

Advancing DOT & MPO Abilities to Plan for Future Change

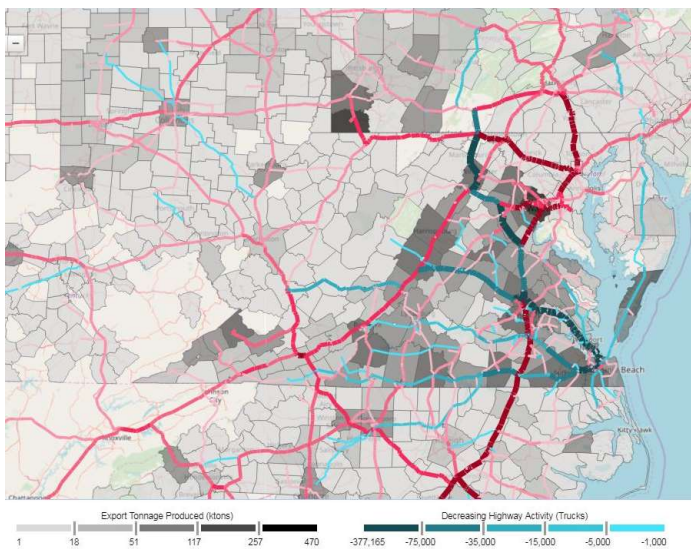
TREDPLAN-Regions™ - Gives an analyst a flexible way of examining how regional and state growth and transportation needs will be affected by future changes in the economy, technology, climate and trade.

What can TREDPLAN™ do for DOTs and MPOs?

- For **long-range planning**, see how future economic shifts will affect your state's or region's economy, commuting, and freight flows.
- For **prioritization**, assess future change in your state's or region's reliance on connections to markets, gateways, and affected facilities.
- For **resilience planning**, identify economic risks and consequences of possible future scenarios.
- For **inter-agency coordination**, identify ways that transportation investments can support regional economic development goals

Future Scenarios

- Economic Shifts
- Global Trade Shifts
- Technology Change
- Climate Change



TREDPLAN Analysis: Change in truck flows under 2045 Alternative Economic Futures

Answers Questions:

- Where will our future growth be concentrated?
- How will freight + commuting demand patterns change?
- Where are our freight markets and economic competitors?
- What are our vulnerabilities and risks of economic loss?
- Where should we invest to optimize economic gain?
- How will future economic, technology, climate and trade changes affect these futures?

Three Versions of TREDPLAN

TREDPLAN-Ports™ Select an air or seaport and assess future shifts in its markets, competitiveness and growth opportunities.

TREDPLAN-Regions™ Select a planning region and assess future shifts in its economy defining future commuter and freight flows.

TREDPLAN-Economy™ Select an economic region, and assess changes in labor, energy and facility investment needs.

TREDPLAN Elements

Areas Covered - TREDPLAN scenarios are generated for all counties in the US. Customers specify their area of interest within the US, which may be a state, a county, multi-state region or multi-county region. TREDPLAN is configured to identify competing or peer areas elsewhere within the US, and then assess the effect of future scenarios on the area of interest relative to competing or peer areas.

Scenarios. Use our preset scenarios to 2050, or we can set it up with customer-specified scenarios:

Economic Trend Scenarios:

- Economy: recession, slump, severe cycles
- Exchange rate shifts - dollar rise or crash
- Energy price shifts - oil and electricity prices

Trade Scenarios

- Tariffs and embargoes for commodities, countries
- Port closures (temporary and long-term)
- Transport fuel and operating costs

Climate Change Scenarios

- Changes in heating and cooling degree-days
- Incidence of tornados, floods and costs
- Sea level rise, air or marine port closures

Technology Change Scenarios

- Energy costs, heating and cooling efficiency
- Autonomous and Connected truck fleets
- E-commerce and supply chain processes
- Education and technology adoption

Outcomes. TREDPLAN can graphically and visually portray effects of alternative future scenarios on:

Freight

- Change in flows by origin/destination and mode
- Change in flows by value and tonnage
- Change in flows by TEUs, truckloads

Commuting

- Change in flows by origin/destination

Facilities

- Terminals - airports, marine ports, intermodal rail
- Corridors - highway, rail
- Value, tons, truckloads, by origin-destination

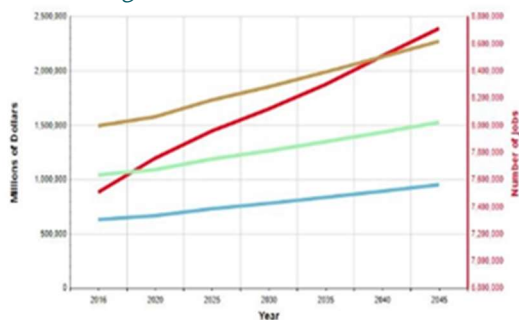
Competitiveness and Operating Costs:

- Transportation, labor and energy costs
- Market shares for shippers and service operators
- Expansion/contraction of local industries

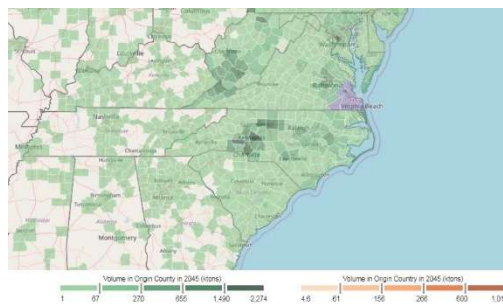
Economy

- Growth/decline in GDP, employment, wages by industry, occupation and area

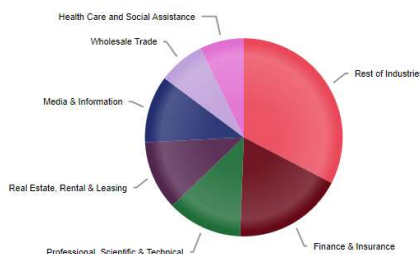
Regional Job Growth Over Time



Inbound Freight Movements



Regional Economy - Future



Top Sources of Outbound Shipments

Domestic (ktons)	Value (\$M)		Volume (ktons)	
	2016	2045	2016	2045
Westchester County, NY	3,766.68	7,082.79	2,854.77	3,073.53
Albany County, NY	301.13	472.00	158.60	1,726.55
New London County, CT	730.19	619.79	1,960.51	1,549.43
Hartford County, CT	1,484.29	1,892.58	1,390.25	1,299.49
Fairfield County, CT	2,462.81	3,646.73	940.88	1,288.03
Schenectady County, NY	143.49	210.13	75.37	1,221.67
Hudson County, NJ	1,490.39	2,255.35	808.27	1,040.75
Rockland County, NY	1,264.30	1,676.75	939.49	1,036.28
Saratoga County, NY	184.46	349.36	92.65	938.87
Bergen County, NJ	1,598.52	2,410.52	736.67	894.18
New Haven County, CT	1,566.39	2,228.28	590.48	766.92
Essex County, NJ	1,197.78	1,610.14	582.49	630.95
Middlesex County, NJ	1,080.05	1,615.08	551.80	678.24

Quickly summarize regional changes associated with alternative future scenarios, using our visual querying platform. See something interesting? Just click to learn more.

A customizable series of reports enables you to focus on broad topics of interest to give structure to your analysis.

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