



Broadband Benefits Assessment of the Ammon Fiber Network

Prepared for the City of Ammon, Idaho

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Table of Contents

1. Executive Summary	3
2. Assessing the Case for Public Broadband Investments.....	6
3. Investing in the Benefits Broadband Enables.....	8
3.1 Existing Infrastructure and Needs	8
3.4 Ammon’s Investment in Broadband	8
3.4.1 Financing the Municipal Network	9
3.4.2 Financing Last-Mile Build-Out	9
3.4.3 Benefits of Ammon’s Approach.....	10
4. Municipal Cost Reductions.....	11
4.1 City of Ammon Fiber Network Cost	11
4.2 Municipal Operating Cost Reductions	11
4.3 School District Cost Reductions	11
5. Economic and Community Benefits.....	12
5.1 Business Benefits	12
5.2 Projected Economic Benefits.....	12
5.3 Municipal Benefits	13
5.4 Household Benefits	13
6. Conclusion and Next Steps.....	15
6.1 Next Steps.....	15
7. Acknowledgements	15
Appendix A: Economic Impact Estimate for Ammon in Bonneville County, Idaho	16

1. Executive Summary

The benefits and costs of investing in a municipal fiber network in Ammon, Idaho, are summarized in the tables and described in more detail later in this report. Strategic Networks Group assessed the impacts of these investments, which enabled significant cost reductions to the city, school district, and households and created new economic development opportunities. Because both investments and benefits occur over time and not all at once, the values are estimated over a 25-year period.

“We want fiber” or “We want to become a gig city” was not a strategy for Ammon. Cheap internet and municipal fiber addressed neither the impact to economic sustainability nor future demand. Instead, Ammon decided to base its investment on community needs and expected benefits, focusing on the question “Where do we want to be in 20 years, and how does broadband influence this strategy?” and then tactically thinking through actionable steps. Ammon felt it could not outsource development of its broadband strategy. Taking a utility approach to building a fiber network, which Ammon decided to do, is tied to the identity of the community, which includes relationships with local partners (citizens, businesses, city councils, service providers, etc.), existing and future economic opportunities, and quality of life.

In 2008, Ammon adopted its broadband policy: broadband telecommunications is a basic, essential service. Such a service can be implemented by a municipal utility, and starting in 2011, Ammon invested \$1 million in a fiber network to

- Meet the city’s needs
- Meet the needs of other anchor institutions
- Offer an alternative for local businesses requiring other options
- Find a pay-as-you-go financing model and a true open-access, future-proof architecture for fiber to the property
- Create the foundation to support innovation and smart-city technology.

Ammon built a broadband model in which the city owns the network infrastructure to each property. Utilizing software-defined networking at the edge of the network enables an open-access model in which any provider, including existing incumbent providers, can offer last-mile services inside the property. The benefits of this approach:

- Control: As a community-owned network, Ammon does not need permission from providers to proactively make changes or investments
- Eliminating risk: Ammon does not have to invest its own capital to extend the network to businesses and homes as property owners opt in to finance the last mile
- Choice and competition: The open-access architecture is service-provider agnostic and allows customers to choose providers based on any criteria customers deem valuable. They also have the flexibility to dynamically change providers digitally without disruption of services.

Since 2014, the city has reduced telecom and internet costs by \$69,628 per year for municipal anchor institutions. These savings pay off the initial \$1 million investment within 25 years, as was planned.

Table 1: Municipal Cost Reductions	
Municipal cost reductions over 25 years	\$1,821,000
Ammon Fiber Network investment with expected payback over 25 years*	-\$1,000,000
Net cost reduction to municipality over 25 years	\$821,000

*Note: No interest on \$1million because the council invested from the city’s reserve as an up-front capital expense. No additional staff time or resources are required to manage the network.

The Ammon school district also needed a connectivity upgrade for expanding video and bandwidth requirements. Three schools upgraded from a 1-gig to a 10-gig connection for a per unit savings of 88 percent (\$10.50 per Mbps) for internet and 85 percent for WAN service. The district will reduce costs by \$2,061,000 over 25 years for three schools. As more schools are connected to the Ammon Fiber Network, these impacts will increase.

Households that opted into the Ammon Fiber Network save \$70 per month (\$54 for 75 Mbps symmetrical service on the Ammon Fiber Network versus \$125 for 100 Mbps/3 Mbps from the incumbent, with a data cap). Households currently have a choice of four broadband service providers with a variety of plans. This yields consumer savings of \$115,000 in 2017 and \$1.9 million annual savings when 50 percent of Ammon is on the network.

Table 2: Last-Mile Financing and Household Cost Savings	
Estimated last-mile network investment	\$7,613,000
Property owner last-mile financing	\$7,613,000
Net cost for last-mile network	\$0
Cost savings for households over 25 years	\$35,110,000

In addition to the preceding, SNG’s [Economic Impact Estimate](#) reveals that investing \$175,000 in programming to drive adoption of online business applications and providing training resources for 5 percent of Ammon’s businesses (52 local businesses with fewer than 50 employees each) will have the following business impacts (see Table 3):

Table 3. Business Economic Impacts over 25 Years

\$78,200,000	Total incremental annual revenue from businesses implementing new online business practices
\$71,600	Average annual new revenue per business

In summary, projected business and household benefits from the Ammon Fiber Network are

- \$3.7 million in new annual revenues achieved by local businesses
- \$70K average new annual revenue per business implementing internet solutions and applications that require high speeds
- \$70 per month in savings for households to receive faster, more reliable broadband
- \$115K in anticipated total savings for connected households in 2017 and \$163K annually from 2018 onward
- Connecting an additional 2,000 households to the Ammon Fiber Network can result in household savings of \$1.7M annually.

The network costs:

- \$1 million to connect Ammon municipal properties
- \$717,000 to connect two neighborhoods in Ammon (239 properties), financed by property owners “opting in” to a broadband improvement district (BID—like a business improvement district or a special improvement district) with a \$3K property assessment that could be amortized at low rates over 20 years (\$17 per month)
- \$17 million to connect every address (2010 quote) for complete last-mile build-out for Ammon, based on cost per premises served. Paying for this requires a \$3,400 per premises property assessment.

Ammon’s fiber network investment has been net positive, reducing municipal costs and improving public service and community anchor institution bandwidth tenfold (1 gigabit to 10 gigabits). Over 25 years, Ammon’s cost reduction benefits (\$43.6 million) outweigh the fiber network investment costs (\$8.6 million). The direct economic benefits are projected to be nine-fold greater at \$78.2 million. The annual business economic impacts better (faster, more reliable) broadband enables plus the household savings are additional layers of community benefits that make the case for public investment.

As important to the city as the financial performance of its investment, Ammon has the flexibility and options to use its network for its own best interests because it owns the infrastructure. The goal is that the Ammon Fiber Network will not only improve the quality of life and home values, thus maintaining and expanding the local tax base, but also spur innovation and drive business-growth opportunities. In addition, Ammon can provide new, online-enabled municipal services as the network is virtualized and because services are cloud based (including ISP). The alternative to using network virtualization technologies is to provision purpose-built or independent physical networks for each service, which has traditionally been used for services such as traffic management, public safety, and closed-circuit camera networks. Ammon’s leadership believes the ultimate benefits of the network are yet to be realized and will be derived from the competition and innovation the network enables.

2. Assessing the Case for Public Broadband Investments

This **Broadband Benefits Assessment** is a preliminary step to inform and develop a plan for local broadband investment as a foundation for community vitality and local economic growth. Technology should not lead this process. Rather than justifying investment in technology, a community should approach investing in broadband as part of a master-plan process to understand how to realize benefits and how technology will enable them.

Whether or not private investments in broadband are made, more and more communities and regions realize that they need to take responsibility for their broadband futures. Broadband—like any infrastructure—is a civic and economic enabler that needs to be incorporated into a city, town, or county master plan.

Establishing a shared, holistic, long-range vision for the meaningful community use of broadband includes exploring and defining broadband’s direct and evolving relationship to local businesses, organizations, and citizens. As the internet increasingly empowers customers, all businesses need to be online, and the private or public sector must meet broadband infrastructure requirements to ensure local business retention, expansion, and attraction.

The master-plan process for broadband should include the following steps:

1. **Quantify local broadband benefits** (immediate and long term) based on local broadband demand (based on analysis of [active, latent, and potential demand](#)) to make an economic case for broadband investment. This includes
 - a. **Cost reduction financing**—restructure existing budgets (municipal, county, regional, school district, etc.) to finance better broadband and best leverage local taxpayer dollars.
 - b. **Local economic growth through broadband**—local economic impacts that make a case for public investment in broadband include
 - i. Solidified and increased local GDP and tax base
 - ii. New, high-paying, local jobsThese impacts have two components:
 - iii. **Broadband as location selection criterion**—high-capacity, reliable, affordable broadband is a necessary condition for businesses to stay in or move to an area and as important as other site selection criteria, e.g., tax rates, land costs, quality of local labor force. This is also true for households.
 - iv. **Broadband as a driver for business retention and growth**—business retention and expansion is a key potential benefit from broadband. However, SNG research shows that 70 percent of businesses [under utilize](#) the broadband they have available. Raising awareness and providing resources to [help local businesses](#) (especially small businesses) adopt online business practices (selling online, customer service, online marketing, etc.) is increasingly fundamental to their existence.
 - c. **Cost savings and performance improvements for subscribers (consumer surplus)** from broadband.
2. **Assess the economic return for investing in broadband** using the quantified immediate and potential benefits to the community (from step 1, above) and whether the community benefits outweigh expected network costs.

3. **Develop an economic case for investing in broadband** based on how broadband can benefit local businesses, organizations, and citizens. This is similar in approach to developing a business case but also incorporates community benefits in a more holistic approach to understanding expected community returns on investment (ROI) in terms of economic growth, improved services, and lifestyle improvements. This includes
 - a. Develop and prioritize broadband-enabled goals aligned with the community's long-term development (economic) strategies.
 - b. Develop a **network business case** and financial plan that includes identifying existing relevant assets, assessing network costs, phasing build-out, etc.
4. Develop **economic development and marketing plans** leveraging the broadband network.
5. Develop **strategy for promoting civic engagement**, enabling access to municipal/county services, and integrating with utilities, education, and health organizations. This includes considering issues that are difficult to measure, such as livability, impact of broadband on lifestyle, access to emerging technologies that broadband enables, and community climate for innovation.
6. Drive adoption and utilization in the community by establishing the benefits that increased meaningful internet use provides.

By quantifying the community benefits from broadband investments, a community ROI, i.e., an economic case for investing in broadband, can be assessed and compared to the expected costs to build the network. Where community benefits outweigh the network investment, local property owners and taxpayers can more clearly see the broadband gaps that need to be bridged and why public investment may be needed. With better information, stakeholders can make objective decisions about whether public investments will return greater community benefits.

3. Investing in the Benefits Broadband Enables

The infrastructure for the digital economy is high-capacity, reliable, and affordable broadband. Its meaningful use is necessary to participate in the modern economy. Unfortunately, there are instances when broadband service providers cannot make a business case for investing because of high construction costs (for example, challenging geographies), low population density, low expected take rates, or low revenue per user. In these cases, service providers won't invest—and because their primary concern is ROI, they probably should not.

This is why many communities, including Ammon, seriously consider building their own networks. The economic case for communities is wider reaching than the private-sector business case because it includes community benefits. Broadband is an essential service communities and regions need to flourish and grow. Areas that are unserved or underserved by broadband need to quantify the community benefits and potential economic impacts to assess whether public investment can improve broadband service.

Focusing on benefits enabled by broadband centers the process of discussion, planning, and agreement on the needs of the community rather than having the process driven by technology. Quantifying broadband's benefits in this report is intended to help prioritize action items for the community and clarify how stakeholders can better align with the community's situation, needs, and goals.

3.1 Existing Infrastructure and Needs

Prior to the Ammon City Council's decision to invest in a fiber network, two broadband providers, CableOne and CenturyLink, served municipal buildings and property owners. Municipal buildings and facilities were served by a combination of cable, wireless, and DSL technologies. In addition, municipal properties and schools in Ammon required better performance, but costs were prohibitive. This contributed to Ammon's motivation to invest in its own fiber network.

Standing pat was not an option for Ammon, primarily for economic development reasons. The leadership of this community of 14,500 felt (and saw) that many businesses were moving to or establishing residence in Idaho Falls because of better bandwidth at lower cost. The concern was that this trend would turn Ammon into a bedroom community, diminishing the tax base and the city's ability to provide and maintain infrastructure.

3.4 Ammon's Investment in Broadband

Ammon's approach is local ownership of the broadband infrastructure—the community owns the infrastructure, and the network is organized as a utility—the municipality owns, manages, maintains, and services the network infrastructure. Services are not part of the Ammon Fiber Network.

The benefits:

- Community-based fiber infrastructure managed as a utility is secure, robust, and future proof, with opt-in financing of the last mile, which mitigates political risk and is sustainable.
- Ammon uses a software-defined network that enables open access, putting service choices in the hands of customers

3.4.1 Financing the Municipal Network

The Ammon approach to financing its fiber network is based on the following stacked model of community benefits:

- Cost reduction financing for municipal telecommunications and internet services
- Local economic growth through broadband
- Broadband improvement districts in which property owners finance build-outs in their neighborhoods.

Ammon’s initial network investment focused on connecting municipal properties. This was driven by the opportunity for municipal cost reductions and to avoid new investments with incumbents. By first connecting municipal properties to better broadband, Ammon created backbone throughout the community, from which last mile can be built based on committed demand. In this way, Ammon had the funds up-front, which eliminated last-mile investment risks.

3.4.2 Financing Last-Mile Build-Out

Leveraging the core network, the model for the last-mile build-out is based on a broadband improvement district¹ (BID) approach. In the case of Ammon, a BID is an area where property owners commit to internet services delivered over the proposed network. Once a threshold of property owners commit (60 percent for Ammon’s phase 1), the last-mile network is built out to the BID. In this way, the last mile is financed by committed subscribers.

This BID approach lowers financial (and political) risk because property owners voluntarily sign up and are legally responsible for their portion of the infrastructure cost. Owners commit to an up-front payment to Ammon that can be financed over time with terms that result in net savings for owners. Because property owners pay for the last-mile connection, households’ long-term internet costs are reduced, which helps increase take rates. In addition, ownership and control of the infrastructure result in substantially less subscriber churn. The model is sustainable because the investment is based on the initial sign-up and does not depend on unpredictable future take rates. Property owners who choose not to participate are not financially responsible for BID debt or obligations.

Costs are transparent to subscribers:

- Infrastructure costs—option to pay up-front or over a 20-year period via property taxes
- Maintenance and operations—paid monthly as city utility bill
- Services—paid directly to service provider based on level of service selected by subscriber.

¹ A broadband improvement district (BID), like a special improvement district, is a mechanism through which property owners assess themselves to provide funding for extended services aimed at the economic enhancement of the area. A BID can exist within a township, a municipal corporation, or any combination of contiguous townships and municipal corporations.

3.4.3 Benefits of Ammon's Approach

The primary benefits of Ammon's approach to building broadband network infrastructure include

- **Low financial risk**—The initial investment is enabled and supported by municipal cost reductions and improved services to anchor institutions. The last mile is financed by committed property owners who make up-front payments financed over time.
- **Low taxpayer risk**—Because the network is essentially financed through cost reductions and by property owners, there is low risk to non-participating taxpayers. This also lowers political risk.
- **Inherently sustainable**—Infrastructure investments are made only when there are committed internet subscribers who have a vested interest in remaining on the network. There is no requirement for achieving uncertain take-rate targets.
- **Service provider choice**—By focusing on providing the fiber infrastructure, Ammon enables multiple service providers to offer services. This provides subscriber choice (competition) while obviating the need for Ammon to become a retail service provider.

In making a fiber network available as a utility, Ammon opened the door to leveraging broadband for economic growth while maintaining community vitality and competitiveness.

4. Municipal Cost Reductions

4.1 City of Ammon Fiber Network Cost

Ammon invested \$1 million between 2011–14. The fiber system connects public works buildings, city hall, well sites, a local pool, and the fire department. The \$80K up-front and \$30K annually, quoted in 2011 by the incumbent carrier to connect and serve the new public works building, pushed the City Council to build the network. The 2016 estimated value of the network is \$1.2 million because of contributions made by telecommunications companies and businesses to extend the Ammon Fiber Network to their properties.

4.2 Municipal Operating Cost Reductions

Ammon’s investment improved bandwidth ten-fold while reducing telecommunication and internet service costs to taxpayers—\$3,838 per month or \$39,628 per year. This includes the following city cost reductions:

- Business-class phone service savings of \$365 per month
- Internet services savings of \$1,079 per month
- Control systems, management, and technical staff savings of \$1,958 per month from eliminating diverse legacy systems.

Table 4: Municipal Cost Reductions/Savings over 25 Years

\$ 991,000	Telecommunication and internet cost reductions for municipal properties
\$ 830,000	Municipal cost avoidance of \$80K up-front and \$30K annually

4.3 School District Cost Reductions

Ammon schools needed connectivity upgrades because of expanding video and bandwidth requirements. Each of the 15 schools paid \$533 per month for 1 gigabit WAN service (\$0.53 per Mbps) with CableOne. Three schools (Hillcrest High School, Falls Valley Elementary, and Lincoln High School) upgraded from a 1-gig to a 10-gig connection to the Ammon Fiber Network. For bandwidth, these schools pay \$810 for 10 gigabits of WAN service (\$0.08 per Mbps), an 85 percent per Mbps savings. They pay 11 percent more but get ten times the bandwidth. For internet services, the schools currently realize savings of 88 percent (\$1.50 per Mbps versus \$12) and use their 10-gigabit connection to

- Aggregate IP camera streams at their locations
- Aggregate their phone systems to a few key points and then tie all network services back to central locations
- Share between schools without having a data center in each school to handle large files. File transfers are now instantaneous
- Consolidate IP cameras into a single location that is outside the schools themselves. This service is now centralized for the whole district and secure.

The district will reduce costs by \$2,061,000 over 25 years for three schools. Ammon is currently in the process of connecting the other 12 schools to the network, and these impacts are expected to increase.

5. Economic and Community Benefits

SNG's extensive proprietary database of more than 35,000 businesses across numerous states makes estimating the adoption of online business practices as well as the financial impacts to businesses possible. The financial impacts used in the economic impact estimates are based on data reported directly by businesses. SNG analyzed this data to derive revenue and cost savings impacts for businesses of different sizes in different industries.

Direct economic benefits drive increased economic activity locally, creating indirect growth for other businesses and inducing further growth through increased overall household income and spending. These indirect and induced economic benefits are estimated using standard economic multipliers.

5.1 Business Benefits

Ammon is lit. As of March 2017, 40 businesses were connected to the network, some of which moved to Ammon because of the network, but the impacts have not yet been quantified. Existing Ammon businesses have an opportunity to grow their revenues by using online business practices to reach new markets and customers and deliver their goods and services in new ways. This allows businesses to stay relevant to customers who increasingly look online for everything they need. SNG's Economic Impact Estimate reveals that a \$175,000 investment in programming to drive meaningful use of broadband with 52 local small businesses (less than 50 employees) has the following business impacts:

Table 5: Business Impacts	
\$ 3,724,000	Total incremental annual revenue from businesses implementing new online business practices
\$ 71,600	Average new revenues per business

Business revenues will not increase immediately because it takes time for businesses to adopt new online practices and for those practices to impact business financials. For purposes of this report, we assume that these additional revenues start in year two of the network plan.

The estimate of 52 businesses is approximately 10 percent of all Ammon businesses adopting new online business practices that generate incremental revenues and cost savings.

5.2 Projected Economic Benefits

With nearly two decades of experience investigating the benefits of broadband, SNG researchers have shown that merely introducing faster broadband or making it more available does not result in actual use. The Ammon Fiber Network is a platform that fosters growth locally by providing access to high-capacity, reliable, affordable broadband. This is further strengthened by helping local business owners better understand how increased utilization of internet-enabled applications and processes positively impacts their bottom lines (see Table 6).

Table 6: Local Economic Impacts	
\$ 172,000	Local increase in annual tax base
\$ 4,680,000	Local annual economic growth from businesses putting better broadband to work for them
66	Incremental local jobs created
\$ 2,650	Cost per new job created

5.3 Municipal Benefits

Ammon has realized improved data collection and reporting performance for municipal facilities and their control systems, improving municipal staff productivity and saving staff time.

Once Ammon had fiber and could compete on connectivity, Ammon’s favorable land cost and tax rates were factored into the retention and attraction of businesses. To date, several businesses have relocated to Ammon because of the fiber network. Businesses often connect through a contract arrangement with Ammon (e.g., a private network connection for banks to the central system of their operations). Going forward, the Ammon Fiber Network opens new opportunities for innovative municipal services and further cost reductions and community benefits in public safety, health, education, and smart-city services.

5.4 Household Benefits

The \$717,000 to build last-mile fiber internet for households in two neighborhoods in Ammon (239 properties as of February 8, 2017) was approached by Ammon as a public works project. By leveraging the Ammon Fiber Network and having property owners finance the last mile, the \$717,000 was financed at \$3K per property owner who could pay up-front or at \$17 per month over 20 years.

Savings of \$70 per month for 190 of the 239 are being realized by subscribers to the Ammon Fiber Network. These households have more disposable income to spend on other things locally, which has a positive economic impact on the community.

Table 7: Household Internet in Ammon—Monthly Costs			
	Ammon Fiber Network		CableOne
Infrastructure	\$17.00	\$3K over 20 years, paid to city	
Maintenance and operations	\$17.00	Paid to city	
Internet	\$19.99	75/75 Mbps (no throttling, no data cap, paid to provider)	\$55 for 100/3 Mbps, \$125 after data cap
Total	\$53.99		

The area served by phase 1 of the Ammon Fiber Network has 369 addresses (wealthy neighborhood with an average \$100K household income, \$230–280K homes); 64 percent have joined the Ammon Fiber Network.

Table 8: Savings for Households over 25 Years	
\$ 3,530,000	Savings (consumer surplus) for phase 1 of residential broadband
\$ 31,580,000	Savings to additional 50 percent of households (2,000) to connect to Ammon Fiber Network

With 80 percent of subscribers saving \$70 per month, the savings to subscribers for phase 1 of residential broadband over 25 years is estimated at \$3,530,000. As Ammon continues the build-out of the last mile to households, the estimated additional 50 percent of households (2,000) to connect to Ammon Fiber Network represents a cost savings to subscribers of \$31,580,000 over 25 years.

6. Conclusion and Next Steps

This report provides a summary assessment of the benefits and costs of the Ammon, Idaho, investment in broadband. Ammon approached building its fiber network as a public works project to connect anchor tenants (municipal properties and schools). Building-out to neighborhoods from anchor tenants using their backbone connections and using a BID for property owners to join the Ammon Fiber Network enables the city to build the last mile in a manner that is low risk and sustainable.

Ammon recognizes that cost reduction benefits over 25 years (\$43.6 million) outweigh the fiber network investment costs (\$8.6 million). The direct economic benefits are projected to be nine-fold greater at \$78.2 million. The goal is that the Ammon Fiber Network will not only improve the quality of life and home values—which maintains and expands the local tax base—but also spur innovation and drive business growth opportunities. Additionally, Ammon can provide new online-enabled municipal services because the network it has implemented is virtualized and services are cloud based.

6.1 Next Steps

Additional benefits can be investigated to further quantify benefits, including

- **Business benefits realized**—in Section 4.1, SNG estimated the business benefits from adopting new online business practices. As more businesses join the Ammon network, their use of internet applications should be benchmarked and tracked to
 - Quantify the incremental benefits and economic impacts of the Ammon Fiber Network
 - Adapt local business retention and expansion and economic development programming based on identified gaps, barriers, and opportunities in the use of online business practices. This should be a top priority with local businesses to help them be more competitive and relevant in the digital economy. SNG research shows that, in general, every dollar invested returns **\$35 in GDP and \$4 in business income taxes**.
- Community benefits in public safety, municipal services, health, education enabled by smart-city services and the Ammon Fiber Network. These benefits impact livability in the community, which retains and potentially expands the tax base—an important source of revenue for municipal infrastructure and services.

As Ammon continues to invest, measuring benefits will show how these investments benefit the community, as well as recommend who should invest based on who benefits from cost-reduction financing, economic and community benefits, and self-funded BIDs.

7. Acknowledgements

Strategic Networks Group (SNG) thanks Bruce Patterson, technology director for the city of Ammon, for the data and time he provided in the preparation of this report.

SNG's core business is to better understand and tell the story of what broadband means for economic development and community vitality. We measure how individual businesses, organizations, and households use broadband. This includes obtaining micro-level data to quantify the impacts of broadband investments and developing strategies that advance economic opportunities at community, regional, or state levels.

Appendix A: Economic Impact Estimate for Ammon in Bonneville County, Idaho

Broadband Utilization Economic Impact Model

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



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

Scenario Parameters		Inputs and outputs	
Target Profile ⁽¹²⁾		13% Rural	
State		Idaho	
County		Bonneville	
Total Households ⁽⁹⁾		36,629	
Total Businesses (all industries/sizes) ^(3,4)		3,214	
Selected Industries (Max. of 10)			
Accommodation & Food Services		Other services (exc. public admin)	
Construction		Professional & Technical Services	
Finance & Insurance		Real Estate	
Health Care & Social Assistance		Retail Trade	
Manufacturing / Processing		Wholesale Trade	
Selected Employment Range		Less than 50	
Total Businesses (selected industries/sizes)		2,743	
% of Selected Industries		96.0%	
% of ALL businesses		85.3%	
Total Employment of Selected Industries ⁽²⁾		27,405	
Selected Industries % of Total Employment		81.6%	
Adoption Scenario - Selected eSolutions (Max. of 5)			
Selling goods or services		Deliver services and content	
Web site for organization		Customer service and support	
Advertising and promotion			
Number of Selected eSolutions		5	
% Increase in adoption		5.0%	
Estimates of Direct Impacts from Adoption ⁽⁵⁾			
Total number of businesses adopting eSolutions		130	
% of Total businesses participating in selected industries		4.7%	
Total number of new eSolutions adoptions		299	
Average new eSolutions per business adopting		2.3	
Total incremental Revenue from new eSolutions		\$9,310,000	
Total incremental Cost Savings from new eSolutions		\$624,000	
Total incremental Direct Impact		\$9,934,000	
Direct Impact Metrics			
Total annual revenues for adopting businesses		\$129,000,000	
Total annual operating expenses for adopting businesses		\$79,500,000	
Operating expenses as percentage of revenues		61.6%	
Aggregate percent increase in revenues		7.2%	
Aggregate percent cost savings		0.8%	
Average incremental revenue per business adopting		\$71,600	
Average cost saving per business adopting		\$4,800	
Economic Impact Assessment ⁽³⁾			
Total Direct Output - Selected industries		\$9,940,000	
Total Indirect Output - All Industries		\$4,110,000	
Total Induced Output - All Industries		\$5,560,000	
Total Incremental Output		\$19,610,000	
Total Direct Jobs		97	
Total Indirect Jobs		27	
Total Induced Jobs		44	
Total Incremental Job Creation ⁽⁶⁾		166	
Total Incremental GDP ⁽⁷⁾		\$11,700,000	
Total Incremental Household Earnings		\$6,060,000	
Total Incremental State and Local Taxes		\$430,000	
Total Incremental Federal Taxes		\$583,000	
Economic Impact Metrics			
Average total incremental output per adopting business		\$151,000	
Average direct jobs per adopting business		0.7	
Average indirect and induced jobs per adopting business		0.5	
Average incremental total taxes per adopting business		\$7,790	
Average incremental GDP per adopting business		\$90,000	
Average incremental Household Earnings		\$165	

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Dashboard Metrics

Measure	Impact
Businesses Adopting	130
New Revenues / Business	\$71,600
Annual GDP	\$ 11.7 M
Annual Tax Revenues	\$ 0.43 M
Total New Jobs	166

Scenario Parameter Selections

Adopting	Select up to 10 Industries ^(3,4)	All Businesses ⁽⁴⁾	Rank
11	<input checked="" type="checkbox"/> Accommodation & Food Services	234	5
	<input type="checkbox"/> Administrative & Support Services	128	11
	<input type="checkbox"/> Agriculture / Forestry / Fishing	6	16
	<input type="checkbox"/> Arts, Entertainment & Recreation	28	14
19	<input checked="" type="checkbox"/> Construction	343	4
	<input type="checkbox"/> Educational Services	27	15
10	<input checked="" type="checkbox"/> Finance & Insurance	227	6
25	<input checked="" type="checkbox"/> Health Care & Social Services	550	1
	<input type="checkbox"/> Information	42	13
7	<input checked="" type="checkbox"/> Manufacturing / Processing	130	10
10	<input checked="" type="checkbox"/> Other services (exc. public admin)	203	7
16	<input checked="" type="checkbox"/> Professional & Technical Services	373	3
7	<input checked="" type="checkbox"/> Real Estate	134	9
17	<input checked="" type="checkbox"/> Retail Trade	472	2
	<input type="checkbox"/> Transportation & Warehousing	125	12
8	<input checked="" type="checkbox"/> Wholesale Trade	192	8
		130	3,214

Adopting	Select Employment Ranges	All Industries ⁽⁴⁾	% of Bus.
66	<input checked="" type="checkbox"/> 1 - 4	1,725	53.7%
26	<input checked="" type="checkbox"/> 5 - 9	608	18.9%
22	<input checked="" type="checkbox"/> 10 - 19	458	14.2%
16	<input checked="" type="checkbox"/> 20 - 49	280	8.7%
	<input type="checkbox"/> 50 - 99	90	2.8%
	<input type="checkbox"/> 100 - 249	40	1.3%
		130	3,201

Select Number of eSolutions		5	(Leave blank)
AND	% Increase in adoption ⁽¹⁰⁾	5%	

OR Select up to 5 eSolutions and % increase in adoption

Adoptions	eSolutions	% Increase ⁽¹⁰⁾	Not Using
72	<input type="checkbox"/> Selling goods or services		44.3%
	<input type="checkbox"/> Purchasing goods or services		17.4%
30	<input type="checkbox"/> Web site for organization		12.3%
55	<input type="checkbox"/> Advertising and promotion		30.2%
94	<input type="checkbox"/> Deliver services and content		55.5%
48	<input type="checkbox"/> Customer service and support		28.8%
	<input type="checkbox"/> Banking and financial		24.7%
	<input type="checkbox"/> Research by staff		9.9%
	<input type="checkbox"/> Electronic document transfer		10.3%
	<input type="checkbox"/> Supplier communication and coordination		16.1%
	<input type="checkbox"/> Access government information		15.5%
	<input type="checkbox"/> Government transactions		30.3%
	<input type="checkbox"/> Staff training and skills development		26.7%
	<input type="checkbox"/> Teleworking		44.4%
	<input type="checkbox"/> Accessing collaborative tools		30.0%
	<input type="checkbox"/> Social networking		29.7%
	<input type="checkbox"/> Multimedia content or service creation		50.8%

Selected Counties (Multiple Selection)		All Businesses ⁽⁴⁾
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		



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