

# Broadband Economic Impact Model

Estimate of economic impacts from business adoption of eSolutions for selected geographies and industry profiles.

- These estimates are intended to provide guidance on the scale of economic impacts possible from meaningful use of broadband.

- SNG's evidence-based approach enables evaluation based on the best research available applied to selected geographic profiles.



## Dashboard Metrics

Measure	Impact
Businesses Adopting	3,949
New Revenues / Business	\$60,000
Annual GDP	\$ 293.0 M
Annual Tax Revenues	\$ 11.00 M
Total New Jobs	4,264

Select a State  Select a County  (Leave blank for entire state; Select Multiple for more than one county)

Scenario Parameters	Inputs and outputs
<b>Target Profile <sup>(12)</sup></b>	27% Rural
<b>State</b>	Minnesota
<b>County</b>	All
Total Households <sup>(9)</sup>	2,087,227
Total Businesses (all industries/sizes) <sup>(3, 4)</sup>	144,481
Selected Industries (Max. of 10)	Accommodation & Food Services Administrative & Support Services Construction Finance & Insurance Health Care & Social Assistance Manufacturing / Processing Other services (exc. public admin) Professional & Technical Services Retail Trade Wholesale Trade
Selected Employment Range	Less than 20
Total Businesses (selected industries/sizes)	107,230
% of Selected Industries	85.3%
% of ALL businesses	74.2%
Total Employment of Selected Industries <sup>(2)</sup>	1,777,846
Selected Industries % of Total Employment	82.9%
<b>Adoption Scenario</b>	
Selected eSolutions (Max. of 5)	Selling goods or services Web site for organization Advertising and promotion Deliver services and content Customer service and support
Number of Selected eSolutions	5
% Increase in adoption	5.0%
<b>Estimates of Direct Impacts from Adoption <sup>(5)</sup></b>	
Total number of businesses adopting eSolutions	3,949
% of Total businesses in selected industries	3.7%
Total number of new eSolutions adoptions	11,032
Average new eSolutions per business adopting	2.8
Total incremental Revenue from new eSolutions	\$237,000,000
Total incremental Cost Savings from new eSolutions	\$14,600,000
<b>Total incremental Direct Impact</b>	<b>\$251,600,000</b>
<b>Direct Impact Metrics</b>	
Total annual revenues for adopting businesses	\$1,900,000,000
Total annual operating expenses for adopting businesses	\$1,090,000,000
Operating expenses as percentage of revenues	57.4%
Aggregate percent increase in revenues	12.5%
Aggregate percent cost savings	1.3%
<b>Average incremental revenue per business adopting</b>	<b>\$60,000</b>
Average cost saving per business adopting	\$3,700
<b>Economic Impact Assessment <sup>(8)</sup></b>	
Total Direct Output - Selected industries	\$251,000,000
Total Indirect Output - All Industries	\$106,000,000
Total Induced Output - All Industries	\$141,000,000
<b>Total Incremental Output</b>	<b>\$498,000,000</b>
Total Direct Jobs	2,480
Total Indirect Jobs	695
Total Induced Jobs	1,112
<b>Total Incremental Job Creation <sup>(6)</sup></b>	<b>4,264</b>
<b>Total Incremental GDP <sup>(7)</sup></b>	<b>\$293,000,000</b>
Total Incremental Household Earnings	\$154,000,000
<b>Total Incremental State and Local Taxes</b>	<b>\$11,000,000</b>
Total Incremental Federal Taxes	\$15,100,000
<b>Economic Impact Metrics</b>	
Average total incremental output per adopting business	\$126,000
Average direct jobs per adopting business	0.6
Average indirect and induced jobs per adopting business	0.5
Average incremental total taxes per adopting business	\$6,630
Average incremental GDP per adopting business	\$74,200
Average incremental Household Earnings	\$74

Scenario Parameter Selections			
Adopting	Select up to 10 Industries <sup>(3,4)</sup>	All Businesses <sup>(4)</sup>	Rank
250	<input checked="" type="checkbox"/> Accommodation & Food Services	11,373	6
222	<input checked="" type="checkbox"/> Administrative & Support Services	7,310	9
	<input type="checkbox"/> Agriculture / Forestry / Fishing	521	16
	<input type="checkbox"/> Arts, Entertainment & Recreation	2,761	13
707	<input checked="" type="checkbox"/> Construction	15,990	3
	<input type="checkbox"/> Educational Services	1,930	15
245	<input checked="" type="checkbox"/> Finance & Insurance	9,326	7
511	<input checked="" type="checkbox"/> Health Care & Social Services	15,225	5
	<input type="checkbox"/> Information	2,572	14
162	<input checked="" type="checkbox"/> Manufacturing / Processing	7,237	10
527	<input checked="" type="checkbox"/> Other services (exc. public admin)	15,323	4
540	<input checked="" type="checkbox"/> Professional & Technical Services	16,516	2
	<input type="checkbox"/> Real Estate	6,385	11
532	<input checked="" type="checkbox"/> Retail Trade	19,157	1
	<input type="checkbox"/> Transportation & Warehousing	4,620	12
253	<input checked="" type="checkbox"/> Wholesale Trade	8,235	8
<b>3,949</b>		<b>144,481</b>	
Adopting	Select Employment Ranges	All Industries <sup>(4)</sup>	% of Bus.
2,603	<input checked="" type="checkbox"/> 1 - 4	78,523	54.1%
796	<input checked="" type="checkbox"/> 5 - 9	25,621	17.7%
550	<input checked="" type="checkbox"/> 10 - 19	19,419	13.4%
	<input type="checkbox"/> 20 - 49	12,706	8.9%
	<input type="checkbox"/> 50 - 99	4,524	3.2%
	<input type="checkbox"/> 100 - 249	2,604	1.9%
<b>3,949</b>		<b>143,397</b>	
<b>Select Number of eSolutions</b>		<b>5</b>	(Leave blank to manually select eSolutions below)
<b>AND</b>	<b>% Increase in adoption <sup>(10)</sup></b>	<b>5%</b>	

### Selecting Industries

Select up to 10 industries with sufficient businesses to provide a base for increasing adoption of new online business practices (eSolutions). A base of 1,500 Total Businesses (selected industries/sizes) is recommended for a reliable estimate of impacts.

Multiple county selections may be required to provide a base of business population sufficient for estimating the financial, economic, and employment impacts. Business populations are provided for guidance.

The estimated number of businesses adopting new eSolutions are shown for each industry selected.

Select target business sizes using employment size ranges from 1 up to 249 employees. Counts are provided for all industries listed above.

Selection of businesses with 250 employees or more is not provided due to insufficient data for analysis of this segment.

### Selecting eSolutions

eSolutions are typical business practices that can be enabled or enhanced through online methods.

#### Option 1 - Auto Selection

Select the number of eSolutions to include and the percent increase in adoption. The most impactful eSolutions will be automatically selected.

#### Option 2 - Manual Selection

Select up to 5 eSolutions and the target percent increase in adoption for each.

With either option the target increase in adoption is applied to each selected industry. Estimated new adoptions are shown for each selected eSolution.

OR	Select up to 5 eSolutions and % increase in adoption	% Increase <sup>(10)</sup>	Not Using
2,573	<input type="checkbox"/> Selling goods or services		45.0%
	<input type="checkbox"/> Purchasing goods or services		17.2%
1,142	<input type="checkbox"/> Web site for organization		12.5%
2,058	<input type="checkbox"/> Advertising and promotion		31.8%
3,412	<input type="checkbox"/> Deliver services and content		57.5%
1,847	<input type="checkbox"/> Customer service and support		29.1%
	<input type="checkbox"/> Banking and financial		24.6%
	<input type="checkbox"/> Research by staff		10.4%
	<input type="checkbox"/> Electronic document transfer		10.8%
	<input type="checkbox"/> Supplier communication and coordination		15.8%
	<input type="checkbox"/> Access government information		16.1%
	<input type="checkbox"/> Government transactions		30.1%
	<input type="checkbox"/> Staff training and skills development		27.3%
	<input type="checkbox"/> Teleworking		44.8%
	<input type="checkbox"/> Accessing collaborative tools		30.4%
	<input type="checkbox"/> Social networking		30.3%
	<input type="checkbox"/> Multimedia content or service creation		51.6%

11,032	Selected Counties (Multiple Selection)	All Businesses <sup>(4)</sup>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
0		

### Notes

- Industry profiles are based on USCB County Business Patterns (2013)
- Employment is total for all business sizes. USCB CBP data does not provide a breakdown by employment size range.
- Analysis does not include Public Administration sector (not included in USCB CBP data)
- Mining, Utilities, and Management of Companies are not included for selection due to small numbers of businesses.
- Direct financial impacts for eSolutions adoption are based on SNG research
- Direct, indirect, and induced job impacts are based on I-O modeling and are one-time impacts based on stimulus from new adoptions.
- GDP and Tax impacts are based on I-O modelling
- I-O model uses nominal statewide BEA factors as a proxy for estimation
- Household counts are from USCB 2010 census data
- Percent increase applied to percentage of businesses not currently using the eSolution, by industry and size.
- Financial impacts are annualized based on fully realized benefits from new adoptions.
- Rural percentages based on USCB 2010 data for percent urban population by county.

For more information about the Broadband Economic Impact Calculator, visit: <http://www.sngroup.com/impact>

### Nominal Tax Rates Used \*

State & Local	
Individual Income Tax	3.4%
Corporate Income Tax	0.4%
Sales & Other Indirect Taxes	1.5%
Federal	
Individual Income Tax	6.2%
Corporate Income Tax	0.8%
Other Taxes	0.4%

\* Applied to gross output or gross income