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## e-Solutions Benchmarking

### **Akron & Summit County, Ohio**

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The project team would like to thank Summit County Executive *Russell M. Pry* and the **Greater Akron Chamber** for their support in promoting and deploying the **e-Solutions Benchmarking** online questionnaire and for their support of this initiative overall.

The project team would also like to thank the **Knight Center of Digital Excellence** team, the **Connected Communities** team and **OneCommunity** for their efforts in promoting this initiative and enabling outreach to all organizations in Summit County.

# Context

## FORWARD

The intent of this initiative is to assess the current and planned usage of e-solutions by businesses and organizations in Summit County with the goal of identifying the demand, benefits, and impacts of the use of broadband and e-solutions technologies for those organizations. The information gathered and analyzed contributes to understanding gaps and opportunities to guide local strategies for local economic and community development that build on broadband infrastructure and support capacity.

To accomplish this, the study team adapted and deployed the e-Solutions Benchmarking tool to provide access to an online questionnaire. All businesses and organizations in Summit County were invited to participate through direct invitations via email or direct mail postcards. Data collected was compiled and analyzed for inclusion in this report.

The work was undertaken by Strategic Networks Group, Inc. on behalf of the Knight Center of Digital Excellence and with the support and participation of Summit County Executive Russell M. Pry and the Greater Akron Chamber.

## STUDY BACKGROUND

In April 2009, an independent benchmarking study was conducted of Summit County, Ohio on behalf of the Knight Center of Digital Excellence and OneCommunity. This e-Solutions Benchmarking study provides an analysis of how businesses and organizations are using the Internet and e-solutions<sup>1</sup> in Summit County, which includes assessing current or potential usage of web-enabled applications and levels of demand, benefits, and impacts of broadband and e-solutions technologies for those organizations. This research provides the data needed to define local / regional economic and social development initiatives that leverage broadband.

This assessment has taken place at a time when US states, counties and communities have a unique but time-sensitive opportunity to access US federal and other funding for investment in broadband. Such investments, if made wisely, make a significant impact on a region's economic health and quality of life.

**e-Community Strategy** summary tables on the strongest value propositions for economic and social impacts are provided at the end of this document. We have provided recommendations where sustainable adoption and use of broadband and e-solutions will have the greatest impact on community return on investment (ROI) for Akron and Summit County.

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<sup>1</sup> e-Solutions are online tools and applications that increase revenues, reduce costs, or make day-to-day operations easier. They can include Websites, or online payroll tools for business or organizations.

# Summary report

## WHY BROADBAND MATTERS

While the main body of this report provides the results of the broadband benchmarking study, this executive summary focuses on the impacts of broadband on Summit County's social and economic health. To assess these impacts, three themes are explored: economic development, community well-being, and skill and labor force development.

### Economic development

This report examines the impacts that broadband connectivity and adoption have on a wide range of issues related to economic development. Moreover, this summary pays particular attention to two critical economic development strategies: retention of businesses and jobs on the one hand; and, development of new businesses and jobs on the other.

As an illustration of the job retention implications of broadband, this summary analyses the benchmarking results for the largest employer and revenue generator in Summit County – manufacturing sector. The manufacturing sector is struggling locally and nationally to retain existing jobs and is slowly decreasing its share of overall employment – down 4.7% in Summit County between 2001 and 2006 (before the current recession which has hit manufacturing hard).

For insights into job creation in Summit County, analysis is provided for the Professional, Scientific and Technical Services sector which has been a major source of new employment growth with Summit County as well as state-wide and nationally. Between 2001 and 2006, this sector increased its share of area employment by over 21%.

### Community well-being

To understand the impact of broadband on overall community well-being, this summary focuses on: participation of citizens in the daily activities of their communities; and, access to government, health, and social services. Analysis was conducted of the Health Care and Social Assistance sector, which is also the second largest employer in the area.

### Skill and labor force development

The summary provides an overview of the skills needed by individuals to secure employment and required by organizations to be competitive and productive.

## LESSONS LEARNED

### Supply factors

Broadband infrastructure is widely available and connectivity of businesses, public bodies and non-profit organizations is high. This shows that Summit County has, for the most part, the basic infrastructure to participate in and benefit from the digital economy.

At the same time, nearly a third of respondents say that their currently available Internet service is too slow, which has implications for broadband planning and the ability of individual enterprises and the region's overall economy to remain competitive.

### Demand factors

Organizations across all sectors report significant benefits from utilization of broadband. This finding helps to confirm the wisdom of investing in broadband, at the level of both the community and individual organizations.

However, adoption of advanced applications and activities is uneven. Some sectors appear to be slow to utilize the potential of broadband enabled applications and activities, and risk becoming uncompetitive or substandard in performance.

Security and privacy are the main barriers to adoption of more advanced applications. Other common barriers to e-solutions implementation are the cost of development and maintenance, and the lack of internal expertise and knowledge. These issues must be addressed if higher utilization levels are to be achieved.

### Key Findings

- 99% of survey organizations had broadband connectivity. Only 5 out of 476 respondents relied on dial-up connections;
- Nearly 30% of respondents stated that currently available Internet was too slow. These respondents included users of cable, ADSL, wireless and fiber;
- There was a high usage of basic applications that focus on productivity and customer service benefits. There is opportunity and need for increased utilization of more sophisticated applications;
- Over 50% of respondents view investments in e-solutions as a positive return on investment for improving productivity and for enabling the growth of the organization. Only 1.2% report a negative return on investment;
- Over 75% of respondents mentioned privacy and security and either very important or somewhat important barriers. Over 50% identified them as very important.

- There are no significant differences between organizations located in Akron and those located in other parts of Summit County (i.e. urban vs. rural).

## **ECONOMIC DEVELOPMENT**

Among the leading adopters of broadband enabled activities and applications in Summit County are small organizations and the Professional, Scientific and Technical sector. The latter sector is the seventh largest employer (out of 20 economic sectors) and sixth in revenues. These sectors are leaders in job creation, which is a positive sign for Summit County.

Availability of broadband is critical to retention and attraction of businesses. Those few areas without broadband risk losing existing businesses, while also failing to attract new businesses.

While 99% of surveyed organizations had broadband, many feel that current broadband services are not fast enough. While this may have limited immediate impact, those areas with older and slower broadband infrastructure will over time become less able to retain and attract businesses.

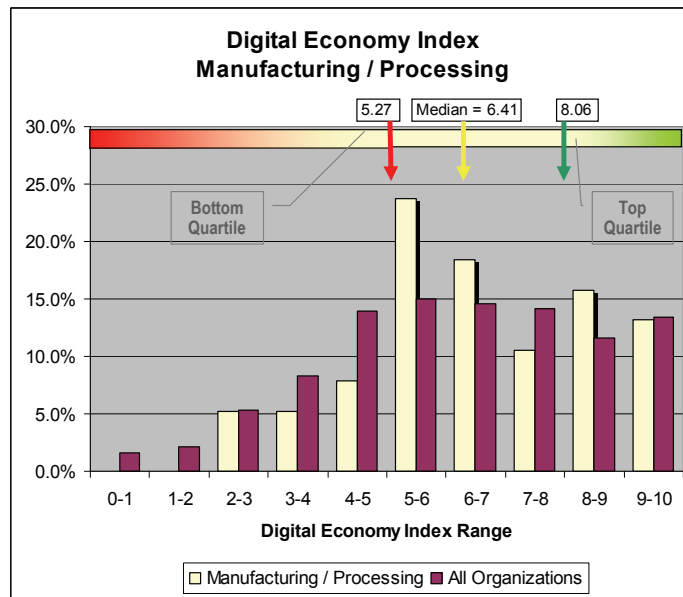
### **Key findings**

- 80% of businesses and organizations stated that availability of broadband was essential or very important in their decision whether to stay or not in that location (this calculation excludes organizations for which location decisions are not applicable). For those businesses and organizations looking at possibly moving to a new location, 66% stated that availability of broadband was essential or very important. The clear implication is that the few areas that do not have high speed internet will be at a significant disadvantage in retaining and attracting businesses;
- 30% of respondents stated that currently available Internet was too slow. This is a surprisingly figure given that 99% already have some form of high-speed service. This indicates that modern broadband infrastructure requires continued investment and upgrading if it is to remain responsive to demand. Areas that do not continue to invest in broadband infrastructure risk becoming uncompetitive and losing existing or new businesses;
- While 82% purchase online, only 44% of respondents sell goods and services online – this has implications that more will be imported to Summit County than exported, resulting in a negative trade balance that will see wealth exported out of Summit County. To maintain and grow the local economy and attract high-paying jobs, more businesses will need to sell goods and services to markets outside of Summit County;
- Over 82% of respondents use a website and 64% have websites with advanced features – as the economy moves more and more online, those businesses and organizations without advanced features will be at a disadvantage. This is an evolution that requires ongoing attention;

- The median score on the SNG Digital Economy Index of the three highlighted sectors are:
  - Manufacturing – 6.41
  - Professional, Scientific and Technical Services – 7.14
  - Health Care and Social Assistance – 5.83

The Digital Economy Index charts below show how far up the adoption curve individual establishments are in each of the above sectors are in Summit County:

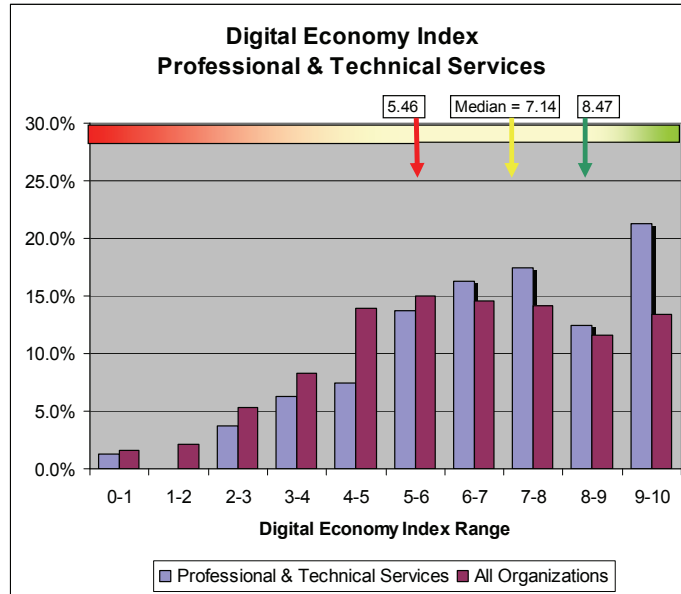
### Manufacturing / processing



### Key DEI Findings – Manufacturing and Processing:

- Manufacturing / Processing is the largest industry sector in Summit County and needs to be more competitive
- 25% of businesses are below a DEI score of 5.27, and another 24% have a DEI score between 5-6

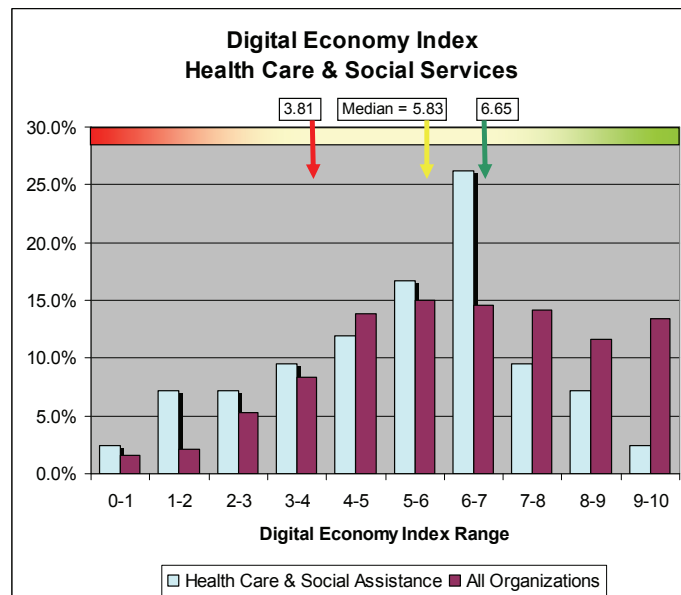
## Professional & technical services



### Key DEI Findings – Professional & Technical Services:

- ▣ Growing sector in Summit County and source of future high-paying local jobs
- ▣ Higher DEI ranking – 25% of firms above a 8.47 DEI score – higher than other sectors

## Health care & social services



### Key DEI findings – health & social Services:

- ▣ Opportunities to extend service to new market segments & areas cost-effectively (tele-health)
- ▣ Low DEI scores for this sector – there is room for improvement that can improve health delivery, as well as save / avoid costs

## COMMUNITY WELL-BEING

With broadband infrastructure widely available across Summit County, most households and individual users have access to the Internet and online services. Nonetheless, a digital divide persists among some population groups, together with increasing requirements for e-literacy among individual citizens.

Access to government services and information is the second highest use of the internet. This offers opportunities for public bodies to expand their reach and explore more effective or more cost efficient service delivery.

Nonetheless, social and health services are one of the lowest performing sectors on the digital economy index. In this sector, lower performance implies relatively low productivity and lost opportunities to access services (e.g. e-health, e-education), especially for marginalized groups that have limited access to the Internet. Moreover, advanced broadband usage, such as tele-health, require advanced broadband networks which are only available in certain segments of Summit County.

Access by digitally marginalized individuals and households can be addressed directly through enhanced public access in libraries, schools, and community centers, training programs and online courses. E-literacy programming can focus on the IT skills needed by local businesses and organizations as they implement e-solutions. When individual businesses and organizations benefit from e-solutions, it maintains and grows the local economy which will maintain and create new jobs in a self-sustaining manner.

These findings suggest the value of follow-up research focused on individual and household use of government services and information, as well as social, health and community services. Such research, if integrated with this project's analysis of productive e-solutions, can help clarify the need for and value of improving access to these public services through more effective use of broadband and e-solutions, as well as the most effective means to achieve these benefits.

### Key findings

- The highest use of the internet by broadband users is for research (90.7%) followed by accessing government information (87.9%);
- The e-solutions with the fastest growth rates are among those that are currently less commonly used. This has implications for the demand for and supply of training and support services;
- Key barriers to e-solutions implementation are the cost of development and maintenance and lack of internal expertise and knowledge;

- Some level of external expertise support is required by the majority (approximately 60%) of organizations.

## NEXT STEPS

The findings from the **e-Solutions Benchmarking** in Summit County form a solid core of needs and usage gaps needed for defining local or regional broadband initiatives. SNG recommends that this information be used in planning local or regional economic and social development initiatives that leverage broadband. Specifically, opportunities exist for broadband initiatives that enable and support increased adoption of e-solutions that put broadband to work.

Based upon the findings of this assessment, a strategic broadband initiative for Summit County should address the following areas:

### Priorities related to broadband supply and demand

Initial priority for enhancing supply should be given to those few geographic areas with businesses, organizations and households that still do not have broadband connectivity. Without broadband connectivity, these areas will not attract new businesses, while existing businesses, organizations and households will be at an increasing disadvantage.

A growing supply priority is meeting the demand for “better broadband” where the current broadband infrastructure does not meet the current or projected demand by businesses, organizations and households (who are effectively underserved which limits their participation in the economy).

In addition to these supply priorities, there is a need to address the low levels of broadband utilization by individual businesses and organizations. This should include assisting organizations and businesses in becoming more effective and productive in their utilization of e-solutions and broadband connectivity. Such efforts can build on this project’s research, both in general and with regard to prioritizing and developing action plans for specific sectors.

### Use of this report and opportunities for funding

The data and findings presented in this report can be used to coordinate with other local and state agencies and prepare proposals (to ARRA and RUS) to undertake a focused and productive broadband initiative that drive local economic growth and civic progress.

### Use of benchmarking findings for e-Community strategies

SNG has prepared **summary tables** on the strongest value propositions for economic and social impacts are provided at the end of this document. We have provided recommendations where sustainable adoption and use of broadband and e-solutions will have the greatest impact on community return on investment (ROI) for Akron and Summit County.

SNG has analyzed the gaps in the utilization of e-solutions and the potential benefits from bridging those gaps for:

- ▣ Professional, Scientific and Technical Services
- ▣ Manufacturing and Processing

See summary tables below for recommended **e-community strategies** in Akron and Summit County.

# e-Community Strategy Summary

## PROFESSIONAL AND TECHNICAL SERVICES

### Significance of the industry sector to Summit County

- ▣ Ranked # 3 in total number of establishments (1,964) representing 10.16% of all establishments in Summit County
- ▣ Ranked # 7 in of total employment (5.31%) of Summit County
- ▣ Important industry as source for future growth and high-paying jobs that can be located in Summit County whose market reach can extend across US and internationally

### Gaps in utilization

Ranked list of most significant e-solutions utilization based on:

- ▣ Number of establishments reporting gaps
- ▣ Size of each establishment (number of employees) and its relative significance to industry sector

Ranking of e-Solutions Gaps in Summit County:

1. Rich media or service creation (e.g. multimedia content, interactive tools)
2. Deliver services and content (e.g. video streaming, digitized products)
3. Tele-working
4. Selling goods or services
5. Advertising and promotion online

### “So what” – why bridge these gaps in utilization of e-solutions?

Examples of specific gaps that could be bridged:

- ▣ 10% don't have a website.
- ▣ 20% of those who have a website don't create rich media content
- ▣ 57% of those who have a website don't sell online
- ▣ 10% of those who sell online don't advertise

Quotes from Professional and Technical Service firm respondents in Akron and Summit County on main benefits from broadband and their expectations of what they could do:

*Our business is 100% on the web. Without Internet access we would not have a business.*

*“Use of networked knowledge resources to handle the peak needs of projects and the lack of a specific critical skill in full time employees.”*

*“Efficiencies in cost management and productivity as well as versatility in services we're able to provide. [Would expect to:] Expand our service reach outside our locale.”*

*“Couldn't exist without it as a SaaS vendor.”*

*“[Deleted] provides utility [deleted] management consulting services nationwide. We currently provide consulting services in 30 states and Canada. Having a dispersed operation requires improved communication to both employees and customers. The internet allows us to communicate effectively with both customers and employees by providing real time data and information. There are very few things we don't do on the internet, video conferencing is next on our agenda. We are in the process of updating our HR and T&E software to improve information to our employees.”*

*“As a technical Service Provider all of my Service Orders, Proposals, Research, Payments, all Documentation including Photographs, Scanned Collaterals are done by using the internet. I am using broadband access! I pay for the fastest speed that my cable company offers. I should be seeing 8 because that's what they are charging me for. I rarely can get a download speed above 1.5. I would like to see truth and accountability ISP's.”*

*“MUST have access for required e-filing in federal courts, some state courts. RESEARCH is greatly enhanced. Access to large amounts of data never before easily obtainable. Remote access----have laptop, will travel to client. Currently the wireless access costs remain too high.”*

*“Communication with clients, uploading and downloading files. Product research and a host of other procedures that help our business. We NEED better broadband and are fighting to get it. No provider has adequate service for our business.”*

## **Recommendations on gaps to target, and expected costs in bridging those gaps**

Recommended e-solutions and e-processes to target:

- ▣ Rich Media Content – it's time to shift to the Web 2.0. Advance features can make selling online possible for this particular industry which relies on services and cannot use traditional selling tools. Appropriate online Staff Training and Tele-work are a pre-condition for success.

Next steps:

- ❑ Develop actionable steps to increase adoption and utilization
- ❑ Prepare estimates on costs to bridge selected gaps in utilization

## Expected economic benefits from bridging targeted gaps

SNG has calculated the potential benefits from increasing utilization of selected e-solutions:

- ❑ Raising the level of **website utilization** by 10% has the potential to increase total direct revenues in Summit County by \$5 to 6 million
- ❑ Raising the level of **selling online** by 10% has the potential to increase total direct revenues in Summit County by \$13 to 14 million
- ❑ Raising the level of **online staff training and tele-work** each by 10% has the potential to increase total direct revenues in Summit County by \$11 to 12 million

There are a range of economic impacts/spillover effects (i.e. increases in GDP, employment, tax revenues) that can be calculated from these direct benefits to Professional and Technical firms in Summit County.

## Next steps & considerations for stakeholders

- ❑ Agree on e-solutions and e-processes to target – develop appropriate programs and leverage local delivery mechanisms
- ❑ Detail project plan and costs
- ❑ Coordinate with other local and state agencies (proposals to ARRA and RUS)

## MANUFACTURING AND PROCESSING INDUSTRY

### Significance of the industry sector to Summit County

- ❑ Ranked # 6 in total number of establishments (1,578) representing 8.16% of all establishments in Summit County
- ❑ Rank # 1 in employment (73,265 employees or 21.06%) of Summit County
- ❑ Rank #1 in revenues (37.15% of total revenues in Summit County)
- ❑ Important the economic foundation for community prosperity and high-paying jobs. While manufacturing is under significant stress and slowing declining relative to other sectors, its sheer size and current importance make it a high priority for job retention, future competitiveness and future community well-being.

## Gaps in utilization

Ranked list of most significant e-solutions utilization based on:

- ❑ Number of establishments reporting gaps
- ❑ Size of each establishment (number of employees) and its relative significance to industry sector

Ranking of e-Solutions Gaps in Summit County

1. Rich media or service creation (e.g. multimedia content, interactive tools)
2. Deliver services and content (e.g. video streaming, digitized products)
3. Government transactions
4. Collaboration
5. Social networking

## “So what” – why bridge these gaps in utilization of e-solutions?

Examples of specific gaps that could be bridged:

- ❑ Less than 1/3 of those with a website create rich media content
- ❑ 26% don't use the internet for staff training
- ❑ 21% don't provide customer service on-line
- ❑ Collaboration and social networking can introduce new internal and external processes and relationships 10% don't have a website.

Quotes from Professional and Technical Service firm respondents in Akron and Summit County on main benefits from broadband and their expectations of what they could do:

*“We have opened up new channels of business - Direct to Consumer and Business to Business (Childcares and hospitals, school systems etc.) using the internet. It has been an excellent way for us to romance our products and receive and provide feedback from our consumers on almost a real time basis.”*

*“We want to expand our Direct to Consumer business to other countries.”*

*“Lower cost marketing of product and company, broader audience by eliminating geographic barriers to information dissemination.”*

*“Reach broader market than the rust belt. / Conduct business on-line reduces selling cost. / Advertising has to be done on-line--Print media waning.”*

*“Continue to increase worldwide sales”*

*“Document exchange that is quick and accurate, cost savings from reduced phone and mail usage, ability to allow clients access to information about their orders etc. without direct contact with our employees.”*

*“Customers cannot enter their orders into our system, most of our suppliers cannot accept our orders into their systems, so many phone calls could be handled more efficiently through internet exchanges but customers are too tied to multiple phone calls, i.e., call us with a question which we have to research and call back which raises another question from the customer that they forgot to ask the first time around and we have to look up and call back. So many inquiries could be answered by our computer systems if we gave access to information to our customers. We have no interactive services available. Our business is 100% on the web. Without Internet access we would not have a business.”*

## **Recommendations on gaps to target, and expected costs in bridging those gaps**

Recommended e-solutions and e-processes to target:

- ❑ Develop enhanced websites with rich media content and capacity for customer service
- ❑ Online Staff Training is key to work force development and succession issues.
- ❑ Develop strategic approach for utilization of collaboration and social networking tools.

Next steps:

- ❑ Develop actionable steps to increase adoption and utilization
- ❑ Prepare estimates on costs to bridge selected gaps in utilization

## **Expected economic benefits from bridging targeted gaps**

SNG has calculated the potential benefits from increasing utilization of selected e-solutions:

- ❑ Raising the level of Customer Service by 10% has the potential to increase direct revenues in Summit County by \$16 million;
- ❑ Raising the level of Selling Online by 10% has the potential to increase total direct revenues in Summit County by \$10 million;
- ❑ Raising the level of online Staff training and Tele-work each by 10% has the potential to increase total direct revenues in Summit County by \$1.6 million.

There are a range of economic impacts/spillover effects (i.e. increases in GDP, employment, tax revenues) that can be calculated from these direct benefits to manufacturing firms in Summit County.

## Next steps & considerations for stakeholders

- ▣ Agree on e-solutions and e-processes to target – develop appropriate programs and leverage local delivery mechanisms
- ▣ Detail project plan and costs
- ▣ Coordinate with other local and state agencies (proposals to ARRA and RUS)

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