



**INDIANA DEPARTMENT OF
TRANSPORTATION**

(INDOT)



**ECONWORKS TOOLS FOR ASSESSING WIDER ECONOMIC
BENEFITS OF TRANSPORTATION
PURDUE UNIVERSITY RESEARCH TEAM**

FINAL REPORT

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March 10, 2016

ECONWORKS TOOLS FOR ASSESSING WIDER ECONOMIC BENEFITS OF TRANSPORTATION

Prepared for:
**The Indiana Department of Transportation
(INDOT)**

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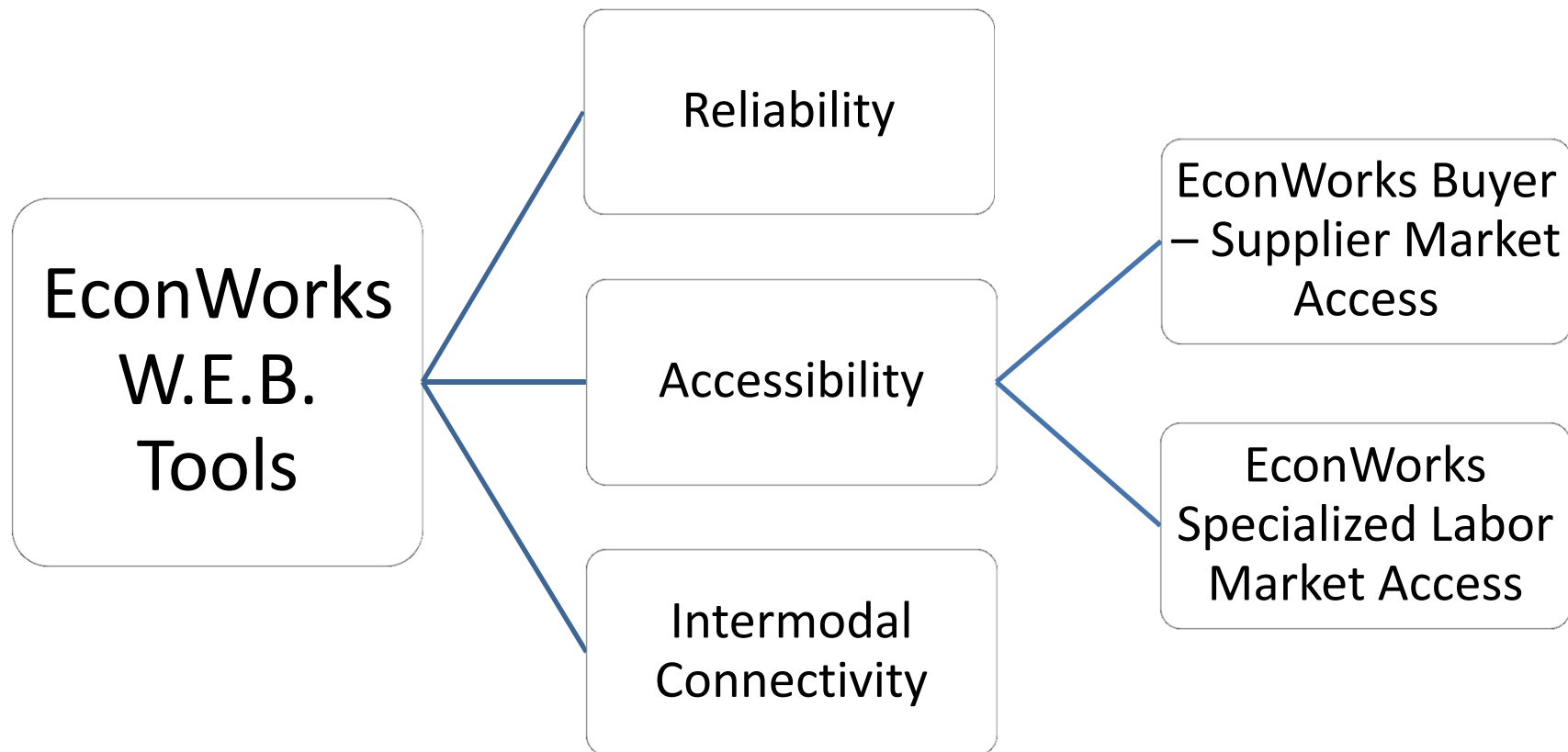
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MARCH 10, 2016

INTRODUCTION

EconWorks W.E.B. Tools



INTRODUCTION

PROJECT OBJECTIVES

- Demonstrate and document the use of the EconWorks W.E.B. tools for assessing the wider economic benefits (reliability, accessibility, and intermodal connectivity) of transportation projects in Indiana.
- Conduct sensitivity analysis of the results with respect to select input factors.
- Conduct a parallel analysis of selected projects using TREDIS.

US-36

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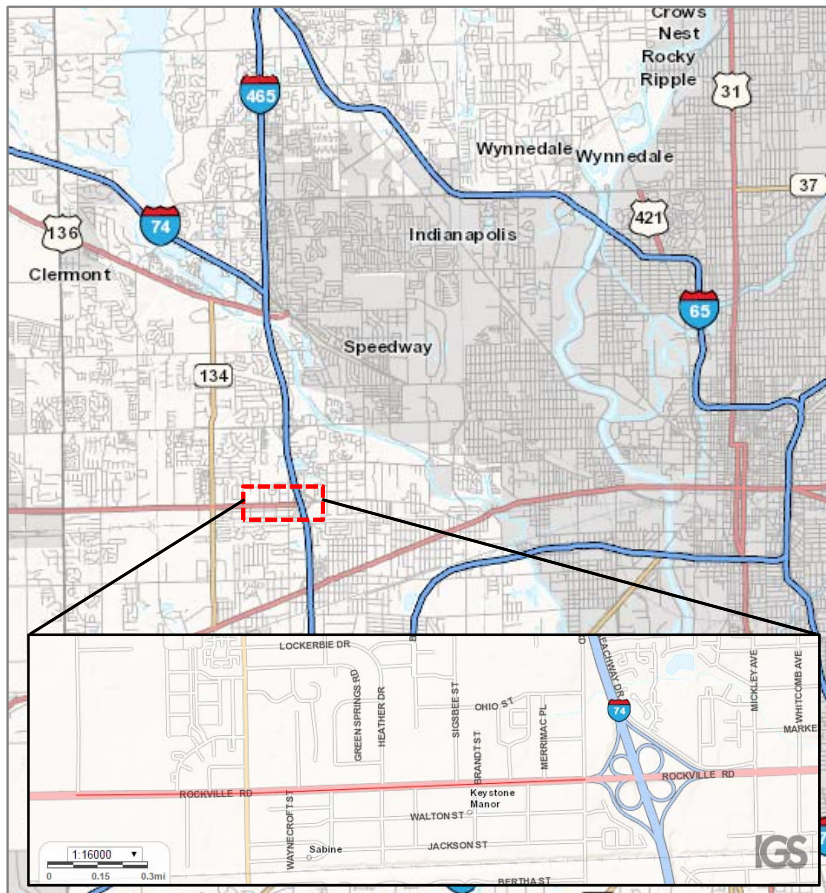
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ECONWORKS RELIABILITY TOOL & TREDIS

TOOLS FOR ASSESSING WIDER ECONOMIC
BENEFITS OF TRANSPORTATION

CASE STUDY: US-36

PROJECT DESCRIPTION



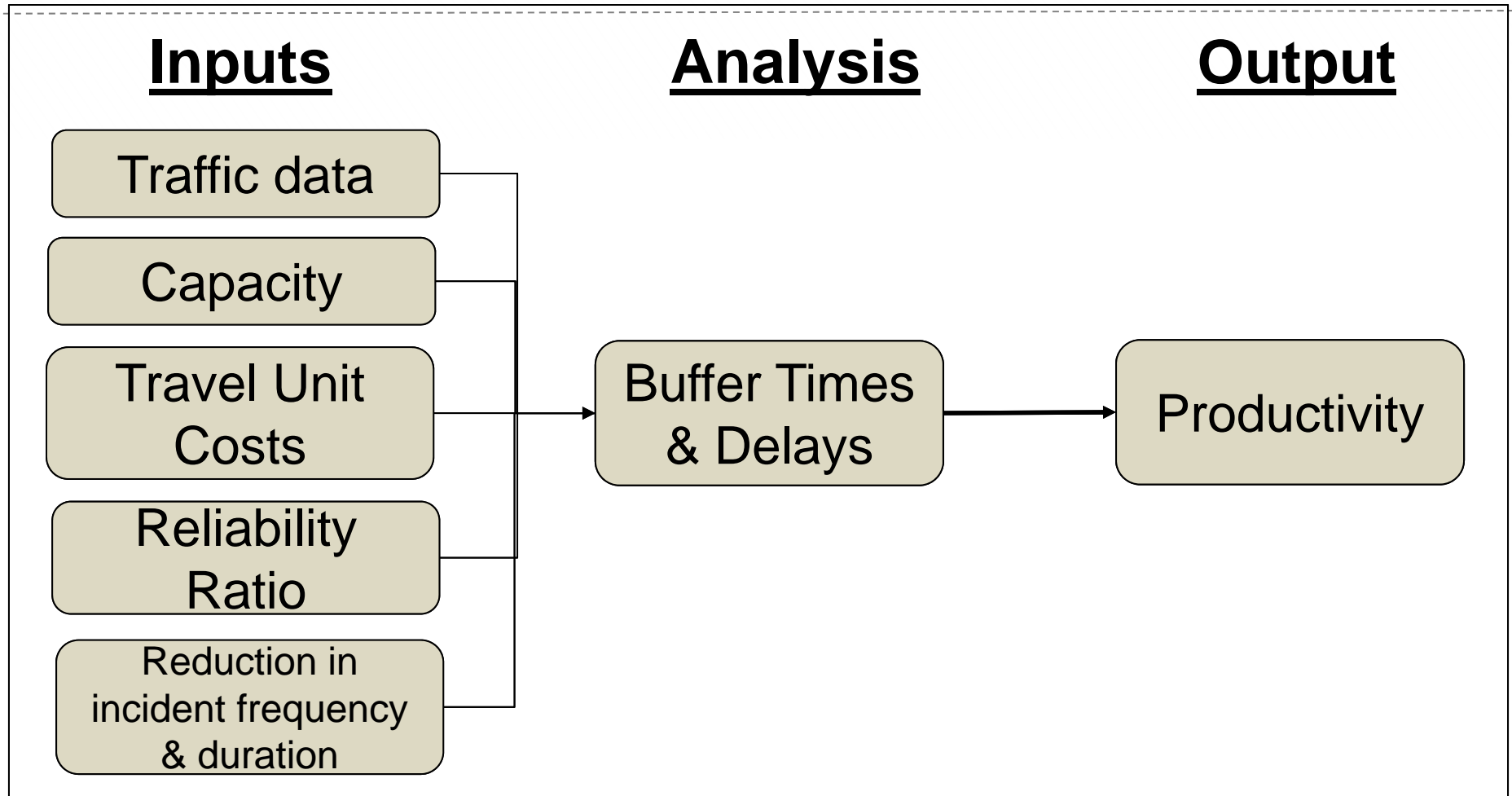
Source: IndianaMap, Indiana Geographic Information Council

- 1.6 miles between Transfer Dr. and Interstate I-465
- AADT: more than 40,000 veh/day (mostly passenger cars)
- Two additional lanes, one in each in each direction
- Peak hour period: between 5 p.m. and 7 p.m. (Indiana TCDS, 2014)
- v/c ratio >0.85 and TTI: 2.00
- Density of traffic lights: 1.8 intersections per mile
- High levels of congestion and associated unreliable travel times

CASE STUDY: US-36

INPUTS & OUTPUTS

ECONWORKS - RELIABILITY TOOL



CASE STUDY: US-36

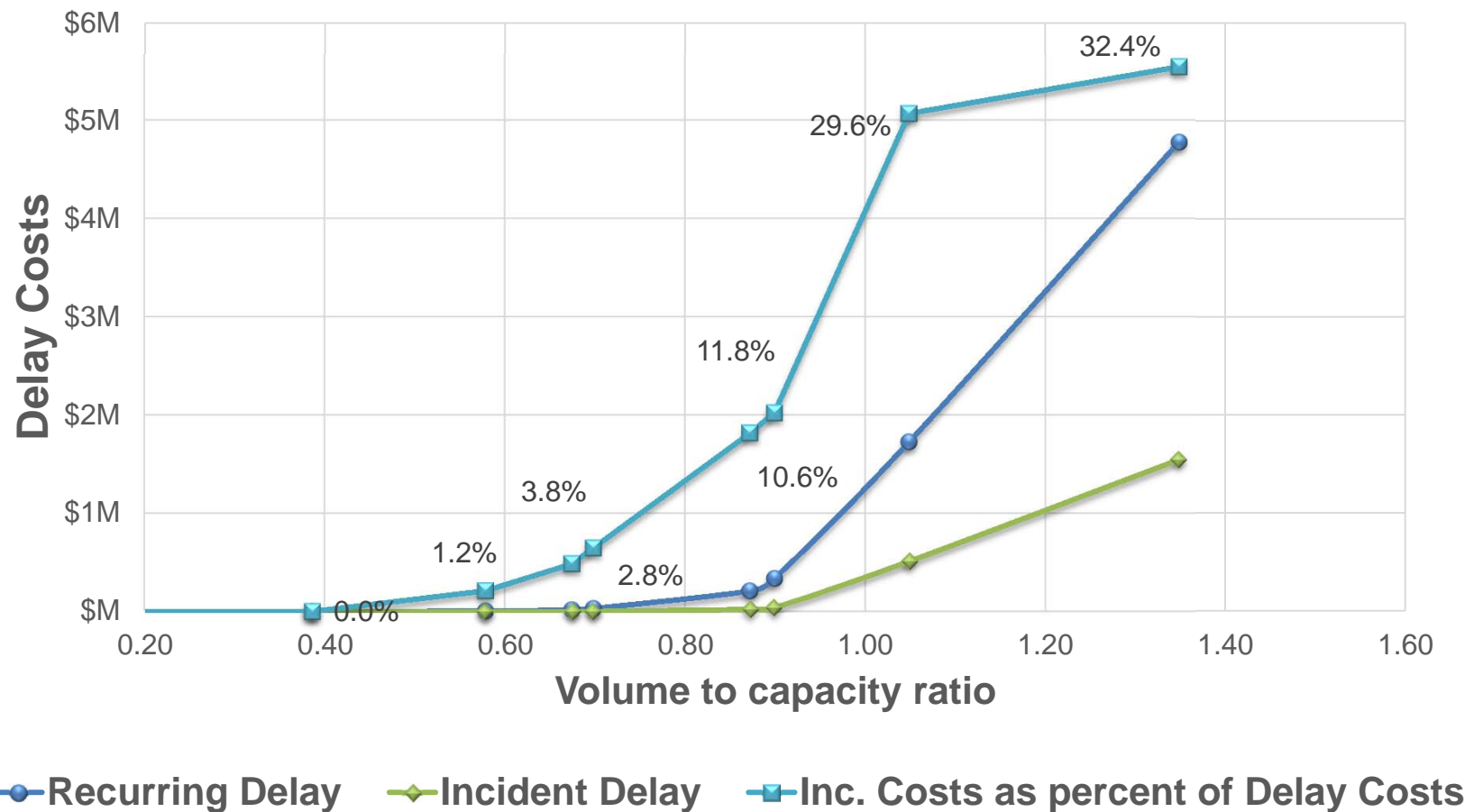
INPUTS & OUTPUTS

ECONWORKS - RELIABILITY TOOL

Metric	US36 - Base scenario	US36 - Built Scenario
Overall mean TTI	1.24	1.02
TTI95	1.70	1.07
TTI80	1.35	1.02
TTI50	1.17	1.00
Percentage of trips less than 45 mph	24.79%	2.89%
Percentage of trips less than 30 mph	6.49%	0.65%
Total Annual Weekday Delay (veh-hrs)		
Total Equivalent Delay	59767	3408
Recurring Equivalent Delay	53282	3367
Passenger Delay	51023	3201
Commercial Delay	2259	165
Incident Equivalent Delay	6485	41
Passenger Delay	6113	38
Commercial Delay	372	3
Total Annual Weekday Congestion Costs (\$)		
Total Equivalent Delay	\$1,132,190	\$64,683
Recurring Equivalent Delay	\$931,093	\$62,179
Passenger Delay	\$878,941	\$58,084
Commercial Delay	\$52,152	\$4,095
Incident Equivalent Delay	\$201,097	<u>\$2,504</u>
Passenger Delay	\$185,499	<u>\$2,276</u>
Commercial Delay	\$15,599	<u>\$228</u>

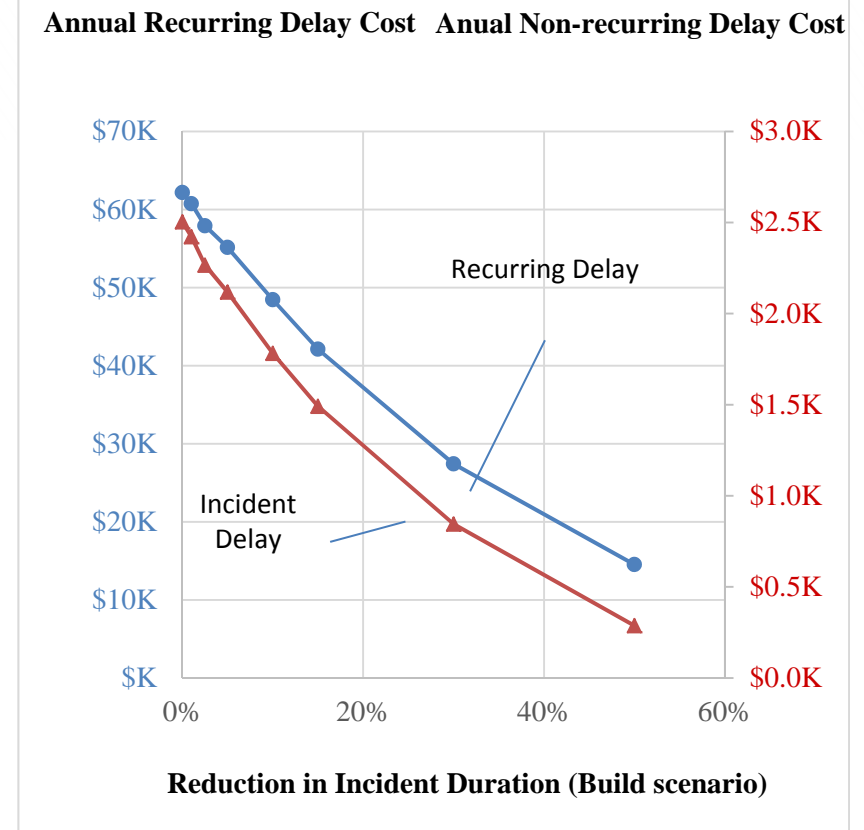
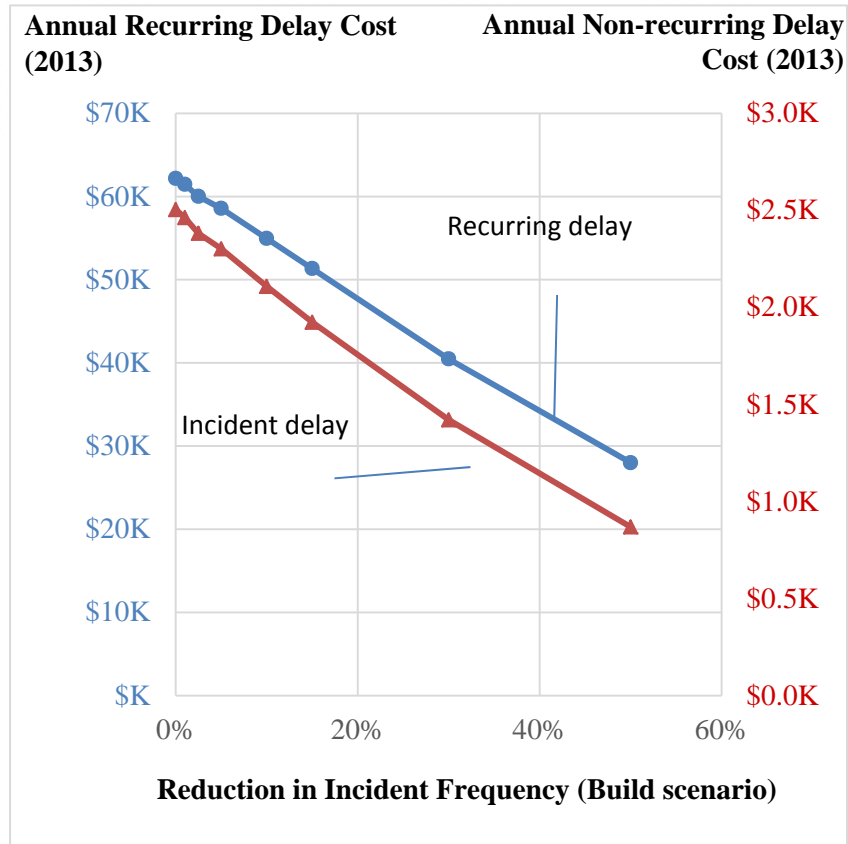
SENSITIVITY ANALYSIS - CASE STUDY US-36

ECONWORKS RELIABILITY TOOL



SENSITIVITY ANALYSIS - CASE STUDY US-36

ECONWORKS RELIABILITY TOOL



EconWorks Estimated Reliability Costs as a Function of the Reduction in Incident Frequency and Reduction in Incident Duration - Build scenario (2013)

SYNERGIES BETWEEN ECONWORKS RELIABILITY TOOL & TREDIS

EconWorks Reliability Tool	TREDIS Reliability Analysis
<ul style="list-style-type: none"> • Functions based on the travel time index (TTI) that yield a delay value. • Outputs of the tool include: percentiles of TTI percent of trips, percent of trips under 30 and 45 mph, recurring delay, incident delay, and total delay. 	<ul style="list-style-type: none"> • Buffer time index. • Outputs include buffer time per mode.
<ul style="list-style-type: none"> • Percentiles of TTI are estimated using the SHRP2 L03 “Data Poor” equations. • Reliability space is measured as the difference between the 80th and 50th percentiles. 	<ul style="list-style-type: none"> • Buffer time can be directly provided by the user or it can be estimated using an empirical relationship between congestion and the buffer time index (only for cars and trucks).
<ul style="list-style-type: none"> • Facility capacity calculations distinguish between freeways, signalized highways, and rural roadways. 	<ul style="list-style-type: none"> • Metrics of reliability do not consider the type of facility being analyzed.
<ul style="list-style-type: none"> • Required data can be easily obtained or estimated. The tool does not require/offer calibration to local conditions. 	<ul style="list-style-type: none"> • Default values and empirical relationships facilitate the analysis.

ECONWORKS RELIABILITY TOOL LIMITATIONS

- The EconWorks Reliability tool presents a set of built-in hourly volume factors to estimate the hourly distribution of volumes that cannot be adjusted to fit the project peak hour volumes exactly.
- The tool does not make a distinction between the benefits for different trip's purposes in the passenger vehicles (i.e. commuting, personal, and business trips), therefore, the travel time unit cost for passenger vehicles might need to be adjusted.
- The tool provides a set of default values for the reliability ratio, which can vary depending on the industry sectors that the transportation facility is serving. The tool's guidelines provide a range of variability, but there is still some degree of uncertainty when choosing these values.

SR-3

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ECONWORKS ACCESSIBILITY TOOLS & TREDIS

TOOLS FOR ASSESSING WIDER ECONOMIC
BENEFITS OF TRANSPORTATION

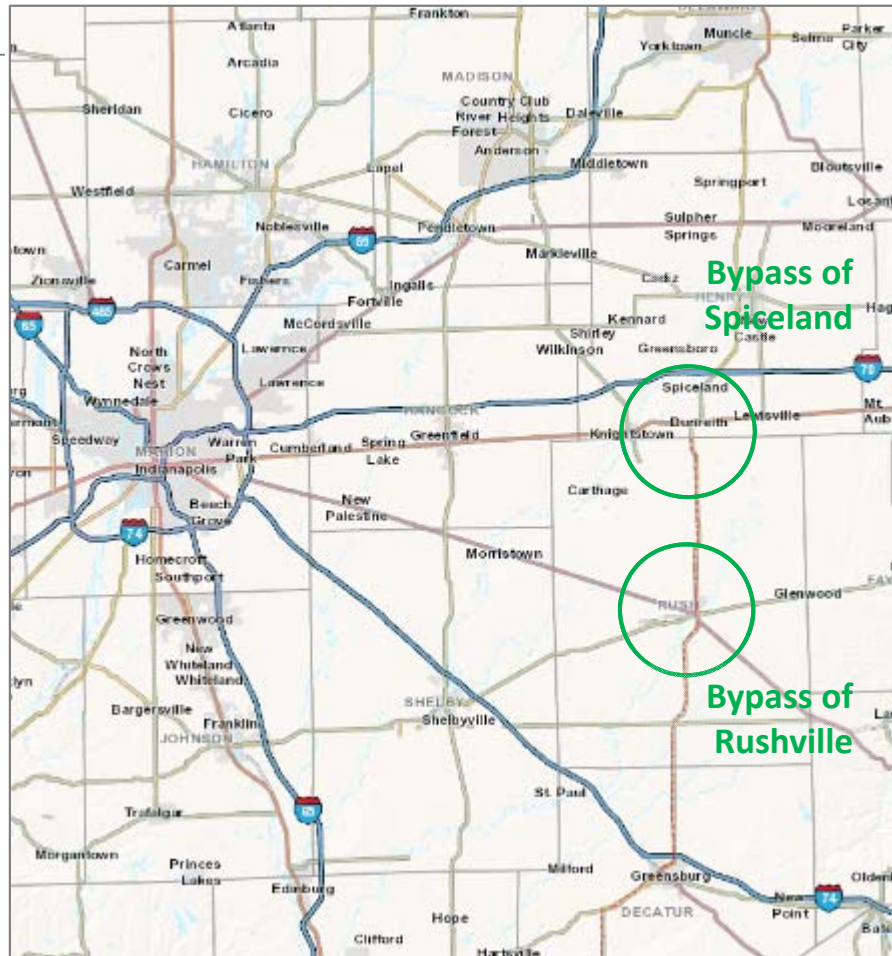
INTRODUCTION

Market Access Benefits

- Effect of expanding breadth of **destinations** served by same-day truck deliveries from given business location
 - Scale economies in production and **delivery processes**
- Effect of expanding breadth of locations from which a business expects to draw workers
 - Scale economies through improved access to **specialized labor pool** and **knowledge spillovers**



CASE STUDY: SR-3 FROM I-70 TO I-74



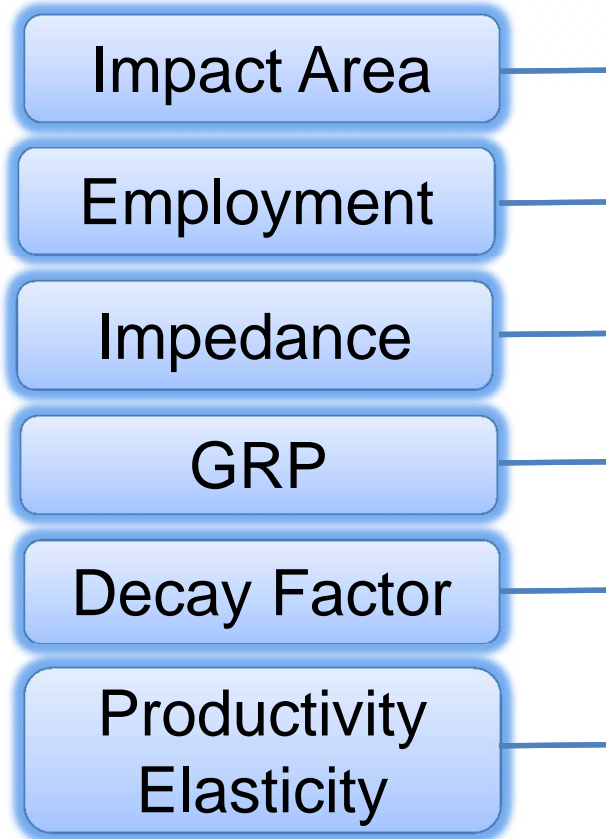
PROJECT DESCRIPTION

- Adding at least one lane per direction
- Bypasses at Rushville and Spiceland
- Objectives:
 - Decrease travel time
 - Enhance freight mobility
- Expected benefits:
 - \$44.6M to regional economy
 - 460 new jobs

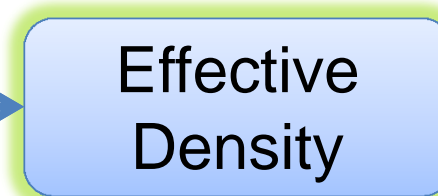
Source: Blue Ribbon Panel on Transportation Infrastructure (2014)

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

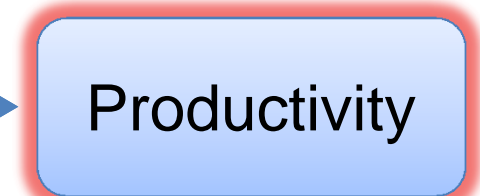
Inputs



Analysis



Output



SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Inputs

Impact Area

Employment

Impedance

GRP

Decay Factor

Productivity
Elasticity

Analysis

Effective
Density

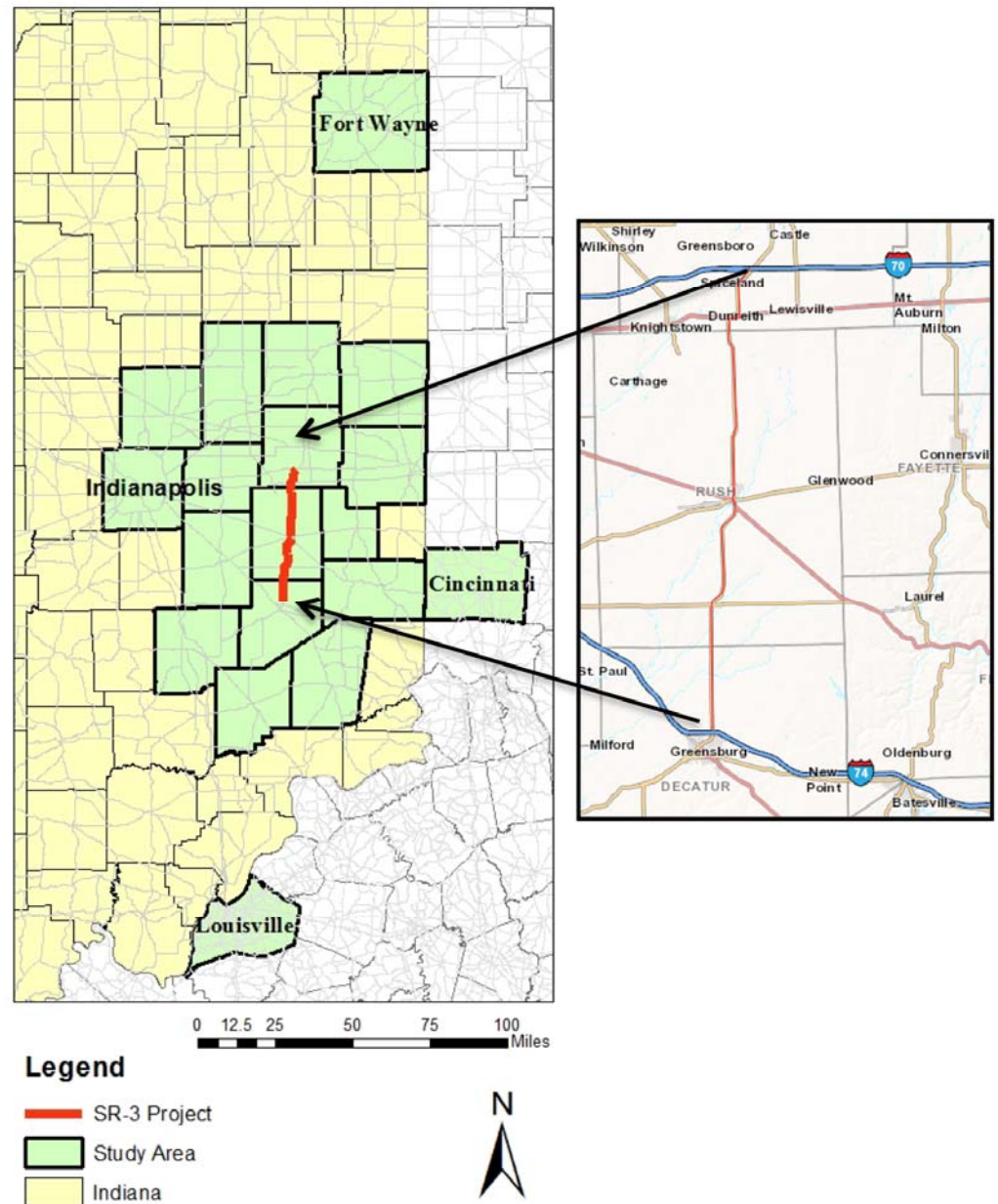
Output

Productivity

SR-3 CASE STUDY DEMONSTRATION

Impact Area

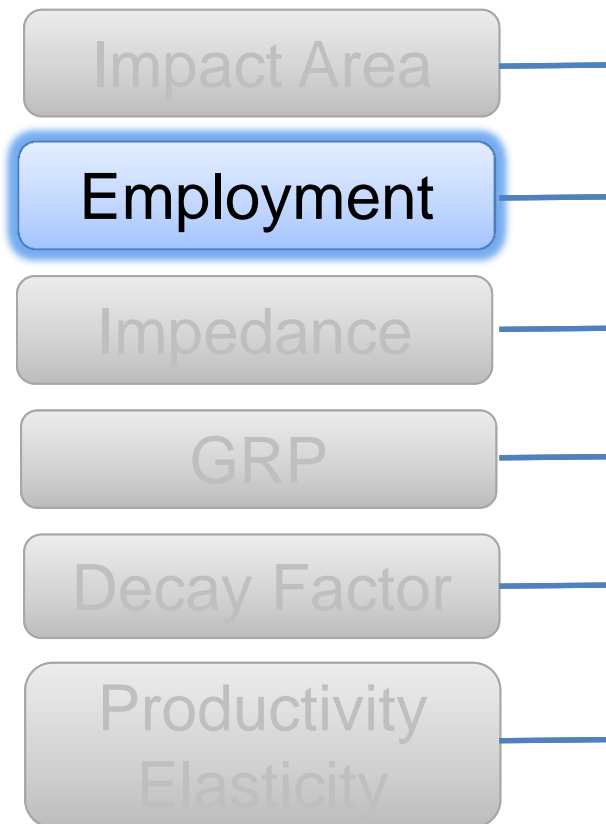
- Directly Affected Counties
 - Decatur, Rush, Henry
- Indirectly Affected Counties
 - Neighbors
 - Marion (Indianapolis)
 - Allen (Fort Wayne)
 - Hamilton, OH (Cincinnati)
 - Jefferson, KY (Louisville)



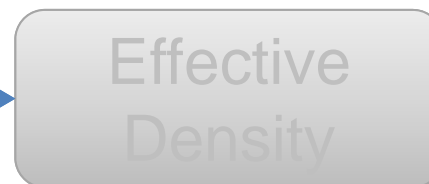
SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

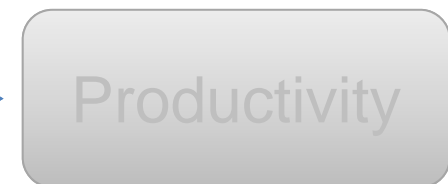
Inputs



Analysis



Output



SR-3 CASE STUDY DEMONSTRATION

Employment

- Total employment or employment for a specific sector (e.g. manufacturing)
- Source: Bureau of Economic Analysis, Regional Data (2013)

	Total Employment	Manufacturing Employment	Is Manufacturing the Sector with Highest Employment?
Decatur	16,869	4,911	✓
Rush	6,784	974	✓
Henry	17,893	2,053	✓
Delaware	59,099	4,249	
Madison	50,399	4,175	
Hancock	39,448	3,779	✓
Shelby	22,169	4,732	✓
Bartholomew	58,027	17,959	✓
Jennings	10,284	1,829	✓
Ripley	14,440	1,990	
Franklin	7,316	640	
Fayette	9,176	1,180	
Wayne	36,692	5,451	✓
Randolph	10,461	2,183	✓
Hamilton	187,089	6,317	
Marion	674,177	55,095	
Allen	225,997	28,036	✓
Cincinnati	608,746	48,875	
Louisville	539,746	46,311	

SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Inputs

Impact Area

Employment

Impedance

GRP

Decay Factor

Productivity
Elasticity

Analysis

Effective
Density

Output

Productivity

SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Indiana Statewide Travel Demand Model (ISTDM)

- Time horizon
 - No-build: base-case 2010 scenario
 - Build: 2035 scenario
- Analysis unit
 - Matrix aggregation tool
 - TAZs to county-level zones

Alternative Sources for Impedance Levels

- Oak Ridge National Highway Network (<http://cta.ornl.gov/transnet/SkimTree.htm>)
- ESRI Business Analyst Online (<https://bao.arcgis.com>)
- Google Earth

SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Inputs

Impact Area

Employment

Impedance

GRP

Decay Factor

Productivity
Elasticity

Analysis

Effective
Density

Output

Productivity

SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Gross Regional Product (GRP) Proxy

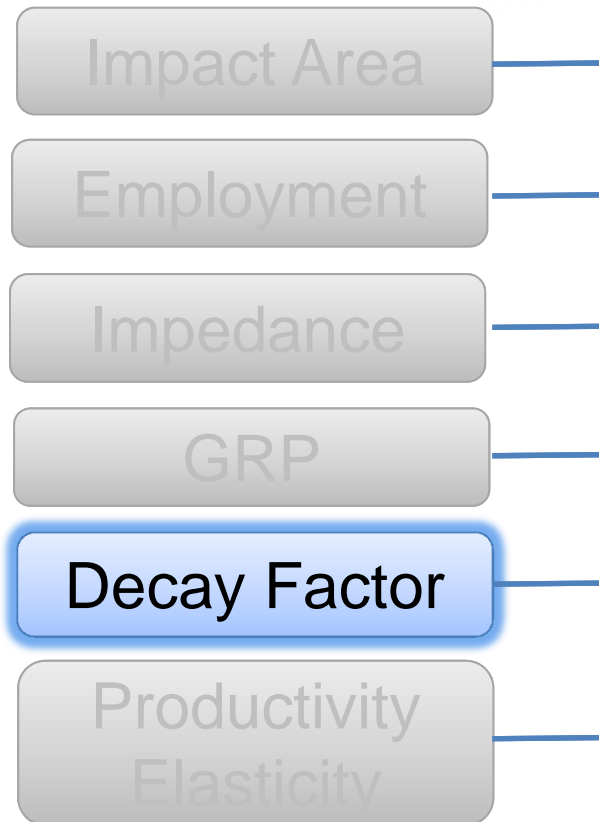
$$GRP\ proxy_i = \frac{State\ GDP}{State\ total\ earnings\ by\ place\ of\ work} \times \frac{Total\ earnings\ by\ place\ of\ work_i}{Employment_i}$$

- Data Source
 - Bureau of Economic Analysis, Regional Data (2013)

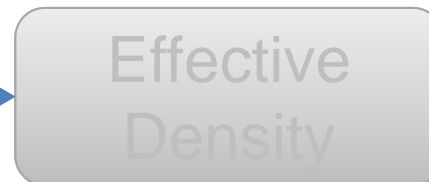
SR-3 CASE STUDY DEMONSTRATION

SHRP2 C11 ACCESS TO BUYER-SELLER MARKETS TOOL

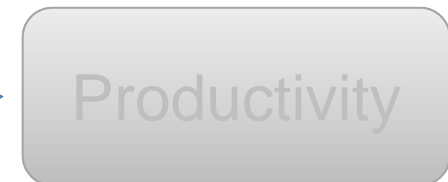
Inputs



Analysis



Output



SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Impedance Decay Parameter

- Behavioral parameter used in the estimation of *effective density* (measure of market access)
- Suggested values in the Econ Works W.E.B. tools guidelines: 0 - 5
 - “Those with access to MPO travel demand models may use the data from those models to calibrate decay”
- Graham, et al. (2009). Transport Investment and the Distance Decay of Agglomeration Benefits
- **Sensitivity Analysis**

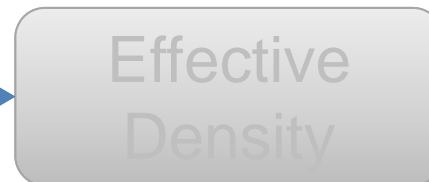
SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

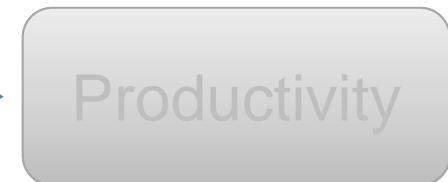
Inputs



Analysis



Output



SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

$$\text{Productivity Elasticity} = \frac{\% \text{ change in productivity}}{\% \text{ change in market access}}$$

Table 5.5. Suggested Elasticity Ranges for Evaluation

Activity	μ Range	New Capacity or Improved
Population	0.20–0.01	0.06 for new capacity; 0.03 or less for improved.
Employment	Similar to above.	Similar to above.
Manufacturing Employment	Mean estimate 0.03 (Min –0.36; Max 0.319) Value selected must be based on how specialized the industry is within the region. Suggested value is 0.03 and subjected to sensitivity analysis.	0.03 for new capacity and lower than 0.03 for improved.
Other Sectors	Limited guidance is available at this time.	Limited guidance is available at this time.

Source: SHRP 2-C11-RW-1

➤ Sensitivity Analysis

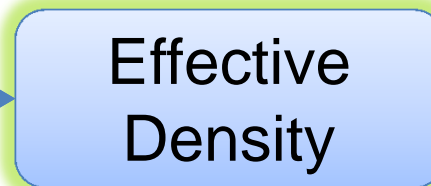
SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

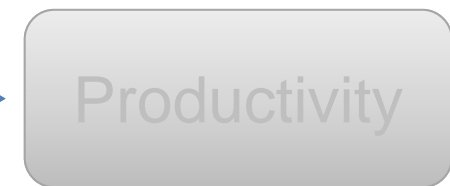
Inputs



Analysis



Output



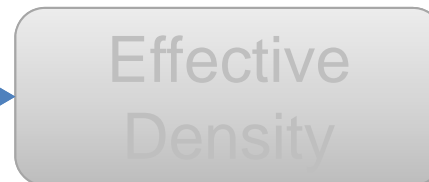
SR-3 CASE STUDY DEMONSTRATION

ECONWORKS BUYER – SUPPLIER MARKET ACCESS

Inputs



Analysis



Output



CASE STUDY: SR-3

TREDIS ANALYSIS – MARKET ACCESS MODULE

Inputs

Mode – Trip Purpose Combination

Project Timing and Analysis Period

Study Regions

Total Construction Costs

Maintenance and Operation Costs

Traffic Data (build & no build)

Emp.- 3 hours for Build Scenario

Output

Productivity
(Value added)

BUYER-SUPPLIER MARKET ACCESS RESULTS COMPARISON

EconWorks Buyer-Supplier Market Access Tool

County	FIPS County Code	Effective Density, Base Year (2010)	Effective Density, Reference Year (2035)	Productivity (2013\$ RPPs)
Allen, IN (Fort Wayne)	18003	27,359	27,478	\$2,384,361
Bartholomew, IN	18005	35,919	36,012	\$422,381
Decatur, IN	18031	33,404	33,712	\$371,417
Delaware, IN	18035	34,987	35,063	\$277,443
Fayette, IN	18041	31,572	31,597	\$14,034
Franklin, IN	18047	31,696	31,723	\$10,197
Hamilton, IN	18057	46,986	47,485	\$5,039,462
Hancock, IN	18059	44,865	44,901	\$59,514
Henry, IN	18065	36,228	36,450	\$208,794
Jennings, IN	18079	31,065	31,267	\$131,901
Madison, IN	18095	38,897	38,983	\$227,974
Marion, IN (Indianapolis)	18097	57,133	57,262	\$4,842,611
Randolph, IN	18135	28,185	28,268	\$77,242
Ripley, IN	18137	31,252	31,429	\$208,280
Rush, IN	18139	35,333	35,579	\$128,924
Shelby, IN	18145	39,609	39,679	\$92,910
Wayne, IN	18177	31,724	31,882	\$393,683
Jefferson, KY (Louisville)	21111	36,311	36,350	\$1,520,141
Hamilton, OH (Cincinnati)	39061	31,942	31,933	-\$524,859
Total		684,467	687,053	\$15,886,410

\$7.1 Million

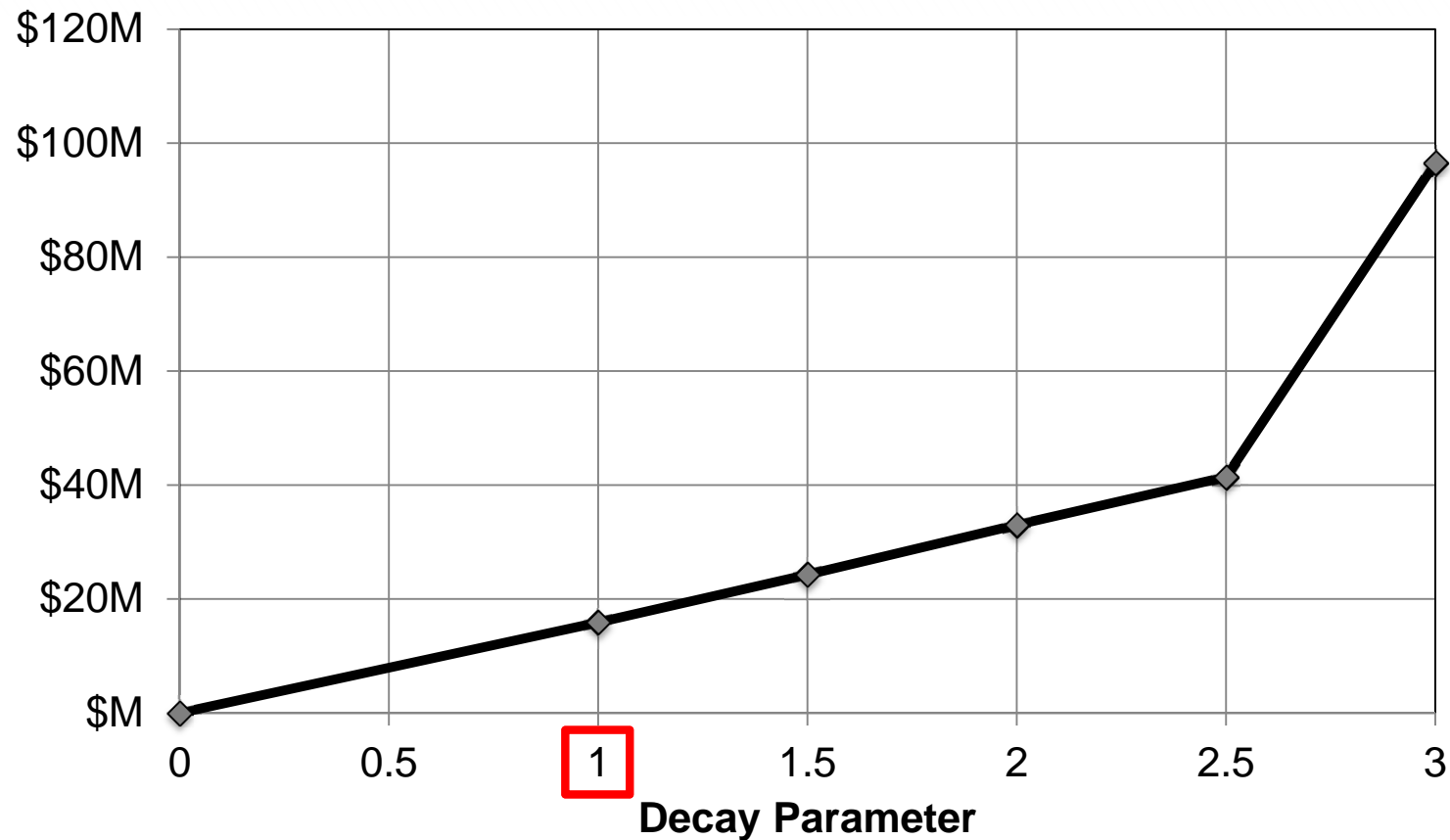
TREDIS Market Access Module

\$3.8 Million only took into consideration of Decatur, Rush, and Henry County

ECONWORKS BUYER – SUPPLIER MARKET ACCESS TOOL

SENSITIVITY ANALYSIS: IMPEDANCE DECAY PARAMETER

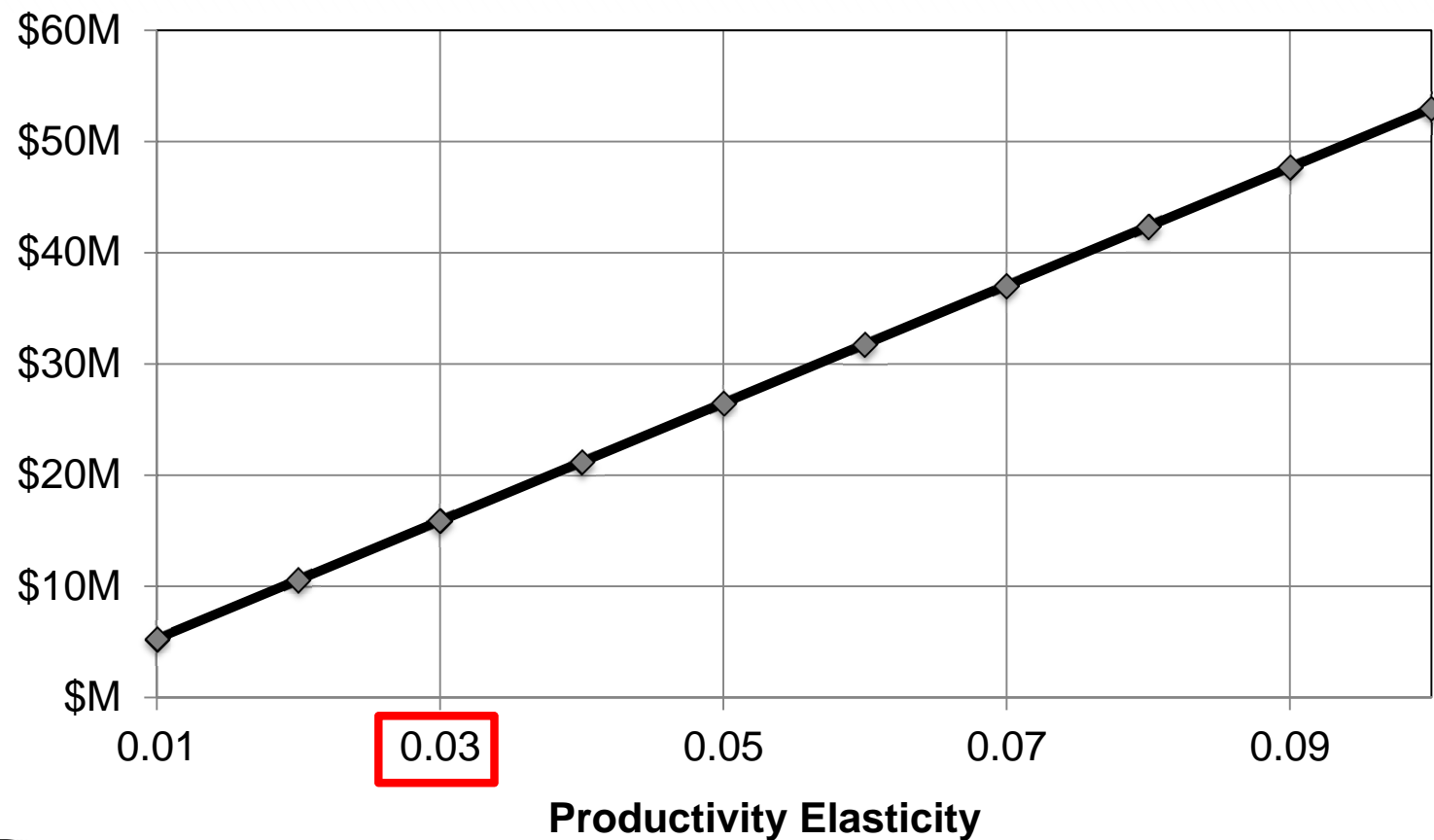
**Productivity
(\$2013 RPPs)**



ECONWORKS BUYER – SUPPLIER MARKET ACCESS TOOL

SENSITIVITY ANALYSIS: PRODUCTIVITY ELASTICITY

Productivity
(\$2013 RPPs)



SENSITIVITY ANALYSIS - CASE STUDY SR-3

ECONWORKS BUYER-SUPPLIER MARKET ACCESS

Sensitivity Analysis : Impedance Type

Impedance Type	Productivity ^a (\$2013 RPPs)
Free-flow travel time (min)	15,886,410
Travel time cost ^b (\$)	15,945,778
Generalized cost (\$)	16,039,136

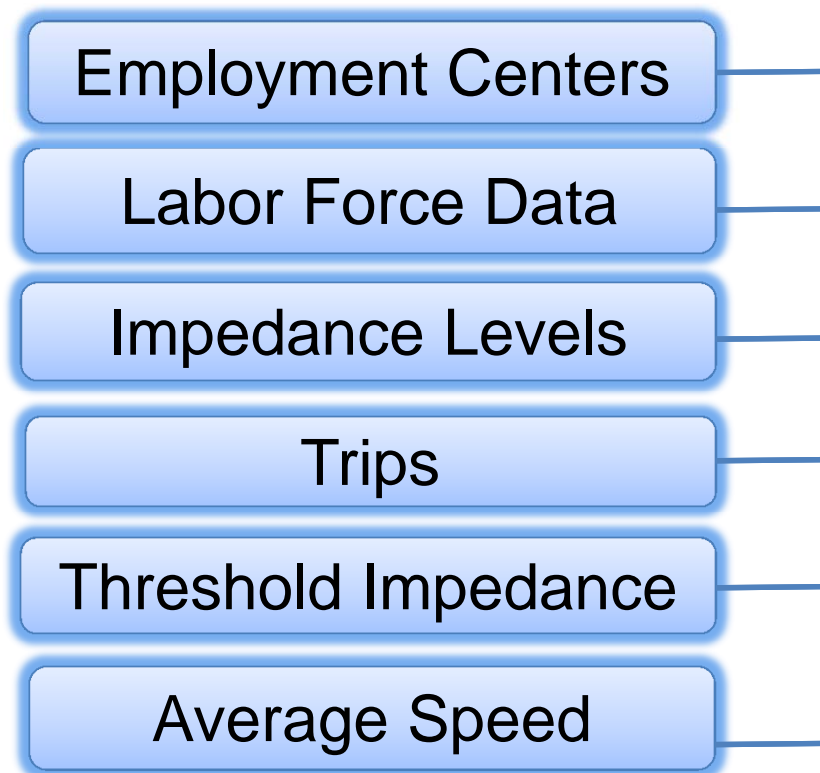
a Productivity was estimated for decay parameter equal to 1, and productivity elasticity of 0.03

b Travel time cost was estimated for VOT equal to \$25.75/hour, which corresponds to the VOT for truck drivers as presented by TIGER (2012).

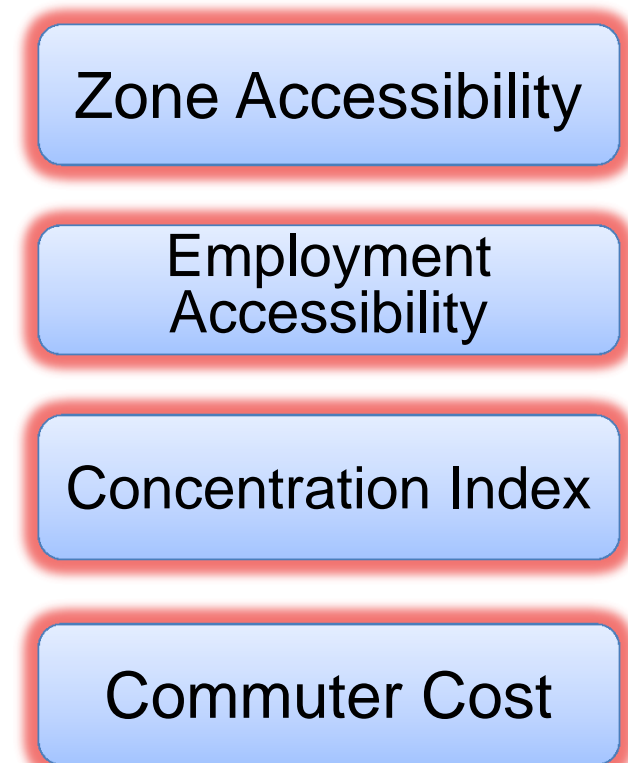
CASE STUDY: SR-3

ECONWORKS SPECIALIZED LABOR MARKET ACCESS

Inputs



Analysis and Output



LABOR MARKET ACCESS RESULTS COMPARISON

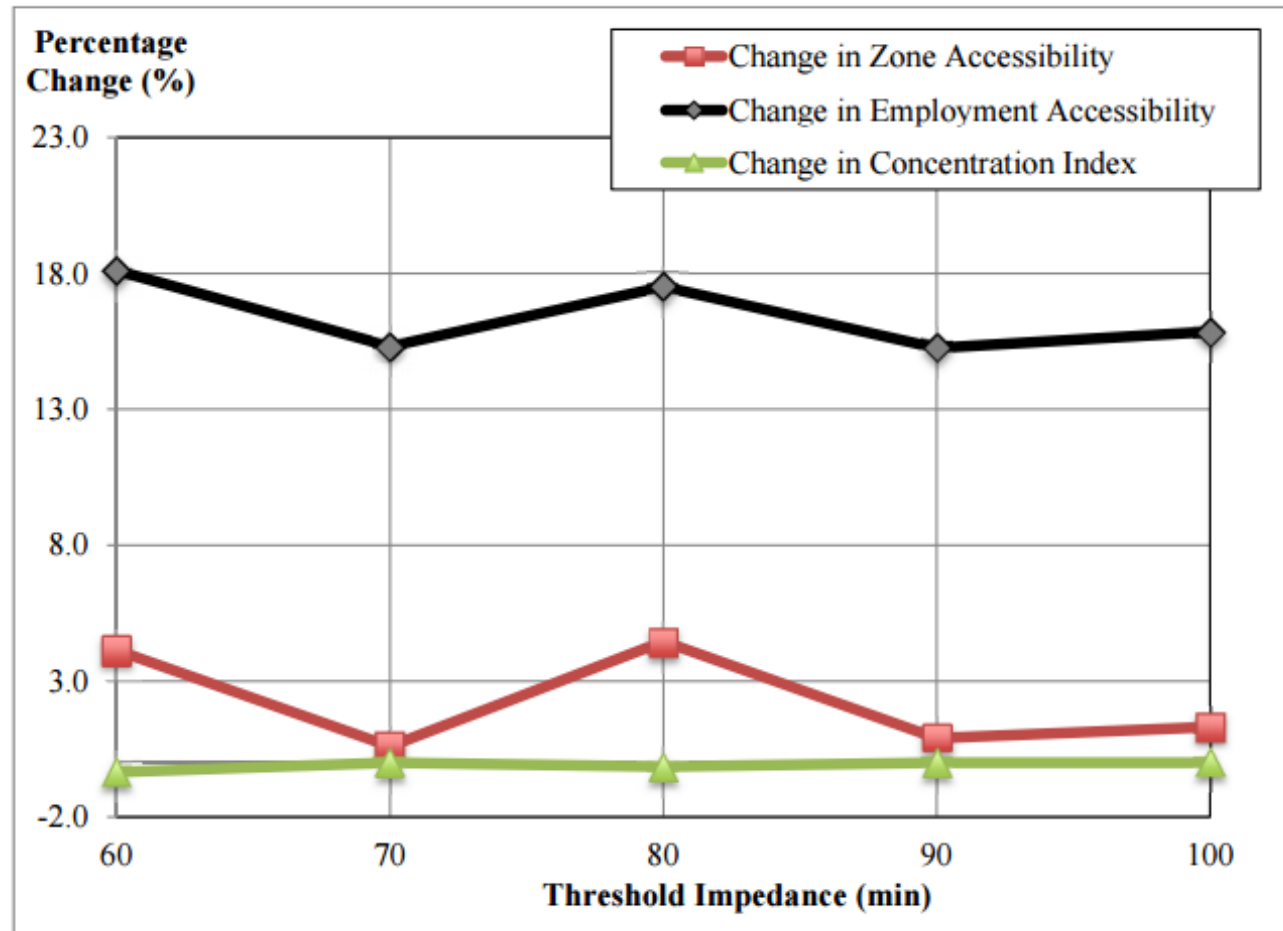
EconWorks Specialized Labor Market Access Tool

Employment Center	FIPS County Code	Change in Zone Accessibility (%)	Change in Employment Accessibility (%)	Change in Concentration Index (%)	Change in Commuter Cost (\$ 2013)
Bartholomew, IN	18005	0.00	15.00	-0.11	\$0
Decatur, IN	18031	0.00	15.00	-0.11	\$167
Delaware, IN	18035	2.22	17.01	0.42	\$934
Fayette, IN	18041	1.64	15.00	-0.11	-\$1,912
Franklin, IN	18047	1.30	15.00	-0.11	-\$300
Hamilton, IN	18057	1.08	15.00	-0.11	\$559
Hancock, IN	18059	0.92	15.00	-0.11	\$3,144
Henry, IN	18065	0.80	15.00	-0.11	\$7,342
Jennings, IN	18079	1.46	21.18	1.75	\$0
Madison, IN	18095	1.32	15.00	-0.11	\$321
Marion, IN	18097	1.20	15.00	-0.11	\$369
Randolph, IN	18135	1.11	15.00	-0.11	\$22
Ripley, IN	18137	1.55	19.57	-1.43	\$24
Rush, IN	18139	1.44	15.00	-0.11	\$6,940
Shelby, IN	18145	1.33	15.00	-0.11	\$503
Wayne, IN	18177	1.67	16.82	0.61	-\$408
Total		1.31	15.85	0.00	\$17,705

SENSITIVITY ANALYSIS - CASE STUDY SR-3

ECONWORKS SPECIALIZED LABOR MARKET ACCESS TOOL

Sensitivity Analysis: Threshold Impedance



Case Study: SR-3

TREDIS- MARKET ACCESS MODULE

Inputs

Mode – Trip Purpose Combination

Project Timing and Analysis Period

Study Regions

Total Construction Costs

Maintenance and Operation Costs

Traffic Data (build & no build)

Pop.- 40 min. for Build Scenario

Output

Productivity
(Value added)

\$64.9 million only
considered Decatur,
Rush, and Henry
County

COMPARISON OF ECONWORKS W.E.B. AND TREDIS

Criteria	EconWorks W.E.B Accessibiity and ConnectivityTools	TREDIS Market Access Module
Separate tools to measure market access and intermodal connectivity	Yes	No
Double Counting of Economic Benefits	Possible	No
Measure of Buyer-Supplier Market Access	Changes in effective density	Changes in employment reached within 3 hours drive
Measure of Specialized Labor Market Access	Changes in concentration index for a given threshold impedance	Changes in population reached within 40 minutes drive
Connectivity Values	Connectivity Index and changes in value of travel time	Changes in driving time from the county's population center to the terminal or port
Connectivity to different types of ports is measured concurrently	No	Yes

COMPARISON OF ECONWORKS W.E.B. AND TREDIS

Criteria	EconWorks W.E.B Accessibiity and ConnectivityTools	TREDIS Market Access Module
Driving time in the connectivity measurement	A weighted index value	Average driving time
Separated monetary benefits calculation for each port or terminal	No	Yes
Elasticity values	Range of elasticity values proposed based on past literature	Derived from a set of equations simultaneously
Analysis for a specific industry sector	Yes. Analysis can be done for just one sector.	Yes. Results can be given by sector.
Data Inputs for the measurement of market access	High data requirements	Less data intensive

ECONWORKS BUYER –SUPPLIER MARKET ACCESS– LIMITATIONS

- Impact area < 30 zones
- Proxy GRP for each county
 - For more reliable GRP values: private providers
- No estimates of jobs added
- Productivity benefits only for reference year (and not for entire analysis period)
- Productivity benefits for a single industry sector
- Evaluation of labor market access benefits possible, if population data is used instead of employment.
 - Final output: change in effective density

ECONWORKS BUYER –SUPPLIER MARKET ACCESS– LIMITATIONS

- Transportation improvement links a place of work to a place of residence and, simultaneously, the study area includes specialized industry sectors
- No mathematical definition for zone and employment accessibility
- Incomplete definition for the concentration index
- Not possible to evaluate the magnitude of commuter cost savings
- Functionality issues
- Outputs only for reference year (and not for entire analysis period)
- Labor market access analysis for each industry sector

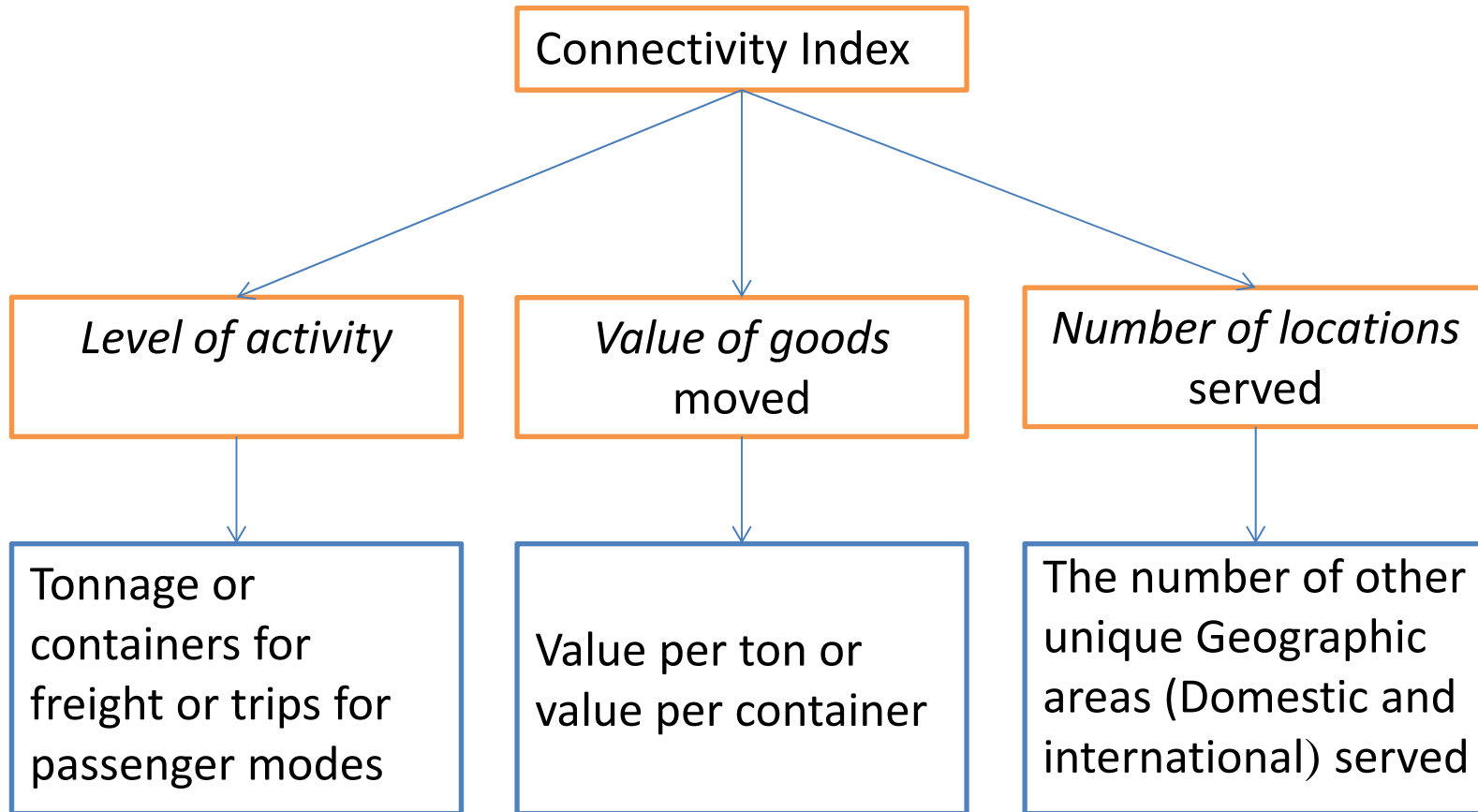


ECONWORKS CONNECTIVITY TOOL **BURNS HARBOR**

TOOLS FOR ASSESSING WIDER **ECONOMIC**
BENEFITS OF TRANSPORTATION

ECONWORKS CONNECTIVITY TOOL

CONNECTIVITY INDEX



CASE STUDY: BURNS HARBOR PROJECT

PROJECT DESCRIPTION

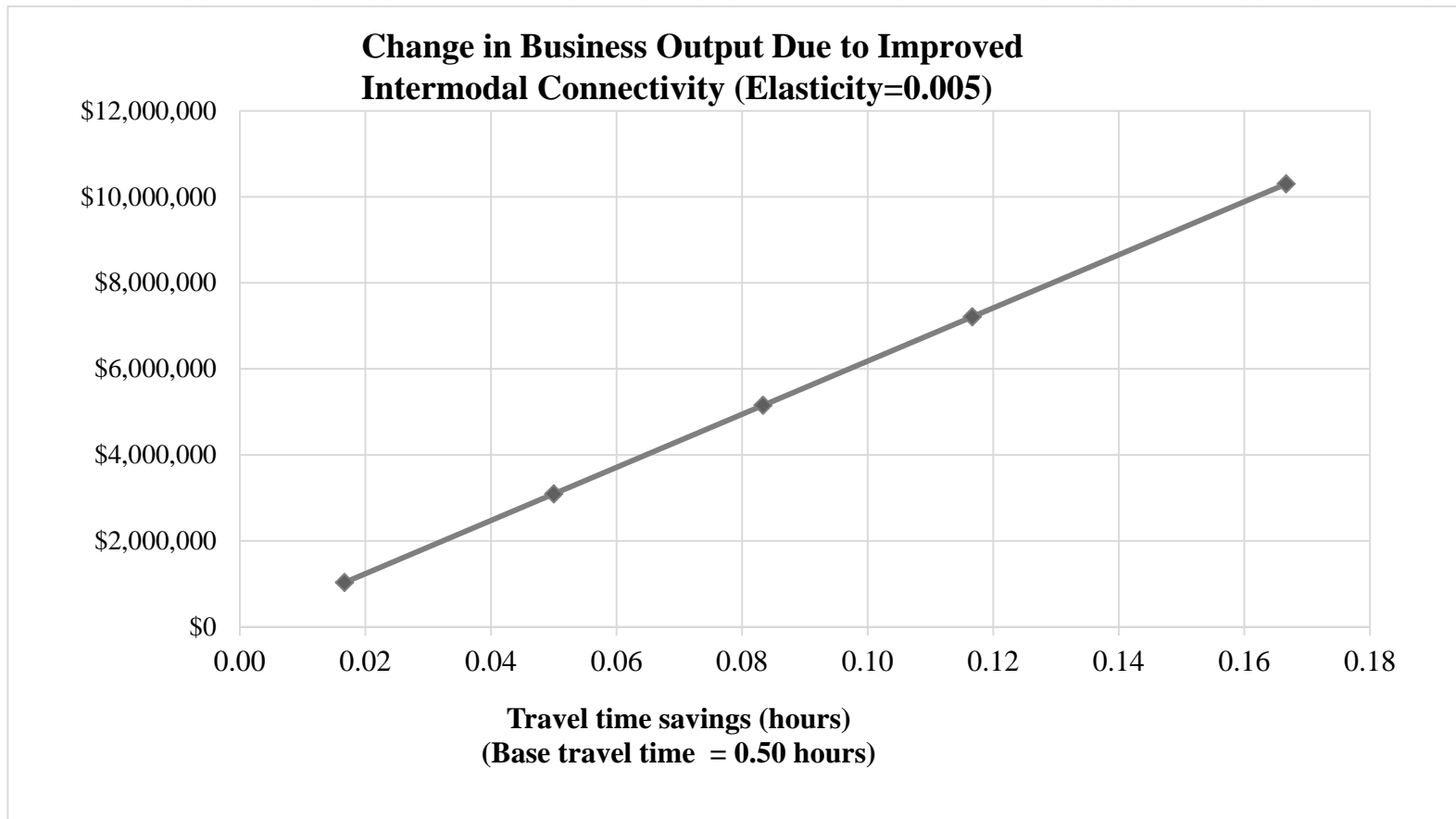


Source: IndianaMap, Indiana Geographic Information Council

- Adding another new bridge to the Burns Harbor
- Objectives:
 - Alternative to the old bridge
 - Ease the traffic at peak hours
- Construction Cost:
 - \$ 18 Million

CASE STUDY: BURNS HARBOR PROJECT

PROJECT DESCRIPTION



Expected change in the businesses' productivity for different values of expected travel time savings.

APPLICABILITY OF THE ECONWORKS W.E.B. TOOLS AND TREDIS

Project Objective	Threshold Factor	Traditional Benefit Analysis	EconWorks W.E.B. Tools	TREDIS
Travel time reduction (due to speed or distance change)	Annual Reduction in VHT > 80,000 hours	✓	-	✓
Capacity improvement/congestion relief	LOS ≥ D	✓	Reliability Tool	✓
Travel time reliability improvement (incident delay reduction due to congestion relief)	TTI > 1.3	✓	Reliability Tool	✓
Metropolitan area accessibility improvement between housing and employment centers	Population > 50,000 and Density > 1,800/sq.mile	✓	Buyer-Supplier Market Access Tool	✓
Metropolitan or regional business delivery accessibility improvement	Trucks > 12% of all vehicles	✓	Buyer-Supplier Market Access Tool	✓
Intermodal terminal connectivity improvement	Trucks > 12% of all vehicles	✓	Connectivity Tool	✓

IMPLEMENTATION OF THE ECONWORKS W.E.B. TOOLS IN INDIANA

- In the short term, the implementation of this study will consist of a set of training sessions for INDOT and MPOs. These sessions will cover the theoretical background as well as demonstrate the use of the EconWorks W.E.B. tools.
- In the long-term, INDOT plans to use the EconWorks Connectivity tool on projects that provide linkages to multimodal facilities.
- INDOT has also identified future studies where the economic impacts of recommended strategies can be estimated using the EconWorks W.E.B. tools.
- Available staff resources and staff training in economic modeling were indicated as key challenges to a wide implementation of these tools.

IMPLEMENTATION OF THE ECONWORKS W.E.B. TOOLS IN INDIANA

INDOT REPORTS

- 1 A system of economic analysis portfolios economic analysis portfolios
 - Project-by-project basis for key corridor improvements
 - Communications with different agents in the decision-making making process (executive office, stakeholders, and general public)
 - Project discussions with asset teams in Indiana.
- 2 Ad-doc reports
 - INDOT will prepare these reports to respond to executive level inquiries.
- 3 Aggregate statistics of expenses and returns
 - These reports will show aggregate statistics on INDOT's expenses on key corridors and the expected return on investment in terms of jobs, real income, business impacts, and system reliability, among others.

IMPLEMENTATION OF THE ECONWORKS W.E.B. TOOLS

CHRONOLOGICAL OVERVIEW OF ACTIONS TAKEN/TO BE TAKEN

Action Implemented/to Implement	Date
Discussions about ensuring the presence of a representative from the technical planning or modeling team when the list of major capacity adding projects scopes are being refined.	October, 2015
Employment of GIS to map projects and visualize their proximity to multimodal facilities for use of the EconWorks Connectivity Tool.	November, 2015
Establishment of annual district meetings with MPOs, RPOs, and each of the INDOT Districts to discuss existing and future projects. The constrained list of major capacity adding projects was evaluated. Additionally, INDOT discussed applying the tools for unconstrained projects, but resources are not available.	December, 2015
Training sessions for INDOT and the MPOs on EconWorks W.E.B.	March-April 2016
The Technical Modeling Team will meet with INDOT Executives, Indiana Economic Development Corporation Representatives, and Indiana Finance Authority to discuss the various economic and analysis tools, their capabilities and potential use	April, 2016

IMPLEMENTATION OF THE ECONWORKS W.E.B. TOOLS

CHRONOLOGICAL OVERVIEW OF ACTIONS TAKEN/TO BE TAKEN

Action Implemented/to Implement	Date
Additional meetings with interested MPOs to discuss incorporation of the EconWorks W.E.B. tools in their project development process.	May, 2016
INDOT will established a workflow to integrate the EconWorks Connectivity tool, TREDIS, and REMI into major capacity adding project development activities	August, 2016
Discussion with select asset teams, Freight Mobility Team, and MPOs on performance measures specific to the FAST Act and how these tools can assist with reporting performance results.	October-December 2016
Report the success of the tools and solicit for additional feedback, tool refinement, research assistance, MPO coordination, training needs, and refinement to business rules/work flow.	January-February 2017

REFERENCES

- Indiana Department of Transportation (INDOT), 2016. Report “*EconWorks Tools for Assessing the Wider Economic Benefits of Transportation Implementation Assistance*”.