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***Regional Profiles of Broadband Utilization
in North Carolina***

Prepared for:
The State of North Carolina

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1. Introduction

Many communities and regions across North Carolina face numerous and dramatic challenges, among them economic dislocation and an aging population. Most rural areas face the additional challenge of population shifts from rural to urban areas. In the face of these challenges, how can communities and businesses maximize their competitiveness, while improving their quality of life? One area with significant potential is broadband, which can be leveraged into tangible benefits for communities, businesses and households. Businesses can become more productive, competitive and reach into new markets. Households can access services more easily and often more cheaply. Governments can delivery services more cost effectively.

The ability to leverage broadband varies significantly by region. Not all regions, businesses or households have been able to turn the potential of broadband into measurable success in terms of jobs, company attraction and retention, increased tax base and revenues, and more efficient and effective citizen services. Turning potential into reality requires skills, training, and both formal and informal support, all in addition to access to broadband services. In those areas that already have a large, diverse and modern economy and work force, building broadband infrastructure may be sufficient to unleash the potential of broadband. However, many communities and regions do not have large and diverse populations and economies. In these areas, even with state-of-the-art connectivity, leveraging broadband often lags. The consequence is these communities (and households and businesses) lose out on many of the benefit of broadband. More importantly, over time, these communities are at risk of becoming less desirable and economically competitive.

This report examines how regions in North Carolina differ in their utilization of broadband and where they can look to make improvements. The report shows in detail how different industry sectors rate compare to the state average and compared to other regions. The report provides insights and hard evidence that allows regions and businesses to assess where they stand, as well as to identify what kinds of actions will improve their performance and benefits.

The report includes recommendations for how regions can improve the utilization of broadband, and thereby improve their economies and quality of life. Recommendations are broken down into three areas: gaps and opportunities where regions are lagging in their use of the Internet and broadband; key barriers to improving the use and benefits of Internet and broadband; and the best ways to build skills and abilities. Analysis and recommendations are identified for both organizations (commercial and non-commercial) and households.

The report uses data collected in 2010 across North Carolina. Over 6,000 organizations and 1,500 households contributed to the broadband benchmarking effort.

2. Starting Points

This report is the second of two companion documents:

- a) A state-wide comparative analysis of regional utilization of the Internet. This state-wide perspective highlights of trend that impacts all regions to some degree. Recommendations from this section focus on issues facing regional planning bodies in all seven regions. The seven regions for which profiles are provided include: Charlotte, East, Northeast, Piedmont Triad, Research Triangle, Southeast, and Advantage West.
- b) Regional profiles for each of the seven economic development regions. The regional profiles focus on the specific opportunities and gaps for that region. Recommendations in this section focus on the issues specific to each region.

For those interested in a more detailed exploration of regional performance in broadband utilization, you are strongly encouraged to contact regional outreach staff from the North Carolina Department of Commerce.

This report examines regions within North Carolina, including industry sectors, and types of households with the objective of identifying gaps and opportunities for improvement. The report uses the following utilization categories that cover a range of activities important in tracking how organizations and households use their Internet and broadband connections:

Utilization Categories for Organizations	
<i>e-Commerce Related</i>	<i>e-Process Related</i>
Selling goods or services	Purchasing goods or services
Deliver services and content	Supplier communication and coordination
Rich media or service creation	Electronic document transfer
Customer service and support	Staff training and skills development
Advertising and promotion	Teleworking
Social networking	Accessing collaborative tools
Web site for organization	Banking and financial
Research by staff	Government transactions
	Access government information

Utilization Categories for Households	
<i>Communication</i>	<i>Transactions</i>
E-mail	Buying goods or services
Voice over IP	Selling items
Online chat	Investments / trading
Sharing information	Online banking
Personal website	Paying bills
<i>Productivity</i>	Government services
Education or training courses	Music or video download
Accessing workplace	Software download
Teleworking	Booking travel
Home business	<i>Research</i>
<i>Recreation</i>	Product information
News and sports	Investments
Listen to radio	Government information
Watch TV programs	Community events
Watch movies	Education and training
Online gaming	Health information
	Travel information

2.1 Introducing the Digital Economy Index

This report includes extensive comparisons of Internet use between regions by various characteristics, such as industry, business size, and household demographics. To assist in the process of making comparisons, SNG developed the Digital Economy Index (DEi) for organizations. Drawing on the 17 utilizations categories noted above, a composite score is developed that summarizes how comprehensively each organization uses Internet-enabled applications to drive efficiencies, innovation, and profitability. An individual organization's DEi score (from 0 to 10) captures that organization's utilization of e-solutions, with 10 being the highest possible use and 0 being the no utilization. DEi scores are averaged across groups of users by various categories: e.g. a region's DEi is the average for all organizations in that region. Similarly, an industry's DEi is the average of all organizations in that industry. The DEi can be used to compare an organizations, regions, or industries. A DEi for households is also used to compare how different types of households use the Internet. The household DEi is derived from the 30 household utilizations noted above.

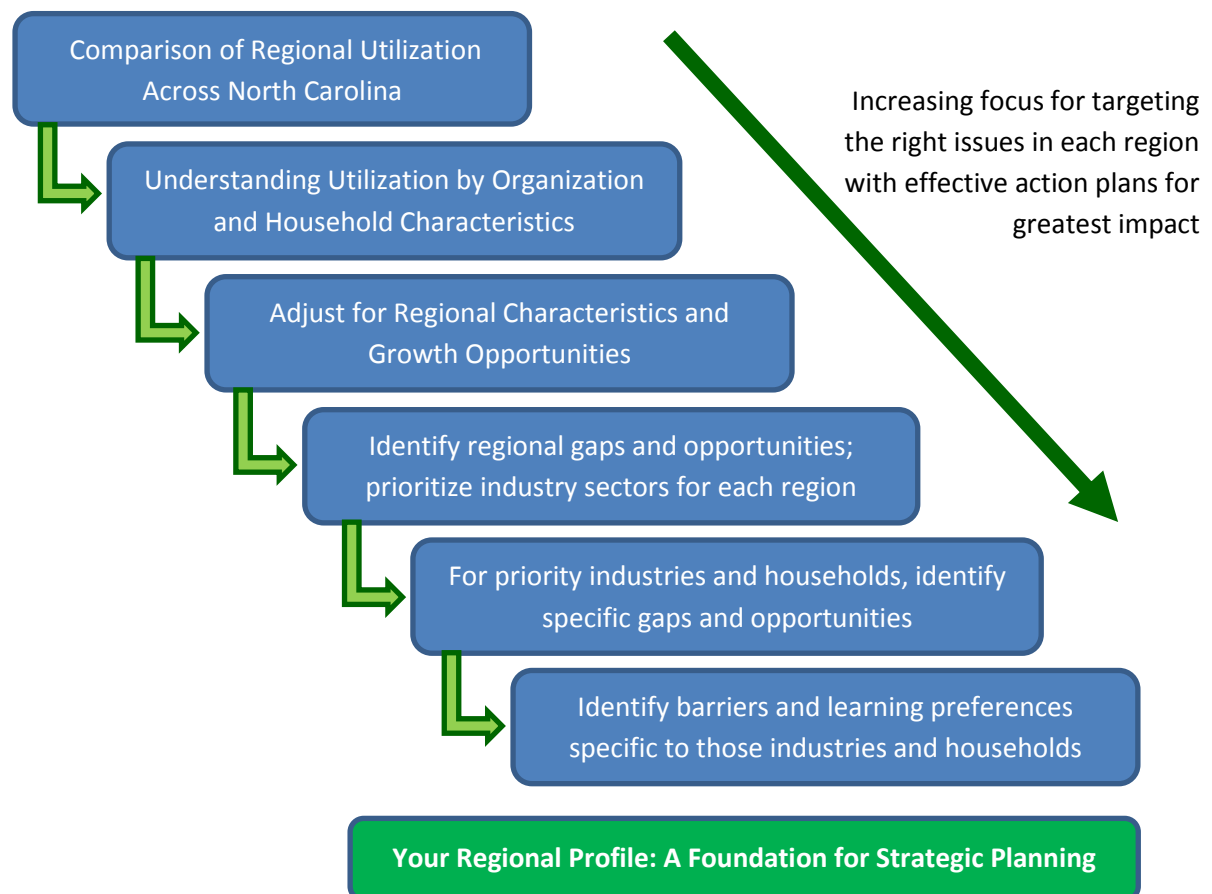
The DEi is used extensively throughout this document as a basis for comparison of utilization levels across various dimensions for state and regional economies. Identifying variations in DEi assists in focusing on areas where a deeper assessment is warranted. In areas where DEi is lower than average, indicating lower utilization levels, there is an opportunity to increase utilization and the resulting benefits to organizations and households.

2.2 Objectives

This report is designed to be a catalyst for leveraging broadband through actionable intelligence. The chart below outlines the steps used in this report to move from descriptive data to detailed information on targets, priorities and strategies. The ultimate goal of the Regional Profiles is to:

1. Identify which segments of the regional economy utilize the Internet to a greater or lesser degree;
2. Prioritize the segments that show utilization gaps based on importance to the regional economy and opportunity to address the gaps; and,
3. Identify specific utilization categories that may be addressed to close the gaps so that effective actions can be defined and targeted where they will have the most impact.
4. Identify the barriers to improved Internet utilization, as well as the best means to overcome them.

Leveraging Broadband for Regional Economic and Social Development



2.3 Recommendations and Highlights from Regional Analysis Report

This section includes the recommendations and highlights from the companion document (Regional Analysis of Broadband Utilization in North Carolina).

Significant variations exist in Internet utilization levels by among the seven regions in North Carolina. This is true for both organizations and households. Utilizations dynamics for organizations and households show both similarities and divergence. The shared dynamics are centered on the two larger and wealthier regions with big urban centers – Research Triangle and Charlotte. These two regions show the highest overall utilization levels. The remaining regions show a more diverse pattern, with the East and Northeast consistently below the state average. The West performs relatively well on household utilization, but poorly among organizations.

In looking more closely at organizations, it is clear that industry utilization levels vary significantly across the regions. Even lagging regions lead in some industries while leading regions lag in others. Where industry utilization lags in a region there is an opportunity to increase utilization levels and thereby increase competitiveness, revenues and job creation. The lagging industries for Internet utilization in each region are identified in this report.

Recommendation #1: Focus on high opportunity industries within each region rather than undertaking broad but untargeted initiatives.

Prioritizing industries and other economic segments must be done within a regional context. While factors such as industry size within each region are considered in this report, additional factors and considerations exist within each region, such as key industries in decline or regional strategies for developing specific sectors. In general, focus should be on industries that make the largest contribution to the economy and that have the greatest growth potential.

Recommendation #2: Focus on industries that have the highest economic contribution and highest growth potential within each region. These are identified in each Regional Profile.

Small to medium sized organizations should be a focus for all regions. This segment is important for the following reasons:

- Largest number of establishments (95%) and significant employment (44%)
- Lowest utilization level compared to larger employment segments
- Dynamic engines for employment growth, especially through use of the Internet
- Least capacity and expertise to adopt more sophisticated Internet applications

Recommendation #3: Focus on the small-medium enterprise segment, especially 1-49 employees, to increase Internet utilization, drive competitiveness, revenues and job creation.

Once industries and segments are targeted for each region, the specific utilization categories that represent gaps and opportunities can be targeted.

Recommendation #4: Initiatives aimed at increasing utilization among the small to medium enterprise segment should focus on the following 10 utilization categories:

1. Delivery of services and content
2. Rich media or service creation
3. Teleworking
4. Staff training and skills development
5. Advertising and promotion
6. Social networking
7. Government transactions
8. Customer service and support
9. Selling goods or services
10. Supplier communication and coordination

Armed with an understanding of utilization gaps and opportunities, as well as barriers to adoption initiatives, action plans can be defined at the regional level to address the target segments. Summaries of the target segments and focus areas for utilization are provided in regional profiles as the starting point for regional planning activities.

Recommendation #5: Utilize intelligence in Regional Profiles as a springboard for regional planning to leverage broadband.

By taking well-targeted action at the regional level that is aligned with regional priorities, utilization levels can be increased within each region and for the most significant industries across the state. As adoption of Internet-enabled applications increases, a greater impact will be achieved in terms of organization revenues and employment growth. Such impacts can take some time to occur but they should be measurable within two years of effective initiatives being in place.

Utilization of the Internet by households also has significant impacts on a region's economic and social well-being. A skilled and entrepreneurial workforce is increasingly seen as part of the necessary "infrastructure" of a region. Whether it is through development of local businesses or attraction of outside businesses to the region, a skilled and dynamic workforce is a critical element.

Recommendation #6: Target workforce participants with training programs that focus on applications and processes in priority industries and priority segments.

Private residences are increasingly the center of entrepreneurial activities that provide diversity to the regional economy and income security to households.

Recommendation #7: Support home based businesses with targeted online resources, specifically focusing on areas shown to be challenging yet potentially rewarding.

Households with low computer skills represent an important group due to the social and economic benefits that can be accessed through the Internet. Moreover, for governments to move their services to the Internet to achieve better reach and cost efficiencies, these government entities need to know that their constituencies can and will access these online services. Given the evidence that low adoption and utilization is strongly tied to age and income, training programs for the general population should be targeted at people over 55 with low to lower middle incomes. In addition, training programs should be built with a clear understanding of the learning preferences of this target population.

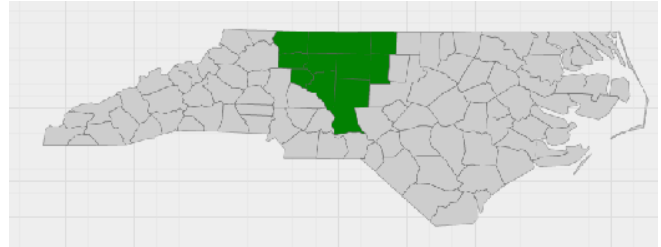
Recommendation #8: Develop training programs and resources that target lower to middle income households over the age of 54, using both online methods and existing social networks.

3. Regional Profile: Piedmont Triad

This section provides a profile of Internet utilization in the area covered by the Piedmont Triad region.

Most of the material is taken from the Report on Regional Analysis of Broadband Utilization in North

Carolina and consolidated into one region specific profile. Some additional material has been added to provide a more detailed picture. Recommendations are specific to this region, reflecting the unique characteristics and utilization patterns in the Piedmont Triad.



Overview

For context in prioritizing regional planning activities it is important to consider the existing profile of the regional population and economy, as well as areas of growth potential.

Households			Rank	Organizations			Rank
Population	1,631,871		3	Establishments	36,761		3
Households	727,249		3	Employment	607,097		3
Median Income ⁱ	\$42,800		3	Annual Payroll	\$21.7B		3
Median Age ⁱⁱ	38.3 years		3 ¹	Average Size	16.5 employees		2

With the third largest population of the seven regions in North Carolina, the Piedmont Triad region has close to the median income for North Carolina and has an age profile just slightly older than the state. The eight largest industries, ranked by annual payroll², that collectively represent over 65 percent of the economy in Piedmont Triad region are:

Rank	Industry Sector	Percent Payroll
1	Manufacturing / Processing	20.5%
2	Health Care & Social Assistance	16.2%
3	Retail Trade	8.0%
4	Finance & Insurance	7.7%
5	Wholesale Trade	7.0%
6	Management of companies & enterprises	6.8%
7	Professional & Technical Services	4.9%
8	Construction	4.9%
% Payroll		76.0%
% of Employment		67.3%
% of Establishments		64.9%

¹ Rank: 1 = region with highest median age; 7 = region with youngest median age

² Based on US Census Bureau County Business Patterns data (2009)

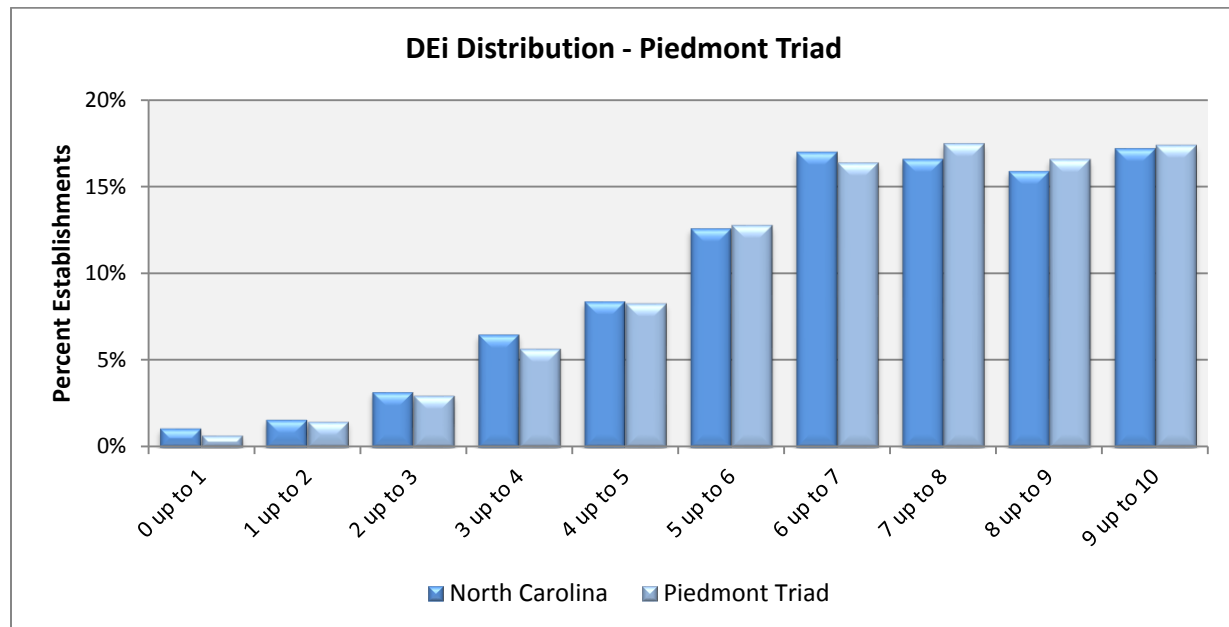
Regional Age Distribution (2009 Census)	Piedmont Triad	Statewide
18 to 34 years	28.4%	30.7%
35 to 54 years	37.8%	37.3%
55 to 64 years	15.7%	15.2%
65 years and over	18.0%	16.8%

3.1 Utilization by Organizations in Piedmont Triad

Internet utilization by organization in the Piedmont Triad region is similar to state-wide patterns. The overall Digital Economy Index (DEi) for Piedmont Triad is 6.86 compared to the statewide DEi of 6.77. This ranks Piedmont Triad second out of seven regions and third based on a weighted ranking that considers the industry profile characteristics of Piedmont Triad.

Average DEi Score		Ranking by Region	
North Carolina	Piedmont Triad	Un-weighted	Weighted
6.77	6.86	2	3

The profile of utilization levels from low (1) to high (10), mimics statewide patterns.



There are significant differences in how different sectors and industries utilize the Internet. One of the most important of these is the size of an organization, which impacts its ability to adopt and benefit from more difficult e-solution. In Piedmont Triad this pattern can be seen in the following table:

Internet Utilization by Employment Size: Piedmont Triad

Employment Range	DEi Score	% of establishments
1 to 49	6.73	94.1%
50 - 249	7.25	5.2%
250 - 499	7.55	0.5%
500 or more	8.26	0.2%
All Size Ranges	6.95	

Smaller organizations have significantly lower DEi, creating a large opportunity to increase utilization levels. Organizations with 1 to 49 employees represent over 94 percent of organizations in the Piedmont Triad region and over 44 percent of employment (statewide).

It is also very informative to look at where industry sectors in Piedmont Triad vary from state-wide averages and how they compare to the other six regions. The following table compares utilization for major industries within the Piedmont Region (according to DEi scores) and to the state average, as well as the Piedmont Triad region's ranking among the seven regions.

Major Industry	Statewide	Piedmont Triad	Rank Compared to Other Regions
Information	7.86	7.8	3
Educational Services	7.33	7.43	3
Real Estate	7.08	6.49	7
Finance & Insurance	7.05	6.85	6
Manufacturing / Processing	7.03	6.84	6
Administrative & Support Services	6.98	7.22	4
Transportation & Warehousing	6.95	6.26	5
Retail Trade	6.9	7.29	1
Professional & Technical Services	6.89	7.24	1
Wholesale Trade	6.85	6.91	4
Arts, Entertainment & Recreation	6.57	7.15	2
Accommodation & food services	6.54	6.98	2
Health Care & Social Assistance	6.42	6.67	1
Construction	6.17	6.17	4
Overall DEi	6.77	6.86	

The following industries show relative strength or weakness within Piedmont Triad in terms of Internet utilization levels based on DEi:

Region	Strong (High DEi)	Weak (Low DEi)
Piedmont Triad	<ul style="list-style-type: none"> Information Educational Services Retail Trade Professional & Technical Services 	<ul style="list-style-type: none"> Construction Transportation & Warehousing Real Estate

The ranking of industries across regions is particularly informative, since this tracks competitiveness and relative performance. The table below identifies industries that are above and below average in utilization compared to other regions. Where the variation is large, the terms leading or lagging have been used and those sectors have been highlighted in **green** (leading) or **red** (lagging). In the case of Piedmont Triad, there are two sectors that are below average, one of which lags significantly (Transportation and Warehousing). Industries that are lagging or below average compared to other regions provide an opportunity for increased Internet utilization levels.

Region	Leading or Above Average	Lagging or Below Average
Piedmont Triad	<ul style="list-style-type: none"> Retail Trade Professional & Technical Services Arts & Entertainment Accommodation & Food 	<ul style="list-style-type: none"> Transportation & Warehousing Real Estate

What types of utilization cause the DEi differences?

The DEi is a composite index of a basket of different types of utilizations – the uses that drive Internet-enabled applications by organizations. The following table compares how industries in Piedmont Triad compare to other regions by showing where they are leading, lagging, or above and below the statewide averages.

As can be seen in the table, **Transportation & Warehousing**, a lagging industry that has the second lowest DEi for all industries in Piedmont Triad, has markedly lower utilization in:

- Customer service and support
- Delivery of services and content
- Social networking
- Staff training

Piedmont Triad: Leading and Lagging utilizations by Industry

Industry	Selling goods or services	Accessing collaborative tools	Advertising and promotion	Customer service and support	Deliver services and content	Social networking	Staff training	Supplier communication and coordination	Web site for organization
Information	Below Average	Above Average	Below Average	Below Average	Above Average	Above Average	Below Average	Lagging	Above Average
Educational Services	Above Average	Below Average	Below Average	Below Average	Above Average	Lagging	Above Average	Above Average	Below Average
Real estate	Below Average	Above Average	Lagging	Lagging	Below Average	Below Average	Below Average	Below Average	Below Average
Finance & Insurance	Below Average	Below Average	Above Average	Above Average	Below Average	Below Average	Leading	Above Average	Below Average
Professional & Technical Services	Above Average	Below Average	Above Average	Above Average	Above Average	Above Average	Above Average	Above Average	Above Average
Retail Trade	Above Average	Above Average	Above Average	Above Average	Above Average	Above Average	Above Average	Above Average	Above Average
Wholesale Trade	Above Average	Above Average	Below Average	Leading	Below Average	Below Average	Below Average	Above Average	Above Average
Transportation and Warehousing	Above Average	Below Average	Below Average	Lagging	Lagging	Lagging	Lagging	Below Average	Below Average
Accommodation and Food Services	Above Average	Above Average	Lagging	Lagging	Above Average	Leading	Above Average	Above Average	Below Average
Administrative & Support Services	Lagging	Above Average	Above Average	Leading	Above Average	Above Average	Below Average	Above Average	Below Average
Arts, Entertainment & Recreation	Above Average	Above Average	Leading	Above Average	Above Average	Above Average	Leading	Leading	Above Average
Construction	Leading	Below Average	Above Average	Above Average	Above Average	Above Average	Below Average	Below Average	Below Average
Manufacturing / Processing	Below Average	Above Average	Below Average	Below Average	Below Average	Below Average	Below Average	Below Average	Below Average
Health Care and Social Assistance	Above Average	Below Average	Above Average	Below Average	Below Average	Above Average	Above Average	Below Average	Above Average

Opportunities and Gaps Based on Utilization

The following is a list of industries that show the largest gaps in utilization for Piedmont Triad, grouped into 3 gap level categories. Everything else being equal, the largest gaps present the greatest opportunity to increase utilization. Prioritization should also consider industry size and growth potential.

Major Industry	Gap Level	Size Rank	Growth Expectation
Manufacturing / Processing	3	1	↓
Health Care & Social Assistance		2	↑
Retail Trade		3	↑
Finance & Insurance	3	4	↑
Wholesale Trade		5	↓
Professional & Technical Services		6	↑ ↑
Construction		7	↑
Administrative & Support Services		8	
Transportation & Warehousing	1	9	
Accommodation & food services		10	↑
Educational Services		11	↑
Other services (exc. public admin)		12	
Information	3	13	↓
Real Estate	2	14	
Arts, Entertainment & Recreation		15	↑
Gap 1 (0.6 or more below the statewide DEi for an industry)			
Gap 2 (between 0.6 and 0.3 below the statewide DEi)			
Gap 3 (less than 0.3 below the statewide DEi)			

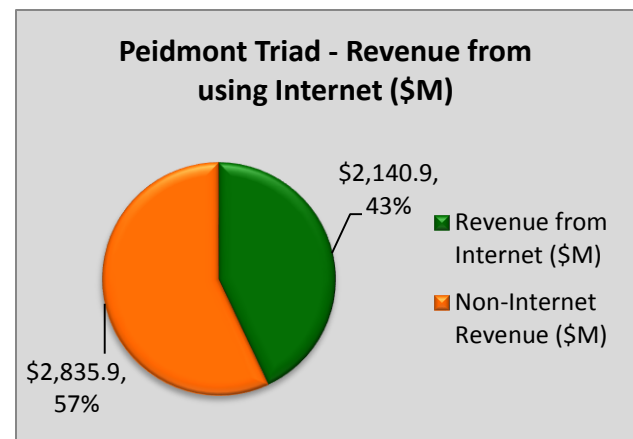
Barriers to Utilization

Barriers to utilization are those factors that tend to inhibit or prevent effective adoption of Internet-enabled applications. The relative importance of different barriers is very consistent from region to region. Of note for Piedmont Triad is the belief that slow Internet is less of a barrier than in other regions.

Frequency of Barrier Cited as Very or Somewhat Important Piedmont Triad Region		
	% Frequency	vs. Statewide
Security concerns	70.0%	-3.1%
Privacy concerns	65.9%	-3.0%
High cost of development/maintenance	58.4%	-3.1%
Loss of personal contact with clients	54.9%	-2.7%
Lack of internal expertise and knowledge	51.2%	-1.0%
Clients not prepared to transact online	45.1%	-2.9%
Incompatibility with existing systems	40.9%	-1.6%
Products not suited to Internet sales	37.0%	-2.9%
Uncertain about benefits	34.3%	-2.0%
Available Internet is too slow	34.1%	5.1%
Suppliers not ready	30.3%	-2.1%
Internal organization resistance	28.1%	0.5%

Impacts from Increasing Utilization

Increased utilization by organizations results in increased revenue and job creation. These positive impacts are most notable when organizations achieve utilization equal to a DEi over 6.0 and these impacts continue to increase with yet higher utilization. The revenue attributed to using the Internet increases by approximately 10 percentage points (of total annual revenue) for each 1.0 increase in DEi between 6.0 and 9.0. Up to 50 percent of organizations fall into this range from 6 to 9 DEi. For each 10 percent increase in utilization by these organizations, there would be an average increase in annual revenues of approximately 10%.



Increasing an organization's DEi by 1.0 is roughly equivalent to adopting two new utilizations, preferably in more sophisticated types of utilizations that tend to be adopted by high utilization organizations. The increased revenues can take one or two years to materialize, but would directly increase regional GDP and have additional indirect and induced effects on the regional economy.

New jobs would also be created from growing businesses. While total job growth is difficult to predict and is not exclusively driven by Internet utilization, e-solutions benchmarking data for North Carolina show that 17.5 percent of new full-time jobs were attributed to organizations' use of the Internet. This ratio is even higher for businesses in the 1-49 employee range.

Utilization by Health and Local Government Organizations

Health organizations in the Piedmont Triad region appear to have a very skewed utilization of Internet applications and processes. For generic uses, Piedmont Triad is above average, ranking first among the regions. For telehealth uses, Piedmont Triad is significantly below the state average, ranking last among regions.

DEi by region for providers of health services

Region	Rank	Ave. DEI Score	Difference from Average	Health Service Providers
Piedmont Triad	1	6.97	0.17	73
Statewide		6.8		441

DEi-H by region for providers of health services

Region	Rank	Ave. DEi-H Score	Difference from Average	# of Health Service Providers
Piedmont Triad	7	2.62	-0.72	73
Statewide		3.34		441

Local government entities in the Piedmont Triad region had average utilization by for both generic and government specific uses.

DEi by region for local government organizations

Region	Rank	Ave. DEI Score	Difference from Average	# of Local Government Agencies
Piedmont Triad	3	6.58	0.1	60
Statewide		6.48		406

DEi-G by region for local government organizations

Region	Rank	Ave. DEi-G	Difference from Average	# of Local Government Agencies
Piedmont Triad	3	6.22	0.04	60
Statewide		6.18		406

3.2 Households in Piedmont Triad

Utilization of the Internet by households in the Piedmont Triad region is below, ranking fourth among the seven regions. The overall Digital Economy Index (DEi) for households in the Piedmont Triad region is 5.18 compared to the statewide DEi of 5.55.

Utilization by Households: Regional Ranking and DEi Score

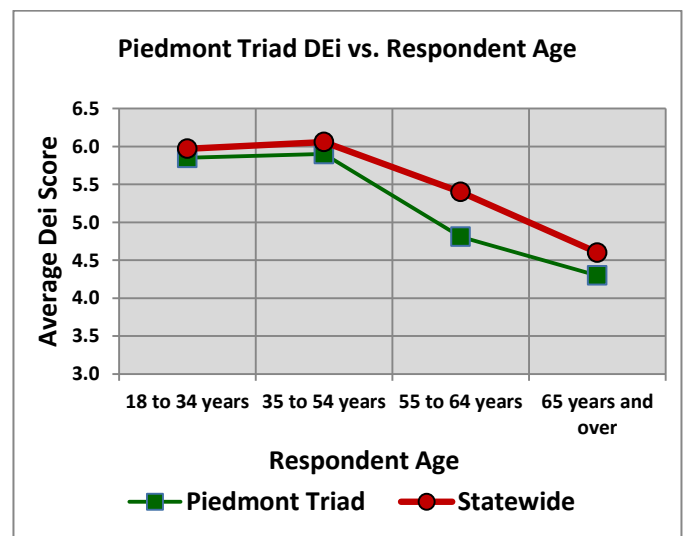
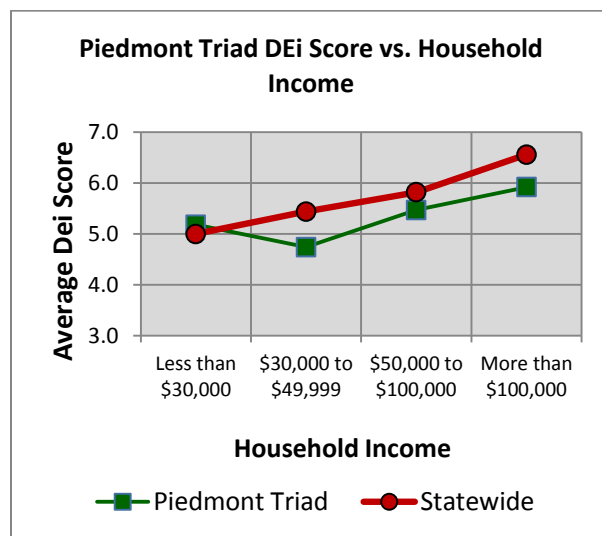
	Average DEi Score	Rank	Difference from Average	Households in Sample
Piedmont Triad	5.18	4	-0.37	114
Statewide	5.55			1416

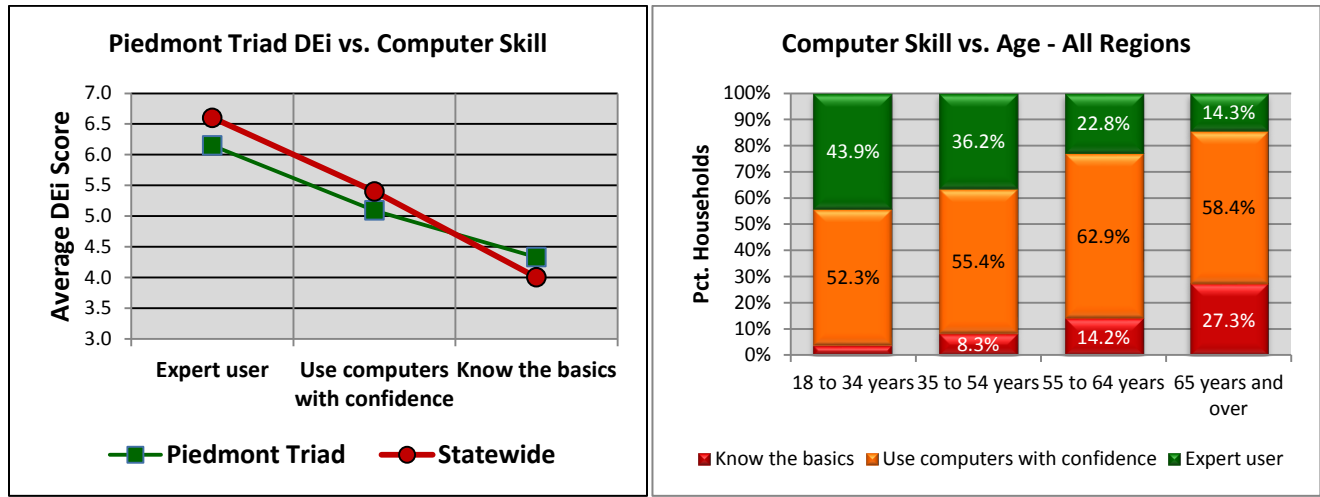
Demographic Effects on Utilization

There are a number of factors that contribute to lower household utilization in the Piedmont Triad region. In general, Internet utilization is lower for higher age groups and for lower income groups. Utilization levels are also directly proportional to computer skill levels. These factors are related, with a higher proportion of lower computer skill levels associated with older age and lower income groups.

Computer Skill Level by % of Households

	Expert user	Use computers with confidence	Know the basics
Piedmont Triad	25.4%	53.5%	20.2%
Statewide	28.2%	58.1%	13.3%





Households in the Piedmont Triad face the same statewide issues of relatively low utilization by those over 55, with lower incomes and poor computer skill level. As a factor that can be addressed through broadband support initiatives, targeting computer skill development at these groups is a clear priority and likely to have the greatest impact on increasing utilization and consequently on the ability of households to earn income and access government services.

For the Piedmont Triad region, 20.3 percent of households only “know the basics” in computer skill. The majority of these are in the 55 years and over age group, which makes up over 30 percent of the population. In addition, more than 50 percent of households are below \$43,000 in annual income (median household income is \$42,800).

Use of Internet for Productivity

In terms of productivity, households in the Piedmont Triad region show below average utilization for work oriented activities, including telecommuting, home based businesses and accessing their work place from home.

Percentage of Households Using the Internet for Productivity

Piedmont Triad	% Currently Engaged In	State Average	Variance from State Average
Accessing workplace	49.1%	55.3%	-6.2%
Home business	25.5%	30.4%	-4.9%
Telecommuting	26.4%	32.8%	-6.4%
Education or training	43.6%	43.6%	0%

Recommendations

In addition to recommendations included in Section 2 of this report, the following Piedmont Triad specific recommendation is submitted for consideration:

Recommendation A: Focus on industries that have the highest economic contribution and highest growth potential within each region.

Based on its current utilization and relatively poor performance, the Transportation and Warehousing industry should be explored as a priority for initiatives related to leveraging the Internet for economic development. This industry sector shows lagging performance in the following areas:

- ***Customer Service and Support***
- ***Delivery of Services and Content***
- ***Social Networking***
- ***Staff Training***

In addition, though their performance may be above average, the following two industry sectors should be considered as priorities due to their strategic role in the regional economy:

- ***Leisure and Hospitality (Accommodation and Food, plus Arts and Entertainment):*** below average in Arts, Entertainment and Recreation.
- ***Health and Social Services:*** this industry sector has weak utilization State wide – Piedmont Triad is no exception. Moreover, this industry is a large and growing sector.