

FHWA Scenario Planning Workshop

Mid-America Regional Council | 1.31.17

FUTURE

Greater Philadelphia

**FUTURE
FORCES**

FORCES

DVRPC



By the Numbers:

2 States

9 Counties

351 municipalities

5.7 million people (2015)

6.4 million people (2045)

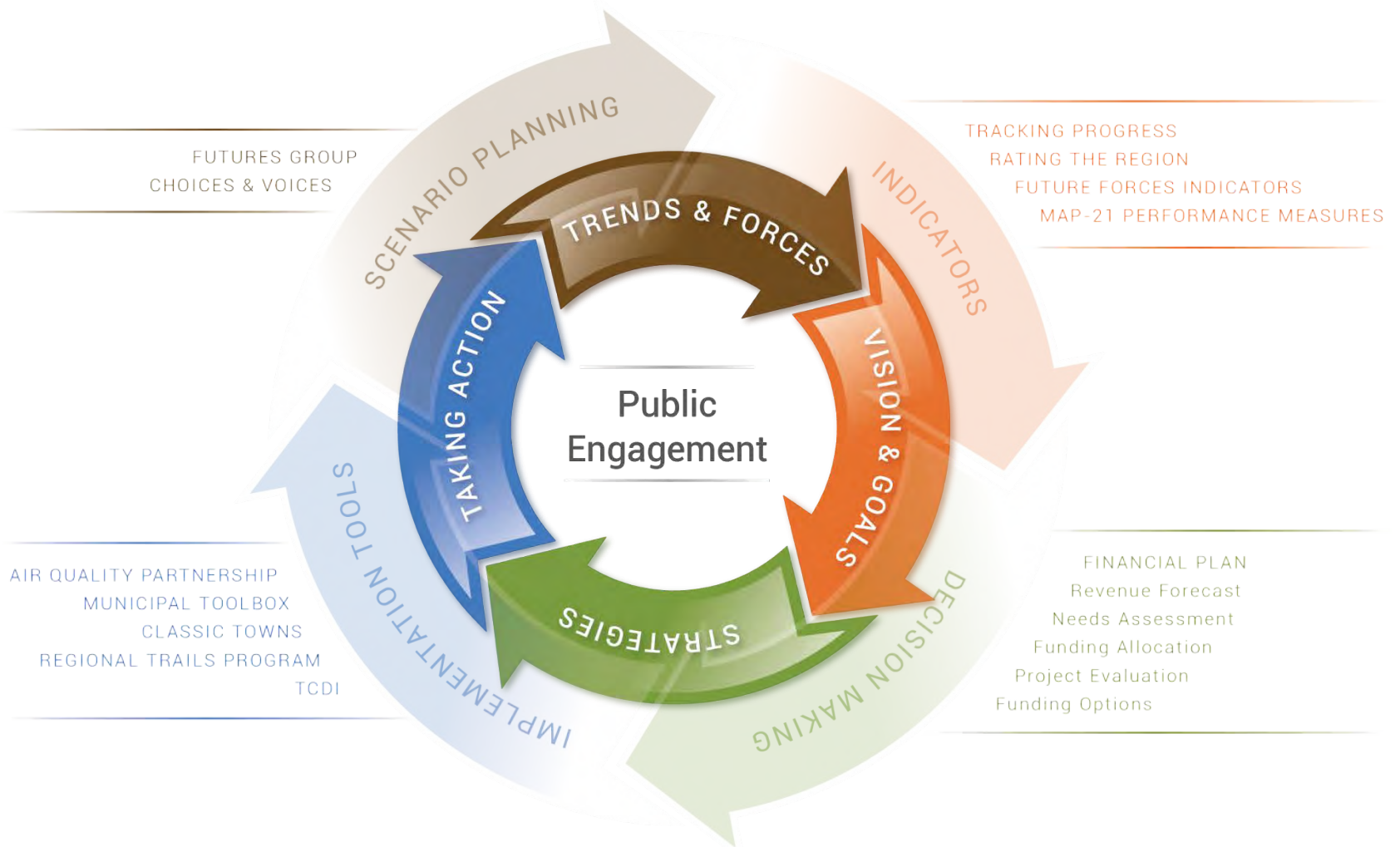
3.0 million jobs

108 million daily
vehicle miles traveled

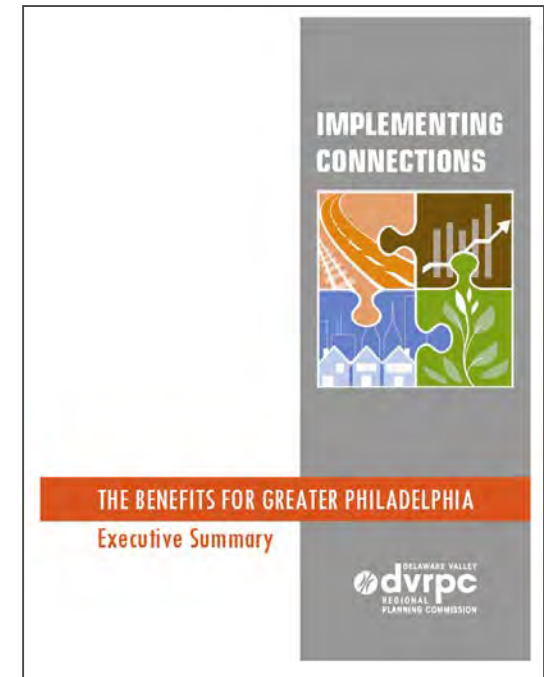
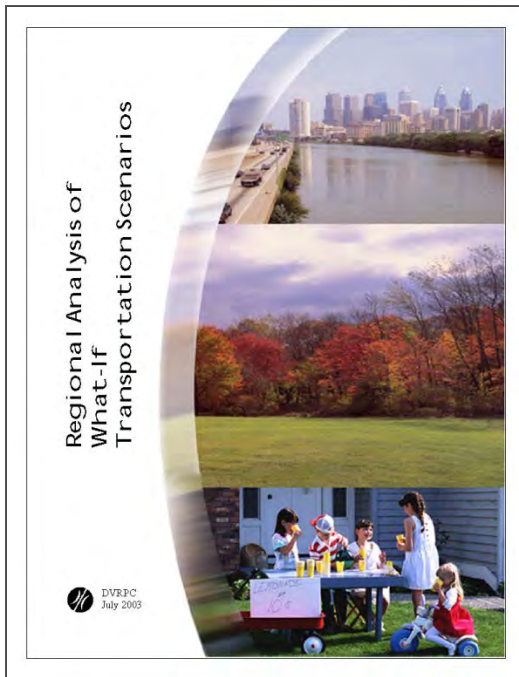
1 million transit trips / day



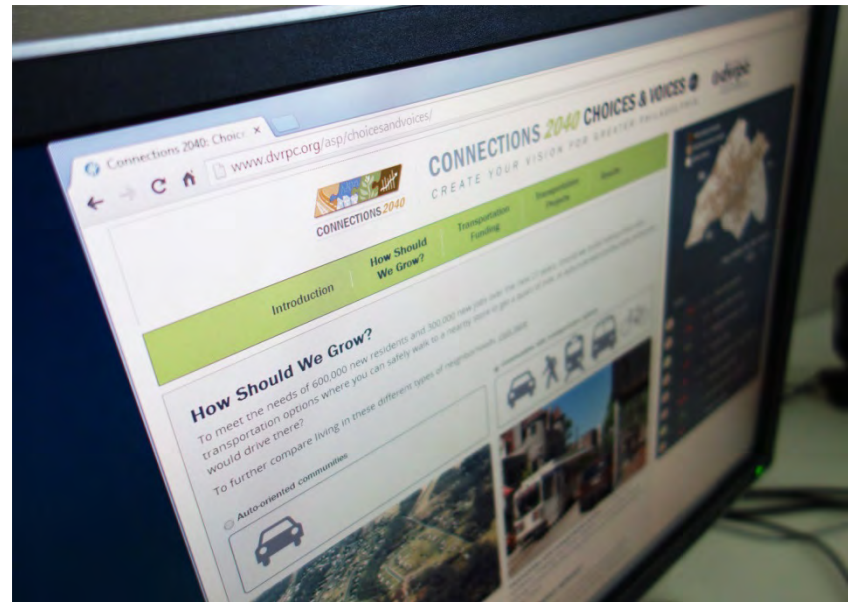
DVRPC Long-Range Planning



Previous Scenario Planning Efforts



Previous Scenario Planning Efforts



www.dvrpc.org/choicesandvoices

FUTURE FORCES

POLITICAL

SOCIAL

ENVIRONMENTAL

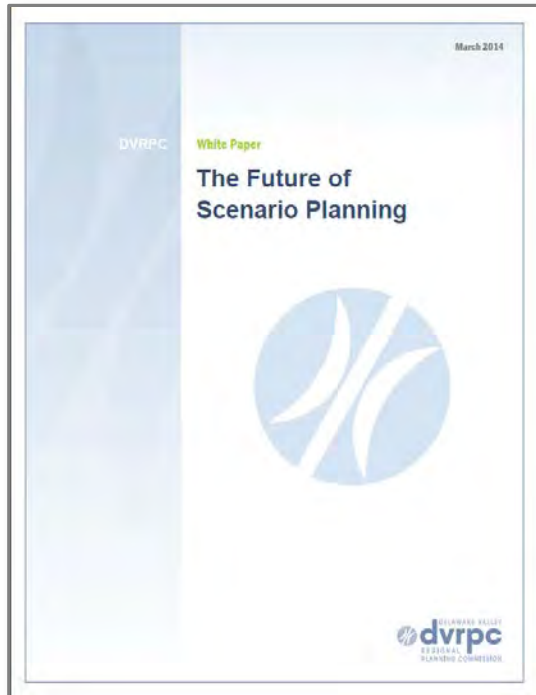
TECHNOLOGICAL

ECONOMIC



- 🏠 LIVABLE COMMUNITIES
- 💧 GROWTH MANAGEMENT
- 💰 ECONOMIC COMPETITIVENESS
- 🚗 MULTIMODAL TRANSPORTATION

Future Forces



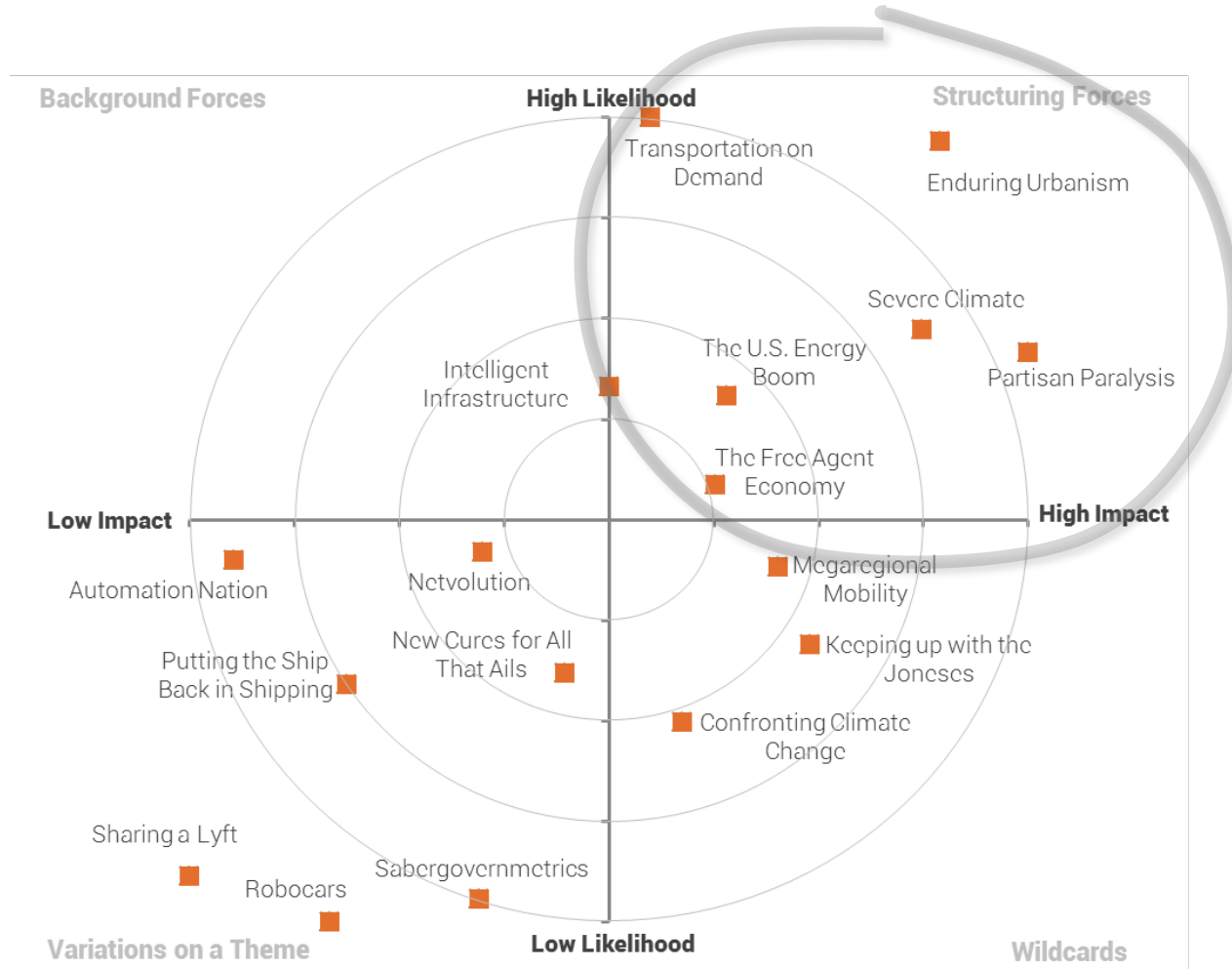
Futures Group Tasks

1. Brainstorm Future Forces of change
2. Vote on their impact and likelihood
3. Use Forces to create 4-5 highly differentiated What-If Scenarios
 - a. Create robust visions of the future
 - b. Analyze probable implications
4. Identify universal actions and contingent actions
5. Determine leading indicators for each Force
6. Create a short, graphic publication, and incorporate into Choices & Voices

Greater Philadelphia's Futures Group



Impact-Likelihood Voting Results



Forces the Futures Group Identified



People and jobs moving to walkable communities is the start of a long-term trend.



Increased outsourcing and automation means individuals must create their own economic opportunities.



Continued rise in atmospheric carbon levels lead to significant disruptions from climate change.



Smartphones, apps, and real-time info help people get around using new and existing transportation modes.



An abundance of domestically produced oil and natural gas keeps the cost of energy low.

Background Forces

Partisan Paralysis

Intelligent Infrastructure (Internet of Things)

Connected Vehicles

Technology Enhanced Health / Chronic Health Conditions

Aging Population

Sharing Economy

Panama Canal Widening

Demand for Same-Day Delivery

Improving Freight Logistics

School Quality Driving Family Location

More Immigration

Declining Water Quality (Suburban)

Some Degree of Climate Change

Flat/Declining Transportation Funding

Worsening Infrastructure Conditions

“The only relevant discussions about the future are those where we succeed in shifting the question from whether something will happen to what would we do if it happened.”

Arie de Geus
Shell International Petroleum Company



How will **CLIMATE CHANGE** impact our region?

Will our **CITIES AND TOWNS** thrive?

How will I **GET AROUND** in 2045?

How much will **ENERGY** cost in the future?

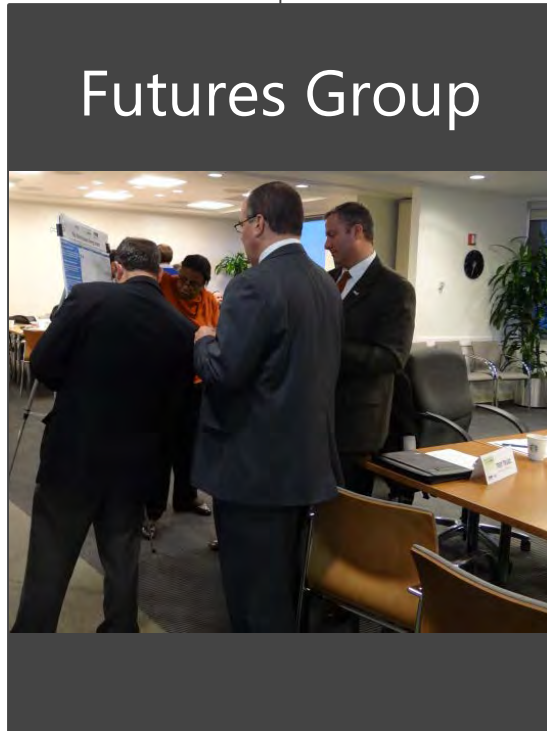
What will my **JOB** look like in 25 years?



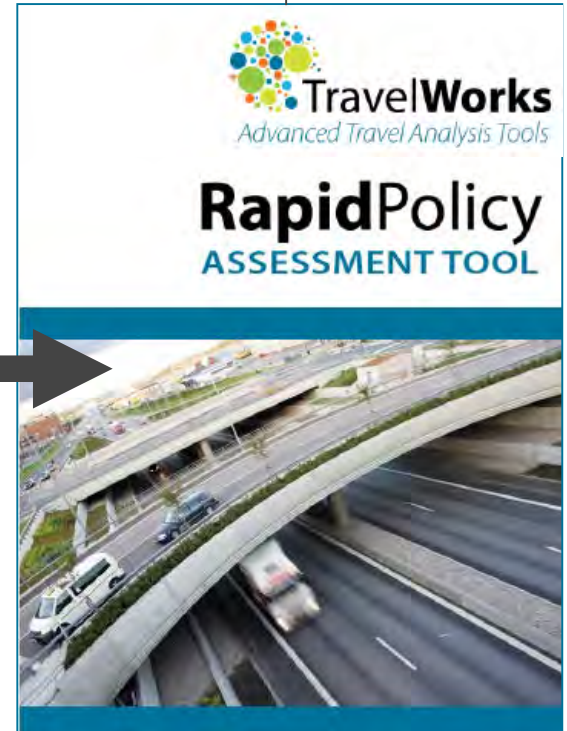
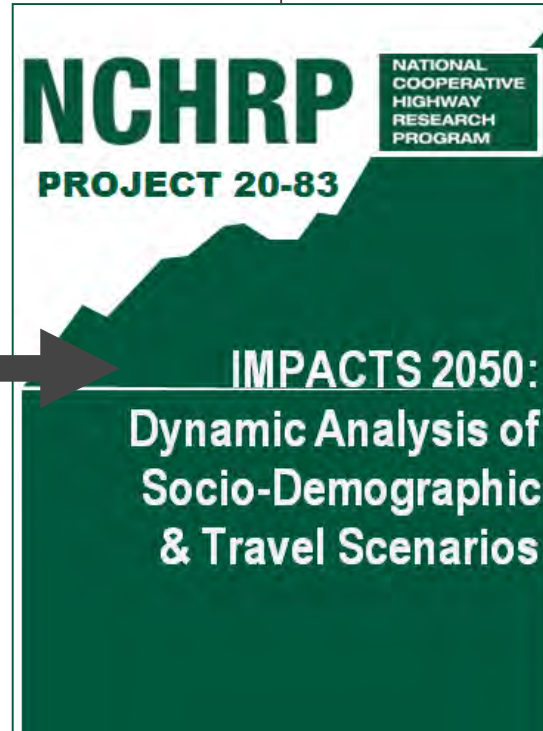
What-if Scenarios

Models

Experts/Stakeholders



Strategic Analysis Tools





What-If Scenario

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Image: BLT Architects



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Walkable Centers



What-If Scenario

Image: SHoP Architects, West 8



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Regional Amenities



What-If Scenario



ENDURING URBANISM



Blurring of City
and Suburb



Contingent Actions

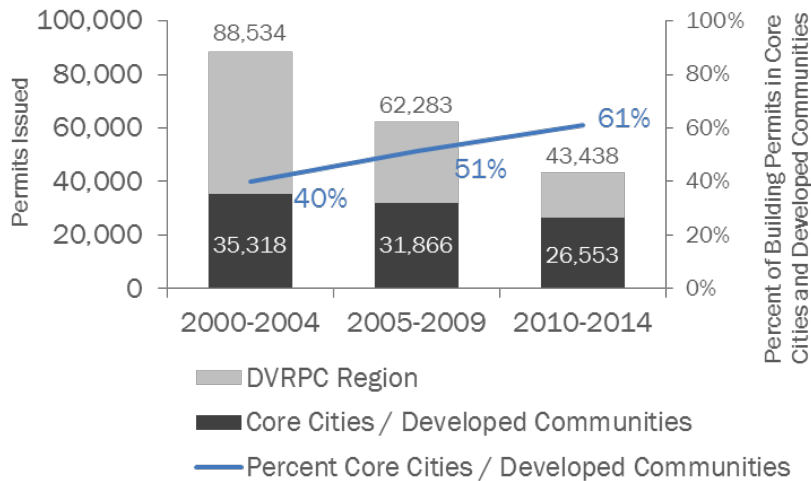


- (Re)Develop without displacement
- Living streets / protected bike lanes / pedestrian plazas
- Increase transit service
- Redevelop suburban office parks as mixed-use centers
- Protect industrial zones

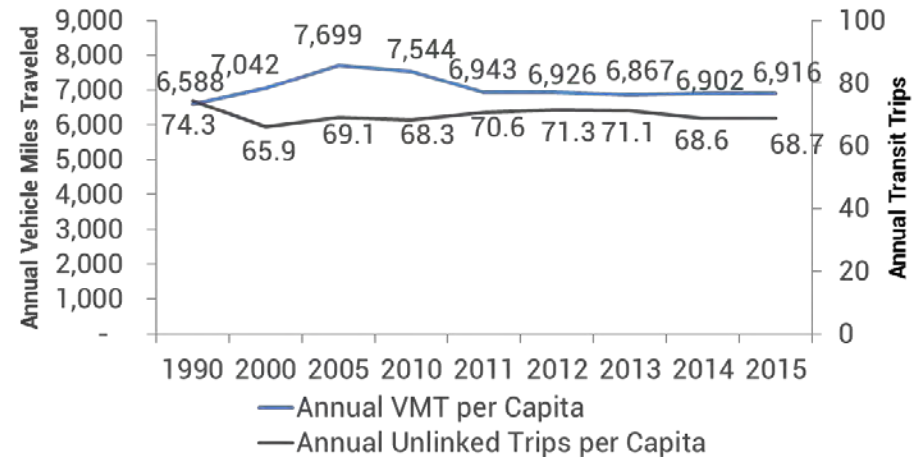


Leading Indicators

Percentage of Residential Building Permits in Core Cities and Developed Communities



Annual Vehicle Miles Traveled and Transit Trips Per Capita



Sources LEFT: U.S. Census, Construction Statistics Division, 2000–2014.

RIGHT: Pennsylvania Department of Transportation, 1980–2014; New Jersey Department of Transportation, 1980–2014; National Transit Database, 1990–2014; U.S. Census, 1980, 1990, 2000; American Community Survey, 2005 (1-year estimate), 2007 (1-year estimate), 2010–2014 (5-year estimates).

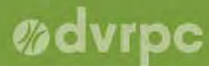


What-If Scenario



FOR HIRE

THE FREE AGENT ECONOMY



Universities are
Economic Growth
Engines



What-If Scenario

Photo: Chester County Planning Commission



Significant Disruptions



What-If Scenario

Photo: Leap Transit



**TRANSPORTATION
ON DEMAND**

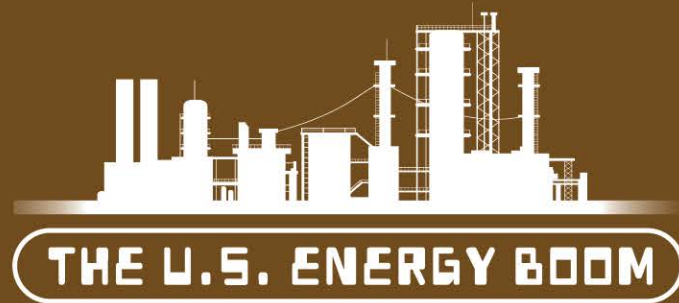


Less Car Ownership,
More Mobility



What-If Scenario

Photo: Philadelphia Energy Solutions



Regional Growth Around Energy Hub

Universal Actions

Build lifelong communities

Data-driven governance

Develop the impact economy

Enhance freight and goods movement

Expand broadband infrastructure

Green infrastructure and stream buffer ordinances

Increase regional transportation funding

Infrastructure resiliency

Immigrant-friendly policies

Megaregional collaboration and cooperation

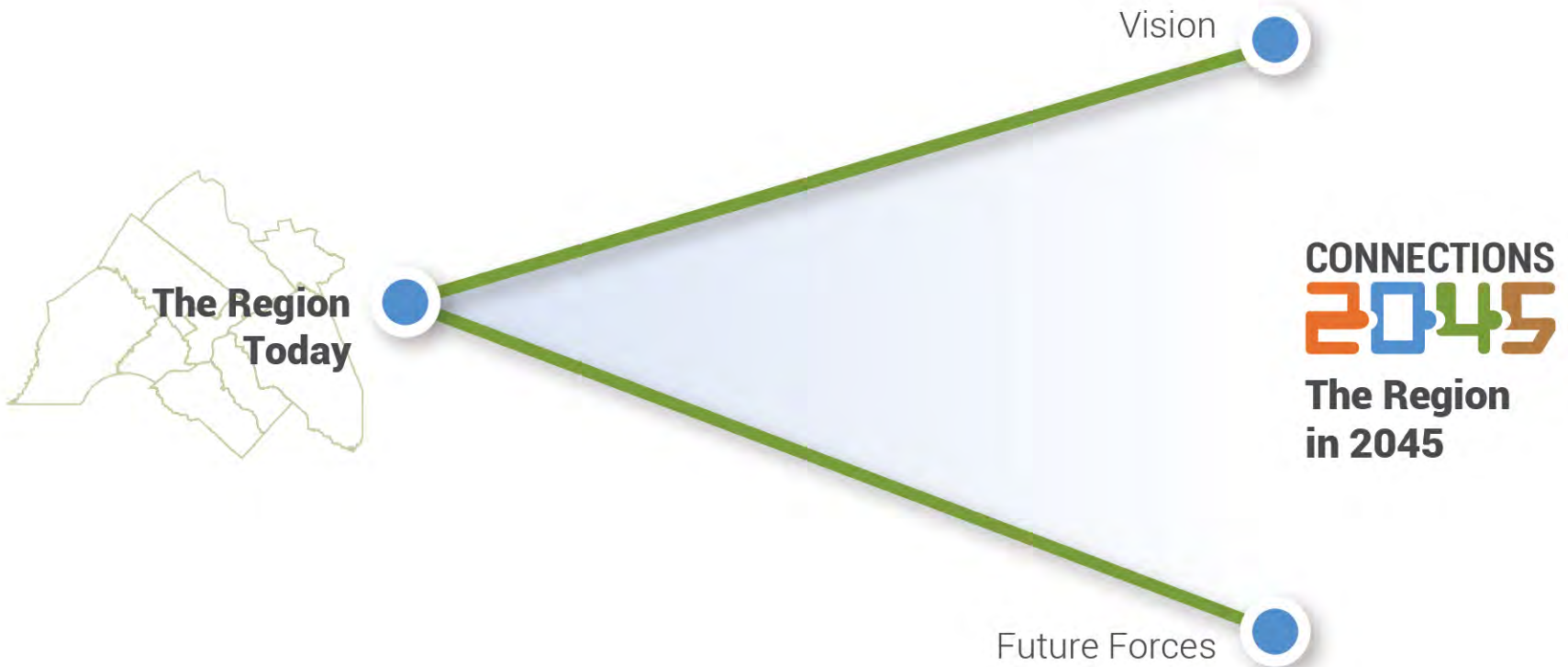
Mixed-use infill development

Modern, multimodal transportation system

Universal pre-kindergarten and other k-12 programs

Vision Zero

Future Forces vs. Vision



More Understanding Needed

1. Full impacts of the “Digital Revolution”
2. On-Demand Outsourcing vs. Automation
3. Abundant, Low-Cost Energy Future
4. Reconstruct, Modernize, and Make Infrastructure More Resilient Within Current Funding Constraint
5. Interplay Between the Forces
6. Recent Past no Longer a Useful Guide for the Future