Funding
Exploratory Scenario Report

Southwestern Pennsylvania Commission Forces of Change Exploratory Scenario Reports
January 2019
# Table of Contents

- What Are Forces of Change? .................................................. 4
- What are the Funding Forces of Change? .............................. 7
- Creating Strategies ............................................................. 14
- Building the Vision ............................................................ 29
- Acknowledgements ............................................................. 31
What Are Forces of Change?
Forces of Change

Forces of Change

are a wide range
of global and national trends that could affect Southwestern Pennsylvania now and in the future.

What Are Forces of Change?
The Southwestern Pennsylvania Commission (SPC) is creating a new regional plan in which it will consider major Forces of Change and how we can best take advantage of opportunities they may create and mitigate the disruptions they may cause. Forces of Change are high level external forces (global, national, regional) that could have significant regional impacts (both positive and/or negative) now and in the future.

A Force of Change Scenario Report for each category has been developed by SPC. The reports will be used, along with input from the public, to establish a range of potential strategies related to each Force of Change. These strategies were reviewed and discussed at a Regional Plan Workshop held in September 2018. The resulting list of strategies will be used to gather further public input and ultimately to update the long range plan for the Southwestern Pennsylvania region.

SPC has identified forces that have effects on transportation and development in five broad categories: Demographics, Technology, Economy, Environment, and Funding.

Why and How Were Forces of Change Identified?
Every four years, SPC is required by federal law to update the region’s long range transportation plan. This plan lays out the vision and strategies for transportation investments in the Southwestern Pennsylvania region over the next 25 years. The current plan was adopted in June 2015.

In 2017, SPC staff began working with the region’s planning directors to develop a Task Force to help develop a process for the new long range plan.

SPC began by reviewing publications from the National Cooperative Highway Research Program on “Dynamic Forces of Change.” Next, peer Metropolitan Planning Organizations (MPOs) along with national and regional thought leaders were interviewed to get different perspectives. Common themes emerged, which drove the formation of Expert Resource Panels for each of the five categories to identify the Forces of Change that will impact them.
Expert Resource Panels and Exploratory Scenarios

Expert Resource Panels were formed to provide expertise on the potential effects of Forces of Change on the region. The Expert Resource Panels identified the Forces of Change within each category that are likely to impact the region. Panelists discussed potential opportunities and challenges, the relative probability of occurrence, and whether the impacts will be positive or negative.

The panel activities were designed to help answer the following questions:

What significant trends or disruptions are occurring now, or are foreseen to occur, with potential impact for the region?

Will the impacts be positive or negative for the region?

What specific challenges and opportunities for the region are generated by these occurrences?

What is the anticipated magnitude of the identified challenges and opportunities?

Participants were asked to focus on events, trends, and factors within each category and to identify possible impacts, potential challenges, and opportunities for each Force of Change.

Based on that discussion, exploratory scenarios were developed. Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. These were developed to aid in discussions related to impacts and strategies for moving forward successfully.

Below are some of the topics that were explored by the Expert Resource Panels. Panelists considered the regional impacts of the topics and identified additional avenues for investigation.

Demographics
Aging Population and Labor Force; Immigration (regional); Urban and Suburban Development Patterns; National/Regional Shifts; Household Size; Diversity; Education; and, Opioid Addiction.

Technology
Connected & Autonomous Vehicles; Mobility as a Service; Automation; Additive Manufacturing; Modal Impacts; Broadband; and, Artificial Intelligence.

Economy
Emerging Industries; Housing Affordability; Economic Growth; Household Income; Employment Types; Shared Economy; Online Economy vs. Brick and Mortar Retail; and, Decaying Infrastructure.

Environment
Energy Supply and Demand; Fossil Fuel/Renewable Balance; Security; Environmental Attitudes; Climate Change and Resilience; and, Water Quality.

Funding
Role of Public & Private Sectors; Investment Levels; National/State/Local Government Roles; and, Finance (how to pay).
What Are The Funding Forces of Change?
Public Awareness

Infrastructure costs are not always well understood by the general public. The region has made significant strides in adequately maintaining the existing transportation system, but investing in maintenance alone is not enough to achieve the transportation system the region desires. The region needs to find ways to smartly invest in additional projects that will strengthen our communities; make the transportation system safer, more efficient, and more reliable; and grow our economy.

We must garner greater private sector, nonprofit, and general public understanding of public infrastructure needs and subsequent support for increased infrastructure revenues. Local municipalities, SPC, PennDOT and others can implement public education campaigns to increase awareness of the benefits of sustainable funding for infrastructure improvements and how it will benefit the economy and local communities.

NOTEWORTHY:
Making smart investments that positively impact the communities and economy of the region is important.
Increased private sector financing of infrastructure could play a future role in investments, particularly with decreases in available public financing. To ensure best practices are followed in the use of public-private partnerships (P3s), conversations should be held between public and private sector entities. Along with tax increment financing (TIF) and transit revitalization investment districts (TRID), P3s offer a way to raise additional financing for transportation or infrastructure projects.

Existing state and federal mechanisms exist that can leverage private sector development in providing infrastructure improvements, such as multi-municipal purchasing, TIF, local economic stimulus tax assistance (LERTA), and Enterprise Zones. Public sector participation can also be incentivized with tax credits and other funding mechanisms. In order to gain the most public support possible, municipalities should undertake public education campaigns to highlight the needs, costs, and benefits of greater transportation funding.
Changing Roles

Changing roles in federal, state and local government could affect our ability to fund infrastructure. According to a Congressional Budget Office report, at current funding levels, the federal Highway Trust Fund would not be able to provide funding to states for improvements to the nation’s highways and transit systems in 2021. This is due, in part, to reliance on the gas tax because vehicles, including hybrid and electric vehicles, are becoming increasingly fuel efficient. The current mechanism is not providing the revenues necessary to adequately maintain or enhance our current transportation infrastructure.

State and local governments are being forced to play an increased role in funding transportation infrastructure. The Pennsylvania state government helped fill some of the gap with Act 89 in 2013.

Stable, reliable funding for infrastructure is critical to the quality of life and economic vitality of Southwestern Pennsylvania. Without predictable funding commitments at all levels, it will be more difficult to invest in new projects such as new transit services, further development of our regional trail networks, and projects that increase capacity and improve the reliability and safety of our roadway and transit systems.

Highway Trust Fund Account Projections, 2016-2026

![Graph showing projected Highway Trust Fund account balances from 2015 to 2026.](image)

**Source:** Congressional Budget Office. 2016. *An Update to the Budget and Economic Outlook: 2016 to 2026.*

**Notes:** Revenues include a small amount of interest on trust fund reserves. Under current law, the Highway Trust Fund cannot incur negative balances.
How to Pay

The need for sustainable and flexible revenue sources to fund infrastructure is critical to the future of the region. Declining revenue from the Federal Highway Trust Fund related to reduced fuel consumption means that new revenue tools may be necessary to fund infrastructure improvements. Further decreases in Federal Highway Trust Fund allocations mean that maintaining current infrastructure and advancing transit projects will require sustainable funding sources. Some new funding sources that have been used in other regions include alternative uses of general tax funds such as: property or income taxes, dedicated funding assessments or assessments such as sales tax allocations or improvement district fees, tax increment financing (TIF), Transit Oriented Development (TOD), TRID, private financing and bonding, public-private partnerships, tolling and millage-based user fees, High Occupancy Toll (HOT) lanes, etc. To both increase revenue and reduce emissions, user fees can be used or adjusted to address high efficiency/low emission vehicles. While many of these alternative funding sources are not always well understood by the general public, robust public education campaigns could help to enhance public knowledge.

The American Association of State Highway and Transportation Officials (AASHTO) has researched the Federal Highway Trust Fund issue. The diagram below from AASHTO shows a national-level assessment of the existing Federal Highway Trust Fund mechanisms in blue and proposed revenue mechanisms in purple. The size of the circle corresponds to the order of magnitude of the revenue generation potential.

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**Policy Optimality Considerations for Federal Revenue Options**

Source: Matrix of Illustrative Surface Transportation Revenue Options, AASHTO

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**Funding** Forces of Change
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Social Equity

The provision of equitable, accessible infrastructure and transportation services should be considered for all investment decisions. Equity and accessibility are growing concerns for transportation services. Additional mobility options such as public transit, walking and biking are needed to promote quality of life and healthy communities for the area’s residents. These options can also help ease the burden on the roadway system.

Transportation services must include the most disadvantaged population groups, in particular seniors, persons with disabilities, and low-income individuals. Redundancies in available services across the region should be identified and addressed between agencies.
How can we adapt to the Forces of Change underway and take full advantage of the opportunities they create?

Public Awareness
Infrastructure costs are not always well understood by the general public.

Role of Private Sector
Increased private sector financing of infrastructure could play a future role in investments.

Changing Roles
Changing roles in federal, state and local government could affect our ability to fund infrastructure.

Social Equity
Equity and accessibility are growing concerns for infrastructure and transportation services.

How to Pay
New revenue tools may be necessary to fund infrastructure for the future of the region.
Creating Strategies
To Address Funding Forces of Change

The Funding Expert Resource Panel identified strategies for each Force of Change to address potential impacts and mitigate risks. Panelists discussed the need to raise public awareness about the true cost of infrastructure and the lack of a sustainable revenue stream. Panelists identified a number of ways to move forward:

- Provide information to local governments and the business community on the existing mechanisms to leverage private sector development in providing infrastructure improvements.
- Broaden taxes available to local governments through legislature, amending local codes, etc.
- Ensure the provision of public transportation and affordable housing in rural areas.
- Consider funding transportation with user fees.

Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. These were developed to aid in developing strategies to address impacts and mitigate risks.
Public Awareness Strategies

That Impact Funding

Exploratory Scenario*

What If...there is no sustainable revenue stream to adequately fund public infrastructure and the general public is not aware of what it takes to do it.

*Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. It is not suggested that these scenarios will occur, only that a region may consider them as a “What If...” scenario.
Strategy 1: Build Support for Increased Infrastructure Revenues
The general public is not always aware of the revenue stream that is required to adequately fund public infrastructure. In order to broaden support for increased infrastructure revenues, the region should work to raise awareness in the business community, nonprofit sector, and other areas. Past successes and accomplishments should be highlighted through public education campaigns to make the general public more aware of the benefits of increased infrastructure funding and how it has been used in local communities.

Partners for Implementation
SPC, nonprofits, chambers of commerce, rotaries, local champions, local transportation related industries, Construction Legislative Council, American Society of Civil Engineers (ASCE), County Commissioners Association of Pennsylvania
Role of Private Sector Strategies That Impact Funding

Exploratory Scenario*

What If...the application of Public-Private Partnerships is only being used for large scale projects and is inherently complicated and unreliable. There is increasing stress on public infrastructure due to private development that negatively affects livability and mobility in the region.

*Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. It is not suggested that these scenarios will occur, only that a region may consider them as a “What If...” scenario.
Strategy 1: Share Existing Mechanisms with Local Government and the Business Community to Leverage Private Sector Development

Provide information to local governments and the business community on the existing state and federal mechanisms to leverage private sector development in providing infrastructure improvements. Regional cooperation (multi-municipal purchasing), TIF, LERTA, Enterprise Zones (state and federal), LSA-technical and educational assistance to communities are options that are currently available. Encourage innovative thinking and new legislative solutions to further promote this effort.

Partners for Implementation
SPC, economic development and redevelopment authorities, PennDOT, counties, municipalities, councils of government, educational institutions, private transportation companies

Strategy 2: Identify the Best Path for Private Sector Participation

Learn from with other public and private sector entities with public-private partnership experience. Public sector participation can be incentivized via tax credits and other methods of financing. Existing state and federal mechanisms exist that can leverage private sector development in providing infrastructure improvements, such as multi-municipal purchasing, TIF, LERTA, and Enterprise Zones. Public sector participation can also be incentivized with tax credits and other funding mechanisms.

Partners for Implementation
PennDOT P3 office, counties, trade organizations, financial organizations, chambers of commerce, economic development agencies

Strategy 3: Privatize Infrastructure and Charge Users What it Costs

Privatization of infrastructure and charging users “what it costs” to operate and maintain the facility to increase the role of the private sector in funding infrastructure projects. Work with local government and private developers to charge users “what it costs” to operate and maintain the facility.

Partners for Implementation
Councils of government, private developers, PennDOT, financial organizations, Pennsylvania Turnpike Commission

Funding Forces of Change
Southwestern Pennsylvania Commission Forces of Change Exploratory Scenario Reports
Strategy 4: Protect State and Local Infrastructure From Damage Caused by Natural Gas Extraction Activities
Local governments and PennDOT should ensure those companies provide adequate protection and/or fees to offset damages to the local transportation system.

Partners for Implementation
Private sector, PennDOT, municipalities, counties, SPC, developers

Strategy 5: Require Private Sector Projects to Complete Required Public Infrastructure Improvements
Work with local and county governments to establish requirements for developers to pay for public infrastructure improvements associated with private sector projects. For example, the costs to provide sewer line access to a new housing development may be the responsibility of the private developer.

Identify private sector opportunities. Promote a public education campaign to educate the general public and local businesses on the importance of infrastructure for business attraction, quality of life, tourism economy, and competitive advantages for both public and private sectors.

Partners for Implementation
Counties, municipalities, PennDOT, councils of government, private transportation companies, developers
Changing Roles Strategies
That Impact Funding

Exploratory Scenario*

What If...a decline in the long-term role of the federal government in funding for transportation infrastructure is having a strong negative impact to the region. State and local governments are being forced to play an increased role in funding transportation infrastructure. It is uncertain how local governments will come up with the matching funds necessary to maintain and sustain locally owned system.

*Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. It is not suggested that these scenarios will occur, only that a region may consider them as a “What If...” scenario.
Strategy 1: Broaden Revenue Tools Available to Local Governments

Municipalities must anticipate future decreases in the revenue they receive from fuel taxes. Broaden revenue opportunities available to local governments, which would include revenue neutrality across different funding streams. Encourage legislature to amend local codes that permit local governments to broaden available tax base(s).

Partners for Implementation
Counties, municipalities, state government

Strategy 2: Create Bundling Programs for Funding

Expand the leverage of state and federal funds with local funds in successful bundling programs. Use available tools and provide flexibility through legislation to local governments to create new revenue opportunities.

Possible programs/funding include regionalization (multi-municipal purchasing), TIF, LERTA, Enterprise Zones (state and federal), LSA – Technical and educational assistance to communities and business community (regional).

Conversations with other public and private sector entities with public-private partnership experience could expand this list or generate innovative ideas. Surveys, national legislation, and planning efforts to identify regional initiatives can help to move this effort forward. Incentivize public sector participation with tax credits, funding, etc.

Partners for Implementation
Legislators, business community, advocacy groups, local officials, local champions, SPC, PennDOT P3 office, trade organizations
Strategy 3: Identify Sustainable Public Transit Funding
Identify a possible sustainable source for dedicated public transit funding. Due to reductions in federal funding for transportation systems, additional revenue will be needed. Encourage the public and local organizations to advocate for increased federal funding.

Partners for Implementation
PennDOT, county, public transit agencies, public, municipalities, nonprofits

Strategy 4: Identify Sustainable State Revenues for Transportation Needs
Work consistently with the state legislature to recognize that the need for revenue increases are a continuing process, not a “one and done” endeavor. Develop an ongoing, cooperative process with the state legislature to work toward matching revenues to transportation needs. Garner private sector, nonprofit and general public understanding of public infrastructure needs and subsequent support for increased infrastructure revenues by highlighting past successes and accomplishments (i.e. Act 13, 89).

Undertake a public education campaign to make the general public aware of the benefits of increased transportation funding and how it has been used in local communities.

Partners for Implementation
Chambers of commerce, rotaries, local champions, local transportation related industries, Construction Legislative Council, American Society of Civil Engineers (ASCE), County Commissioners Association of Pennsylvania
Social Equity Strategies
That Impact Funding

Exploratory Scenario*
What If...the region’s elderly and disabled populations have difficulty in accessing transportation services and infrastructure. Property tax structures are a burden on fixed income retirees.

*Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. It is not suggested that these scenarios will occur, only that a region may consider them as a “What If...” scenario.
Strategy 1: Encourage Philanthropic Activity Throughout the Region

Encourage philanthropic sources to expand giving into the region’s rural areas. Engage in conversations with regional foundations to discuss larger regional issues and highlight how funds can benefit rural areas.

Partners for Implementation
Grantmakers of WPA, nonprofits, community foundations

Strategy 2: Provide Relief for Disadvantaged Populations

Examine current the tax structure and provide tax relief for disadvantaged populations where needed. Work with school districts, county governments and municipalities to implement tax structures to attract fixed income retirees.

Partners for Implementation
School districts, municipalities, counties
Strategy 3: Ensure the Provision of Affordable Housing
Ensure that the provision of affordable housing is retained in areas that are experiencing redevelopment and increased investment. Require mixed income housing and green/open space in new or redeveloping blighted areas. Expand the requirement and/or replicate it in areas of redevelopment. Agreements should be tied to public investment to ensure equitable options.

Partners for Implementation
Banking industry, developers, local governments, housing authorities

Strategy 4: Ensure the Provision of Transportation Options for Rural Areas and Disadvantaged Populations
Ensure that rural areas and disadvantaged populations have access to public transportation and other transportation options. Work with rural providers to examine services to optimize funding and leverage services. Form partnerships with the private sector and health services/nonprofits. Address flexibility in transportation funding, mobility as a service, and technology.

Partners for Implementation
Nonprofits, ridesharing companies, health care industry, transit providers, PennDOT, local governments
How to Pay Strategies
That Impact Funding

Exploratory Scenario*
What If...higher costs and lower revenues are having negative impacts on the regional transportation system. Funding needs across all modes of transportation continue to grow.

*Each exploratory scenario describes uncertain, but comprehensible, potential futures that may occur. It is not suggested that these scenarios will occur, only that a region may consider them as a “What If...” scenario.
Strategy 1: Enhance Efficiency in Public Transit Systems
Work toward greater efficiency in public transit systems through regional cooperation and/or privatization. As the private sector plays an increasing role in transit, municipalities must be able to adapt to future changes in transit and ensure equity in providing access is maintained.

Partners for Implementation
Transit agencies, county governments, PennDOT, SPC educational institutions, private transportation companies

Strategy 2: Fund Transportation With New Revenues
Fund transportation with a user-fee-based transportation revenue system or other new revenues. A robust public education campaign is needed to educate the general public on the need for sustainable funding sources. Some examples of revenue options that have been used in other regions include, but are not limited to, the following:

- Tolling
- VMT tax (mileage based user fees are not always well understood by the general public and would require a robust public education campaign)
- State and/or local taxes
- Bicycle registration fees
- Transportation Network Company (TNC) fees
- Ridesharing/pooled vehicle fees
- Electric vehicle charging fees
- Carbon taxes
- State income tax - dedicated to infrastructure
- Regional asset districts

Partners for Implementation
Legislators, business community, SPC, advocacy groups, local officials, local champions
During the Regional Plan Workshop, participants were asked to discuss potential draft strategies for the Forces of Change and identify investment levels for each of the draft strategies. This exercise helped to create a framework that could be used to evaluate and drive future evaluation of projects and investments.

Below are the investment strategy results for the Funding Forces of Change.

<table>
<thead>
<tr>
<th>Funding Forces of Change</th>
<th>Percent Investment</th>
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<tbody>
<tr>
<td>Public Awareness Strategies</td>
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<td>Role of the Private Sector Strategies</td>
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<td>Social Equity Strategies</td>
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<td>14.2%</td>
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<td>Other</td>
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</tr>
</tbody>
</table>

**Public Awareness Strategies**
Gainer private sector, nonprofit and public understanding of public infrastructure needs and subsequent support for increased infrastructure revenues.

**Role of the Private Sector Strategies**
Provide information to local governments and the business community on the existing (state and federal) mechanisms to leverage private sector development in providing infrastructure improvements.
Identify what the public sector does not do well and leverage private sector in their participation to assist.
Ensure private companies involved in natural gas extraction provide adequate protection for possible damages to state and local roads and bridges.
Privatization of infrastructure and the ability to charge “what it costs” to operate and maintain the facility.
Private sector pays cost of public improvements associated with private development projects.

**Changing Roles Strategies**
Broaden taxes available to local governments, which would include revenue neutrality across different funding streams.
Expand the leverage of state and federal funds with local funds in bundling programs.
Identify a possible regional source for dedicated public transit funding.
Work consistently with the state legislature to recognize that the need for revenue increases are a continuing process, not a “one and done” endeavor. Develop an ongoing, cooperative process with the state legislature to work toward matching revenues with appropriately measured overall transportation needs.

**Social Equity Strategies**
Encourage philanthropic sources to expand giving in the region’s rural areas.
Examine current tax structure; provide tax relief for disadvantaged populations.
Ensure the provision of affordable housing is retained in areas that are experiencing redevelopment and increased investment.
Ensure the provision of public transportation and transportation options to rural areas and disadvantaged populations.

**How to Pay Strategies**
Regionalization and/or privatization of public transit systems (efficiency).
Fund transportation with user fee based transportation revenue system/new revenues.

*Funding Forces of Change*  
Southwestern Pennsylvania Commission Forces of Change Exploratory Scenario Reports
Building the Vision

As discussed in this report, in developing Smart Moves for a Changing Region, SPC convened a series of Expert Resource Panel meetings to identify Forces of Change, weigh their potential impacts, and develop strategies to mitigate and/or optimize the forces. This information, coupled with public and partner input and feedback from SPC leadership, was organized into a set of three emerging themes that capture the most positive aspects of each strategy and focus them in a way that will result in a holistic long range plan for the region.

SPC is developing a plan that both provides a framework and makes significant investment to advance the most critical issues and projects facing the region. The emerging themes will be used in conjunction with performance metrics and other public input to evaluate the program of proposed projects and programs to be contained in the plan. This will ensure the projects and programs contained in the plan will work in concert to assist the Southwestern Pennsylvania region achieve its desired vision for the future.

The emerging regional vision is a world-class, well maintained, integrated transportation system that provides connected mobility for all, enables resilient communities and supports a globally competitive economy.

This vision means taking advantage of our considerable existing assets and developing, supporting and implementing projects that advance our progress. It means investing in regionally connected seamless public transportation that includes new transit investments in key corridors and networks. It means developing modern support infrastructure that prepares the region not just for current technological advances, but also strives to put the region years and decades ahead, by developing the next technology here in this region because we have the expertise in the region to make this happen. It means tackling climate change and taking care of our air and our water. This will allow us to work with many partners and dovetail this plan with other related plans and regional efforts of both public and private sector to advance the region.

The vision means working with partners in identifying and using the types of proven funding and financing arrangements that we will need to make that happen.

The vision will focus on the workforce needs of the region. It means attracting and growing our population by making the region a place where people want to come and stay. It means training our population not just for the jobs that exist but for the jobs we create through innovation and entrepreneurship, and making this region a leader in technology and innovation.

Technology and innovation can be much more than self-driving cars and artificial intelligence and it can work in rural as well as urban parts of the region. It will include innovative new farming techniques and technology deployment that will connect our entire region with high speed access to the internet to afford all our residents the opportunity to work from anywhere and connecting them to the global economic opportunities. The vision will recognize our assets and putting them to the best use for this region, and our residents.

The vision also means taking stewardship and care of the communities that are the foundation of this region, and environment that sustains us. This plan will focus community investment that both sustains our past and protects our future, while elevating the status of our communities throughout the region as desirable places to live and work.

Funding Forces of Change
Southwestern Pennsylvania Commission Forces of Change Exploratory Scenario Reports
Acknowledgements

Expert Resource Panel Workshop Participants

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Mavis Rainey, Oakland Transportation Management Association
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Michael Storms, Elliott Group
Jim Struzzi, Indiana County Chamber of Commerce
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Douglas Tomlinson, PennDOT
John Turack, Penn State University
Michael Turley, North Huntingdon Township
Ray Vargo, University of Pittsburgh SBDC
Chris Watts, Pittsburgh Downtown Partnership
Joe West, Beaver County Planning Commission
David White, Healthy Ride Pittsburgh
David Wahlwill, Port Authority of Allegheny County
Blair Zimmerman, Greene County Board of Commissioners
Ephraim Zimmerman, Western Pennsylvania Conservancy