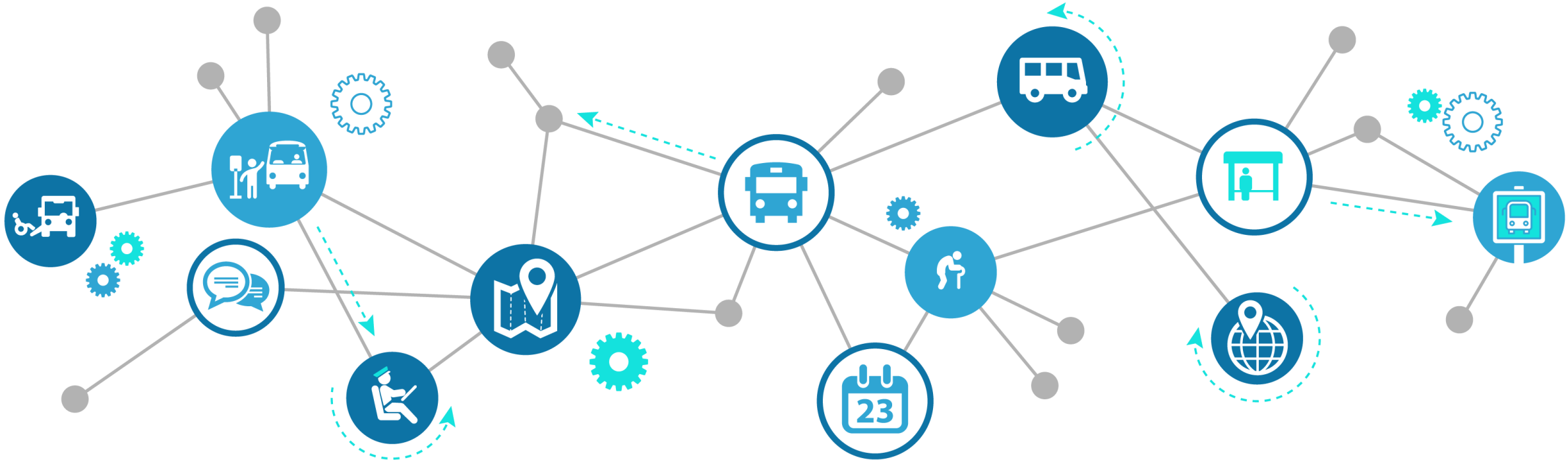
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# AGENDA

# AGENDA

- 10am Introductions + icebreaker
- 10:15 Homework packet review
- 10:25 Mentimeter activity for priority driving forces
- 11:20 Grab lunch & get in small groups
- 11:30 Small groups discussion of assigned driving forces
- 12:45-12:55 Break
- 12:55 Small group report back and full group discussion
- 1:50 Wrap-up



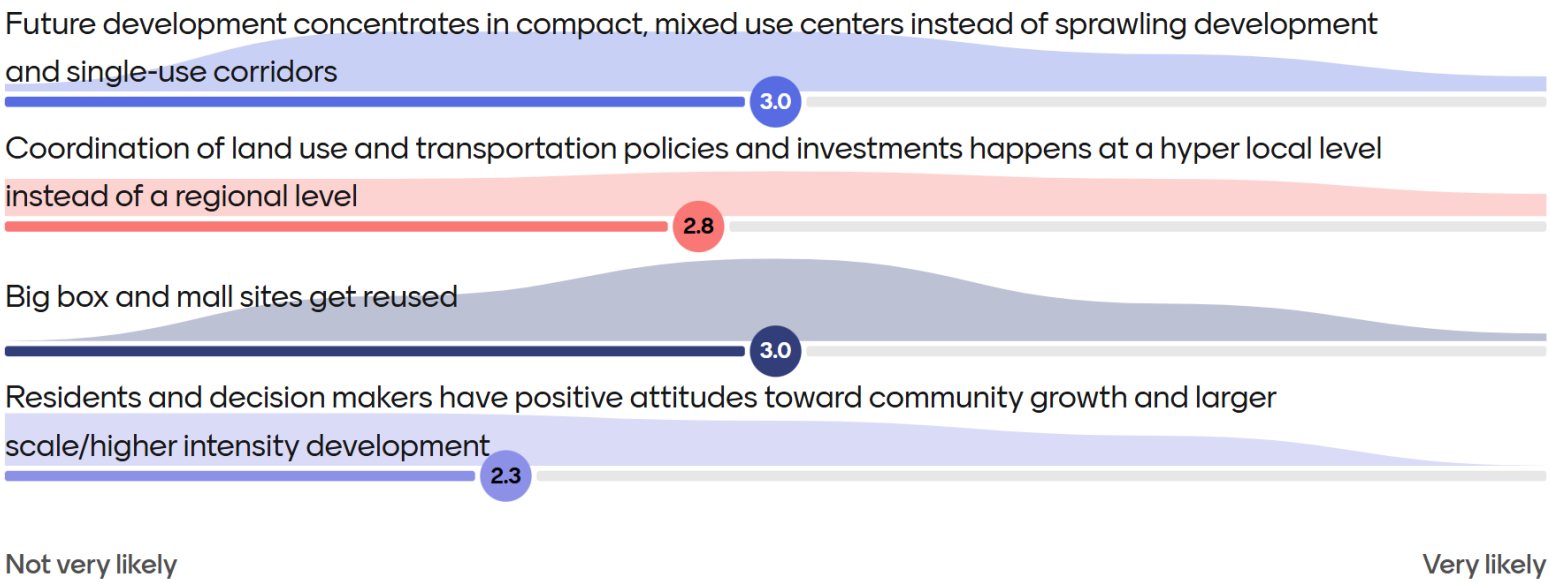

# NEXT STEPS

# COMING UP

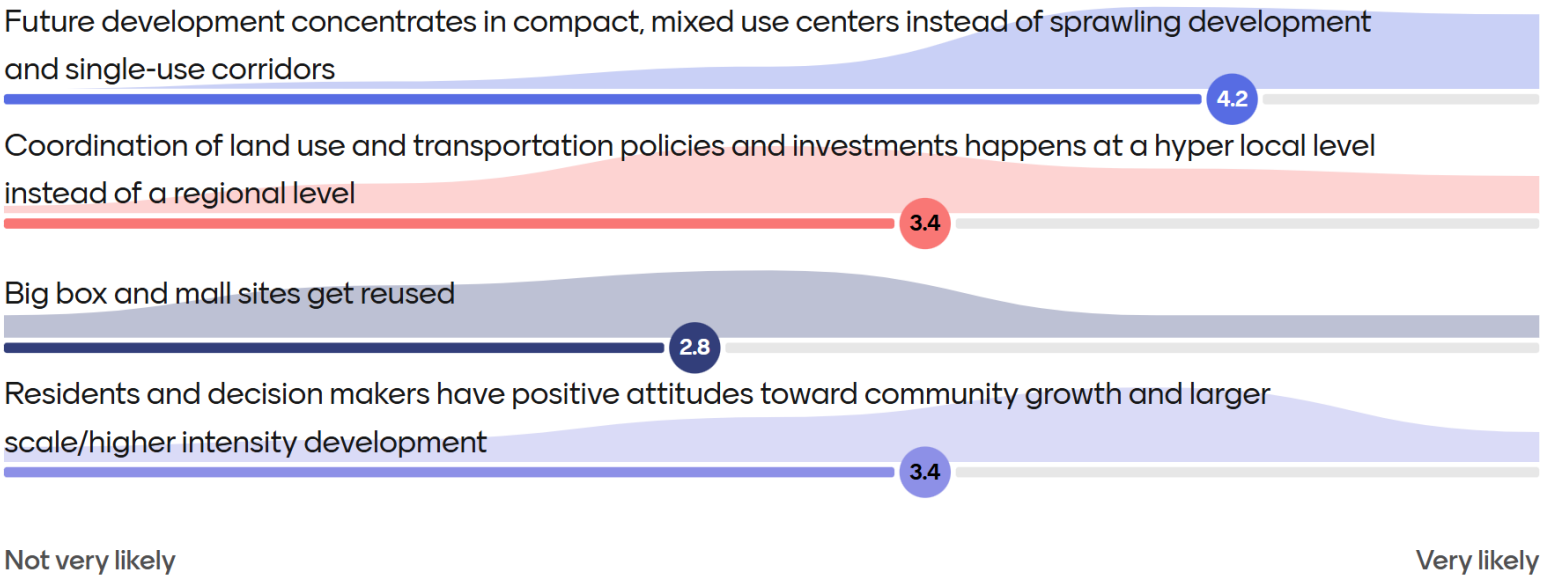
- We'll develop 4-5 scenarios based on Workgroup input
- Scenario Planning Workgroup will meet Tuesday, August 4th, 10am-2pm to identify 'no-regrets' strategies likely to work across multiple uncertain futures and or other strategies that could be used to improve the likelihood of success

# **APPENDIX F.** WORKSHOP #1 MENTIMETER OUTCOMES

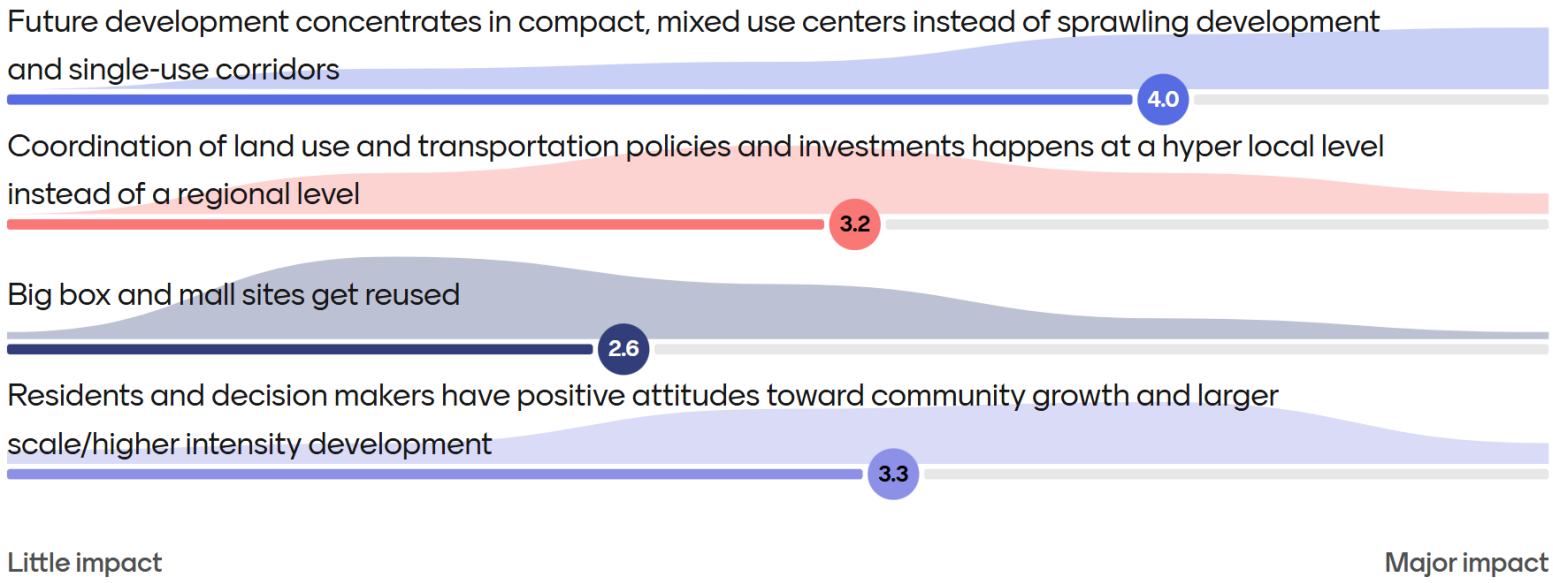
# How likely are these land use and development pattern changes to happen?



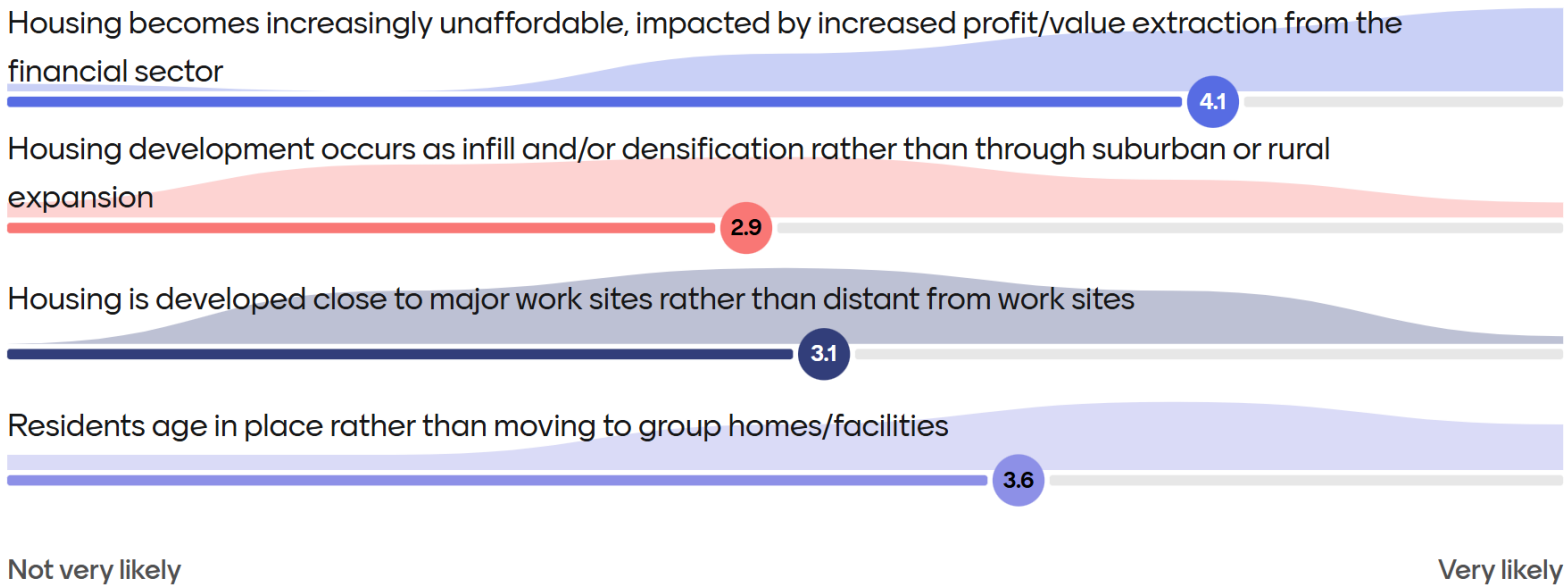
If these land use and development pattern changes happen, how likely are they to impact the transportation system?



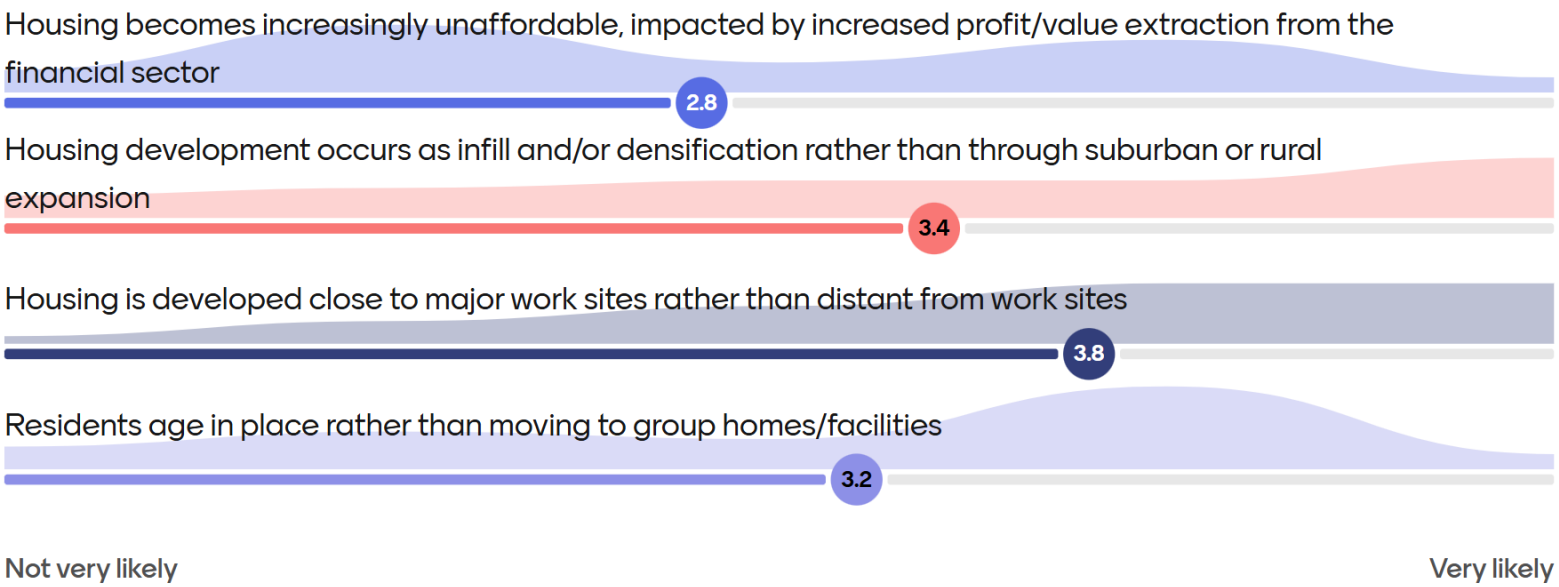
If these land use and development pattern changes happen, what is the level of impact they will have on the transportation system?



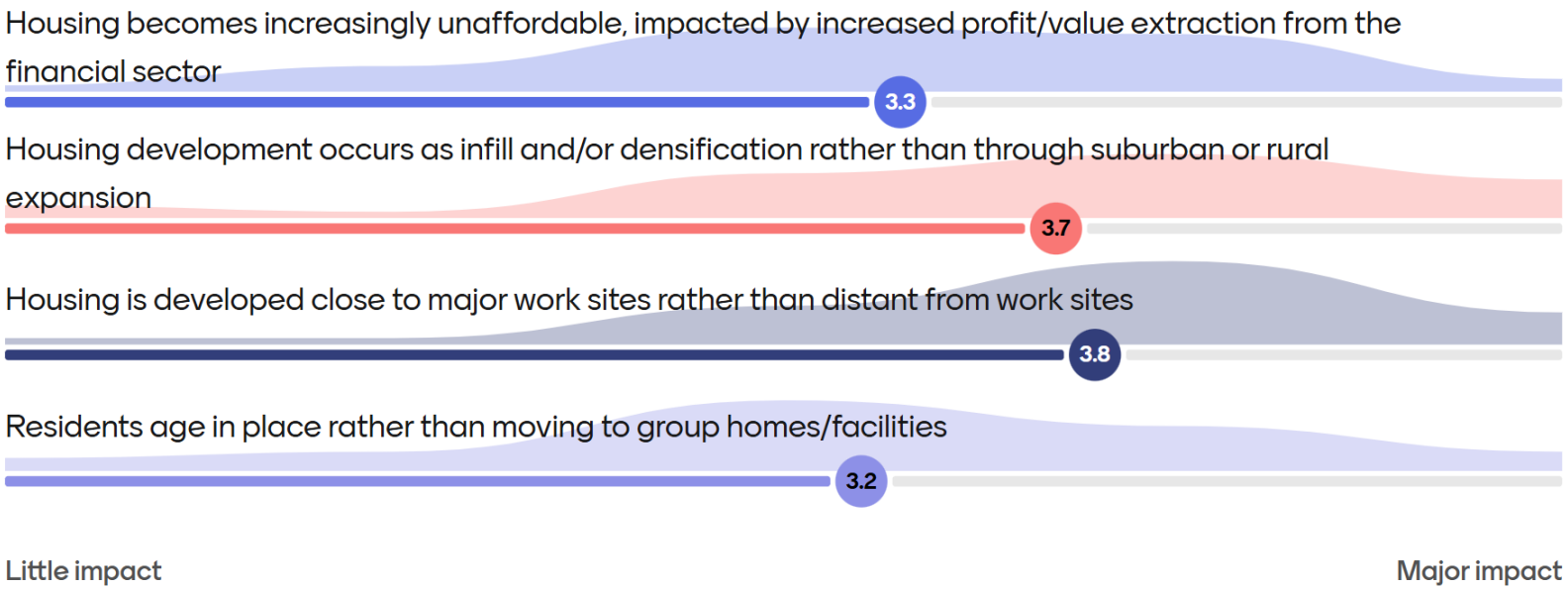
## How likely are these housing affordability,  type, and location patterns to change?



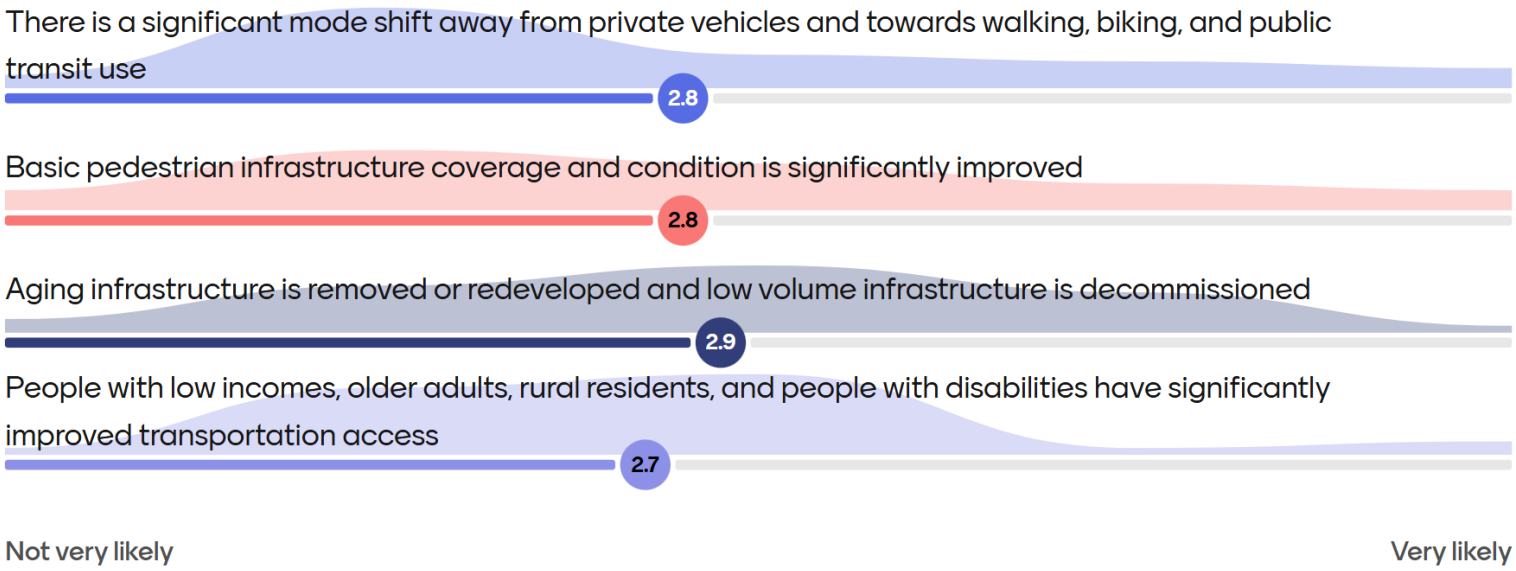
If these housing affordability,  type, and location patterns change, how likely are they to impact the transportation system?



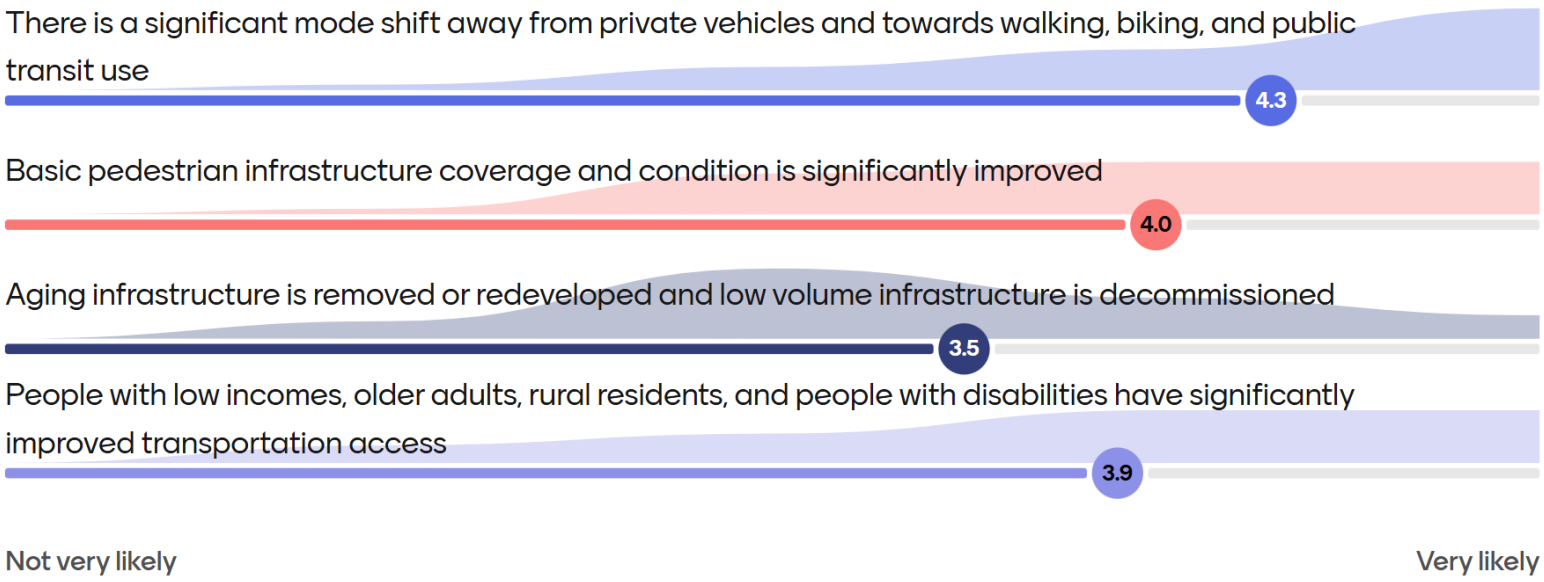
If these housing affordability,  type, and location patterns change, what is the level of impact they will have on the transportation system?



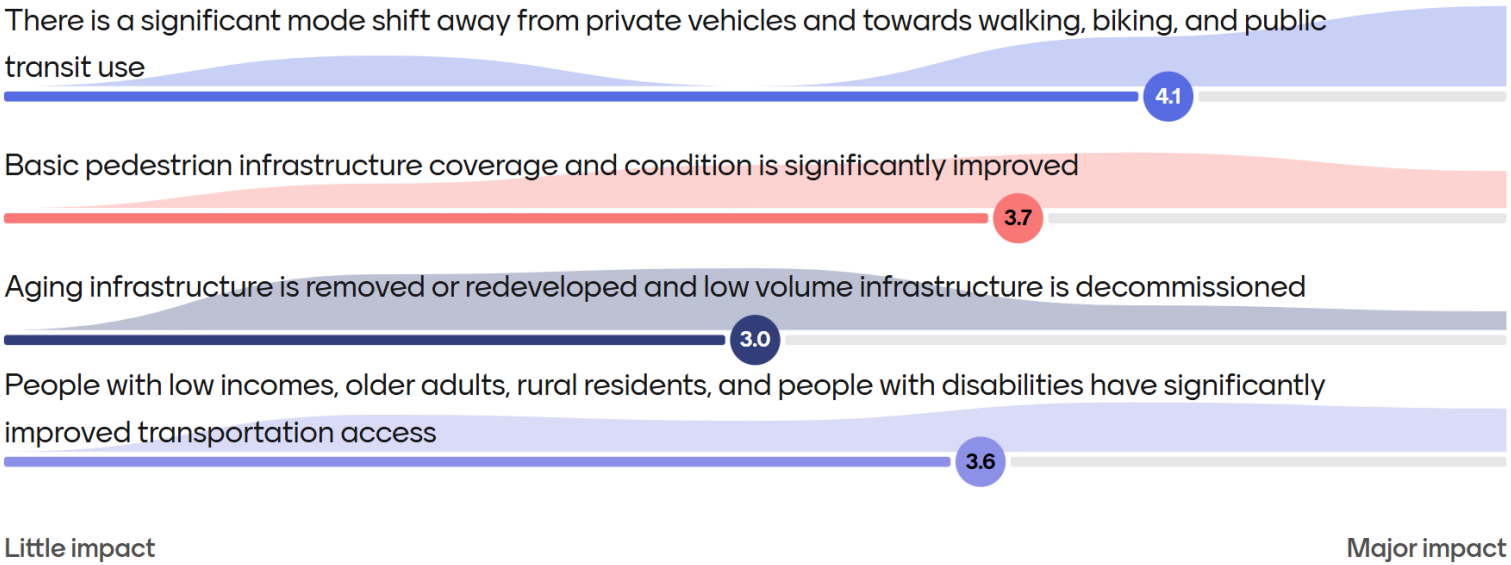
How likely are these personal and public transportation access, modes, and networks patterns to change?



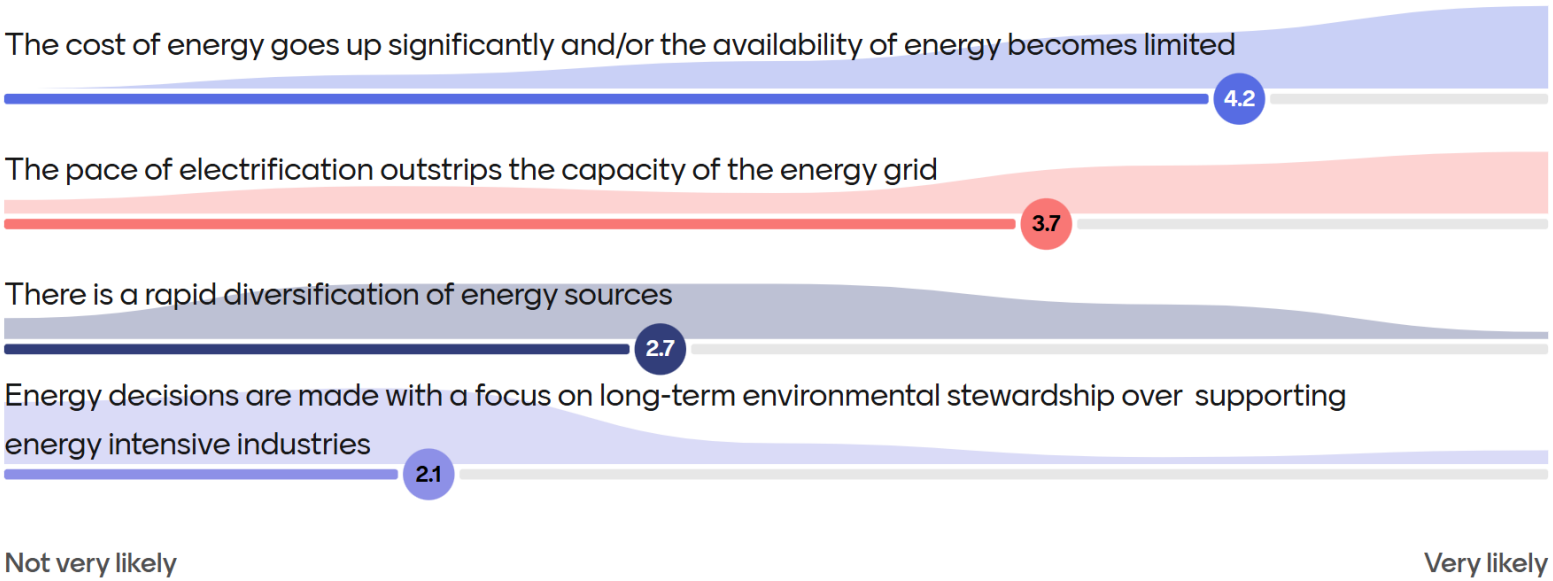
If these personal and public transportation access, modes, and networks patterns change, how likely are they to impact the transportation system?



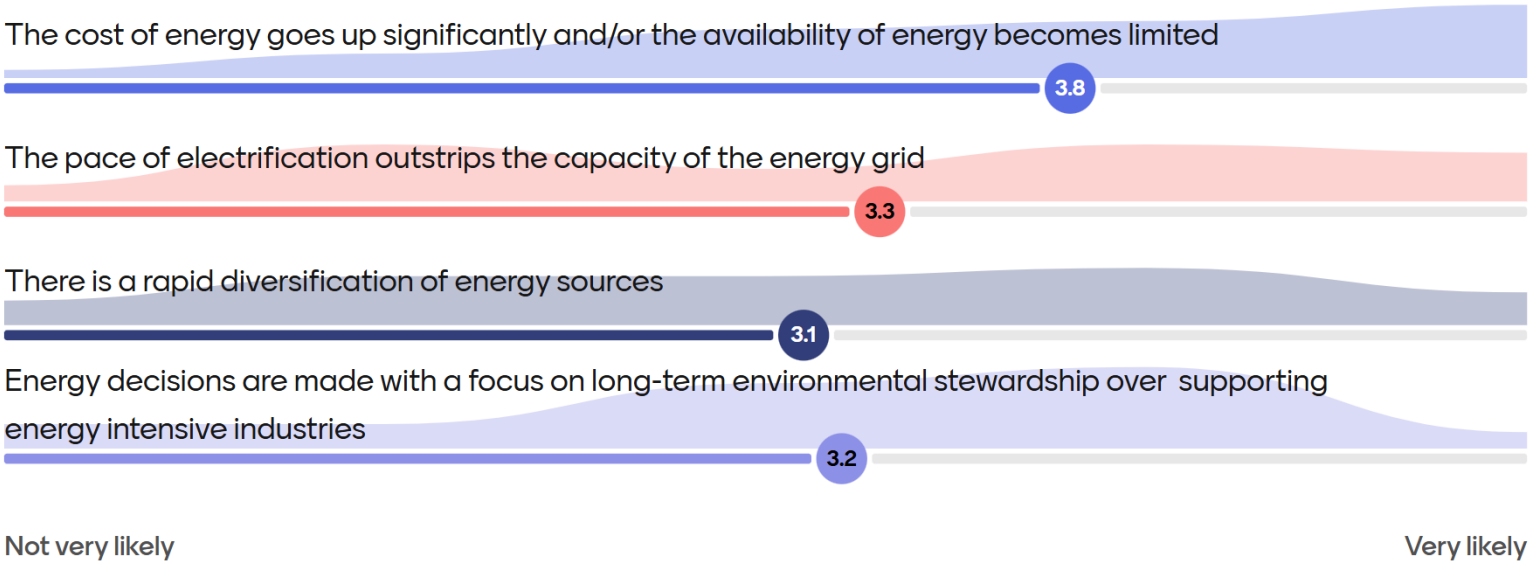
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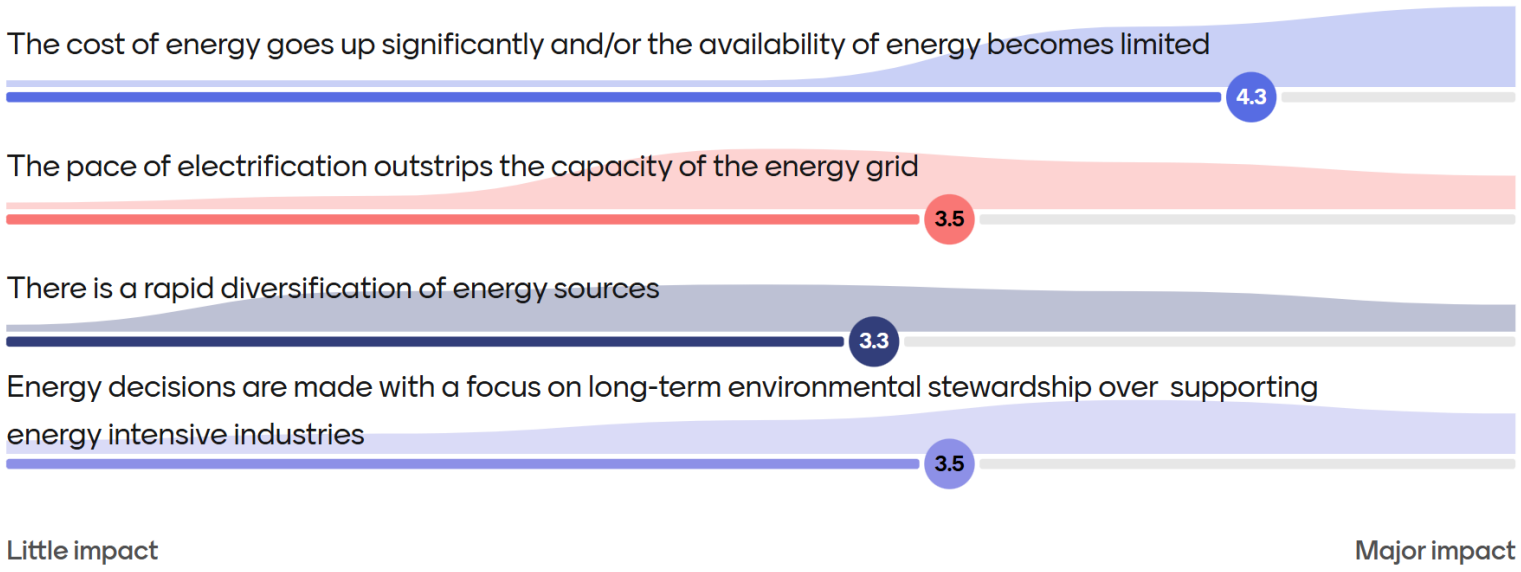
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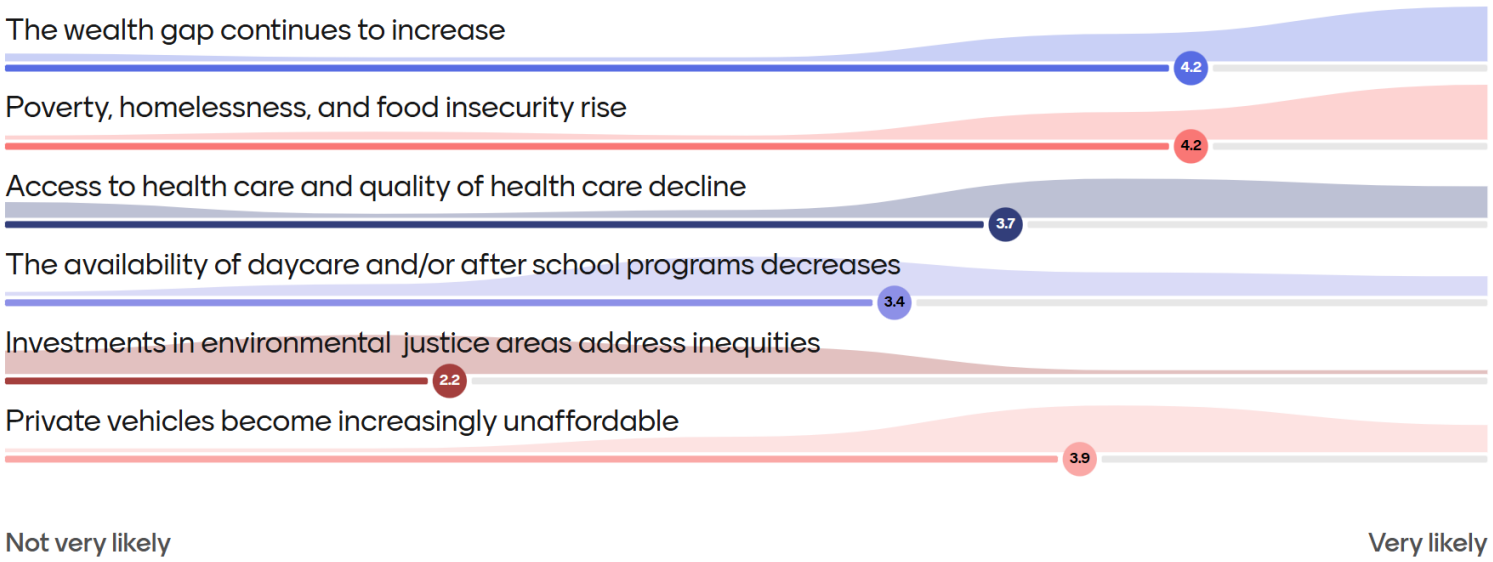
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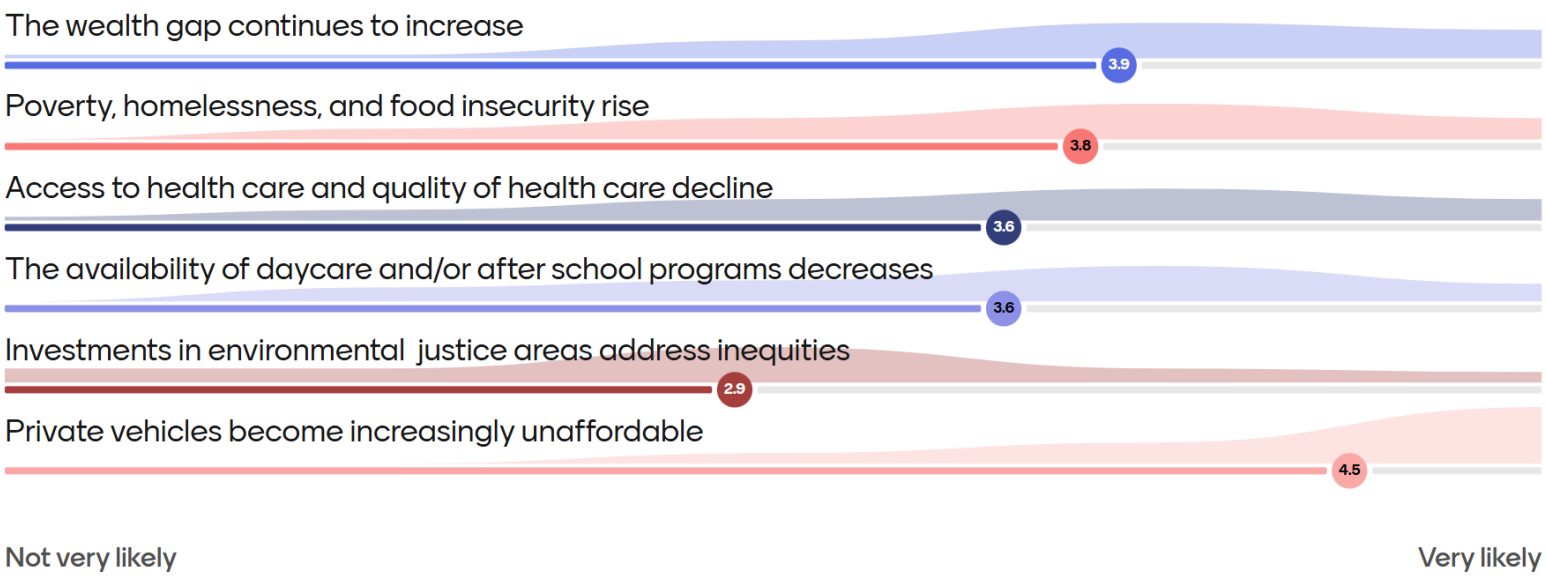
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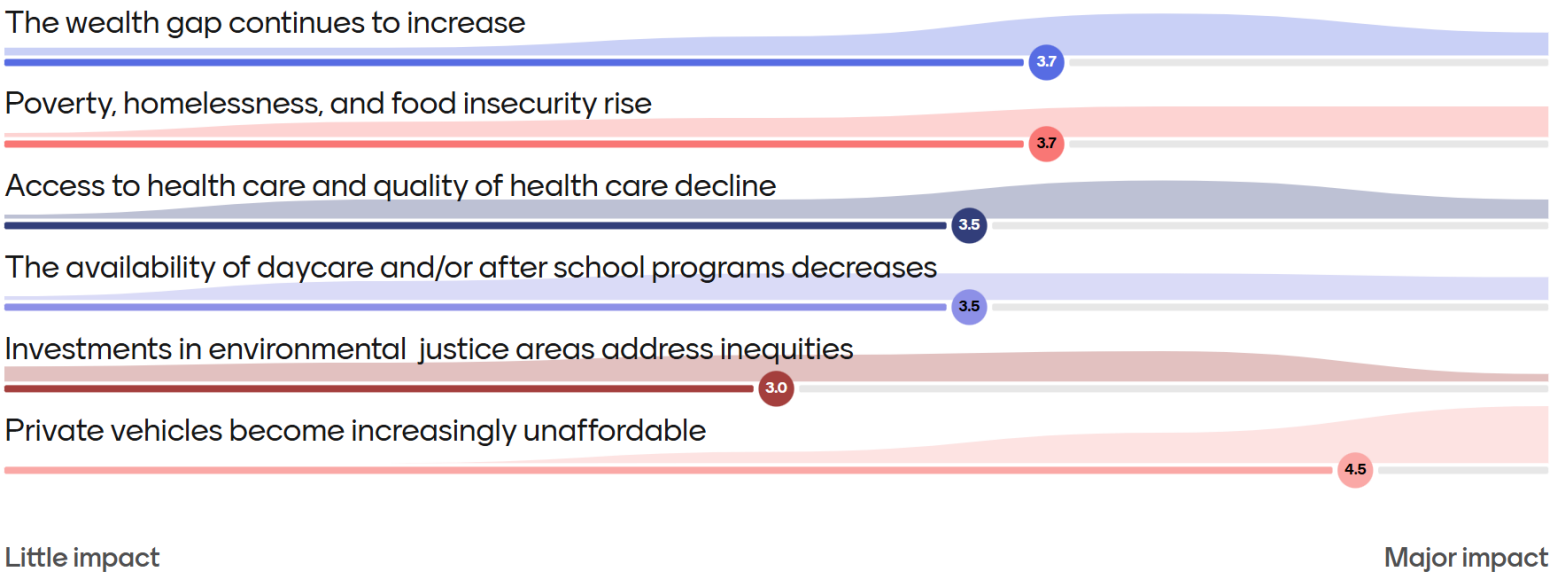
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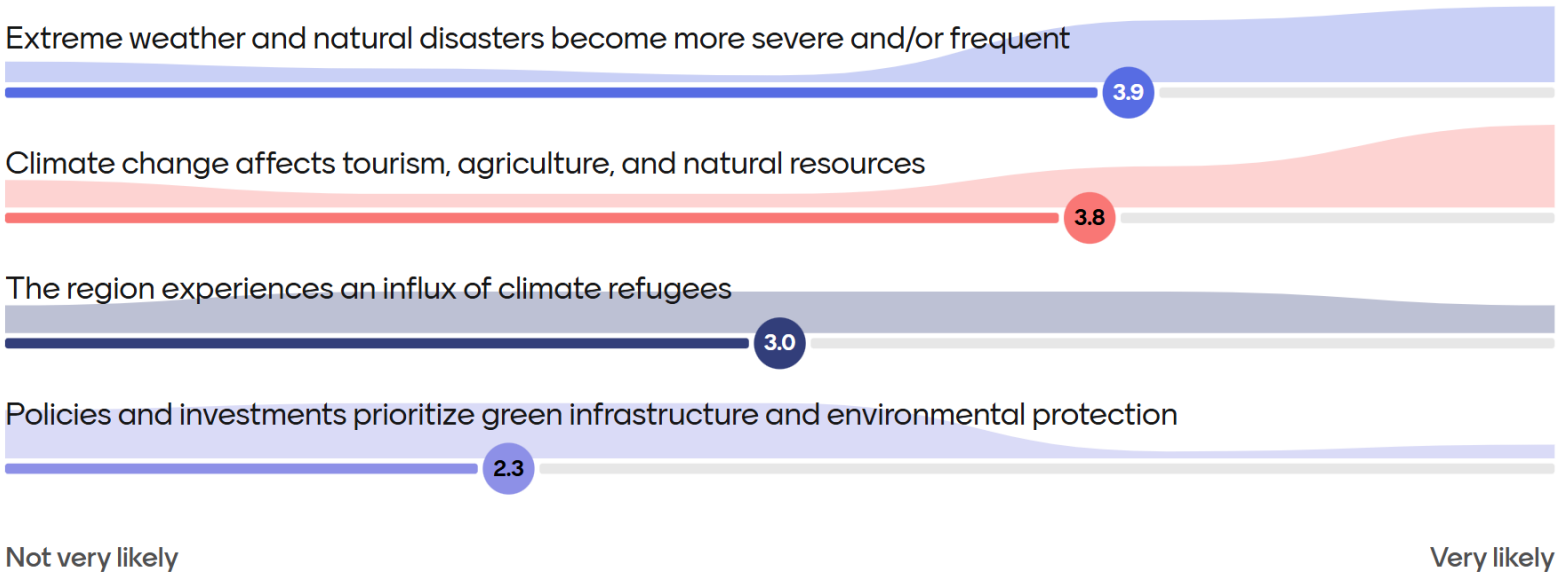
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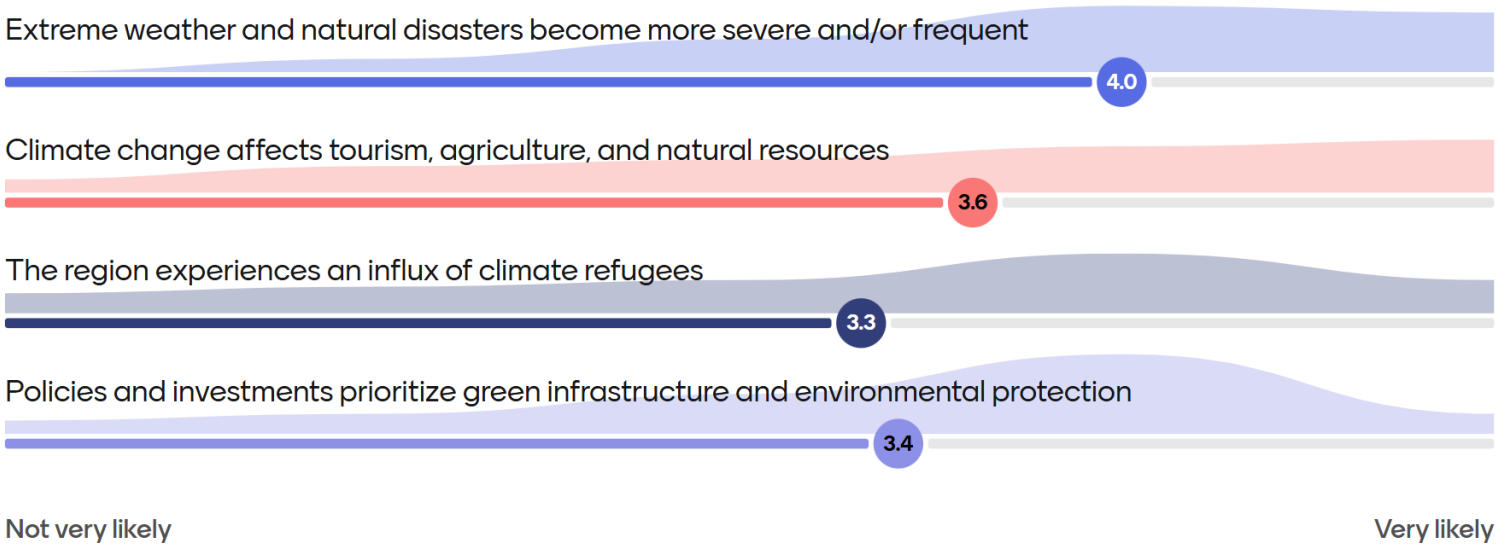
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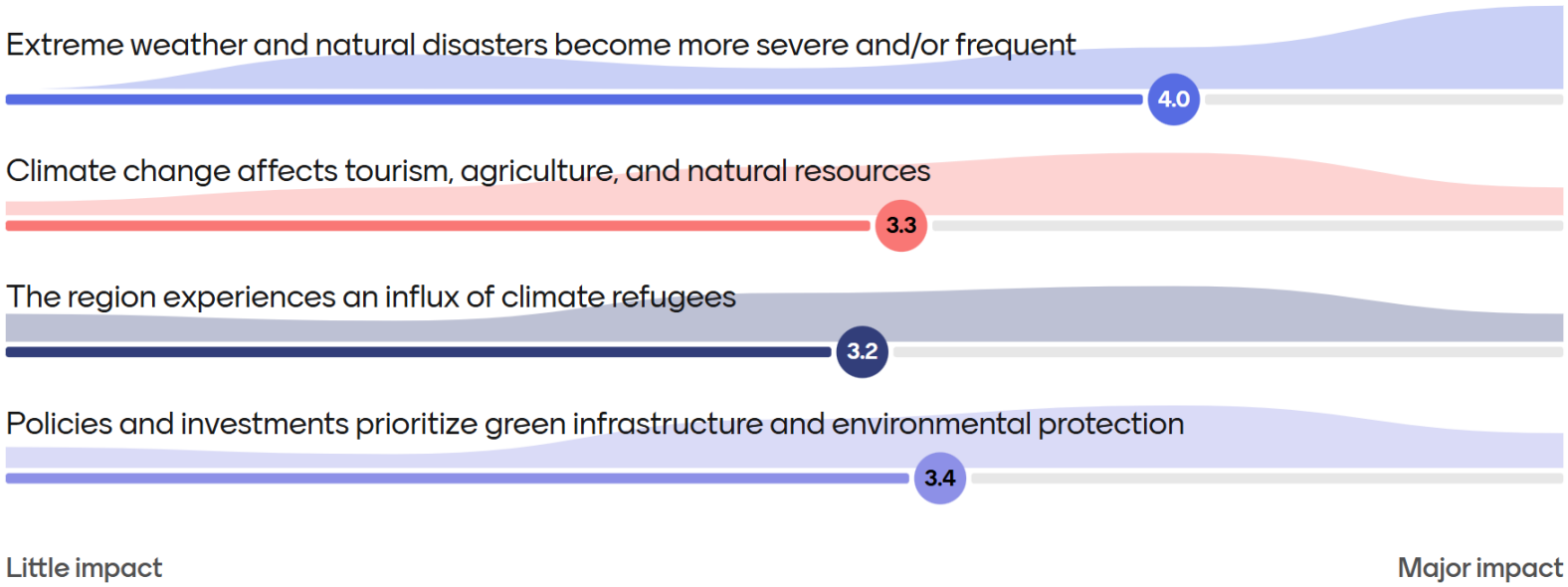
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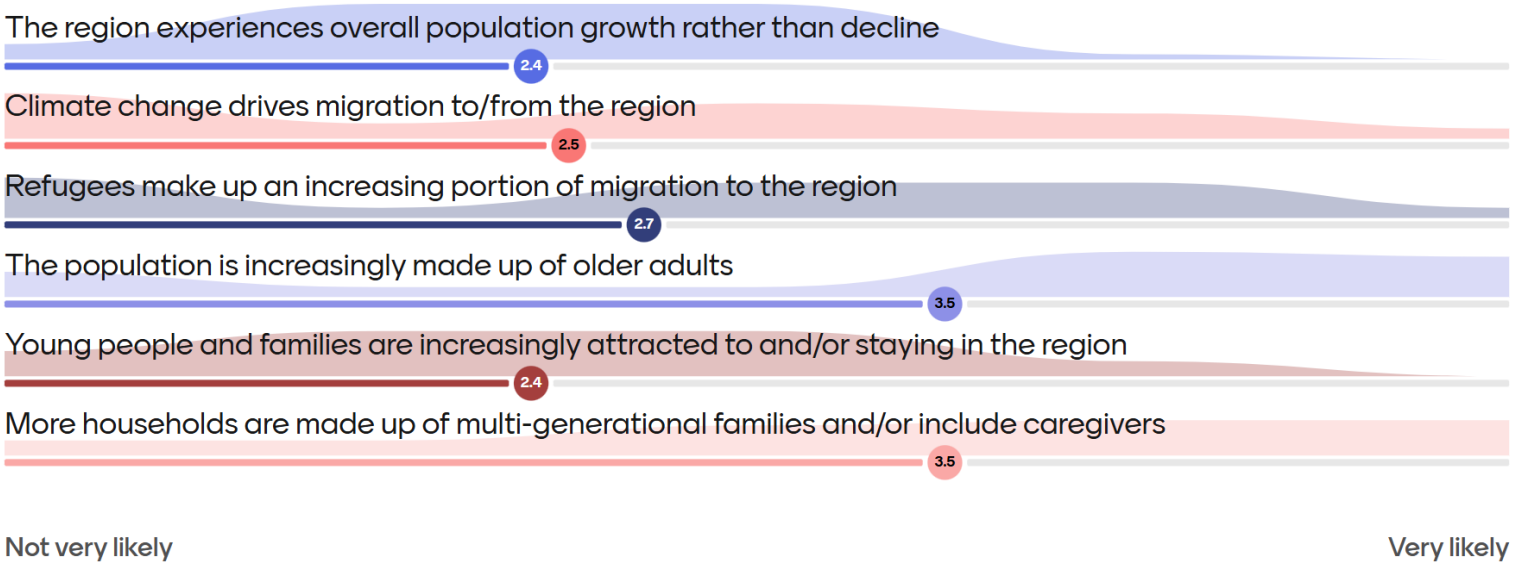
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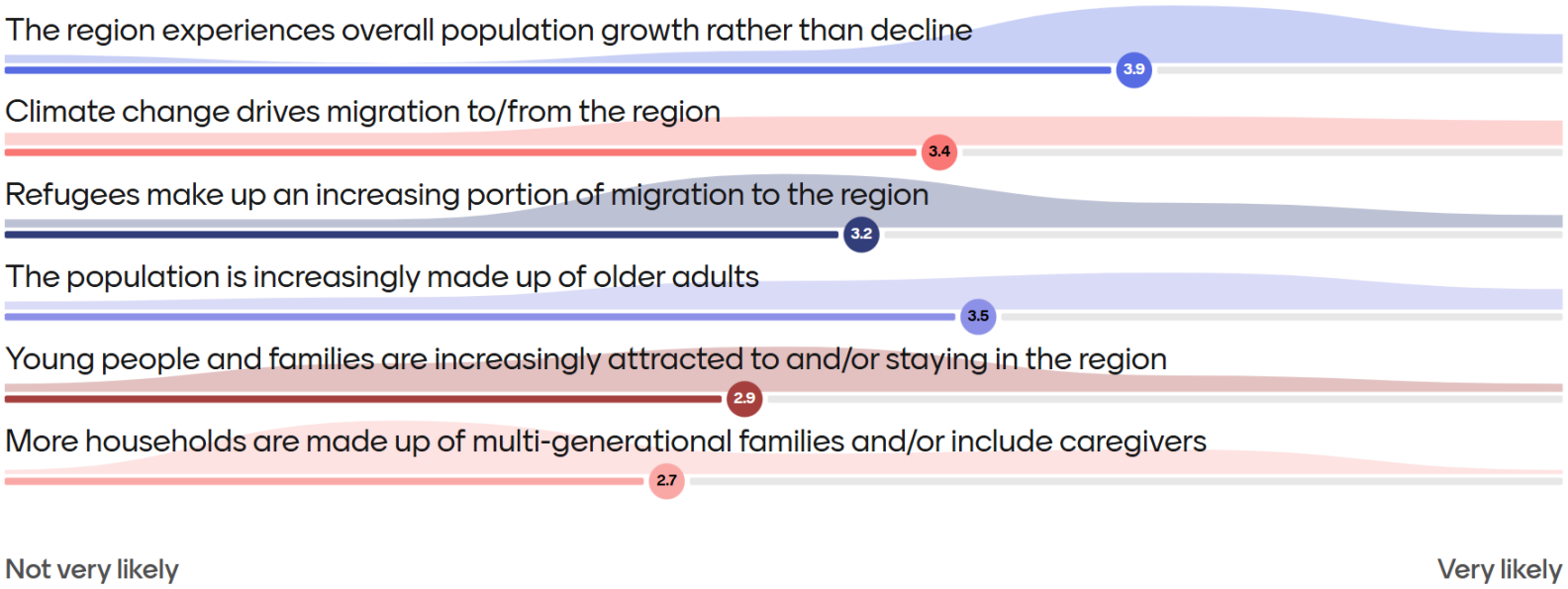
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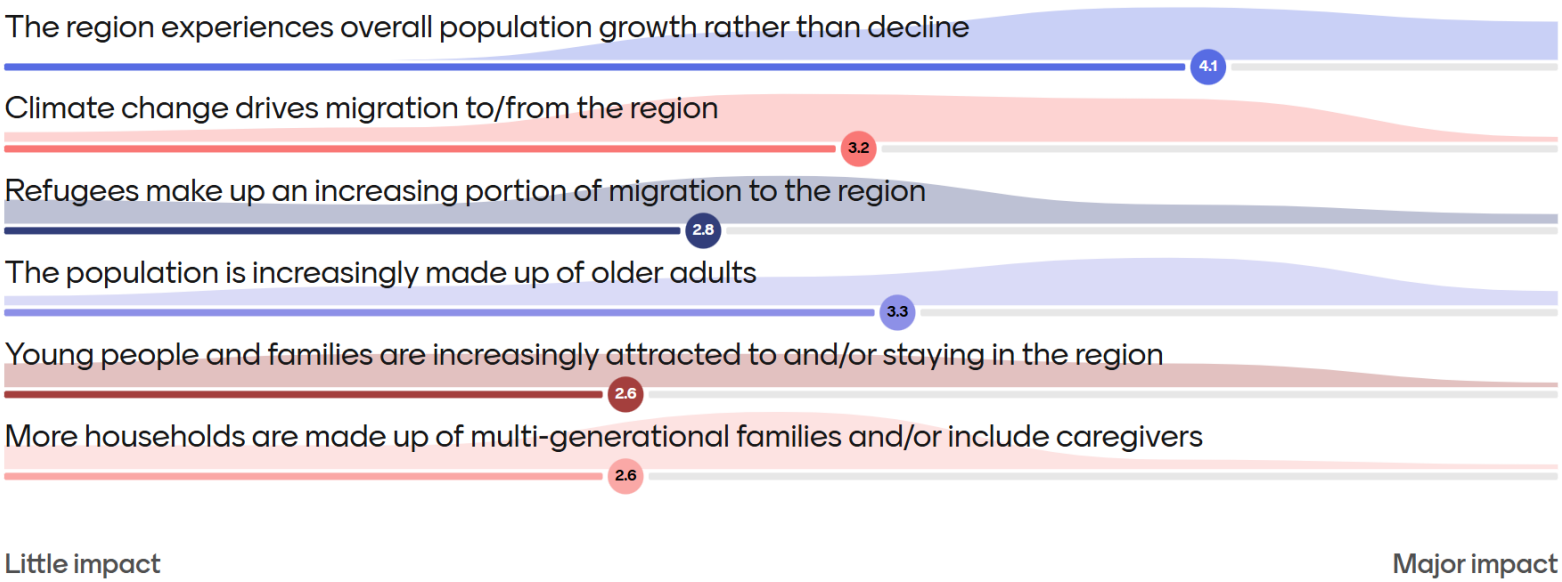
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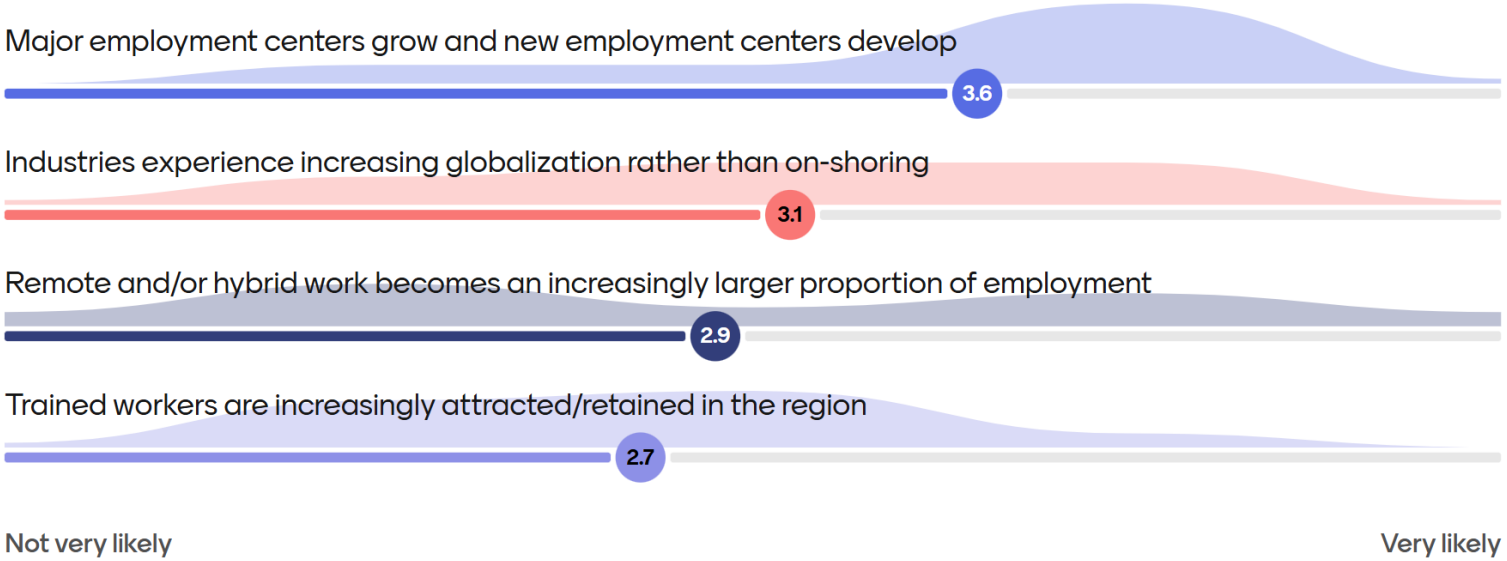
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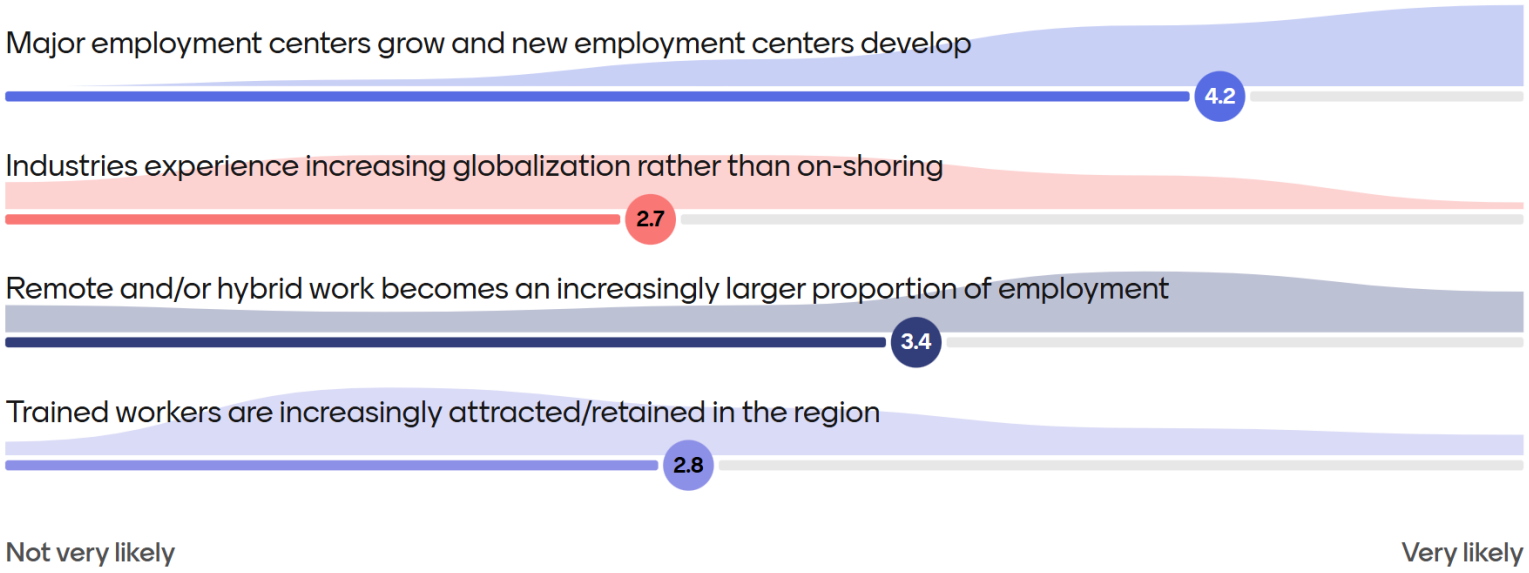
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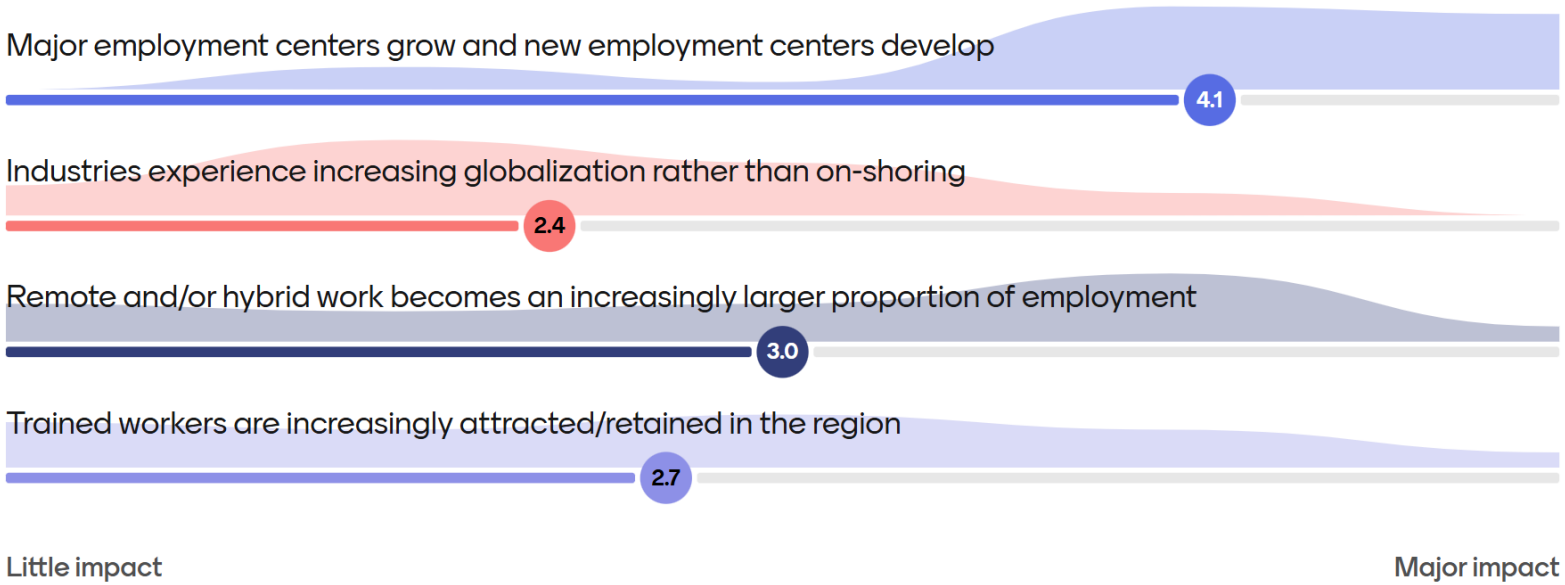
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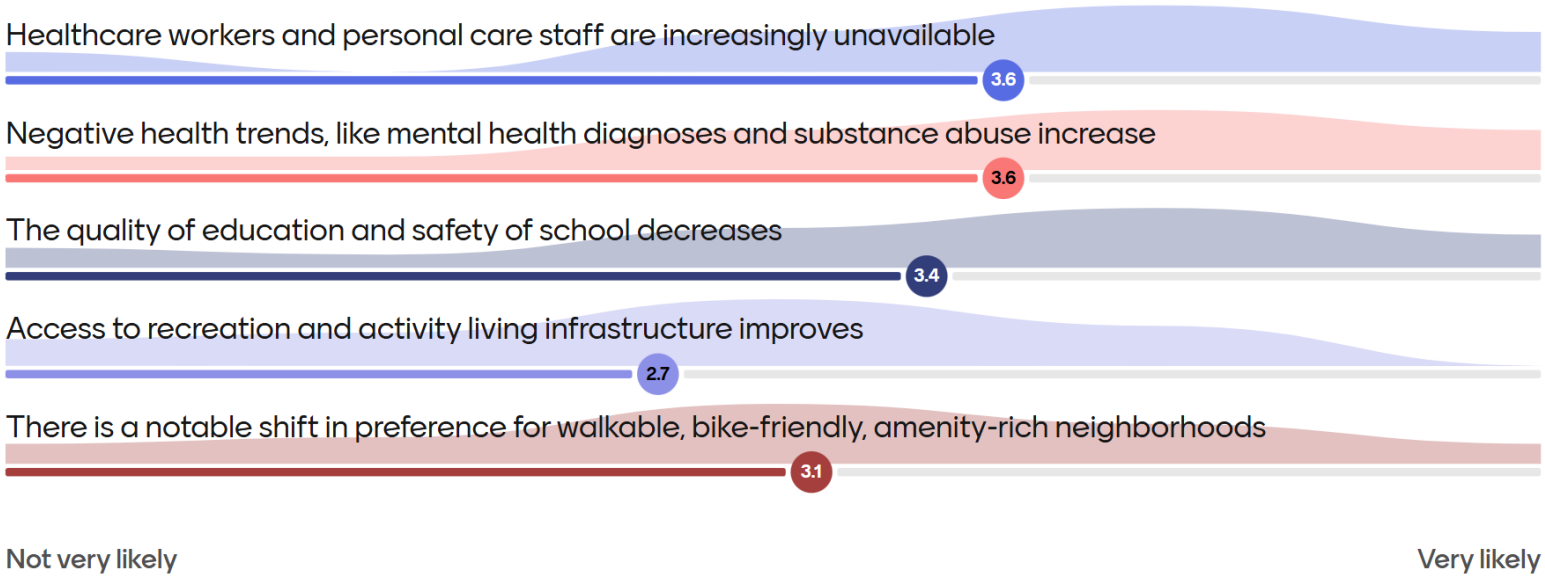
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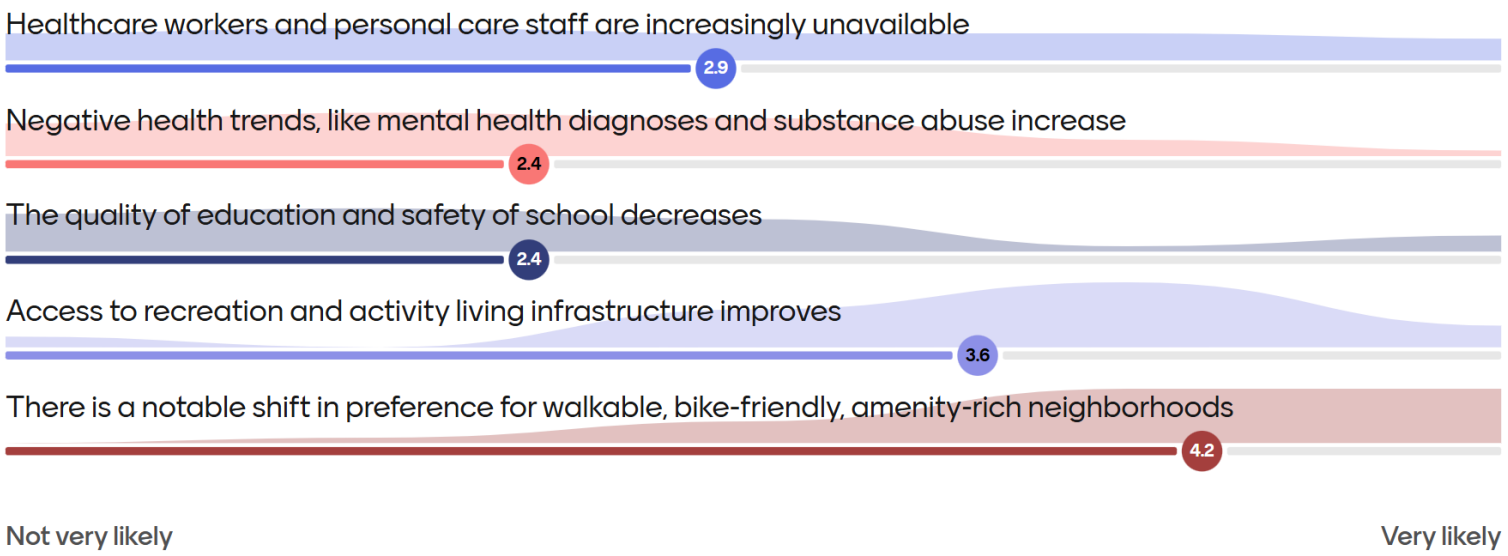
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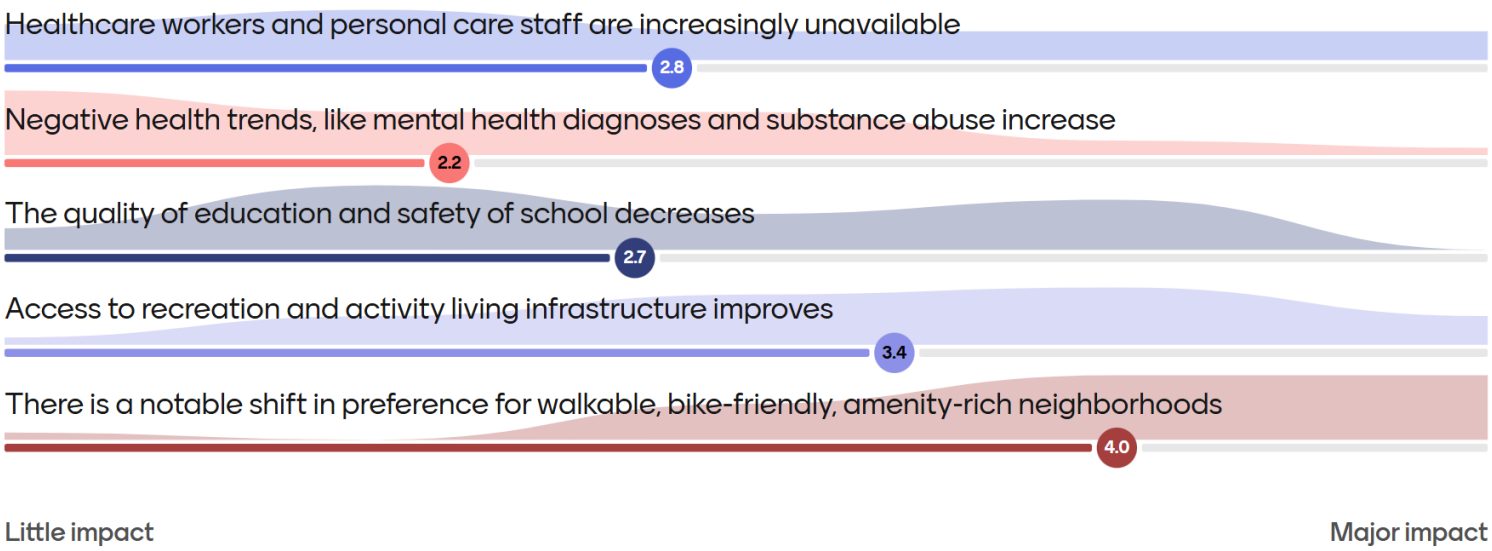
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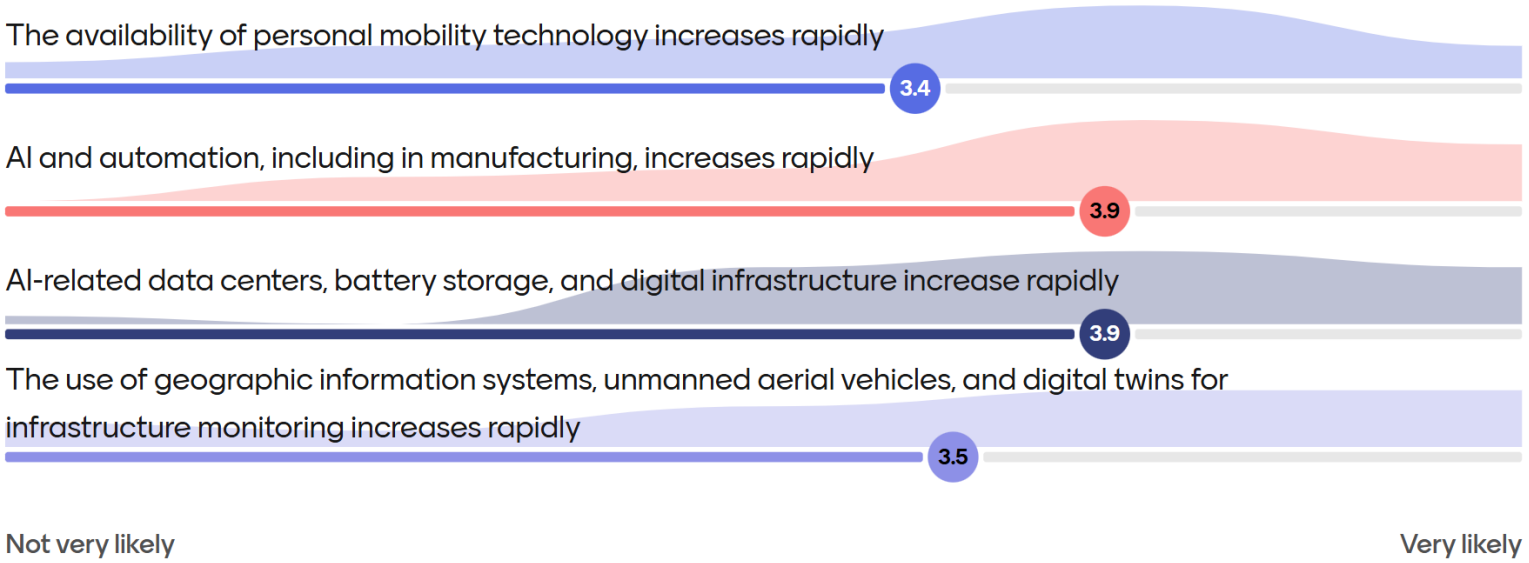
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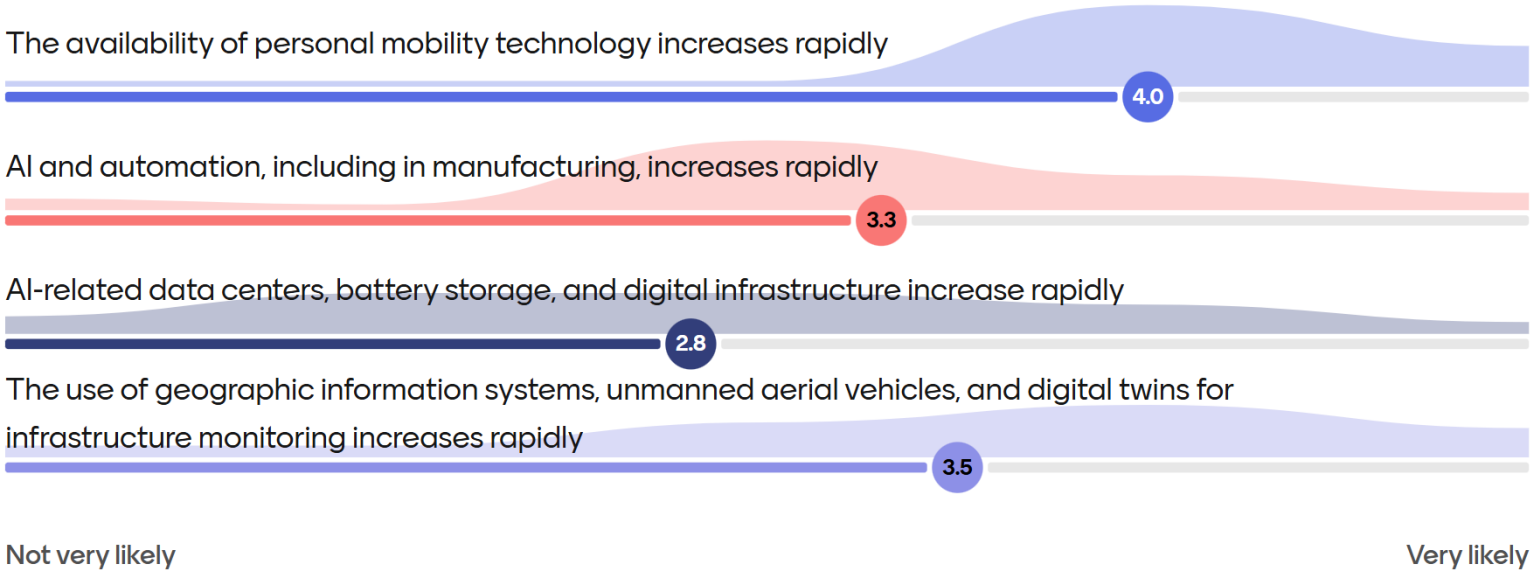
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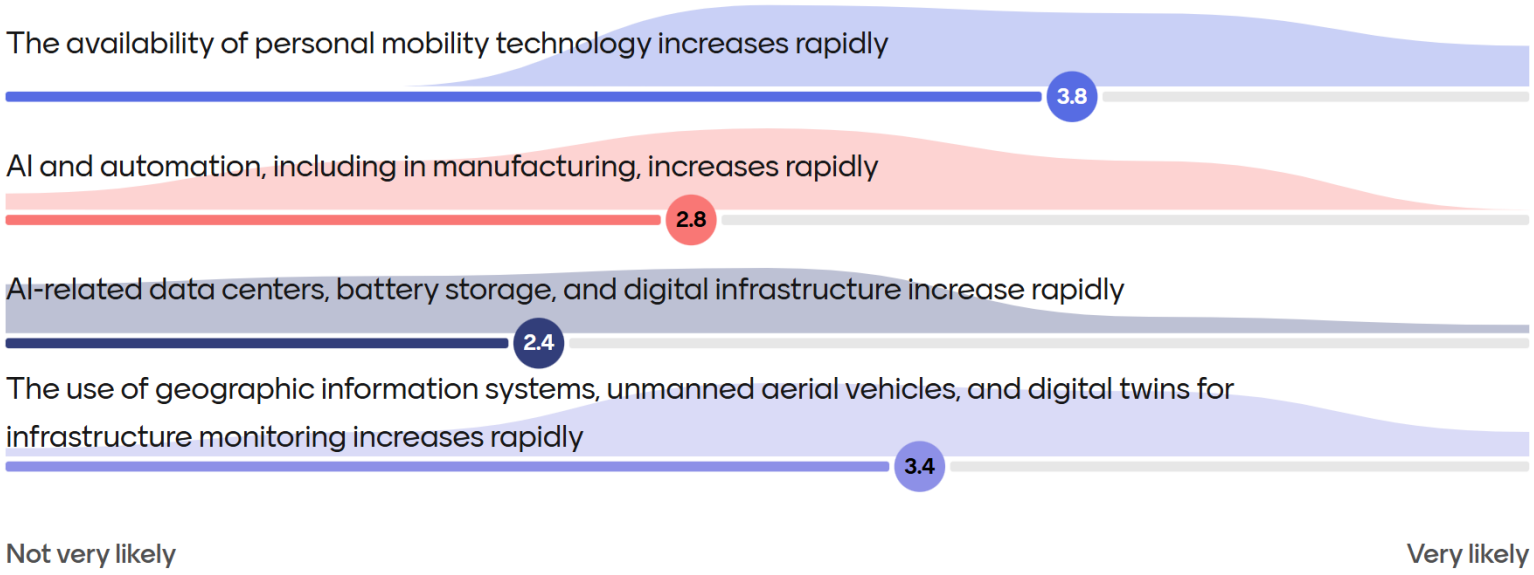
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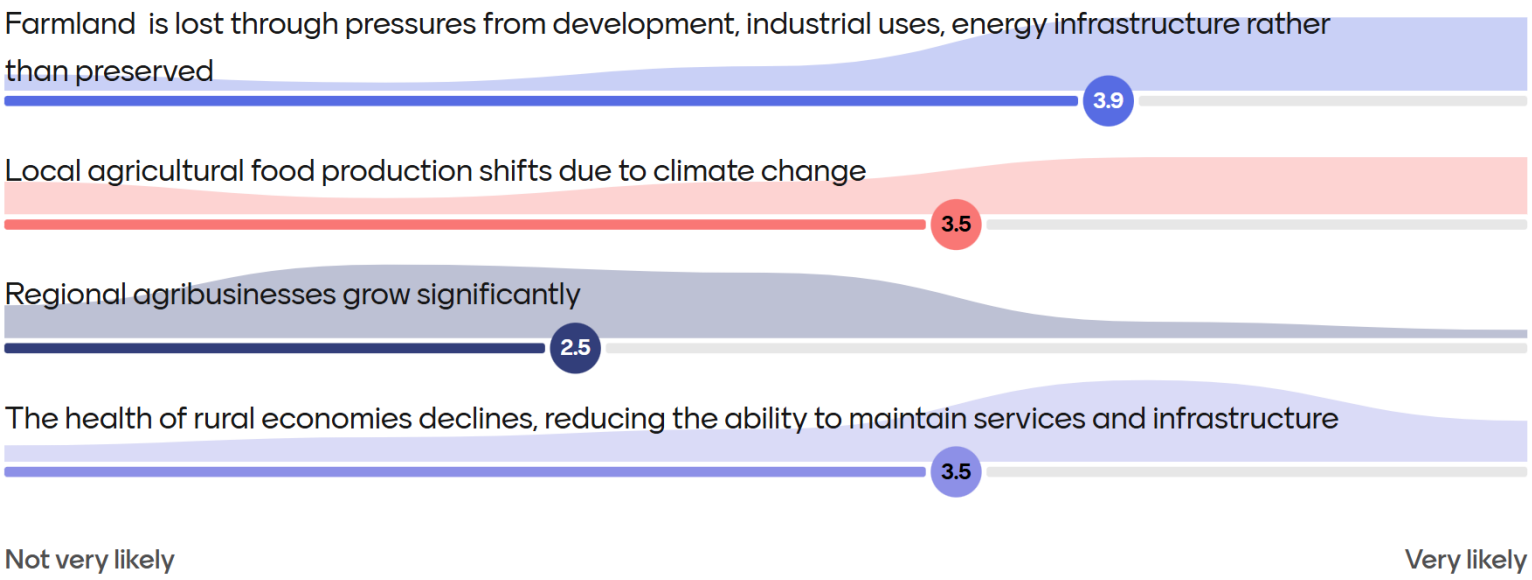
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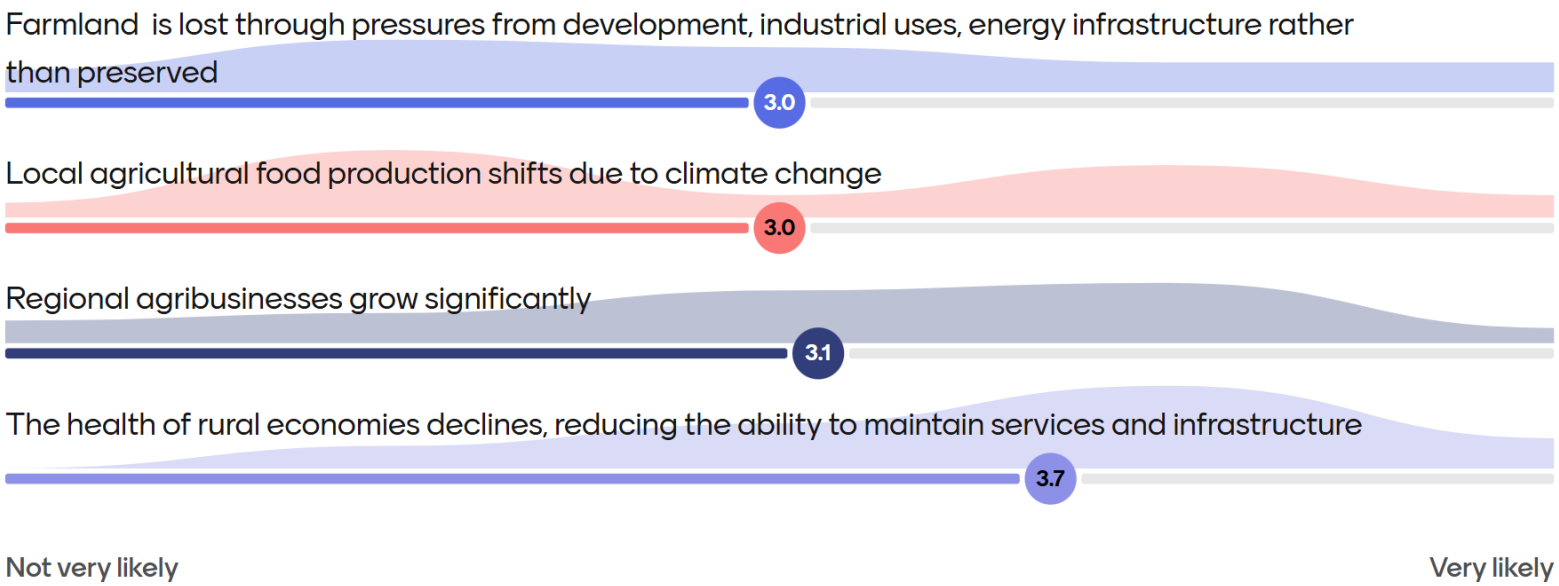
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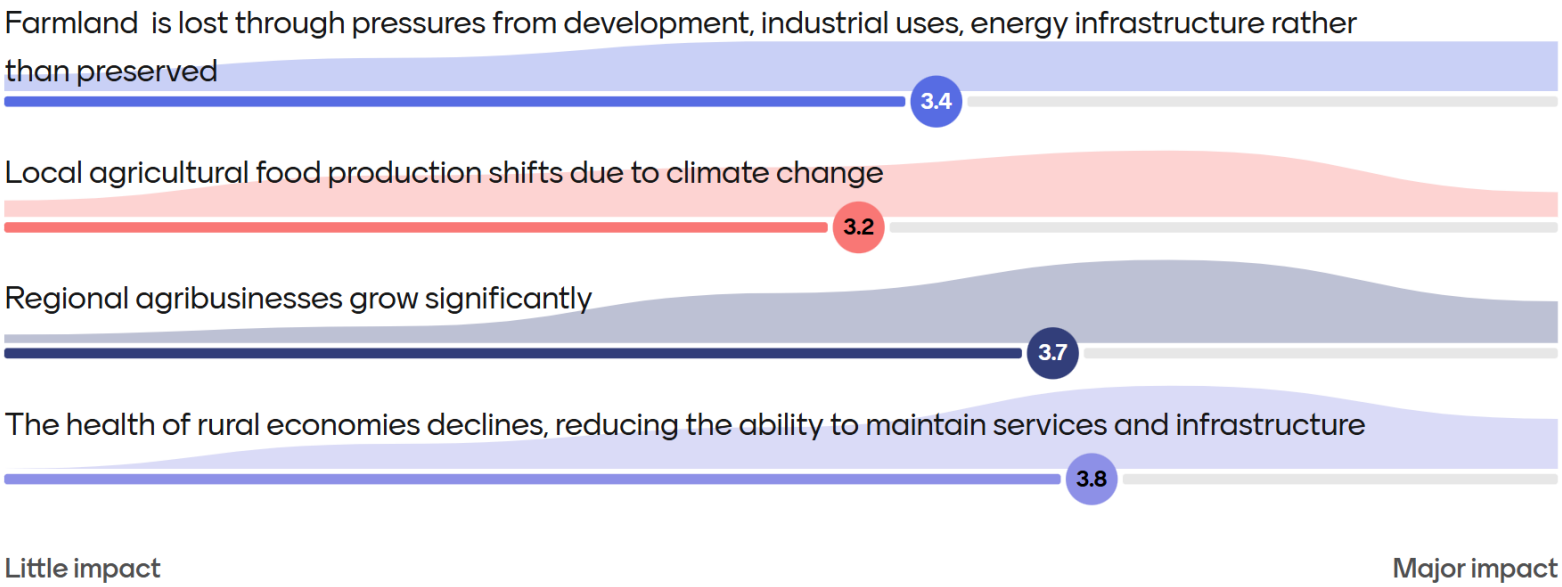
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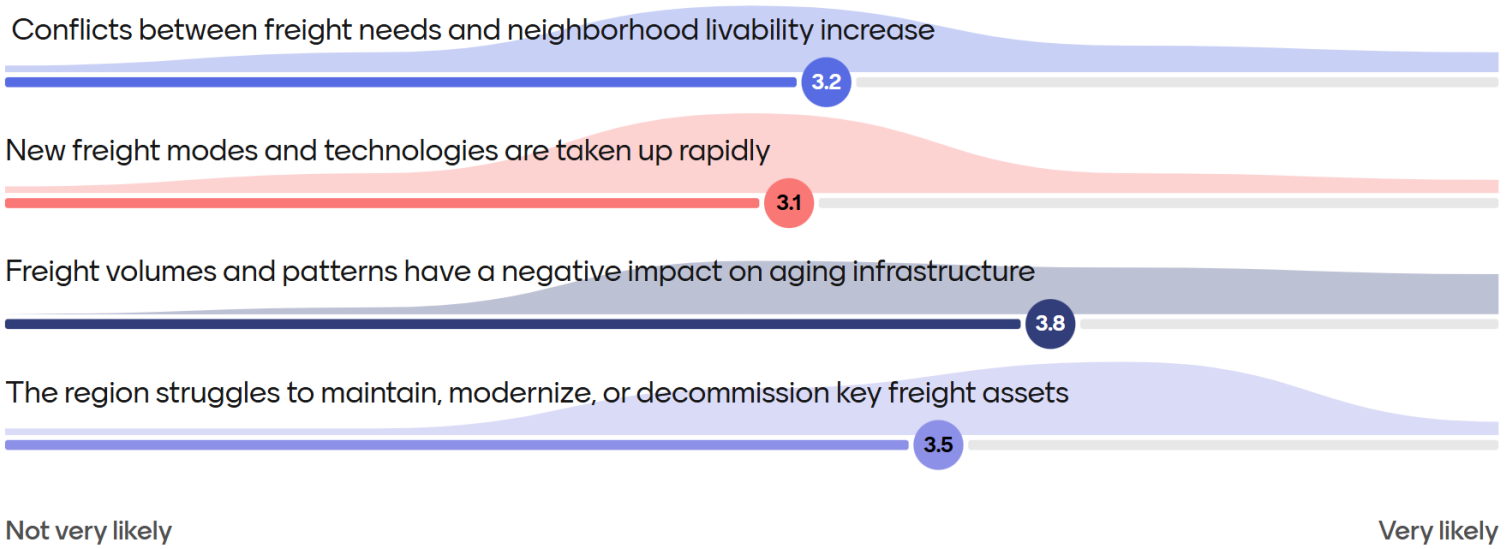
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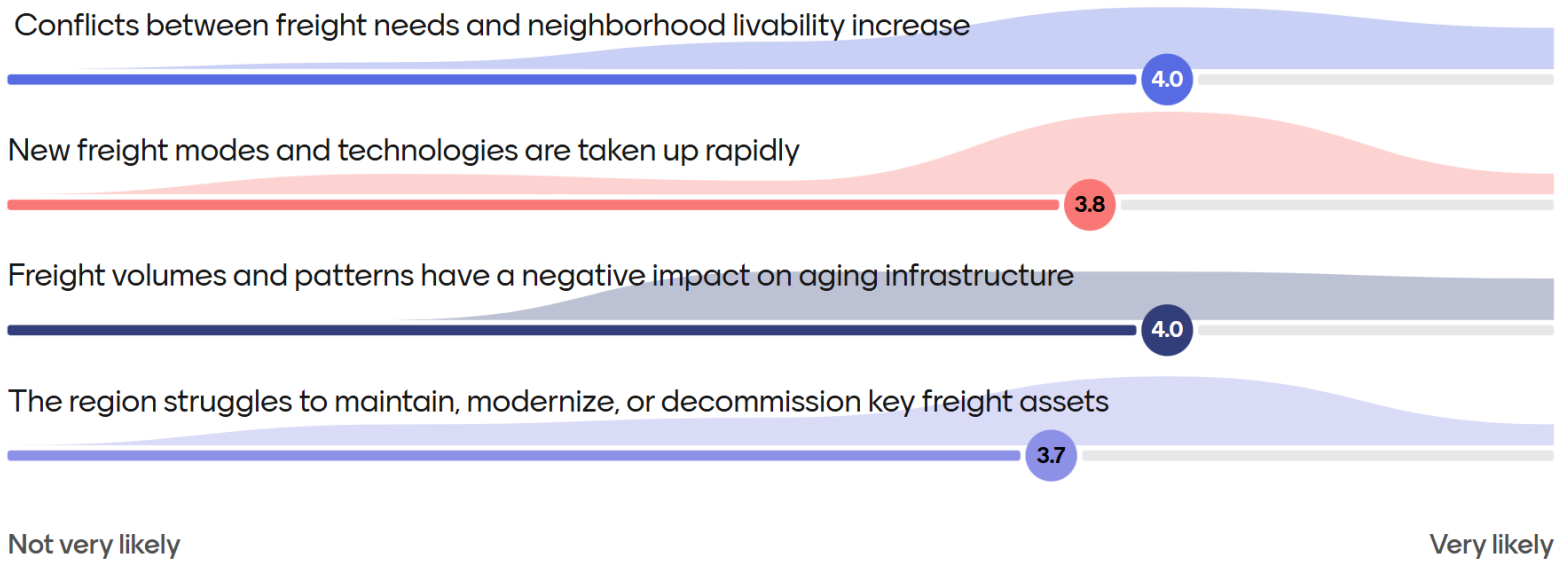
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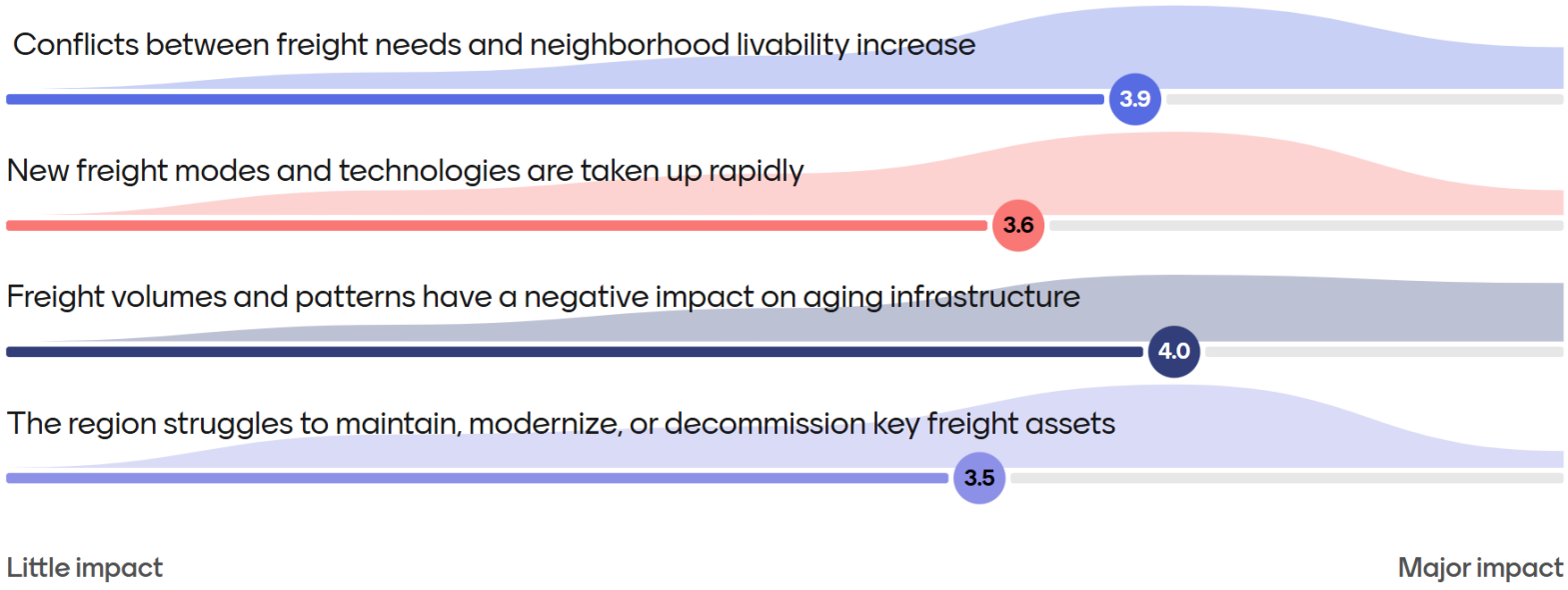
# How likely are these freight, logistics, and industrial corridors patterns to change?



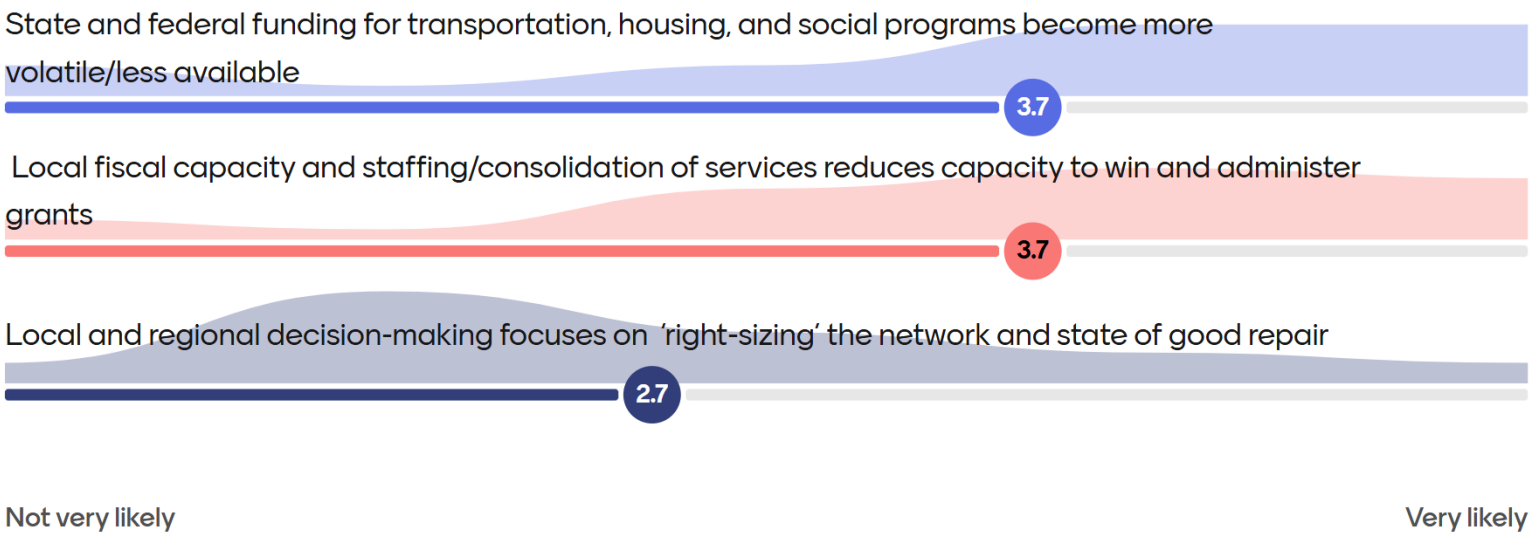
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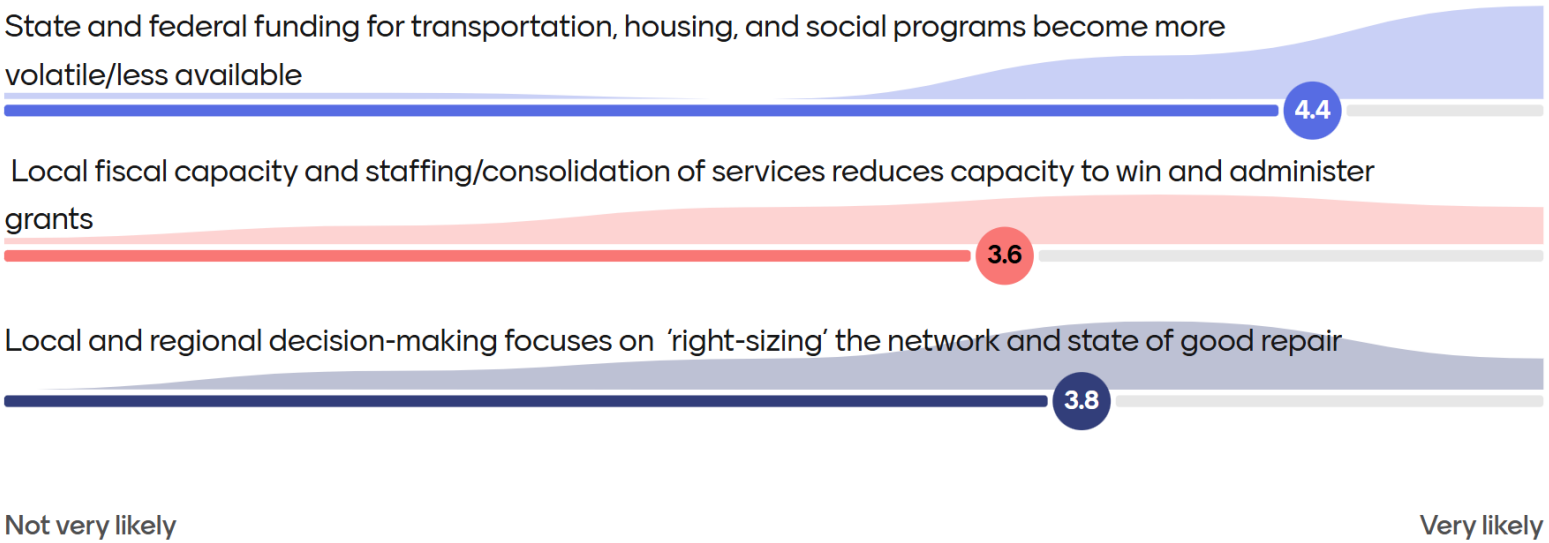
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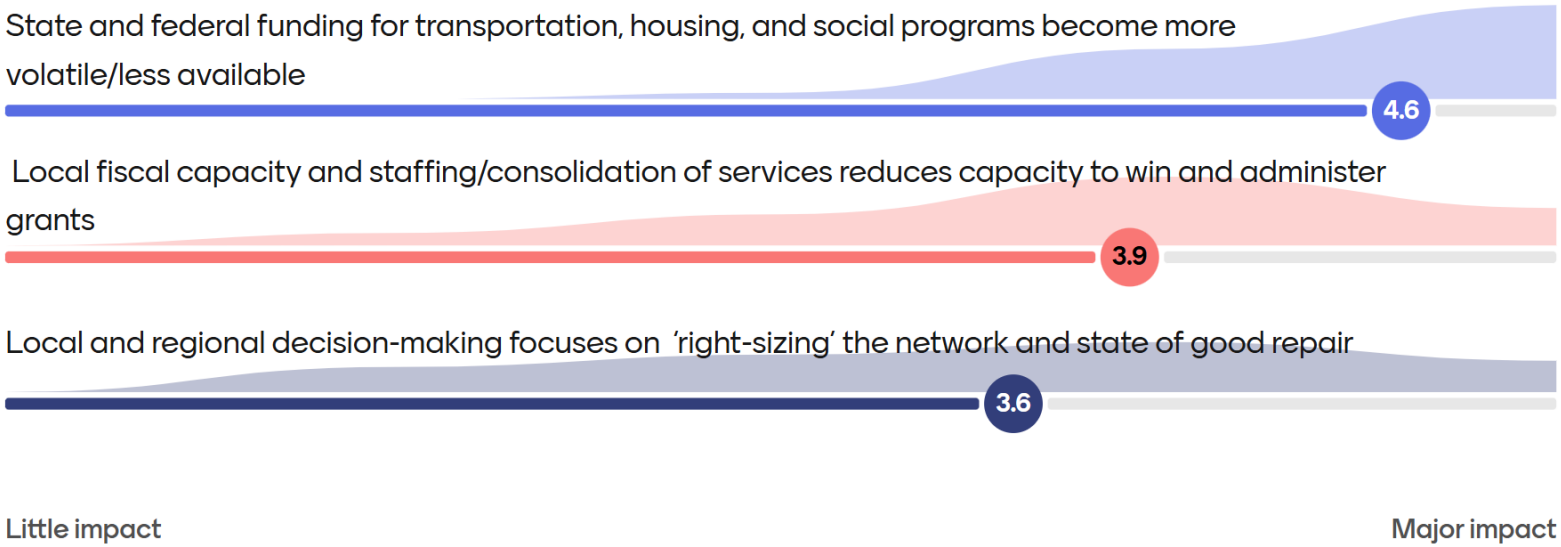
## How likely are these public finance, funding, and governance patterns to change?



If these public finance, funding, and governance patterns change, how likely are they to impact the transportation system?



If these public finance, funding, and governance patterns change, what is the level of impact they will have on the transportation system?



# **APPENDIX G.** WORKSHOP #1 MEETING NOTES

transpogroup
WHAT TRANSPORTATION CAN BE.

***MEMORANDUM***

| | | | |
|---|---|---|---|
| **Date:** | July 01, 2026 | **TG:** | 1.23341.00 |
| **To:** | Julie Richmond, Amy Heiderich | | |
| **From:** | Transpo Group | | |
| **cc:** | Scenario Planning Workshop #1 Participants | | |
| **Subject:** | HOCTC Scenario Planning Workgroup Meeting #1 – Meeting Notes | | |

The first Herkimer-Oneida Counties Transportation Council (HOCTC) scenario planning workshop was held on June 23, 2026, at the Innovare Advancement Center in Rome, New York, from 10am–2pm.

## Introduction

The purpose of this workshop was to determine which driving forces should be explored further through the development of future scenarios. Collectively and in small groups, workshop participants assessed driving forces and evaluated each according to uncertainty, likelihood of impact, and magnitude of impact.

**Attendees:**
Audrey Alix, City of Utica
Sophie Axe (Intern), HOCTC
Christopher Barboza, Tug Hill Commission
Chip Bassett, Kirkland Trails
Allison Cox, Mohawk Valley Community Action Agency
Joshua Dahlin, HOCTC
Maya DeFazio, HOCTC
Hannah Dillenbeck, Mohawk Valley Economic Development District
JP Dillon, HOCTC
Miriam Doud, Living ADK
John Duesing, Transpo Group
Heidi Ganum, Transpo Group
Dan Gilmore, Oneida County Health Department
Daniel Harp, New York State Department of Transportation (NYSDOT)
Amy Heiderich, HOCTC
Thalia Honorat (Intern), HOCTC
Norah Kiel (Intern), Mohawk Valley Community Action Agency
Darlene Mack Brown, Mohawk Valley Community Action Agency
Samantha Morrone, NYSDOT
Dan Olivadoti, 50 Forward Mohawk Valley
Matt Pawlusik, Oneida County Planning
Allison Perry, NYSDOT
Jeff Rehler, Mohawk Valley EDGE
Julie Richmond, HOCTC
Hanna Sauberan, HOCTC
Sophia Spindler (Intern), Mohawk Valley Community Action Agency
Stephanie Tyoe, Herkimer County Department of Public Works
Grace Whiffen, HOCTC

## Introductions and background

Julie Richmond, Director of HOCTC, provided an introduction to the project and to scenario planning. Workshop participants introduced themselves through a short icebreaker and learned about the agenda for the day.

## Full group live polling

Each of the 13 driving force categories include 4–6 factors. Using an online poll, participants were asked to consider the same three prompts for each factor using a 1–5 scale, with 1 being not very likely/little impact and 5 being very likely/major impact:

1. The likelihood of a given factor to change
2. The likelihood of a given factor to impact the transportation system
3. The level of impact a given factor would have on the transportation system

Based on the results of the poll, Table 1 shows the highest impact factor for each of the 13 categories.

*Table 1. Poll Results: Highest Impact Factor for each Category*

| Category | Factor | Average Score |
|---|---|---|
| Agriculture and rural economies | The health of rural economies declines, reducing the ability to maintain services and infrastructure | 3.8 |
| Climate change, environment, and resilience | Extreme weather and natural disasters become more severe and/or frequent | 4 |
| Energy systems and stability | The cost of energy goes up significantly and/or the availability of energy becomes limited | 4.3 |
| Freight, logistics, and industrial patterns | Freight volumes and patterns have a negative impact on aging infrastructure | 4 |
| Housing affordability, type, and location | Housing is developed close to major work sites rather than distant from work sites | 3.8 |
| Industry trends, major employers, and work patterns | Major employment centers grow and new employment centers develop | 4.1 |
| Inequality, poverty, and social safety nets | Private vehicles become increasingly unaffordable | 4.5 |
| Land use and development | Future development concentrates in compact, mixed-use centers instead of sprawling development and single-use corridors | 4 |
| Personal and public transportation | There is a significant mode shift away from private vehicles and towards walking, biking, and public transit use | 4.1 |
| Population, migration, and household change | The region experiences overall population growth rather than decline | 4.1 |
| Public finance, funding, and governance patterns | State and federal funding for transportation, housing, and social programs become more volatile/less available | 4.6 |
| Public health, healthcare, and community well-being | There is a notable shift in preference for walkable, bike-friendly, amenity-rich neighborhoods | 4 |
| Technology, artificial intelligence, and automation | The availability of personal mobility technology increases rapidly | 3.8 |

## Small group assignments

Attendees were divided into five groups, and each group was assigned several driving force categories to consider (Table 2, asterisk indicates the small group facilitator).

*Table 2. Group Members and Driving Force Categories*

| Group 1 | Group 2 | Group 3 | Group 4 | Group 5 |
|---|---|---|---|---|
| *Group members* | | | | |
| Darlene | Allison C. | Norah | Sophia | Dan O. |
| Samantha | Daniel H. | Matt | Hannah | Christopher |
| Audrey | Chip | Dan G. | Miriam | Stephanie |
| Amy * | Joshua * | Allison P. | Hanna * | John D. |
| Maya | Thalia | Grace * | Sophie | JP * |
| | | | Jeff | |
| *Driving force categories* | | | | |
| Public finance, funding, and governance | Personal and public transportation access, modes, and networks | Energy systems and stability | Agriculture and rural economies | Climate change, environment, and resilience |
| Land use and development patterns | Industry trends, major employers, and work patterns | Housing affordability, type, and location | Population, migration, and household change | Freight, logistics, and industrial corridors |
| | Inequality, poverty, and social safety nets | Public health, healthcare, and community well-being | Technology, artificial intelligence, and automation | |

## Small group discussion

In small groups, participants were asked to examine their driving force categories based on the following questions:

- What could this mean for the transportation system?
- How might this driving force interact with other driving forces?
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)

Participants were asked to focus on the factor with the highest impact score (as shown in Table 2) first, for each category, and then to continue the discussion focusing on the other factors within each category.

High-level bullet points are listed below to summarize major discussion topics from each group.

### Group 1

***Public finance, funding, and governance***

State and federal funding for transportation, housing, and social programs becomes more volatile/less available.

- What could this mean for the transportation system?
  - New transportation bill coming in late 2026, shifting priorities
  - Lack of communication/cohesiveness between local governments and NYSDOT
  - Limited agency capacity to pursue grants (and reduced funding overall)
- How might this driving force interact with other driving forces?
  - Industry trends/major employers: Lack of available contractors, projects take a long time to complete

    - Energy systems/stability: MVCAA funding for energy efficiency program moved to lead remediation (limited funds, spread thinner), lead pipe remediation is a focus and requires lots of resources and coordination among agencies
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Assume that funding will decrease

***Land use and development patterns***
Future development concentrates in compact, mixed-use centers instead of sprawling development and single-use corridors.

- What could this mean for the transportation system?
    - Park and walk: walkable city centers accessible by driving from suburban areas
    - Development density occurring unevenly across region, impacts opportunities for non-vehicle transportation
    - Transportation challenges: lack of available parking, lack of reliable public transportation
- How might this driving force interact with other driving forces?
    - Housing: high-income options, low-income options, limited middle-income options
    - Freight/logistics: aging infrastructure impacts on freight, ability of transportation system to accommodate freight
    - Industry trends: regional response to data centers, solar farms, battery storage
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - No big population shifts
    - Residents do not want change
    - Residents prefer low density, suburban/rural land uses and lifestyles

## Group 2

***Personal and public transportation access, modes, and networks***
There is a significant mode shift away from private vehicles and towards walking, biking, and public transit use.

- What could this mean for the transportation system?
    - Need to build better network for pedestrians and cyclists, infrastructure for electric bikes (significant investments)
    - Closer proximity between work and home
- How might this driving force interact with other driving forces?
    - Could increase spatial inequality (certain areas getting more investment than others)
    - Household energy costs would decrease
    - Land use patterns would need to change
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Infrastructure investments will facilitate this shift
    - Shift is made by choice

***Industry trends, major employers, and work patterns***
Major employment centers grow, and new employment centers develop.

- What could this mean for the transportation system?
    - Opportunities for expanded transit and new modes (walking, biking)
    - Changing traffic patterns and volumes across the region
    - Increased carpooling network

    - Public transportation will be insufficient
- How might this driving force interact with other driving forces?
    - Land use/development: require varied housing options
    - Childcare availability and proximity to new employment centers
    - Pressure on housing and other costs of living as population grows
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - New employment opportunities would pay well
    - Development would bring in new residents rather than reskilling those who already live here
    - Incoming workers would use transit more than their own vehicles

***Inequality, poverty, and social safety nets***
Private vehicles become increasingly unaffordable.

- What could this mean for the transportation system?
    - Increased demand for transit
    - Increased housing density
    - Need for closer proximity between work and home
    - Inequality increases if people can't access employment, services, school
- How might this driving force interact with other driving forces?
    - Household energy costs may decline
    - Land use: need for denser, mixed-use development
    - Climate: local improvements in air quality
    - Shift toward public transportation
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Unaffordability of private vehicles would signal larger regional challenges
    - Public transportation agencies would also face increasing costs

## Group 3

***Energy systems and stability***
The cost of energy goes up significantly and/or the availability of energy becomes limited.

- What could this mean for the transportation system?
    - Change in travel patterns, spending habits, use of social services
    - Disproportionate impact on rural areas (greater costs)
- How might this driving force interact with other driving forces?
    - Demand for local agriculture/goods + services increase
    - Demand for pedestrian infrastructure increase
    - Work from home increase
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - People are relying in personal vehicles for transportation
    - Difficult adapting to energy crisis
    - Current energy infrastructure

***Housing affordability, type, and location***
Housing is developed close to major work sites rather than distant from work sites.

- What could this mean for the transportation system?
    - Need more connectivity between communities, closer proximity to resources
    - Increased demand for bike/ped infrastructure
    - Increased density, shifts in housing types

- How might this driving force interact with other driving forces?
    - Infrastructure investments would be necessary to support sewage, water, traffic
    - Gentrification as something to plan for/mitigate
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Assuming average family of four would be moving to region
    - Energy infrastructure is updated
    - Assuming people working at major sites make above median wage
    - Current housing availability is insufficient

***Public health, healthcare, and community well-being***
There is a notable shift in preference for walkable, bike-friendly, amenity-rich neighborhoods.

- What could this mean for the transportation system?
    - Significant new infrastructure would have to be added and maintained
    - Less demand for transit, private vehicles and associated infrastructure
- How might this driving force interact with other driving forces?
    - More communication/planning needed between communities to create network
    - Population: influx of young families
    - Housing needed to accommodate new residents
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Community and municipal support for walkable, bike friendly, amenity-rich neighborhoods
    - Housing costs would increase in amenity-rich neighborhoods
    - More likely to happen in neighborhoods with higher average incomes

## Group 4

***Agriculture and rural economies***
The health of rural economies declines, reducing the ability to maintain services and infrastructure.

- What could this mean for the transportation system?
    - Rural populations would decline, resulting in less funding for transit services
    - Longer commutes for remaining residents
    - Need to travel farther to access services
    - Harder to maintain rural transportation system
- How might this driving force interact with other driving forces?
    - Remote work could expand
    - Inequity increases, rural/urban access gap widens
    - Tourism declines
    - Services concentrate in urban areas
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Population would decline
    - Agribusiness would declines
    - Agricultural land reused for clean energy production
    - Decline in traffic volumes

***Population, migration, and household change***
The region experiences overall population growth rather than decline.

- What could this mean for the transportation system?
    - Transportation system would become overburdened and crowded without investments (increased traffic would lead to increased need for maintenance)

    - More funding needed, more bus routes, increased demand for ADA infrastructure
- How might this driving force interact with other driving forces?
    - Growth may cause denser, mixed-use development, leading to mode shift
    - Infill development: vacant malls and big box sites would be reused to support growth
    - A portion of population growth could be related to climate refugees
    - Farmland lost to development pressures
    - Strain on schools, healthcare system
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Current transportation modes would remain, no big shifts
    - Similar energy use/forms

***Technology, artificial intelligence, and automation***
The availability of personal mobility technology increases rapidly.

- What could this mean for the transportation system?
    - Increased conflicts between personal mobility and other modes (freight activity, neighborhood livability)
    - Need to modify driving and road use rules/laws to accommodate new personal mobility technology
    - New infrastructure demand
    - Changing streetscapes
    - Less reliance on transit
- How might this driving force interact with other driving forces?
    - Unaffordability of new technologies could result in inequity
    - More development along new routes and at key nodes
    - More mobility hubs
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Less safety on rural roads
    - E bikes are a fad
    - Aren't compatible with local geography and infrastructure
    - Services accessible by new modes
    - People don't change lifestyle habits or behaviors
    - Limited to electric bikes, scooters, wheelchairs
    - This form of transportation is seasonal

## Group 5

***Climate change, environment, and resilience***
Extreme weather and natural disasters become more severe/frequent.

- What could this mean for the transportation system?
    - Increased damage and deterioration of road networks, more funding to fix
    - Extreme weather makes walking and biking less attractive
    - Potential disruptions to emergency response
    - Climate refugees would lead to increased strain on transportation system
- How might this driving force interact with other driving forces?
    - Development and design decisions could worsen climate impacts (extensive use of impervious surfaces)
    - Influx of climate refugees could lead to increased housing demand and more unaffordability
    - Tourism industries like fishing and winter sports could be negatively impacted

- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Climate refugee migration will happen
    - Increased hazard mitigation/climate resilience planning
    - Increased costs of housing, transportation, basic needs
    - Negative attitudes toward new development will be a major obstacle
    - Proactive planning will be difficult, and will remain responsive to funding priorities

- Road networks deteriorate
- Extreme weather will impact which modes people use
- Need to plan for emergency management

***Freight, logistics, and industrial corridors***
Freight volumes and patterns have a negative impact on aging infrastructure.

- What could this mean for the transportation system?
    - Damage to local and county roads not designed for heavy freight use
    - Closing freight corridors for repairs would put stress on local roads
    - Negative impacts on quality of life from noise/dust
    - Increased infrastructure maintenance costs, unsure of where this funding would come from
    - Autonomous vehicles needing accurate road markings may not be able to navigate current road conditions
- How might this driving force interact with other driving forces?
    - Electric vehicles will result in additional infrastructure needs
    - Climate change will affect road conditions, burden freight network
    - Funding availability (state of good repair vs. expansion) will determine what can be done
- What are some assumptions your group is making when thinking about this driving force? (Have you assumed certain other factors about the future?)
    - Funding for maintenance backlog and state of good repair, new projects deprioritized
    - Due to home-rule, difficulty coordinating between state and local
    - Freight volume impacts are inherently negative
    - Local agencies burdened with costs, little state/federal support
    - Grid development to support electric vehicles will be expensive and difficult
    - Autonomous vehicles will continue to require road markings to operate correctly

## Full group discussion

- Increasing costs + maintenance needs coupled with funding volatility and an increasingly negative attitude towards raising taxes to generate revenue. On top of that, it can be hard, even when the money is there, to staff the organizations and/or find contractors to do the construction work.
- Aging infrastructure will be a challenge across many scenarios, and improved public transit is needed but not easy to fund.
- Most participants didn't assume any radical changes in the kinds of vehicles that would be used, and there is no assumption that home rule will change in the future.
- Accessibility will be an issue because of aging population, potential increase in disability, immigrant populations, rural households.
- Alternative routes need to be part of the network for climate events and in case of other infrastructure disruptions.

- Improved coordination across locals, counties, region, state, feds - when a project is planned, how to make sure we're getting the most for our $? Who owns the road? The ROW nearby? The utilities underneath? What communities is it connecting/benefitting?

## Next steps

The second scenario planning workshop will take place on Tuesday, August 4, 2026. It will explore regional recommendations from HOCTC's Long-Range Transit Plan (LRTP) in the context of five alternative futures, to be developed by the project team based on the outcomes of this first workshop. The purpose of testing LRTP recommendations against the alternative futures is to:

1. Identify which transportation strategies and investments may be 'no regrets' approaches that could succeed under multiple future scenarios,
2. Consider, for transportation strategies and investments that may succeed under certain scenarios but not others, what can be done to impact negative outcomes or improve chances of success, and
3. Develop new recommendations based on the discussion across groups.

# **APPENDIX H.** WORKSHOP #2 HOMEWORK PACKET

HOCTC
HERKIMER-ONEIDA COUNTIES
TRANSPORTATION COUNCIL




# Long-Range Transportation Plan

## *Scenario Planning Workshop #2*

August 4, 2026

# *WORKSHOP PURPOSE*

*The purpose of this workshop is to explore regional goals and strategies from the long-range transportation plan (LRTP) in the context of four future scenarios. The purpose of testing LRTP strategies against the alternative futures is to:*

1. *Understand how LRTP strategies may be enhanced to improve their success under a given future,*
2. *Consider whether there are LRTP strategies that will support one future but not others and the magnitude of these impacts, and*
3. *Identify additional goals and strategies based on a given alternative future.*

# **Introduction:** What is Scenario Planning?

Scenario planning is a process that helps us prepare for multiple futures by imagining the possibilities together. This process differs from a traditional planning process, where we plan for the future by examining past and present data and trends. In scenario planning, we explore what's happening now, what could change, how it could change, how that would affect our region's future, and what strategies we should take to prepare for those impacts. The scenario planning process helps us get out of reacting to the past and present and more towards thinking expansively about the future.

There are several types of scenario planning and processes that a region can undertake. Types of scenario planning include:

- **Normative**—where a community has a clear vision of the future they want
- **Predictive**—where a community wants to predict the most likely future
- **Exploratory**—where a community wants to explore multiple alternative futures

Regions may choose to do one or a combination of scenario planning types. The planning process, the technical analysis conducted, and the tools used will depend on the region's goals for the scenario planning process.

## *Agenda*

- *Brief introductions (15 minutes)*
- *Workshop objective & LRTP goals overview (10 minutes)*
- *Overview of scenarios & small group instructions (10 minutes)*
- *Small group discussions (90 minutes)*
- *Break to grab lunch (15 minutes)*
- *Small group report back & large group discussion (90 minutes)*
- *Next steps (5 minutes)*

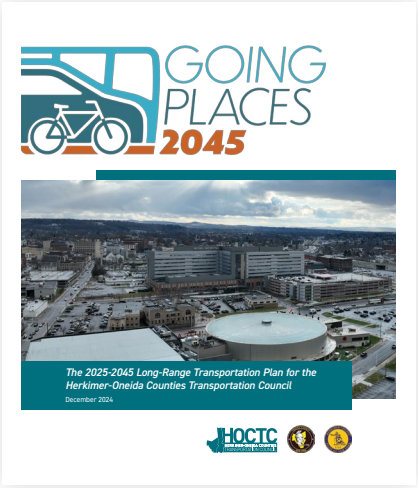
For this exercise, we are using an **exploratory scenario** process to help identify a range of future driving forces and uncertainties. Through the process, the Futures Workgroup (that's you!) will identify and prioritize driving forces and examine how potential futures shaped by those forces could impact the success of the LRTP goals and strategies. Through this process, workshop participants will help identify strategies that are likely to work across a range of uncertain futures and implementation steps that may help improve the success of the adopted strategies and projects.

# Long-Range Transportation Plan Goals and Strategies

***Going Places 2045***, HOCTC's long-range transportation plan, identified five broad goals related to transportation in the region and recommended a set of strategies for each. The Technical Advisory Committee further evaluated HOCTC's transportation goals, and two were identified as top priorities for the agency: **Mobility & Accessibility** and **Safety in Transportation Options**.

The full LRTP can be found here:

oneidacountyny.gov/assets/Planning/Transportation/Projects/HOCTC-GoingPlaces2-121924-FINAL.pdf




## Mobility & Accessibility

Use a strategic approach to provide mobility and accessibility opportunities.

- Ensure sufficient mobility and adequate access to places of work and to locations where goods and services may be obtained.
- Expand intercity and rural public transportation.
- Implement Intelligent Transportation Systems (ITS) strategies and other remedies to improve the efficiency of the transportation network.
- Support multimodal accessibility to the region's tourist facilities, for all travelers including the mobility disadvantaged.
- Enhance existing facilities to provide better bicycle and pedestrian integration within the transportation network.

## Safety in Transportation Options

Proactively address existing safety deficiencies and strategically integrate safety elements into future projects for all roadway users.

- Identify systemwide safety trends and appropriate mitigation measures that can be incorporated into policy, planning, and design standards throughout the region.
- Implement cost-effective improvements that reduce the frequency and severity of crashes along key corridors and intersections.
- Reduce conflicts among transportation modes, including the integration of non-motorized facilities, by evaluating operations and transportation system improvements from a multi-modal lens.
- Support local municipalities and partner agencies in developing safety education and outreach campaigns.



## System Preservation

Invest in preserving the transportation system to make the most sustainable use of existing assets, services, and resources.

- Operate and maintain the transportation network to enhance comfort, convenience, resiliency, safety and security.
- Encourage the continuation of operating assistance for public transportation to ensure adequate levels of service.
- Protect the capital investment infrastructure and contribute to safety and stable traffic flow through state-of-good-repair maintenance.
- Upgrade and strengthen existing transportation routes that are used frequently by heavy vehicles to improve longevity and durability.
- Safeguard the region's transportation system security and safety when integrating emerging transportation technologies.



## Transportation & Land Use Planning Coordination

Develop a transportation system that is supported by and supports regional land use, economic development, and sustainability policies and plans.

- Prioritize transportation improvements that are consistent with regional and local land use, housing, economic development, and sustainability plans.
- Aid in the collaboration between municipalities such that transportation improvements are conducted cost-effectively and with minimized impact to users of the transportation network.
- Minimize transportation improvements that require significant impact on agricultural lands.
- Improve access between housing and commercial areas, industrial sites, and regional employment centers.
- Improve transportation connectivity within rural communities and between rural and urban areas, particularly for disadvantaged populations.



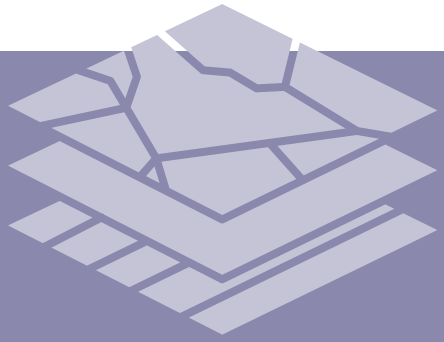
## Environmental Impacts

Avoid and/or mitigate negative environmental impacts while protecting the region's transportation infrastructure from environmental threats.

- Enhance the resiliency of the region's transportation system by preparing infrastructure for the impacts of increasingly extreme weather events.
- Emphasize energy conservation in transportation improvements.
- Encourage transportation improvements that are located within the existing right-of-way while balancing accommodations for non-motorized travelers.
- Ensure equity in the transportation planning process by focusing public outreach within Areas of Persistent Poverty and Historically Disadvantaged communities.
- Implement strategies that balance the use of electric vehicles and renewable energy technologies with the evolving constraints of such technologies and the regional context.
- Mitigate impacts on environmentally sensitive areas, natural, historic, and archeological sites, and stormwater flow patterns.

# *SCENARIOS*

*At the first workshop, participants considered 56 factors across the 13 driving force categories. Through the live polling exercise, small group discussions, and full group discussions, a subset of factors emerged that were more important to workshop participants and applicable to the region. These factors formed the foundations of the draft scenarios, with specific regional examples and lower priority factors weaved in.*



# *SCENARIO 1:* SHIFTING GROUNDS

This scenario describes a future in which the region is responding to significant external shifts. These shifts put HOCTC and local municipalities in a reactive, rather than proactive, planning position, as they are largely outside of local and regional control and difficult to predict.

State and federal funding is unreliable and does not meet regional transportation needs. According to LRTP projections, federal funding is estimated to account for between 70–77% of the region's total transportation budget between 2023 and 2045. In this scenario there is greater volatility year-over-year, impacting HOCTC's ability to think long term about the region's transportation system. Local municipalities generally assume that funding will decline over time and must prioritize projects based on significantly strained budgets. This leaves little room for anything beyond the maintenance and repairs required to keep roads, bridges, and sidewalks open and in acceptable condition.

Knowing that state and federal funding is unstable, municipalities increasingly explore new ways to raise revenue and work collaboratively to address transportation challenges on a regional level, with HOCTC playing a key role in this coordination. Public-private partnerships are preferred but limited, and residents are broadly opposed to tax increases. Municipalities must also balance the varying transportation needs of urban and rural areas within a funding environment where there is less to go around and less certainty about where dollars will come from.

Nationally, the costs associated with vehicle ownership rise and become unaffordable for many households. As a response to increased vehicle and fuel costs, urban residents in the HOCTC region drive less and can more easily shift to other modes, like walking and biking, than rural residents. However, active transportation is not a feasible option for some residents for certain trips, for example large grocery trips or trips during extreme weather. Conflicts between pedestrians and other modes increase due to the need to share existing infrastructure. Public transportation ridership increases, making service more financially efficient and boosting farebox revenue.

Rural residents in Herkimer and Oneida counties feel the increased vehicle costs most acutely, as they are more reliant on personal vehicles to access services and have longer commutes than urban residents. In response, rural residents make fewer trips overall. This is due to trip chaining—making multiple stops during a single trip to and from home—which saves gas, as well as rural residents choosing to cancel trips. Rural residents who don't qualify for special transportation services but cannot afford their private vehicle must make decisions about which trips are the most important, at the expense of others. Increasingly, their daily needs are not being met with existing transportation options.

At the same time, the region's agricultural economy is thriving and attracting new private sector investment. Growth provides new employment opportunities for existing residents but does not attract significant numbers of new residents from outside the region. Agribusiness expansion causes increased freight traffic along major corridors between rural and urban areas, strains supportive infrastructure like utilities, and requires additional land for warehouses to process and store goods.

Herkimer County's outdoor recreation economy—centered around recreational opportunities in the Five Ponds Wilderness and other parks and nature preserves—expands noticeably, though the seasonality of this economy is not enough to spur major investments. Still, the value of these areas, both economically and socially, is codified through regional commitments to conserve wetlands and other wildlife areas. Agritourism, which includes attractions like family farms, farmers markets, and Christmas tree farms, is thriving and growing.



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# *SCENARIO 2:* BOOMTOWNS

This scenario describes a future in which the region experiences overall population growth rather than decline, though growth and development are concentrated in existing urban areas. This leads to further densification of cities like Rome and Utica and along Interstate 90 in the Mohawk River Valley corridor, which allows for the removal or decommissioning of aging and low-volume infrastructure that becomes underutilized. In turn, funds that would be used to maintain and repair these assets can be redirected to other transportation projects.

Growth is spurred by industries that are easier to locate in urban areas, specifically professional services, hospitality, healthcare, and education. Large corporate campuses like the Griffiss Business and Technology Park in Rome also develop close-in to cities, allowing for direct and short commutes and creating jobs that attract new residents from outside the region. Investment from New York State and Oneida County in the Triangle site at the Griffiss Business and Technology Park pays off; the Chobani manufacturing facility creates over 1,000 new jobs and strengthens the regional agricultural sector through partnerships with nearby dairy farms. Proposed mixed-use projects like the West Street Impact Center in Utica's Cornhill neighborhood and the St. Luke's Hospital redevelopment in New Hartford contribute to densification and walkability. Increasingly, residents live and work within their neighborhoods, and traffic volumes decline overall, leading to fewer traffic conflicts and crashes.

There is competition among local municipalities to attract major employers, and a given municipality's leverage depends on their ability to provide cost breaks and other incentives that would draw private investment.

The region's population increasingly concentrates around these urban employment centers and remote work opportunities expand, reducing urban residents' reliance on personal vehicles to access employment, services, and amenities. Employment opportunities

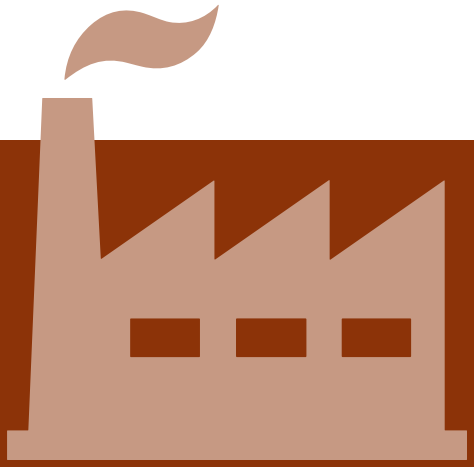
allow the region to retain younger residents, which slows the overall aging of the urban population. The mode shift away from private vehicles and towards walking, biking, and public transportation is facilitated by both densification and value capture strategies, the costs of which are passed on to renters and consumers. The percentage of sidewalks that meet Americans with Disabilities Act standards increases in areas with concentrated development, while sidewalk conditions are poorer outside of these areas.

Emerging walkable, amenity-rich neighborhoods are attractive to new residents, driving demand for housing and, by extension, driving up housing costs. While this increases tax bases of growing cities, meaning more public investment, households with lower incomes are increasingly shut out of central housing markets. Income disparities and varying levels of access to new amenities emerge along spatial/geographic lines, with higher income urban areas benefiting from aesthetic and safety improvements like murals, green spaces, high visibility crosswalks, and pedestrian lighting.

In contrast to concentrated urban growth, rural areas lose employers and population, resulting in a lower tax base and reduced federal formula funding for transit services. Younger rural residents move to urban areas to be closer to employment and education opportunities. Essential services and infrastructure cannot be sustained with rural budgets. Because development is concentrated in urban areas, agricultural land is largely preserved; however, due to poor economic conditions in rural areas, this land is also underutilized.



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# *SCENARIO 3:* THE ELECTRIC SPRAWL

This scenario describes a future in which municipalities are having to respond to growth in land- and energy-intensive industries, including continued growth in primary metal manufacturing and machinery manufacturing. Population growth and employment opportunities expand significantly but unevenly across the region, creating large-scale shifts in land use patterns. Urban areas do not experience significant densification, and farmland is lost from development, industrial uses, and energy infrastructure.

New and expanded work sites attract people from outside the region and the overall population increases, but these sites are dispersed and put intense pressure on agricultural land. The state's moratorium on data centers ends, and some of this sprawling, resource-intensive development is attributed to relaxed regulations. Development is low density and land uses are largely siloed, meaning that residential areas are not co-located with emerging work sites, and emerging work sites are not located near existing urban centers. Rather than resulting in densification in urban areas, residential development extends outward from cities through the conversion of agricultural land. This creates scattered, low-density suburbs connected by vehicle-only roadways (rather than corridors that can accommodate multiple transportation modes) to urban areas and work sites. Because of the distance between communities, pedestrian infrastructure is not prioritized and the region's reliance on driving is further ingrained through single-use corridors. With more vehicles on the road more often, traffic incidents and crashes increase.

As the region's population grows and commute times increase, the road network experiences greater traffic congestion, and it becomes more expensive for municipalities to maintain a state of good repair. Road conditions are further degraded by expanded freight needs, as dispersed work sites require heavy duty container trucks to travel farther, and the region struggles to maintain, modernize, or decommission key freight assets due to the spatial distribution of these assets. Local

municipalities rarely coordinate to plan for connectivity between emerging work sites or address traffic volumes across the region, leading to fragmented communities and varying levels of infrastructure investment, as independent towns and villages have the authority to develop their own land use ordinances and zoning codes. New traffic bottlenecks emerge due to competing freight and commuter needs.

The rapid electrification of the transportation sector creates demand for electricity beyond the capacity of the existing energy grid. This is largely driven by shifts in state and federal policy that incentivize and heavily subsidize private fleet electrification, causing new freight technologies to be taken up rapidly. The cost of utilities, particularly energy and transportation, goes up significantly for households in the region as new work sites and industries have high energy demands and require longer commutes. Broadband access expands to previously unserved parts of Herkimer and Oneida counties, supporting telehealth in areas with limited access to medical centers.

The electrification of transportation extends beyond fleet vehicles to personal mobility, and residents have broader access to electric vehicles, bikes, and scooters. This is partially due to residents purchasing these technologies for personal use, and partially due to the expansion of private micromobility companies that provide per-mile or per-minute e-bike and e-scooter rentals. Conflicts between electric micromobility and other transportation modes increase, forcing local municipalities to quickly respond by regulating micromobility use. Municipalities are also pressured to install public electric vehicle charging stations and dedicate most of their grant writing capacity to identifying and applying for these funds.



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# *SCENARIO 4:* WEATHER OR NOT

This scenario describes a future in which daily life is increasingly shaped by climate change, while economic and demographic trends largely unfold as currently projected. Short-, medium-, and long-term transportation revenue generally aligns with projections from the LRTP, meaning that highway funding is sufficient to maintain a state of good repair for roads, but the amount of funding available for bridge replacement and transit services does not meet what is needed.

Flooding and other extreme weather events become more acute and cause significant, recurring disruptions to road networks, making roads and bridges occasionally difficult or impossible to navigate. Bridge projects currently funded through BridgeNY are completed as planned, and municipalities continue to seek funding for the other identified bridge projects. Climate events compound the effects of normal wear and tear as bridge projects await funding, making certain bridges temporarily or indefinitely impassable. In turn, connectivity is intermittently impacted, limiting access to economic hubs, recreation, shopping, and medical centers. Emergency services vehicles are occasionally rerouted due to flooding on roads and bridges, increasing response times and making it more difficult to respond to rural calls. This, in turn, worsens health outcomes for people needing emergency medical services.

The vast majority of transportation investment in the region is dedicated to preserving the existing roadway network, though complete street principles are increasingly incorporated in urban areas where possible. Funding for dedicated active transportation infrastructure, while increasingly desired by urban residents, is primarily dependent on competitive grants and is not approached at a system-wide level. Staff capacity to pursue competitive grant opportunities is limited in smaller agencies, but without significant targeted investment and coordinated planning, the percent of commuters who walk, bike, or take transit regularly remains low.

Even as the region itself is increasingly impacted by extreme climate events, the Mohawk River Valley corridor sees an influx of climate refugees—people who have had to leave their homes because the effects of climate change have made them uninhabitable—resulting in demand for more non-driving options in Rome, Utica, and smaller urban areas as well as greater demand for housing and social services generally. The influx of climate refugees occurs in addition to the region's current refugee resettlement patterns centered around Utica, compounding existing barriers related to employment and transportation.

The region's rural population ages and declines in number, continuing the trend from previous years. Most older adults in rural areas choose to age in place. This creates demand for travel options that are responsive to the special transportation needs of older adults, for example connecting rural Herkimer County residents to services in Herkimer, Rome, and Utica. Population decline is more pronounced in largely rural Herkimer County, which reduces the amount of FTA Section 5310 and 5311 formula funding available to support transportation services for older adults, people with disabilities, and rural residents.

Agribusinesses and agritourism (including family farms, farmers markets, and Christmas tree farms) face operational challenges caused by the increase in extreme climate events like flooding, both in terms of what farms can cultivate and in the logistical difficulties of transporting goods across flooded bridges and roadways. The associated risk and instability cause these businesses to reduce their workforce, making agriculture and related sectors a smaller portion of the region's overall economy.



NOTES

## Small Group Questions

In your group, for the future scenario you were given to explore, consider each of the LRTP goals described previously. For each LRTP goal, identify the transportation investments or strategies that you think would best help the region meet that goal, given the future scenario that you have been assigned.

As you identify strategies, also record any assumptions you're making about the future. Consider, too:

- Timing of the strategy for maximum effectiveness - do some of your strategies need to be started immediately to be viable for completion in the future?
- Who are the likely beneficiaries of the strategy? Who is likely to be negatively affected?
- Who would be responsible for developing and implementing the strategy? Are there other supports needed in place for it to succeed?
- Would some strategies work well in addressing one goal but create challenges in addressing another goal?

## Full Group Questions

During the report back, each scenario group will share their ideas for strategies to meet the LRTP goals and the assumptions they made with respect to those strategies. As a full group, we will discuss strategies that are emerging as likely to be successful across different futures, assumptions that have been highlighted across different futures, and strategies that may become valuable in the future if specific conditions exist or trends begin to emerge.

# **APPENDIX I.** WORKSHOP #2 PRESENTATION



# HOCTC SCENARIO PLANNING

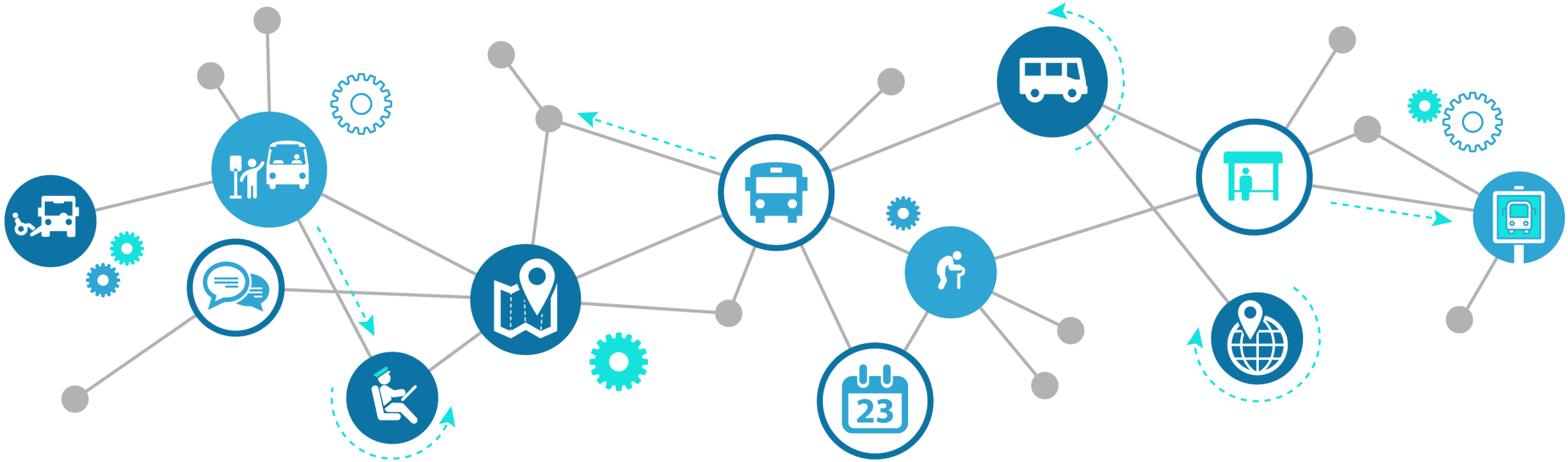
## Testing LRTP Goals Against Multiple Futures

August 4, 2026

transpogroup
WHAT TRANSPORTATION CAN BE.

# TODAY'S AGENDA

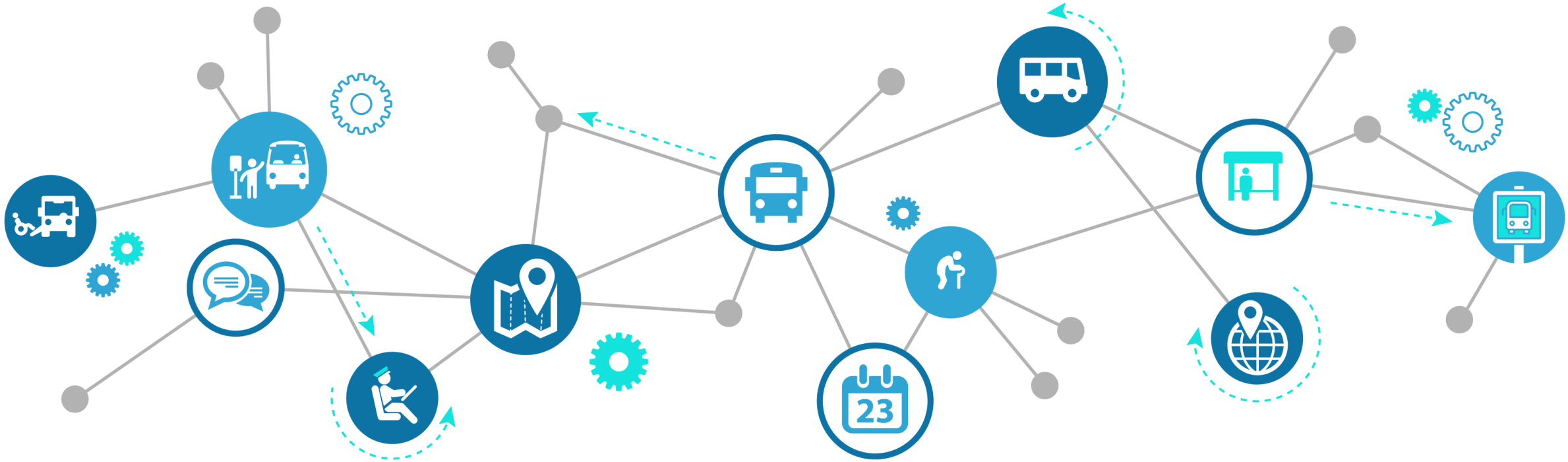
- Brief introductions
- Workshop objective & LRTP goals overview
- Overview of scenarios & small group instructions
- Small group discussions
- Break to grab lunch
- Small group report back & large group discussion
- Next steps




# INTRODUCTIONS & ICEBREAKER

# INTROS & ICEBREAKER

- Name
- Organization
- If you could have renamed yourself when you were 9 years old, what would you have picked?

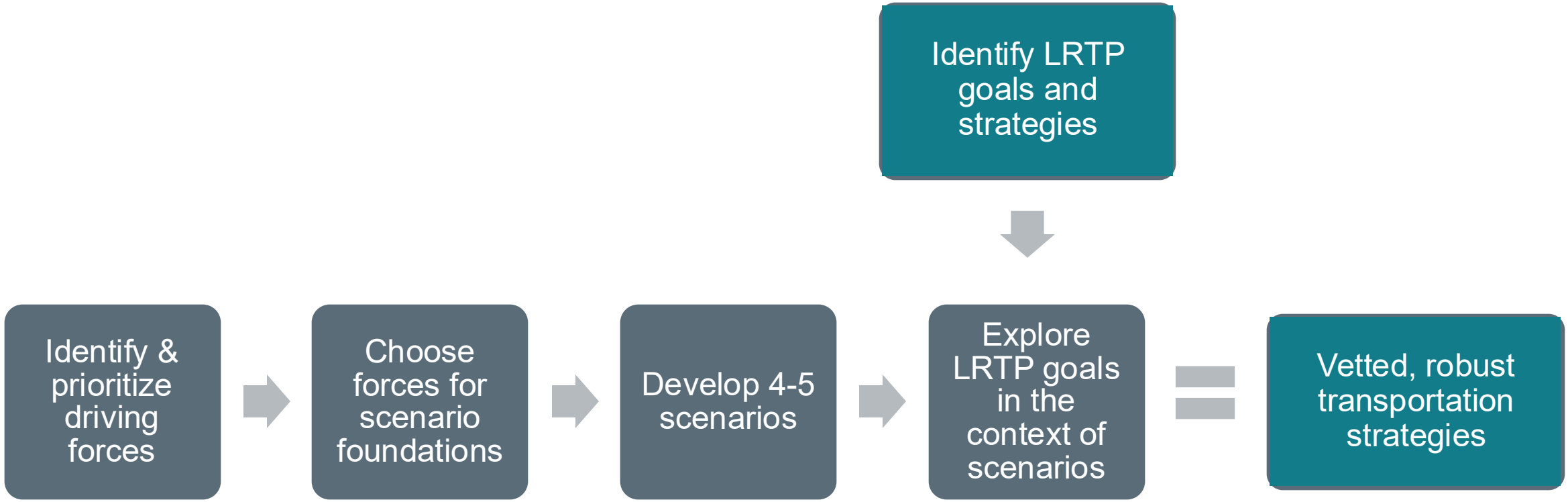



# WHAT IS SCENARIO PLANNING?

# WHAT IS SCENARIO PLANNING?

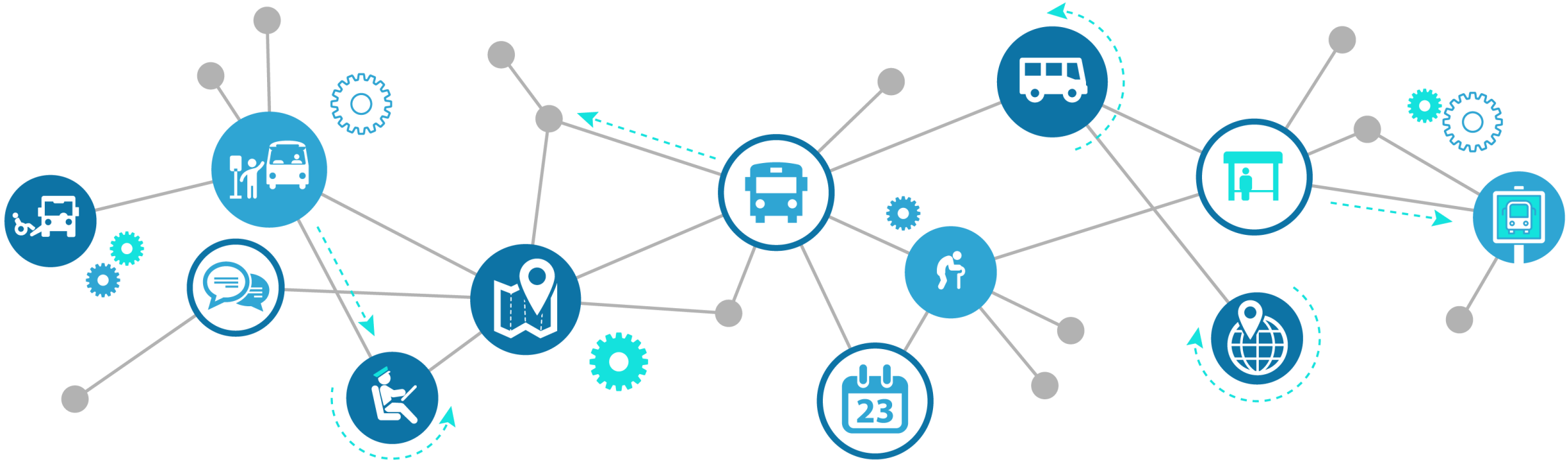
- Prepare for multiple futures by imagining possibilities together.
- Explore what's happening now, how it could change, how that would affect our region's future, and what strategies we should take to prepare for those impacts.
- Three general types:
  - Normative – a community has a clear vision of the future they want
  - Predictive – a community wants to predict the most likely future
  - **Exploratory** – a community wants to explore multiple alternative futures

# EXPLORATORY SCENARIO PLANNING PROCESS






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# LONG-RANGE TRANSPORTATION PLAN GOALS

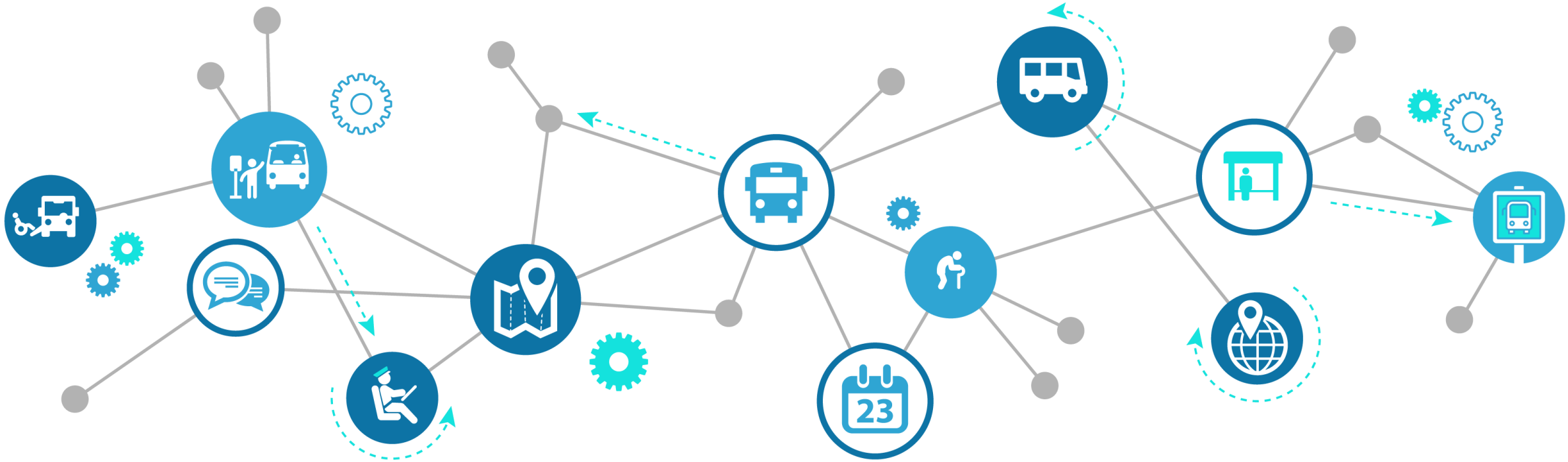
# GOING PLACES 2045

| Mobility and Accessibility | Safety in Transportation Options | System Preservation | Transportation and Land Use Planning Coordination | Environmental Impacts |
|---|---|---|---|---|
| Use a strategic approach to provide mobility and accessibility opportunities. | Proactively address existing safety deficiencies and strategically integrate safety elements into future projects for all roadway users. | Invest in preserving the transportation system to make the most sustainable use of existing assets, services, and resources. | Develop a transportation system that is supported by and supports regional land use, economic development, and sustainability policies and plans. | Avoid and/or mitigate negative environmental impacts while protecting the region's transportation infrastructure from environmental threats. |

These goals were identified as top priorities by the LRTP Technical Advisory Committee

# LRTP GOALS AND SCENARIO PLANNING

- Imagine living in the future described in your scenario. In the world of that scenario, what transportation investments and strategies would you recommend to meet LRTP goals?




# OVERVIEW OF SCENARIOS

# HOW DID WE GET HERE?

- Identified driving forces to help develop future scenarios
  - Two virtual driving forces brainstorming sessions in May
  - Half-day in-person workshop to rank driving forces and identify potential impacts in June
- Developed future scenarios
- Identify strategies to meet LRTP goals under different future scenarios workshop today!

# SCENARIO 1. SHIFTING GROUNDS

- Reactive, rather than proactive, planning (shifts are largely outside of local/regional control)
- State and federal funding is unreliable and doesn't align with LRTP projections
- Costs of private vehicle ownership increase significantly
- Agritourism/outdoor recreation economies are thriving

**Example recommendation for LRTP**

To meet the Mobility and Accessibility LRTP goal in the context of this scenario, this group might respond to unreliable state/federal funding and increased private vehicle costs by recommending flexible transportation investments, like weekly shopper shuttle pilots that would connect rural residents to urban services/amenities several times per week, rather than large investments in any one mode.

# SCENARIO 2. BOOMTOWNS

- Overall regional population and economic growth
- Growth is concentrated in existing urban areas – emergence of mixed-use employment centers
- Densification preserves agricultural land, though rural economies face disinvestment
- Benefits of growth are unevenly distributed along spatial lines

**Example recommendation for LRTP**

To meet the Transportation and Land Use Planning Coordination LRTP goal in the context of this scenario, this group might respond to the concentrated growth of mixed-use employment centers in existing urban areas by decommissioning low-volume infrastructure and using the resulting leftover funds to strengthen a core regional transportation network between rural and urban areas.

# SCENARIO 3. ELECTRIC SPRAWL

- Overall regional population and economic growth
- Growth occurs in land- and resource-intensive industries – emergence of dispersed work sites
- Land uses are largely siloed
- Rapid electrification of transportation sector strains grid capacity

**Example recommendation for LRTP**

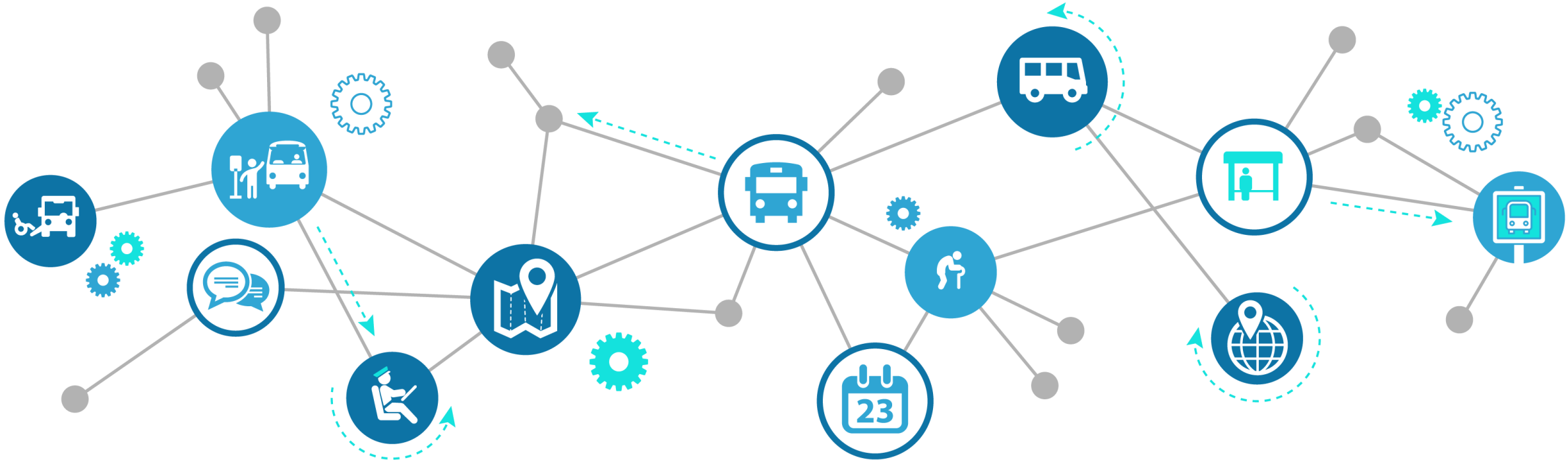
To meet the Environmental Impacts LRTP goal in the context of this scenario, this group might respond to the significant increase in traffic volume due to low-density, siloed land uses by investing in green infrastructure and bioretention facilities that prevent polluted roadway runoff from entering wetlands and other environmentally-sensitive areas.

# SCENARIO 3. WEATHER OR NOT

- Flooding and extreme weather events increase in frequency and intensity
- Rural population ages and declines in number
- Most transportation funding is dedicated to repairs and maintenance
- Influx of climate refugees to existing urban areas, greater need for social services

**Example recommendation for LRTP**

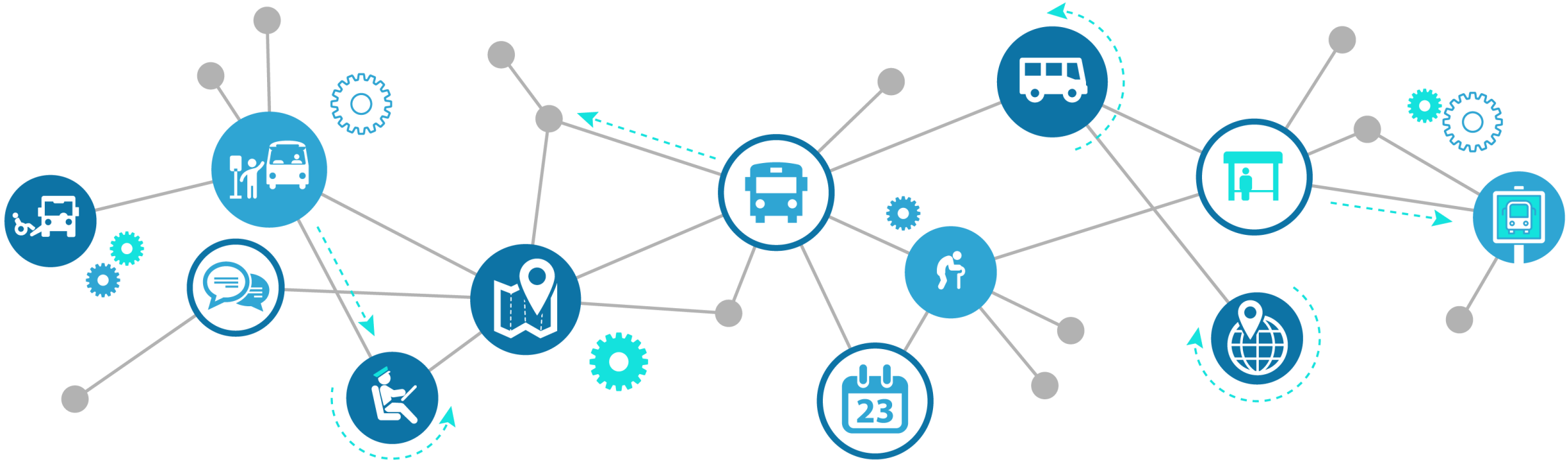
To meet the System Preservation LRTP goal in the context of this scenario, this group may respond to roadway and bridge obstructions from flooding by investing in Intelligent Transportation System technologies like sensors to monitor water depth and other conditions. This information could be used by maintenance crews to prioritize work orders and by EMS dispatchers to reroute vehicles.




# SMALL GROUP INSTRUCTIONS

# IN SMALL GROUPS

- For the future scenario you were given to explore, for each LRTP goal, identify the transportation investments or strategies that you think would best help the region meet that goal.
- As you identify strategies, also record any assumptions you're making about the future. Consider, too:
  - Timing of the strategy for maximum effectiveness - do some of your strategies need to be started immediately to be viable for completion in the future?
  - Who are the likely beneficiaries of the strategy? Who is likely to be negatively affected?
  - Who would be responsible for developing and implementing the strategy? Are there other supports needed in place for it to succeed?
  - Would some strategies work well in addressing one goal but create challenges in addressing another goal?




# NEXT STEPS

# NEXT STEPS

- Summarize workshops
- Identify ‘no-regrets’ recommendations
- Summarize all recommendations and relevant factors (timing, potential mitigations needed, etc.)

# **APPENDIX J.** WORKSHOP #2 MEETING NOTES

transpogroup
WHAT TRANSPORTATION CAN BE.

***MEMORANDUM***

| | | | |
|---|---|---|---|
| **Date:** | August 17, 2026 | **TG:** | 1.23341.00 |
| **To:** | Julie Richmond, Amy Heiderich | | |
| **From:** | Transpo Group | | |
| **cc:** | Scenario Planning Workshop #2 Participants | | |
| **Subject:** | HOCTC Scenario Planning Workshop #2 – Meeting Notes | | |

The second Herkimer-Oneida Counties Transportation Council (HOCTC) scenario planning workshop was held on August 4, 2026, at Mohawk Valley Community College in Utica, New York, from 10am–2pm.

## Introduction

The purpose of this workshop was to explore regional recommendations from HOCTC's Long Range Transportation Plan in the context of four alternative futures and:

- Identify which transportation strategies and investments may be 'no regrets' approaches that could succeed under multiple future scenarios
- Consider, for transportation strategies and investments that may succeed under certain scenarios but not others, what can be done to impact negative outcomes or improve chances of success
- Develop new recommendations based on discussions across groups.

### *Attendees:*

Allison Cox, Mohawk Valley Community Action Agency (MVCAA)
Allison Perry, New York State Department of Transportation (NYSDOT)
Amy Heiderich, HOCTC
Chip Bassett, Kirkland Trails
Claire Papendick, NYSDOT
Dan Harp, NYSDOT
Dan Olivadoti, 50 Forward Mohawk Valley
Darlene Mack-Brown, MVCAA
Francisca Ortiz, HOCTC
Grace Whiffen, HOCTC
Hannah Dillenbeck, Mohawk Valley Economic Development District (MVEDD)
Heidi Ganum, Transpo Group
Hanna Sauberan, HOCTC
John Duesing, Transpo Group
John Healt, Tug Hill Commission
Joshua Dahlin, HOCTC
Julie Richmond, HOCTC
Matt Pawlusik, Oneida County Department of Planning
Maya DeFazio, HOCTC
Miriam Doud, Living ADK
Samantha Morrone, NYSDOT
Sophie Axe, HOCTC
Stephanie Tyoe, Herkimer County Highway Department

## *Scenarios*

The project team developed four future scenarios based on the outcomes of the first workshop. Each participant was assigned to a scenario (Table 1).

### Shifting Grounds

This scenario describes a future in which the region is responding to significant external shifts. These shifts put HOCTC and local municipalities in a reactive, rather than proactive, planning position, as they are largely outside of local and regional control and difficult to predict. Key elements of this scenario include:

- Reactive, rather than proactive, planning (shifts are largely outside of local/regional control)
- State and federal funding is unreliable and doesn't align with LRTP projections
- Costs of private vehicle ownership increase significantly
- Agritourism/outdoor recreation economies are thriving

### Boomtowns

This scenario describes a future in which the region experiences overall population growth rather than decline, though growth and development are concentrated in existing urban areas. This leads to further densification of cities like Rome and Utica and along Interstate 90 in the Mohawk River Valley corridor, which allows for the removal or decommissioning of aging and low-volume infrastructure that becomes underutilized. In turn, funds that would be used to maintain and repair these assets can be redirected to other transportation projects. Key elements of this scenario include:

- Overall regional population and economic growth
- Growth is concentrated in existing urban areas – emergence of mixed-use employment centers
- Densification preserves agricultural land, though rural economies face disinvestment
- Benefits of growth are unevenly distributed along spatial lines

### Electric Sprawl

This scenario describes a future in which municipalities are having to respond to growth in land- and energy-intensive industries, including continued growth in primary metal manufacturing and machinery manufacturing. Population growth and employment opportunities expand significantly but unevenly across the region, creating large-scale shifts in land use patterns. Urban areas do not experience significant densification, and farmland is lost from development, industrial uses, and energy infrastructure. Key elements of this scenario include:

- Overall regional population and economic growth
- Growth occurs in land- and resource-intensive industries –emergence of dispersed worksites
- Land uses are largely siloed
- Rapid electrification of transportation sector strains grid capacity

### Weather or Not

This scenario describes a future in which daily life is increasingly shaped by climate change, while economic and demographic trends largely unfold as currently projected. Short-, medium-, and long-term transportation revenue generally aligns with projections from the LRTP, meaning that highway funding is sufficient to maintain a state of good repair for roads, but the amount

of funding available for bridge replacement and transit services does not meet what is needed. Key elements of this scenario include:

- Flooding and extreme weather events increase in frequency and intensity
- Rural population ages and declines in number
- Most transportation funding is dedicated to repairs and maintenance
- Influx of climate refugees to existing urban areas, greater need for social services

*Table 1. Scenario assignments*

| Shifting Grounds | Boomtowns | Electric Sprawl | Weather or Not |
|---|---|---|---|
| Miriam Doud | Dan Olivadoti | Darlene Mack-Brown | Stephanie Tyoe |
| Allison Cox | Hannah Dillenbeck | Daniel Harp | John Healt |
| Claire Papendick | Samantha Morrone | Matt Pawlusik | Allison Perry |
| Chip Bassett | Maya DeFazio* | Grace Whiffen* | Amy Heiderich* |
| Sophie Axe* | Hanna Sauberan* | John Duesing* | Francisca Ortiz* |
| Joshua Dahlin* | | | |

Asterisk (*) indicates HOCTC or consultant staff

## *Long-Range Transportation Plan Goals*

Going Places 2045, HOCTC's long-range transportation plan, identified five broad goals related to transportation in the region and recommended a set of strategies for each. The Technical Advisory Committee further evaluated HOCTC's transportation goals, and two were identified as top priorities for the agency: Mobility & Accessibility and Safety in Transportation Options.

### Mobility & Accessibility

Use a strategic approach to provide mobility and accessibility opportunities.

- Ensure sufficient mobility and adequate access to places of work and to locations where goods and services may be obtained.
- Expand intercity and rural public transportation.
- Implement Intelligent Transportation Systems (ITS) strategies and other remedies to improve the efficiency of the transportation network.
- Support multimodal accessibility to the region's tourist facilities, for all travelers including the mobility disadvantaged.
- Enhance existing facilities to provide better bicycle and pedestrian integration within the transportation network.

### Safety in Transportation Options

Proactively address existing safety deficiencies and strategically integrate safety elements into future projects for all roadway users.

- Identify systemwide safety trends and appropriate mitigation measures that can be incorporated into policy, planning, and design standards throughout the region.
- Implement cost-effective improvements that reduce the frequency and severity of crashes along key corridors and intersections.
- Reduce conflicts among transportation modes, including the integration of non-motorized facilities, by evaluating operations and transportation system improvements from a multi-modal lens.
- Support local municipalities and partner agencies in developing safety education and outreach campaigns.

### System Preservation

Invest in preserving the transportation system to make the most sustainable use of existing assets, services, and resources.

- Operate and maintain the transportation network to enhance comfort, convenience, resiliency, safety and security.
- Encourage the continuation of operating assistance for public transportation to ensure adequate levels of service.
- Protect the capital investment infrastructure and contribute to safety and stable traffic flow through state-of-good-repair maintenance.
- Upgrade and strengthen existing transportation routes that are used frequently by heavy vehicles to improve longevity and durability.
- Safeguard the region's transportation system security and safety when integrating emerging transportation technologies.

### Transportation & Land Use Planning Coordination

Develop a transportation system that is supported by and supports regional land use, economic development, and sustainability policies and plans.

- Prioritize transportation improvements that are consistent with regional and local land use, housing, economic development, and sustainability plans.
- Aid in the collaboration between municipalities such that transportation improvements are conducted cost-effectively and with minimized impact to users of the transportation network.
- Minimize transportation improvements that require significant impact on agricultural lands.
- Improve access between housing and commercial areas, industrial sites, and regional employment centers.
- Improve transportation connectivity within rural communities and between rural and urban areas, particularly for disadvantaged populations.

### Environmental Impacts

Avoid and/or mitigate negative environmental impacts while protecting the region's transportation infrastructure from environmental threats.

- Enhance the resiliency of the region's transportation system by preparing infrastructure for the impacts of increasingly extreme weather events.
- Emphasize energy conservation in transportation improvements.
- Encourage transportation improvements that are located within the existing right-of-way while balancing accommodations for non-motorized travelers.
- Ensure equity in the transportation planning process by focusing public outreach within Environmental Justice Areas of Persistent Poverty and Historically Disadvantaged communities.
- Implement strategies that balance the use of electric vehicles and renewable energy technologies with the evolving constraints of such technologies and the regional context.
- Mitigate impacts on environmentally sensitive areas, natural, historic, and archeological sites, and stormwater flow patterns.

## *Small Group Discussions*

Each small group was asked to identify the transportation investments or strategies they thought would best help the region meet LRTP goals within the context of their assigned scenario. Groups were also asked to consider:

- Timing of the strategy for maximum effectiveness - do some of the strategies need to be started immediately to be viable for completion in the future?
- Who are the likely beneficiaries of the strategy? Who is likely to be negatively affected?
- Who would be responsible for developing and implementing the strategy? Are there other supports needed in place for it to succeed?
- Would some strategies work well in addressing one goal but create challenges in addressing another goal?

## Shifting Grounds

### *Mobility and Accessibility*

*Strategies*

- Fund shopper shuttles in collaboration with non-profits
- Develop trails to promote tourism
- Purchase additional buses that are ADA accessible and can accommodate bikes
- Install bike racks at key destinations to promote transportation options
- Repurpose unused infrastructure for biking and walking trails
- Promote employer-sponsored transportation (carpool/vanpool)
- Invest in mobile services (libraries, clinics, veggie van, basic necessities van)
- Tourist-oriented buses (tours)

*Assumptions*

- Bike ridership will not grow much without targeted investments to improve infrastructure
- Weather will impact feasibility of cycling (i.e., heavy snow, prolonged heat will deter potential riders)
- Better to invest in existing services utilizing existing infrastructure
- Funding sources and amounts will decrease
- Strategies may require large upfront technology investments

*Timing*

Carpool programs can be developed in the short term.

*Responsible Parties*

Local municipalities, county, and state agencies

### *Safety in Transportation Options*

*Strategies*

- Safety campaigns, especially in rural areas
- Driver education focused on sharing the road with bicyclists
- Better signage and road markings
- Invest in smart technology in high crash locations
- Regulate electric bicycles
- Prioritize low-cost safety measures likes restriping, signage, and lighting
- Volunteer rideshare program

*Assumptions*

- People who are trained in transportation safety will make safer decisions
- People will participate in trainings and safety programs
- People traveling without a vehicle are doing so because they do not have access to a vehicle or cannot drive

*Timing*
Safety education campaigns and signage can be developed in the short term, ITS investments will be longer term

*Beneficiaries*
Pedestrians and cyclists

*Responsible Parties*
DMV, local municipalities

***System Preservation***

*Strategies*
- Develop clear investment criteria/priorities
- Advertise and provide incentives for using public transportation
- Streamline design/construction processes
- Invest in stormwater infrastructure
- Address issues on system-wide level, not case-by-case

*Assumptions*
Clear guidelines

*Responsible Parties*
Local, county, and state agencies

***Transportation and Land Use Planning Coordination***

*Strategies*
- Restrict sprawl with zoning code updates
- Work with tourism organizations to provide non-driving options for tourists (shuttles)
- Expand transit service span to encourage mode shift
- Public-private partnerships

*Assumptions*
People will use transit if it's available, people want to live in mixed use areas

*Timing*
Zoning changes should be developed in the short term

*Beneficiaries*
Employers, transit providers

*Responsible Parties*
Municipalities

## Boomtowns

***Mobility and Accessibility***

*Strategies*
- Use saved/allocated funds from decommissioned infrastructure maintenance to support transportation options like transit and active transportation infrastructure
- Hire a mobility manager to coordinate stakeholders around common goals
- Repurpose underutilized vehicle bridges/infrastructure for pedestrians and cyclist use (reduced maintenance costs)

- Invest in ADA upgrades to sidewalks to improve rural connectivity
- Encourage dense, mixed-use development
- Integrate transportation planning with broadband access, utilities extensions, other infrastructure investments

*Timing*
Coordination between agencies and planning for mixed-use development can start now.

*Beneficiaries*
The general public, pedestrians, cyclists

*Responsible Parties*
Elected officials, county and state agencies, the public, nonprofits

*Conflicts with Other Goals*
Dense development may concentrate negative environmental impacts.

***Safety in Transportation Options***

*Strategies*
- Improve signage and wayfinding
- K-12 bike education programs
- E-bike/scooter regulations
- Invest in better street lighting

*Timing*
Planning and public education can begin now and be ongoing.

*Beneficiaries*
The public

*Responsible Parties*
Road owners, law enforcement, the public and advocates

***System Preservation***

*Strategies*
- Digital inventory of existing assets, condition, use to prioritize preservation
- Upgrade traffic signal detection, consider roundabouts
- Install culverts and drainage technology during preservation projects
- Remove parking standards
- Identify specific routes for heavy vehicles to reduce impact on other parts of network

*Timing*
Continue to maintain a state of good repair and begin asset inventory now.

*Beneficiaries*
The public, local municipalities

*Responsible Parties*
County planning department, local municipalities, MVEDD, NYSDOT

*Conflicts with Other Goals*
Prioritizing a state of good repair will reduce the amount of funding available for infrastructure upgrades that accommodate new modes.

***Transportation and Land Use Planning Coordination***

*Strategies*

- Update zoning and comprehensive plans
- Pursue pro-housing certification and technical assistance
- Incentivize downtown infill development and mixed-use redevelopment
- Protect agricultural land using development regulations
- Support mode shift for agricultural products from truck to rail to reduce impact on highway network

*Timing*
Coordination and planning between agencies can start now.

*Beneficiaries*
The public, businesses and property owners, local municipalities, rural communities

*Responsible Parties*
Local municipalities, elected officials, property owners, businesses

*Conflicts with Other Goals*

- More money given to urban areas than rural areas
- Dense development may concentrate negative environmental impacts

***Environmental Impacts***

Strategies

- Invest in green infrastructure
- Require new development projects to build underground power lines
- Prioritize roundabouts instead of traffic signals to reduce energy usage and vehicle idling
- Expand broadband to promote remote work

*Timing*
Develop and implement environmental regulations now.

*Beneficiaries*
The public

*Responsible Parties*
State agencies, local municipalities, developers

*Conflicts with Other Goals*
Prioritizing environmental impacts will reduce funding to achieve other goals.

## Electric Sprawl

***Mobility and Accessibility***

*Strategies*

- Expand bus routes
- Work with employers to provide transportation options to their employees
- Prioritize infrastructure investments to accommodate increased traffic volumes

*Assumptions*
Insufficient funding and limited support, travelers benefit at expense of government, municipalities in reactive rather than proactive position.

*Timing*
As soon as possible

*Beneficiaries*
Residents

*Responsible parties*
Elected officials, companies, local and state agencies

***Safety in Transportation Options***

*Strategies*

- Improve pedestrian and cyclist infrastructure
- Evaluate current freight traffic patterns and develop dedicated freight corridors
- Target local schools for pedestrian safety campaigns
- Invest in ITS to improve safety
- Develop rideshare/vanpool-type programs to reduce traffic volume

*Timing*
Program and project development should start now

*Beneficiaries*
Everyone

*Responsible Parties*
Transportation providers, local municipalities, elected officials, schools, safety advocates, state and federal agencies

***System Preservation***

*Strategies*

- Develop multimodal hubs around existing train stations
- Prioritize maintaining roads that heavy vehicles use
- Introduce new levies to fund system needs
- Develop plan to prioritize/triage maintenance needs
- Invest in grant writing capacity

*Timing*
Start soon, actions will take time because of the coordination required

*Beneficiaries*
Residents, emergency services

*Responsible Parties*
Elected officials, companies, local/state/federal agencies

***Transportation and Land Use Planning Coordination***

*Strategies*

- Farmland protection plans
- Update zoning codes to allow for transit-oriented development, mixed-use
- Cluster zoning to preserve open space
- Implement Purchase of Development Rights programs

*Assumptions*
Preference for low-density development, significant resistance to zoning changes

*Timing*
Long range – strategies will take years

*Beneficiaries*
Commuters, people who do not drive

*Responsible Parties*
Elected officials, contractors, businesses, local municipalities

***Environmental Impacts***

*Strategies*
- Invest in alternative energy sources without consuming green space
- Culverts and floodplain management
- Increase enforcement and fines for environmental regulations
- Make large industries pay for energy consumption

*Timing*
Start now, strategies are long range

*Beneficiaries*
Everyone

*Responsible Parties*
Companies, elected officials, agencies/organizations

## Weather or Not

***Mobility and Accessibility***

*Strategies*
- Enhance snow storage, greenery, wind barriers to improve roadway conditions
- Invest in technology to manage stormwater and prevent flooding from occurring in the first place (proactive rather than reactive approach)
- Enhance and expand trail networks

*Assumptions*
Climate and weather will continue to get more extreme into the future

*Timing*
Start now

*Responsible Parties*
Engineering departments, State Department of Environmental Conservation

***Safety in Transportation Options***

*Strategies*
- Safety education (emergency preparedness)
- Invest in emergency notification systems, especially for rural and offline residents
- Invest in speed control in Northern Oneida and Herkimer counties

*Assumptions*
Many residents will have phones to receive emergency notifications; necessary information is available but needs to be utilized more effectively

*Timing*
Start with safety education

***System Preservation***

*Strategies*
- Provide CDL training courses to encourage young people to work in the region
- Change highway budget
- Expand use of canal/rail systems

*Assumptions*
- Consolidation will occur

*Responsible Parties*
- Start now to keep people in the area

***Transportation Planning and Land Use Coordination***

*Strategies*
- Invest in/prioritize solar power in new developments
- Utilize canal/rail to reduce freight impact on roadways

*Assumptions*
- Flooding will be controllable through techniques such as diversion

*Timing*
- Short term

*Responsible Parties*
- Municipalities, since land use is typically a localized issue

***Environmental Impacts***

*Strategies*
- Implement green infrastructure along roadways
- Promote transportation alternatives through bike and scooter rental programs

*Assumptions*
Funding will be available and increase over time, little pushback from residents

## *Full Group Discussion*

After small groups developed strategies for achieving LRTP goals in the context of their given scenario, participants discussed these strategies collectively to determine which might work across multiple futures and where there might be conflicts.

### Mobility and Accessibility

- Sidewalk improvements should be coupled with green infrastructure to account for runoff
- Transportation improvements should be multi-modal, not siloed; for example, bus pilot programs should include options for transporting and storing bikes

- Reclassify roads due to increased truck freight volumes
- Municipalities should work on getting new levy on ballot so activities can start as soon as possible

### Safety in Transportation Systems

- Consider regulations for electric bicycle use, including registration
- Low-cost safety measures were discussed by multiple groups, including striping, signage, and lighting
- Safety education was also discussed by multiple groups to increase awareness of and comfort with different transportation options
- Rule enforcement must coincide with education and infrastructure improvements

### Transportation and Land Use

- Updates to zoning codes and comprehensive plans were discussed by multiple groups
- Farmland protection plans can stack policies
- Encourage mixed-use development in certain parts of the region; preserve suburban and rural character
- Moving forward, consider development impact fees to ensure that private companies/developers pay if they put significant strain on infrastructure
- The role of rail in the region's future was considered – whether it should be expanded for freight or decommissioned and incorporated into trail system

### System Preservation

- Multiple groups recommended a digital inventory of existing transportation infrastructure
- Collaboration between local, county, and state agencies is key
- Bridge and road triage is needed with projected freight increases
- Participants considered municipal consolidation

### Environmental Impacts

- Incorporate alternative forms of energy into zoning decisions to preserve land and limit tax burden on residents
- Consider revenue impacts of EV tax on municipalities that already depend on sales tax
- Heated sidewalks and shade infrastructure can improve comfort and safety of residents during extreme weather

## *Key Themes*

Several key themes emerged through this workshop.

### Asset Identification

Across the different goals, the discussion frequently turned to the need to understand assets across the entire region as the basis for any kind of prioritization in the future. While different jurisdictions have undertaken projects of different scales in the past, the need to standardize and integrate data collection efforts came up frequently as the foundation for other strategies.

### Coordination

Some of the liveliest conversations were around topics that require extensive regional coordination and/or are outside of the purview of HOCTC or HOCTC alone. Strategies in this vein included

policy stacking with respect to farmland protection, coordinating comprehensive plans, developing a regional freight network, leveraging planned projects to integrate other needs (such as technology, bike/ped, improved lighting, wayfinding), working with non-profits and human services providers to operate shopper shuttles and with employers to provide carpool/vanpool programs, and planning for ITS investments to support preservation, climate change response, and AV deployment.

### Data-Driven Investment Prioritization

Groups recognized the extensive trade-offs that will be required to ensure a functional transportation system in the future, no matter what future scenario they were assigned. Preservation, while still a priority, needs to be examined with respect to real need, with the understanding that some preservation should not be like for like (for example, some signals should be upgraded when it is time to replace them) while other infrastructure should be considered for decommissioning. These decisions require a holistic picture of the network, though, relying on the asset identification previously noted.

### Triage

Related to data-driven investment prioritization, but worth noting as its own theme, is triage. With climate change and freight currently impacting the network and expected to increasingly impact the network in the future, participants discussed a triage approach, particularly with respect to bridges and other infrastructure that isn't redundant or could create major network bottlenecks.

### Low-Cost Infrastructure and Non-Infrastructure Approaches

Given the funding constraints and right-of-way constraints that were either explicitly described in the scenarios or assumed by the groups, major new investments were not as widely discussed as low-cost infrastructure and non-infrastructure approaches. These included everything from better striping upkeep and wayfinding signage to education (of public and decision-makers) and enforcement (of traffic laws and environmental regulations).

## *Next Steps*

The project team will develop a white paper describing the scenario planning process and emphasizing "no regrets" strategies that HOCTC should consider in the near term and in its next LRTP update.