

SHRP 2 Economics Products Update

TRB Annual Meeting

Washington DC

January 2014

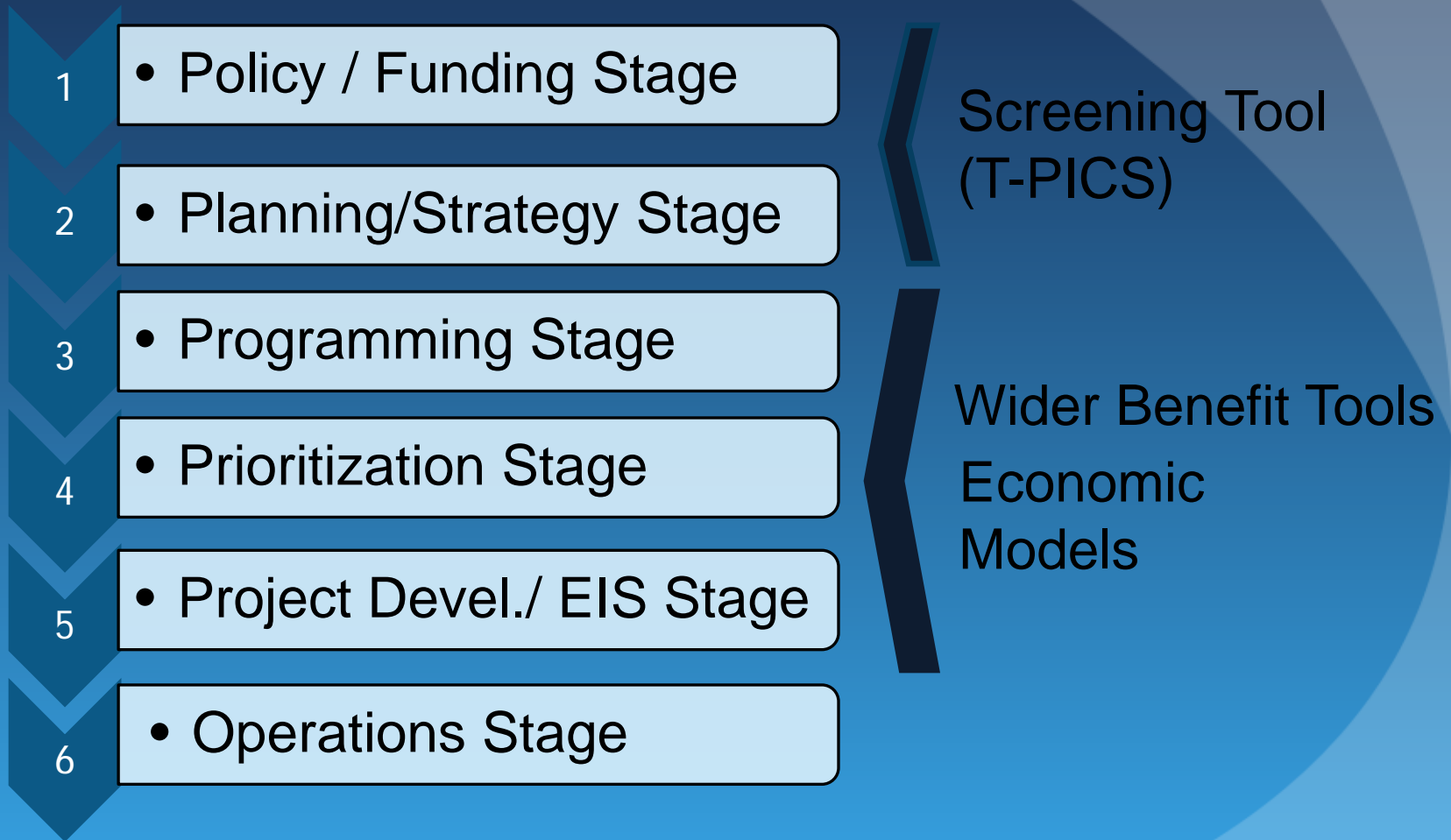


Economics Products Overview

- Goals: Create an easy to understand impact assessment resource; Fill some key empty niches in benefit/cost analysis
- C03: T-PICS economic impact case studies database and web tools
 - Completed, published
- C11: wider economic benefits spreadsheet tools
 - Completed, pre-published
- L35: two very different, local approaches to the value of travel time reliability (VOTTR)
 - In progress



Match Models to Planning Needs



Ref: SHRP 2 Collaborative Decision-Making Framework

Transportation Project Impact Case Studies (T-PICS)

- Strategic Highway Research Program (SHRP 2)
- 100 case studies of transportation projects
 - Purpose: to estimate long-term economic impacts using pre/post data

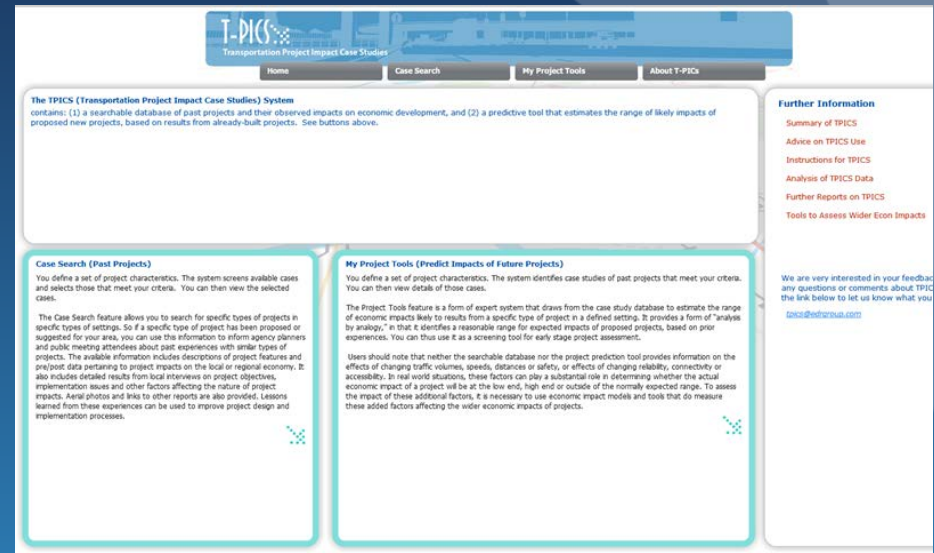
Application

- Quick review of impacts of past, similar projects
- Predict impacts of future projects
- Database for analysis

T-PICS Work Products

T-PICS Web Tool

- Case studies
- Economic impacts
- Interaction with non-transportation policies



User's Guide

- Step-by-step process for running the tool

Practitioner's Handbook

- Effective use of case studies and economic impact assessment
- Appropriate use in planning process and TCAPPS decision-making



The TPICS (Transportation Project Impact Case Studies) System

Contains: (1) a searchable database of past projects and their observed impacts on economic development, and (2) a predictive tool that estimates the range of likely impacts of proposed new projects, based on results from already-built projects. See buttons above.

Further Information

- [SUMMARY OF TPICS](#)
- [ADVICE ON TPICS USE](#)
- [INSTRUCTIONS FOR TPICS](#)
- [ANALYSIS OF TPICS DATA](#)
- [FURTHER REPORTS ON TPICS](#)
- [TOOLS TO ASSESS WIDER ECON IMPACTS](#)

- [SUBMIT NEW CASE](#)
- [FORUM](#)

We are very interested in your feedback. If you have any questions or comments about TPICS, please click the button below to let us know what you think.

[Feedback](#)

Case Search (Past Projects)

You define a set of project characteristics. The system screens available cases and selects those that meet your criteria. You can then view the selected cases.

The Case Search feature allows you to search for specific types of projects in specific types of settings. So if a specific type of project has been proposed or suggested for your area, you can use this information to inform agency planners and public meeting attendees about past experiences with similar types of projects. The available information includes descriptions of project features and pre/post data pertaining to project impacts on the local or regional economy. It also includes detailed results from local interviews on project objectives, implementation issues and other factors affecting the nature of project impacts. Aerial photos and links to other reports are also provided. Lessons learned from these experiences can be used to improve project design and implementation processes.

My Project Tools (Predict Impacts of Future Projects)

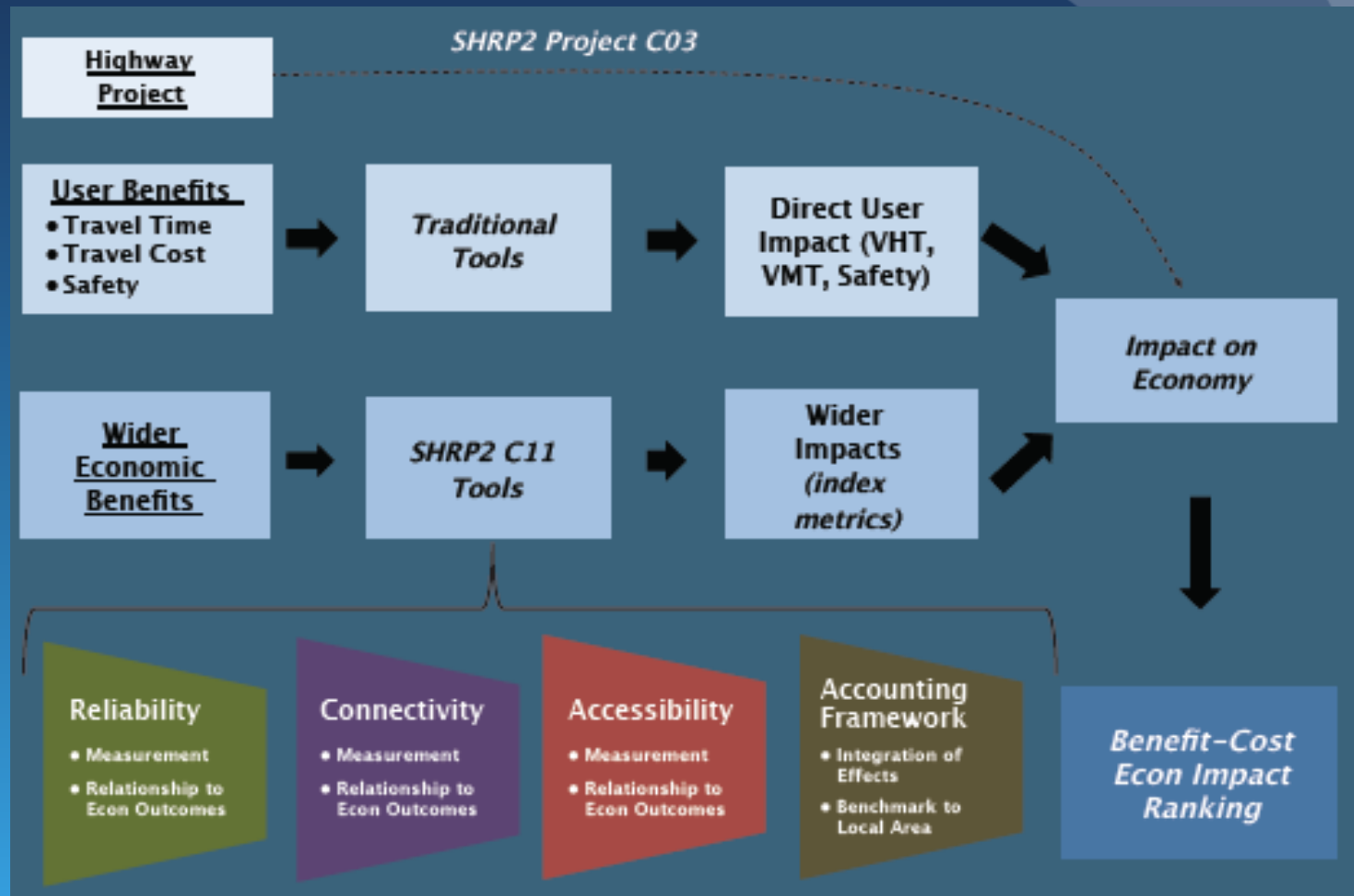
You define a set of project characteristics. The system identifies case studies of past projects that meet your criteria. You can then view details of those cases.

The Project Tools feature is a form of expert system that draws from the case study database to estimate the range of economic impacts likely to results from a specific type of project in a defined setting. It provides a form of "analysis by analogy," in that it identifies a reasonable range for expected impacts of proposed projects, based on prior experiences. You can thus use it as a screening tool for early stage project assessment.

Users should note that neither the searchable database nor the project prediction tool provides information on the effects of changing traffic volumes, speeds, distances or safety, or effects of changing reliability, connectivity or accessibility. In real world situations, these factors can play a substantial role in determining whether the actual economic impact of a project will be at the low end, high end or outside of the normally expected range. To assess the impact of these additional factors, it is necessary to use economic impact models and tools that do measure these added factors affecting the wider economic impacts of projects.

ECONOMIC IMPACT ANALYSIS

(SHRP C11 Fills Gaps Enabling Wider Econ Analysis)





L35A (Portland) Major Tasks

- Measure travel time reliability in a sub-metro area/corridor
- Estimate local Reliability Ratio (RR) or Travel Time Ratio (TTR) through a stated preference approach
- Incorporate TTR into the regional demand modeling process
- Complete an application: SW corridor case study
- Conduct sensitivity analyses
- Policy Group Engagement Workshops
 - Clicker activities so they understand stated preference approach.
 - Agree on key pilot study parameters.
 - Re-examine SW corridor scenarios - before and after.
 - Would including TTR make a difference in investments or not?

L35 B (Maryland) Summary

Valuation Approach for Travel Time Reliability

- Builds on completed SHRP 2 L11 project, which was not deemed entirely successful by reviewers
- Data driven
- Actuarial as opposed to perception-based (“real options”)
- Understandable/simple
 - Exploits the ups and downs of travel time
 - Uses a Random Walk approach
 - Producing a VOTTR number and a ratio to VOT
- Flexible
 - Underlying process
 - Termination function
- Equivalent Solutions
 - Numerical methods, especially a binary tree
 - Closed form

Next Steps

- Finish and document vetting work on T-PICS and C11 reliability spreadsheet model
 - (C33 pilot, Minnesota DOT and REMI for T-PICS)
 - (L38 pilots in California and Washington State for C11)
- T-PICS and C11 go to implementation...AASHTO is the lead agency?
 - A transit version of T-PICS is gathering momentum
- The two L35 projects finish and document their results for dissemination during 2014

