

## Economic Impact Analysis

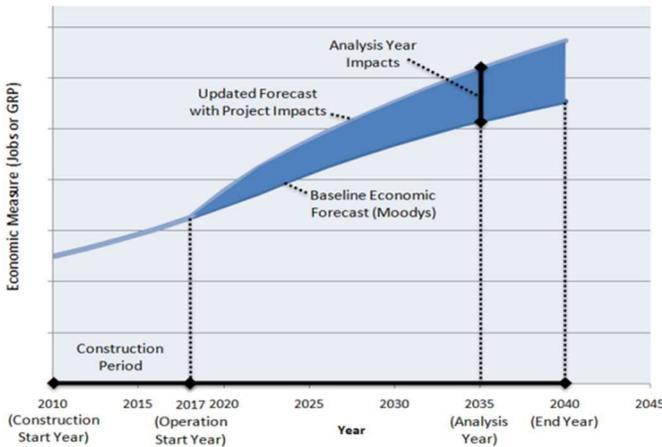
TREDIS calculates the economic impacts of transportation investments, policies, and programs – spanning highway, rail, marine and air modes.



*TREDIS is a comprehensive tool for estimating regional economic impacts. It is applicable for all modes of transportation, and incorporates recent research into several key areas:*

**Impacts on Travel Characteristics.** TREDIS works for all road, rail, air, marine and nonmotorized modes of transportation. It calculates the economic consequences travel impacts, including time savings, reliability, tolls, safety, and operating costs. It accounts for benefits and costs of induced travel and mode shifts. Each form of impact is matched to households and specific NAICS industries for focused impact analysis.

**Access Impacts.** TREDIS is the only economic impact analysis system that estimates how improvements for specific modes of transportation can expand market access and connectivity to affect a region's economy. Access measures reflect changes in local labor and consumer markets. Connectivity measures include supply-chain linkages and proximity to key intermodal and international gateway facilities. TREDIS uses findings from recent research to capture the threshold effects that improvements for each of these measures have on productivity and industry attraction.



### TREDIS Economic Impact Results:

- Direct travel cost savings
- Productivity gains from improved access, connectivity and reliability
- Business growth from increased competitiveness
- Indirect and induced economic effects
- Detailed construction impacts
- Year-by-year job and income growth
- Detailed industry-specific impacts

**Industry Behavior.** A key element in determining regional economic impacts is recognizing how industries respond to changes in transportation costs. TREDIS identifies which industries are likely to expand production, which are likely to increase profits, and which are likely to pass costs and savings on to customers.

# Inside TREDIS

TREDIS is an integrated system of elements that work together as a total solution. It does not require any other analysis tools or models. Yet the system is also flexible so users can substitute their own analysis tools in place of some elements or customize TREDIS to work with other planning and analysis tools.

Unlike “black box” methods, each of the key elements of TREDIS is well-defined and clearly documented, using techniques backed by peer-reviewed publications and approved by public agencies. The key elements are summarized below.

## Travel Characteristics

TREDIS translates changes in traffic volumes, vehicle occupancy, speed, distance, reliability and safety into direct cost savings for household and business travel. It applies best practices for travel modeling and economic valuation that are accepted by metropolitan, state and federal agencies.

## Economic Adjustment

TREDIS applies dynamic, multi-regional economic impact simulation to estimate impacts on employment and income growth over time. The model, has been described in peer-reviewed publications, incorporates economic geography and econometric response factors for cost and access changes, as well as forecasts and trade flows, using data from Moody's, IMPLAN, ESRI, US BEA and US DOT.

## Market Access

TREDIS translates changes in market access and intermodal connectivity into effects on agglomeration, dispersion, and scale economies for industry sectors. It applies calculation methods backed by peer reviewed publications for estimating wider economic impacts.

## Benefit-Cost Analysis

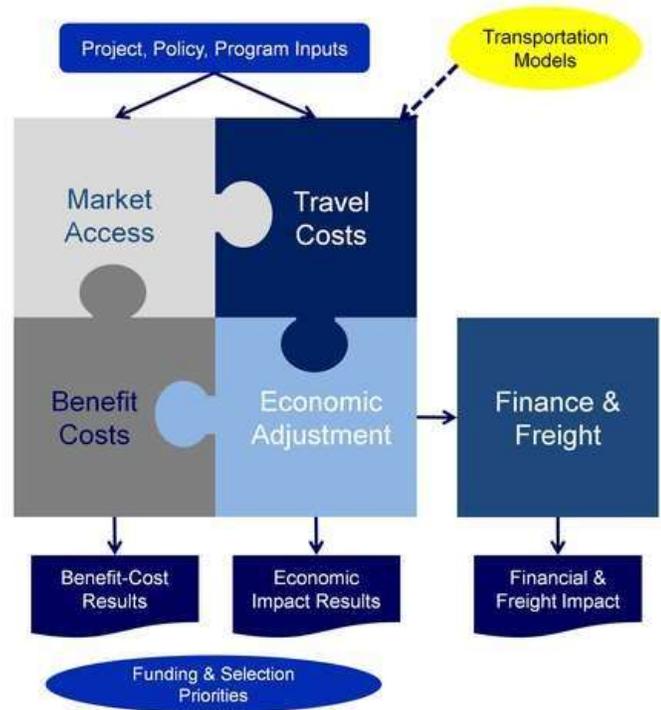
TREDIS calculates the net present value of project benefits and costs from the differing perspectives of federal, state and local agencies. It avoids double-counting and follows the benefit-cost guidance of US DOT modal agencies and Transport Canada, and the internet guide to Transportation Benefit-Cost Analysis hosted by the TRB Economics Committee. TREDIS has helped applicants successfully obtain funding through US DOT grant programs.

## Tax and Finance Analysis

TREDIS calculates local, state & federal tax revenue impacts of projects, programs or policies, as well as public & private economic impacts of tax, toll and pricing scenarios.

## Freight and Trade

TREDIS shows patterns and impacts of economic flows (\$) and commodity (tonnage & vehicle) flows to, from and within study area. Details are shown by mode and industry, along with impacts on employment.



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