

**Phase I  
Technology Plan**

**Lincoln County Regional Planning Commission**

**Submitted by:**

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# Executive Summary- Phase I

The ConnectME Authority approved a grant for Lincoln County Regional Planning Commission to work with Axiom in seven communities in Lincoln County. This report focuses on Phase I, and is designed to help a community understand its existing internet provider infrastructure, gather information from community members about their level of concern around broadband connectivity, recognize any municipal ordinances or procedures that would affect broadband planning and implementation and finally, a Digital Inclusion report that catalogs and identifies existing internet resources available to citizens of the community.

Phase I helps a community build a foundation to apply for Phase II where an internet connectivity plan for implementation will be developed.

### Surveys

The community undertook an extensive survey in the communities to understand the needs and desires around better internet connectivity. Among the findings a recognition and support for the Lincoln County Regional Planning Commission (LCRPC) to play an important role to help communities' Broadband efforts.

### Current Providers

The Broadband Committee met with broadband providers to better understand their willingness to invest, upgrade or enhance the current internet situation on the island. Generally, feelings were mixed. A couple of communities were interested in working with current providers, others were feeling that current providers could not meet their goals.

### Assets and Municipal procedures

Axiom has had extensive conversations with the community about what municipal barriers exist to building a new network. We are not aware of any ordinance that would prohibit or impede a network design in any of the seven communities we are working with.

### Digital Inclusion

The Digital Inclusion Plan is a roadmap to help the community drive internet subscription rates and support local citizens with access and on-line learning that they can apply directly into their own everyday lives. The Lincoln County Regional Planning Commission Digital Inclusion Report is provided by the National Digital Equity Center, [www.digitalequitycenter.org](http://www.digitalequitycenter.org).

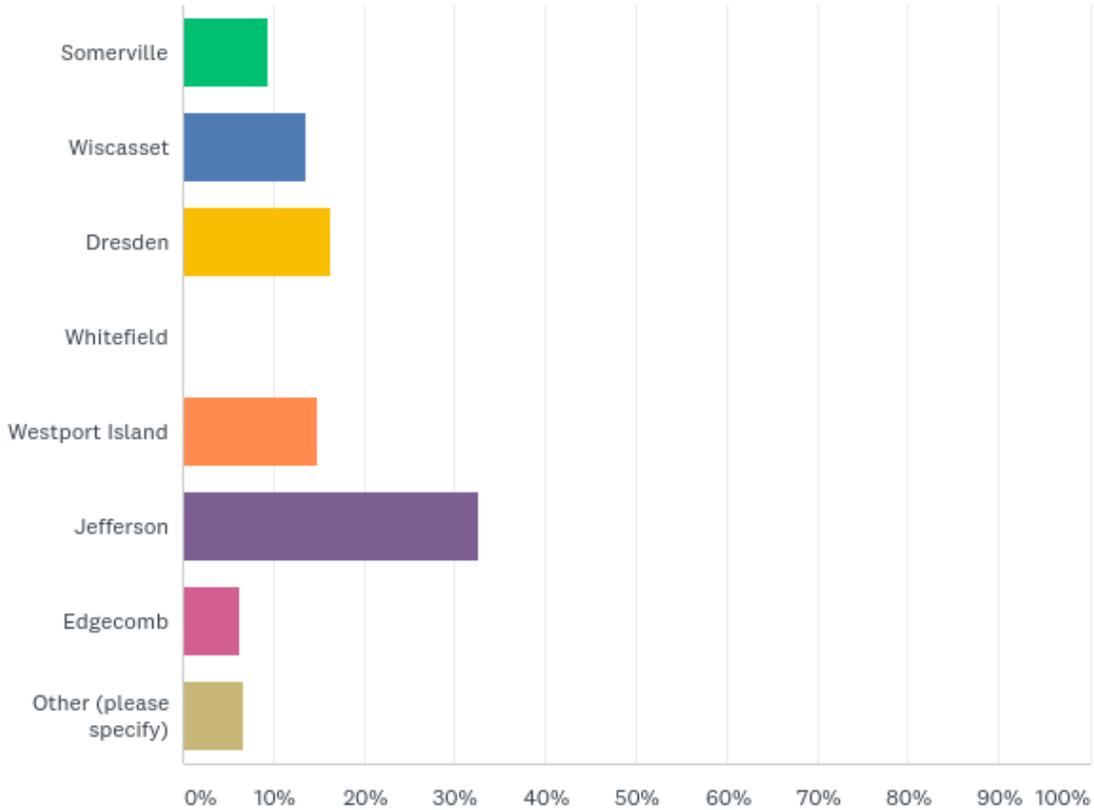
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Taken together, the results of Phase I indicate a strong willingness to move to Phase II and fully develop an internet system design that would serve the community with three important goals:

- **Equal Access for All** - All citizens of the Plantation will be able to access the same service no matter where they live
- **Scalable** - Any internet system must be able to meet increasing demands over a long period of time
- **Reasonably priced** - The cost to the subscriber must be affordable

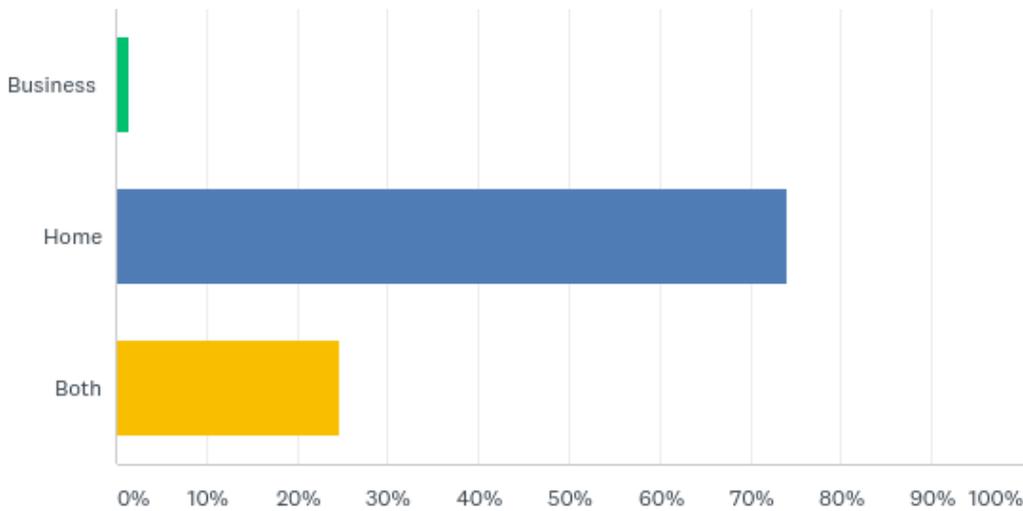
## Surveys

The surveys are one part of the elements of a Phase I ConnectME Planning process. These surveys can help identify issues in communities, help communities better understand constituent issues and generally be one component of support for moving to Phase II. The more responses, the more likely that your community is not happy with their current service. Overall the survey had 362 responses, this does not include the Town of Whitefield, which had already completed a survey previously to Phase I and is analyzed and attached Appendix A.



ANSWER CHOICES	RESPONSES	
Somerville	9.39%	34
Wiscasset	13.54%	49
Dresden	16.30%	59
Whitefield	0.28%	1
Westport Island	14.92%	54
Jefferson	32.60%	118
Edgecomb	6.35%	23
Other (please specify)	6.63%	24
<b>TOTAL</b>		<b>362</b>

**Q3: Is this location your home, business or both?**

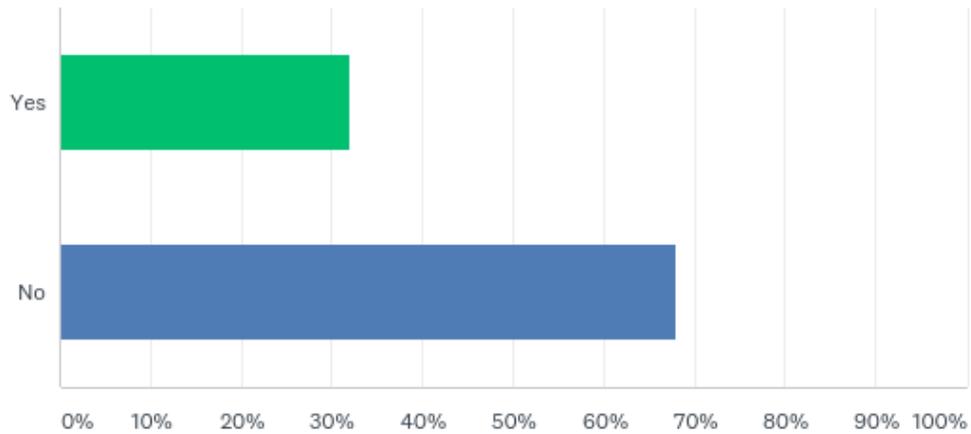


Interestingly, just under 25% of respondents (89) worked from home or had a home business. This is an important statistic to help communities understand the importance of residential service.

Below is the list of providers in your area, not surprisingly Spectrum and Consolidated Communications are by far the most ubiquitous across the area. One small issue with the survey. We listed LCI as one of the providers and received 4 responses. In the “Other” category, a number of people listed their provider as Tidewater, which is the same company as LCI, so the number of LCI customers is underrepresented, and is closer to 5% of the respondents.

ANSWER CHOICES	RESPONSES	
Consolidated Communications (FairPoint Communications)	29.60%	103
Spectrum (Time Warner Cable)	37.36%	130
GWI	0.86%	3
Otelco (OT&T)	0.00%	0
TDS	0.29%	1
UniTel	0.00%	0
LCI	1.15%	4
Premium Choice	0.00%	0
Red Zone	3.74%	13
HughesNet (Satellite)	6.61%	23
Wi-Fi HotSpot (using your cellular phone)	5.75%	20
Other (please specify)	14.66%	51
<b>TOTAL</b>		<b>348</b>

**Q6: Are you happy with your service?**



ANSWER CHOICES	RESPONSES	
Yes	32.09%	112
No	67.91%	237
<b>TOTAL</b>		<b>349</b>

**Q7: Here are some of the comments:**

*"The cost is high for my slow internet DSL connection and the basic (no long distance) phone service. Cable TV is not available in my area of Jefferson so I get TV via antenna connections. The town was short sighted when cable TV was 1<sup>st</sup> planned as selectmen didn't require the cable company to run cable all the way down Route 213 (Bunker Hill Rd.)"*

Consolidated Customer in **Jefferson**

*"We don't have direct internet, we are using DSL (slow) and satellite (expensive)"*

Consolidated and VistaNet customer in **Wiscasset**.

*"The connection drops on a daily basis. Sometimes this causes our phones to automatically jump over to data usage which – which mean means we are paying for our internet use twice – once with Consolidated, which is not working properly, and then with Verizon for data usage. Very frustrating and expensive."*

Consolidated Customer on **Westport Island**

*"Reliable, fast service"*

Spectrum customer on **Westport Island**

*"No high speed internet. Internet on both ends of my road but not the middle where there are like 10 houses I'm like 3000' away and I'm not serviceable but had internet in farm county wtf"*

HughesNet customer in **Dresden**

*"Expensive but high speed WiFi/TV without interruption unlike prior satellite service."*

Spectrum customer in **Edgecomb**

*"It often flutters on and off and can be very slow."*

Consolidated customer in **Jefferson**

Bundled service from Spectrum- \$236/month in **Edgecomb**

Bundled service from Spectrum \$175/month in **Jefferson**

*"It's still slow despite that I have opted for a more costly plan. There are NO choices available in my town."*

Consolidated customer in **Somerville**

*"Very expensive and hard to have multiple users"*

TDS user in **Edgecomb**

*"It's expensive and it's not fiber. I don't trust reliability and quality of my phone so i still have a landline. If I had fiber I would likely give up the landline and use internet for TV, which should be cheaper and better capacity and quality of internet."*

Spectrum customer in **Wiscasset**

*"I had no service for two weeks this summer following storm. I had to leave my lake camp and return to VA."*

RedZone customer in **Jefferson**

*"Slow, and is the only option for internet...streaming and loading email almost impossible".*

Consolidated Customer in **Dresden**

*"I've had Spectrum (Time Warner) for years. I pay over \$100 a month to have the fastest WiFi service they offer and I've had nothing but problems nonstop for the last year with them! The internet crashes multiple times a day, their customer service is horrible, I'm sick of having no other choice but them."*

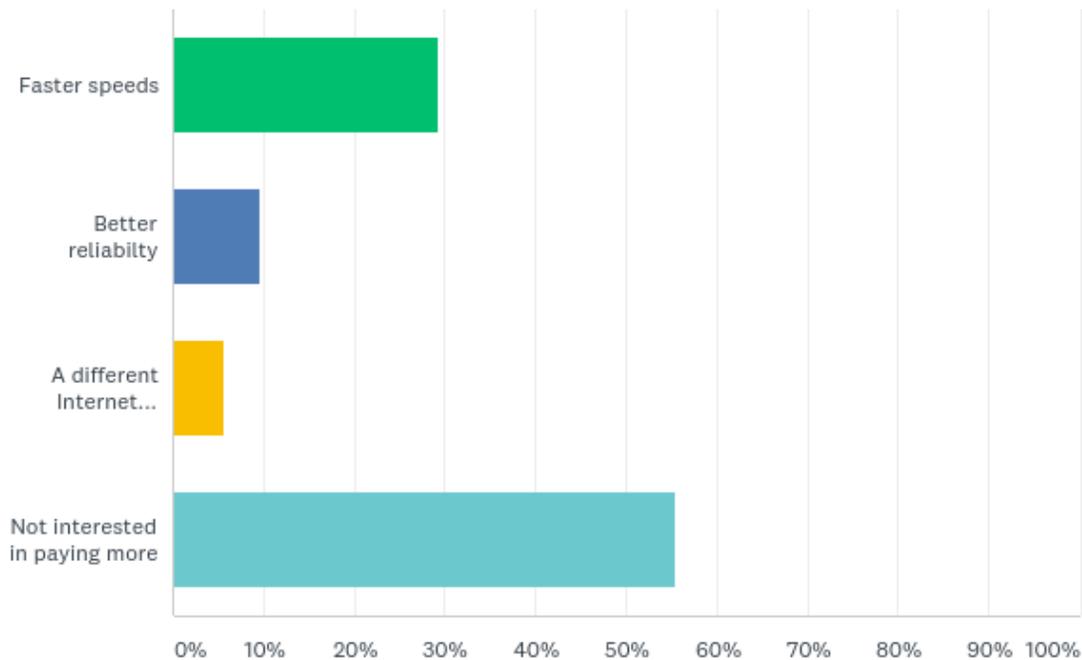
Spectrum customer in **Dresden**

“Satisfied because it’s available. I’d be very interested in options other than Spectrum.”  
Spectrum customer **Wiscasset**

“For some reason does not work between hours of approximately 4:30 and 8:30 p.m. I over single day.  
Slow connection.”  
Consolidated customer in **Edgecomb**

“It is much better than DirecTV which we had before and was very scattered and sometimes we wouldn’t  
have service for days, despite paying over double for this access. We have noticed more lapses and  
slowness lately, but overall we are satisfied with Fiber Optic internet.  
LCI customer in **Edgecomb**

**Q8. Would you be interested I paying more for one of the following?**



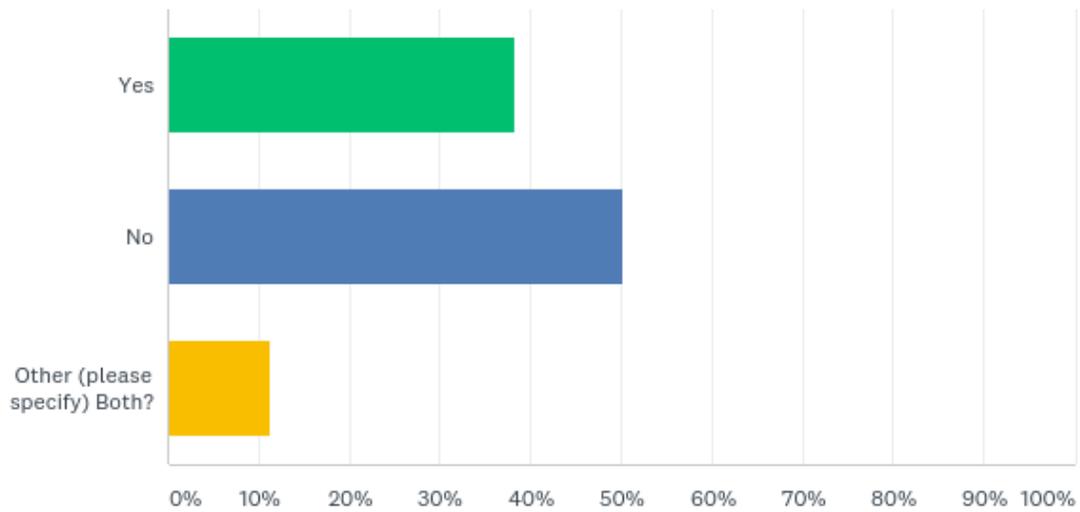
Interestingly, this is less of an unaffordability issue than the actual cost of the service, which is especially expensive for Satellite service. When respondents say they do not want to spend more, it is typically because they are paying well over \$100 for service. There is some price sensitivity at lower costs, but not as great as the chart suggests.

**Q9: Would you be interested in any of the following add-on services?**

**TELEVISION!**

ANSWER CHOICES	RESPONSES	
Television	72.68%	141
Voice (Phone)	32.99%	64
Home Security	20.10%	39
Home Automation	9.28%	18
Other (please specify)	19.07%	37
Total Respondents: 194		

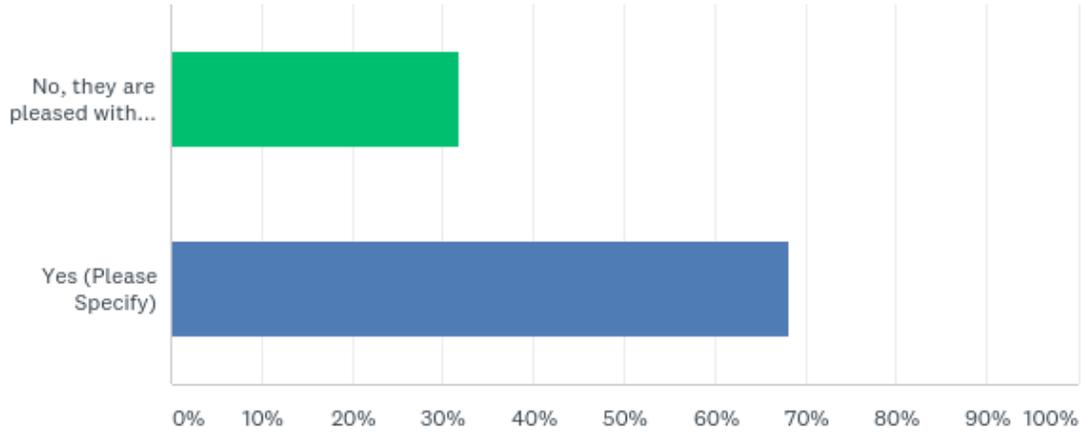
Related to Q3, Q10 asks, “Do you or anyone in your household work from home?”



ANSWER CHOICES	RESPONSES	
Yes	38.33%	138
No	50.28%	181
Other (please specify) Both?	11.39%	41
TOTAL		360

While not particularly surprising, more people working from home, this point to the increasing importance of fast, reliable internet at the home- not just for businesses.

**Q11: Those who work from home, are they frustrated?**



140 responded that they are frustrated, out of 205 responses.

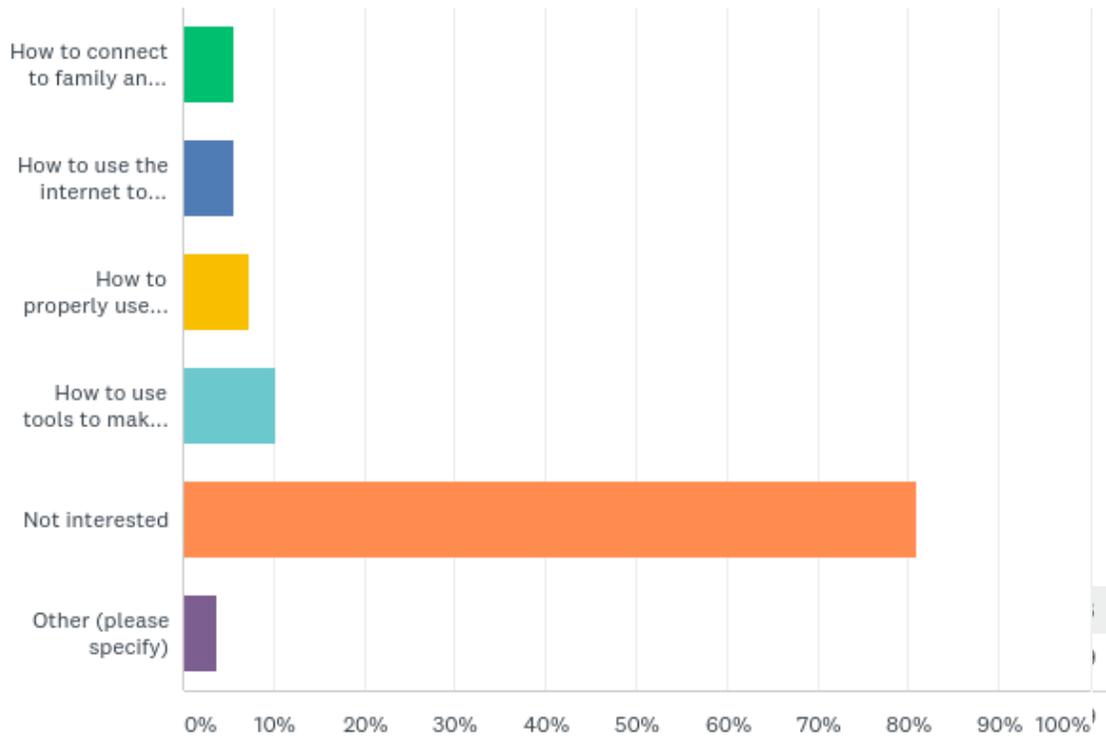
**Q12: 25% (90) responded they telecommuted.**

**Q13: Do you have children or adults in your household who use the internet for homework or education?**

ANSWER CHOICES	RESPONSES	
Yes	46.52%	167
No	53.48%	192
<b>TOTAL</b>		<b>359</b>

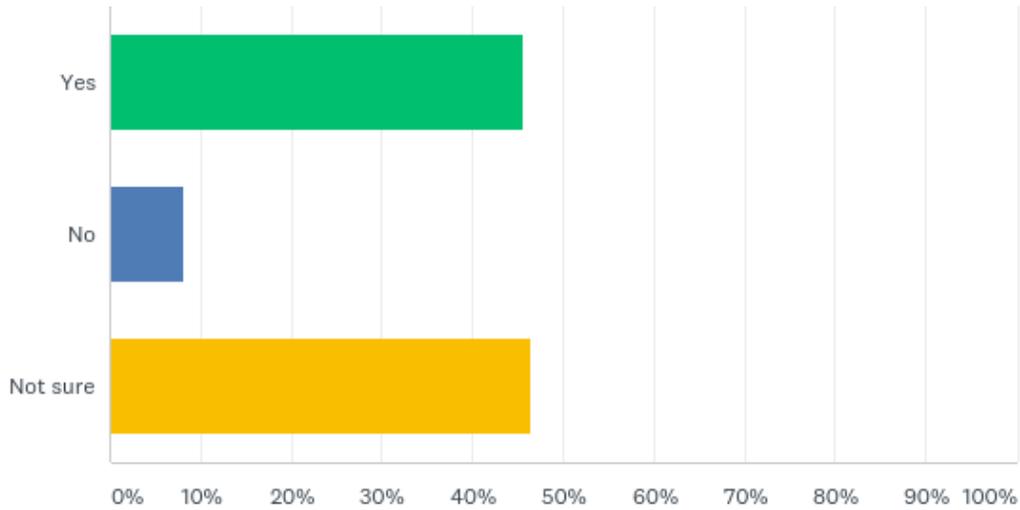
ANSWER CHOICES	RESPONSES	
School-age children	41.95%	73
Adult	71.84%	125
Other (please specify)	4.02%	7
<b>Total Respondents: 174</b>		

**Q15: Interested in training?**



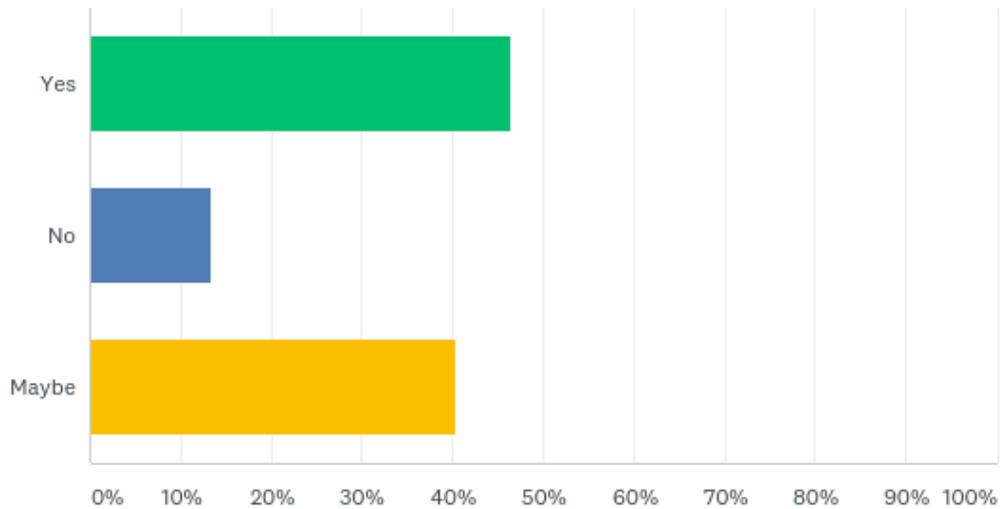
How to properly use Social Media (FaceBook, Twitter, LinkedIn, Instagram, etc.)	7.40%	25
How to use tools to make me more productive in my home or business (Word, Excel, PowerPoint, QuickBooks)	10.36%	35
Not interested	81.07%	274
Other (please specify)	3.85%	13
<b>Total Respondents: 338</b>		

**Q17: Do you think more people would live in your town if there was better internet service available to them?**



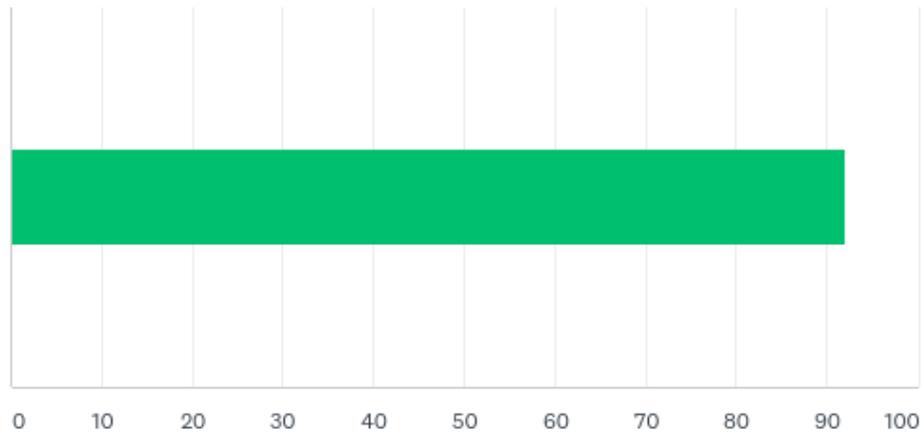
ANSWER CHOICES	RESPONSES	
Yes	45.56%	164
No	8.06%	29
Not sure	46.39%	167
<b>TOTAL</b>		<b>360</b>

**Q18: Do you think visitors would stay longer if good internet were available where they were staying?**



ANSWER CHOICES	RESPONSES	
Yes	46.39%	167
No	13.33%	48
Maybe	40.28%	145
<b>TOTAL</b>		<b>360</b>

**Q20: On a scale of 1 to 100, with one being the least support and 100 being the most support, do you support Lincoln County's and your town's planning efforts to assist with internet improvements?**



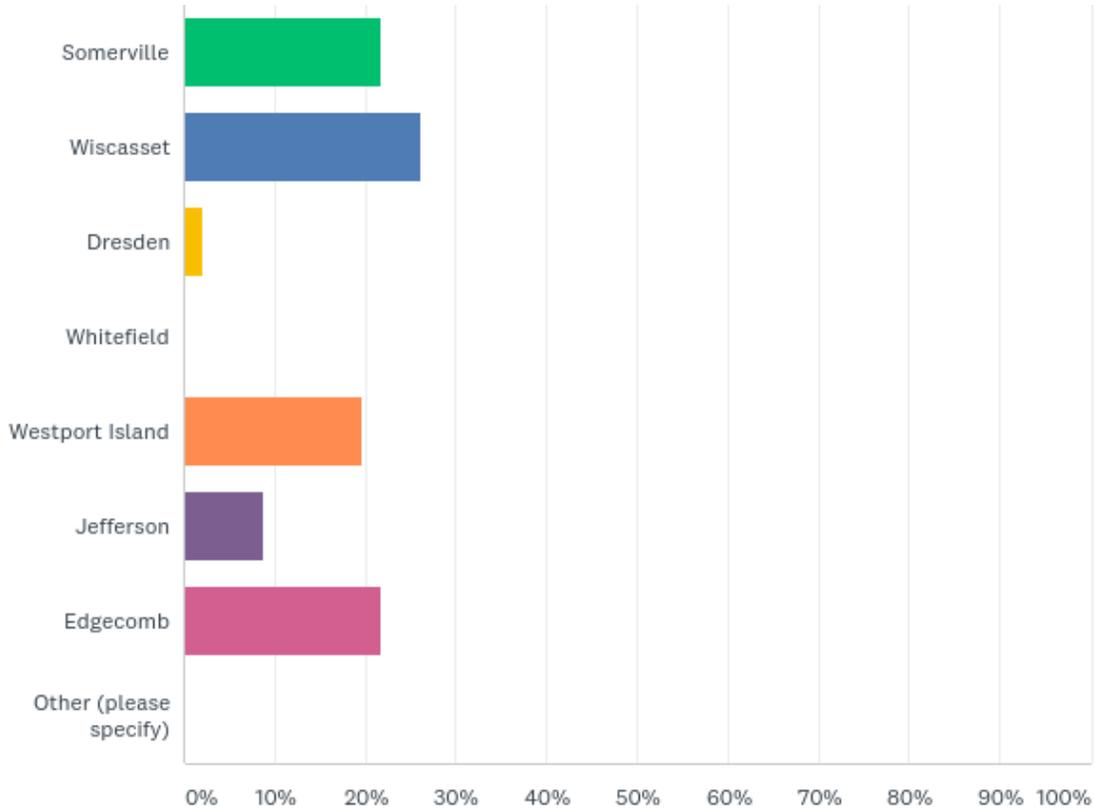
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	92	32,654	355
Total Respondents: 355			

### Take Away of the Survey:

- People recognize how important internet connectivity is to their community, even from those that had good service
- Residential service is as important as business service because of large numbers of citizens that work from home
- Spectrum service generally is too expensive, Consolidated service is not reliable
- Other local providers also are frustrating people, except for LCI fiber
- Jefferson is a mess- a lot of providers, and no one happy
- Strong support for Lincoln County to help- much stronger than expected across all communities

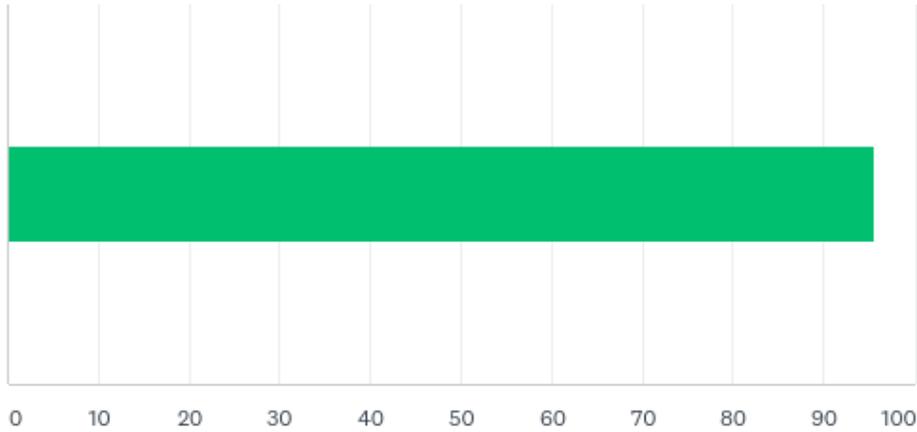
## Business Surveys

We have received 46 business surveys from across the region, including 10 from Whitefield that were obtained separately. The results in Whitefield were similar to the results described here.



ANSWER CHOICES	RESPONSES	
Somerville	21.74%	10
Wiscasset	26.09%	12
Dresden	2.17%	1
Whitefield	0.00%	0
Westport Island	19.57%	9
Jefferson	8.70%	4
Edgecomb	21.74%	10
Other (please specify)	0.00%	0
<b>TOTAL</b>		<b>46</b>

**Q2: How important is the internet to your business?**

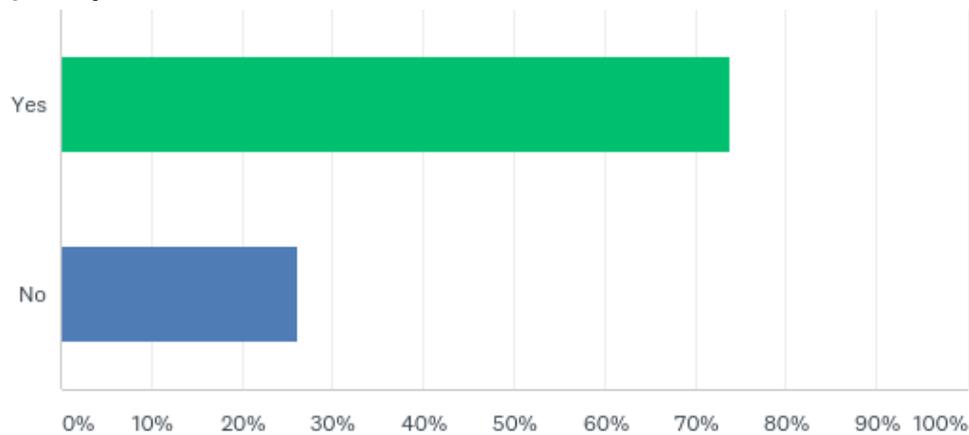


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	96	4,306	45
Total Respondents: 45			

**Q4: I would increase my business revenue if...**

ANSWER CHOICES	RESPONSES	
I could work or sell more efficiently online	69.77%	30
My employees were better trained	13.95%	6
I understood and could implement the latest online tools	27.91%	12
I had updated computer software	30.23%	13
The pool of skilled employees increased	13.95%	6
I'm not sure	18.60%	8
Total Respondents: 43		

### Q6: Do you have a website?



12 respondents do not have a website.

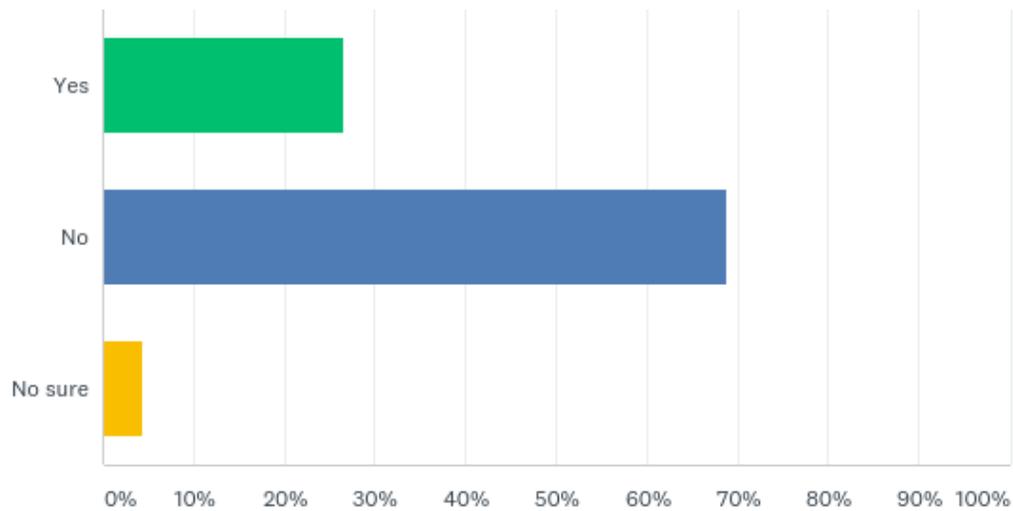
### Q12: What does your business use the internet for?

ANSWER CHOICES	RESPONSES
On-line sales	71.74% 33
On-line purchasing of inventory	71.74% 33
Webinars, Skype, Video	69.57% 32
File or data sharing (outside of your internal network)	71.74% 33
Data management, back-up or data storage	63.04% 29
Operations in the Cloud (Accounting, Sales, Project Management, Inventory, etc.	34.78% 16
Hosting your own server(s)	19.57% 9
Social Media (FaceBook, Twitter, Instagram)	71.74% 33
Other (please specify)	23.91% 11
Total Respondents: 46	

### Q13: How important is improved internet service to your business now?

ANSWER CHOICES	RESPONSES
Not important, current service meets our needs	13.04% 6
Important, we don't have everything we want, but we can make do	32.61% 15
Critically important, current internet does not meet our needs	43.48% 20
We don't know and would like to learn more	2.17% 1
Other (please specify)	8.70% 4
TOTAL	46

**Q15: Over the past few years have internet speeds kept up with your business needs?**



ANSWER CHOICES	RESPONSES
Yes	26.67% 12
No	68.89% 31
No sure	4.44% 2
<b>TOTAL</b>	<b>45</b>

**Q17: What type of Broadband does your business have?**

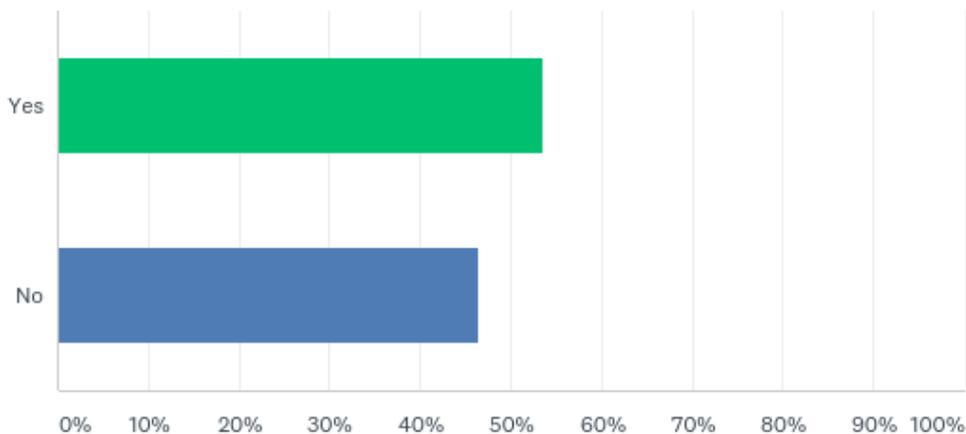
ANSWER CHOICES	RESPONSES
Fiber	13.33% 6
DSL	35.56% 16
T1	2.22% 1
Cable	24.44% 11
Wireless	8.89% 4
Satellite	8.89% 4
Celular	2.22% 1
Other (please specify)	4.44% 2
<b>TOTAL</b>	<b>45</b>

Those that have fiber are happy, those with satellite, cellular and wireless are unhappy. And those with a cable connection or DSL have individual responses, typically based on reliability or cost.

### Q18: Who is your provider?

ANSWER CHOICES	RESPONSES	
Consolidated Communications (formerly FairPoint)	41.30%	19
Spectrum (formally Time Warner Cable)	23.91%	11
GWI	2.17%	1
LCI	6.52%	3
Otelco (formally OT&T)	0.00%	0
TDS	0.00%	0
UniTel	0.00%	0
Premium Choice	0.00%	0
Red Zone	2.17%	1
HughesNet (satellite service)	4.35%	2
Wi-Fi HotSpot (using your cellular phone)	2.17%	1
Other	0.00%	0
Other (please specify)	17.39%	8
<b>TOTAL</b>		<b>46</b>

### Q20: Does your business allow employees to telecommute?



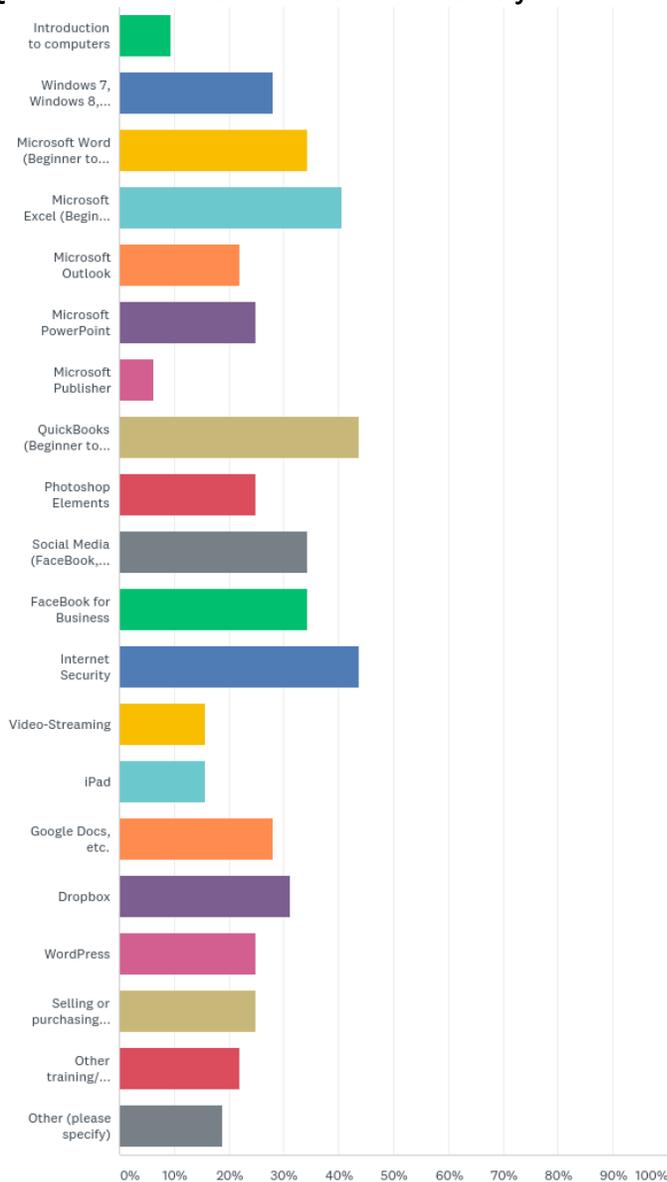
Speaks to importance of residential connection in our modern society, where employees can increasingly live and work in different places because of internet connectivity.

**Q22: Do you see a training need for computer skills in your business?**

ANSWER CHOICES	RESPONSES	
Yes	39.13%	18
No	60.87%	28
<b>TOTAL</b>		<b>46</b>

There are a series of questions about how your employees learn best, do you offer training now, and how you would rate the skill level around computers. These would be clues to how a Digital Literacy program might reach businesses in the region.

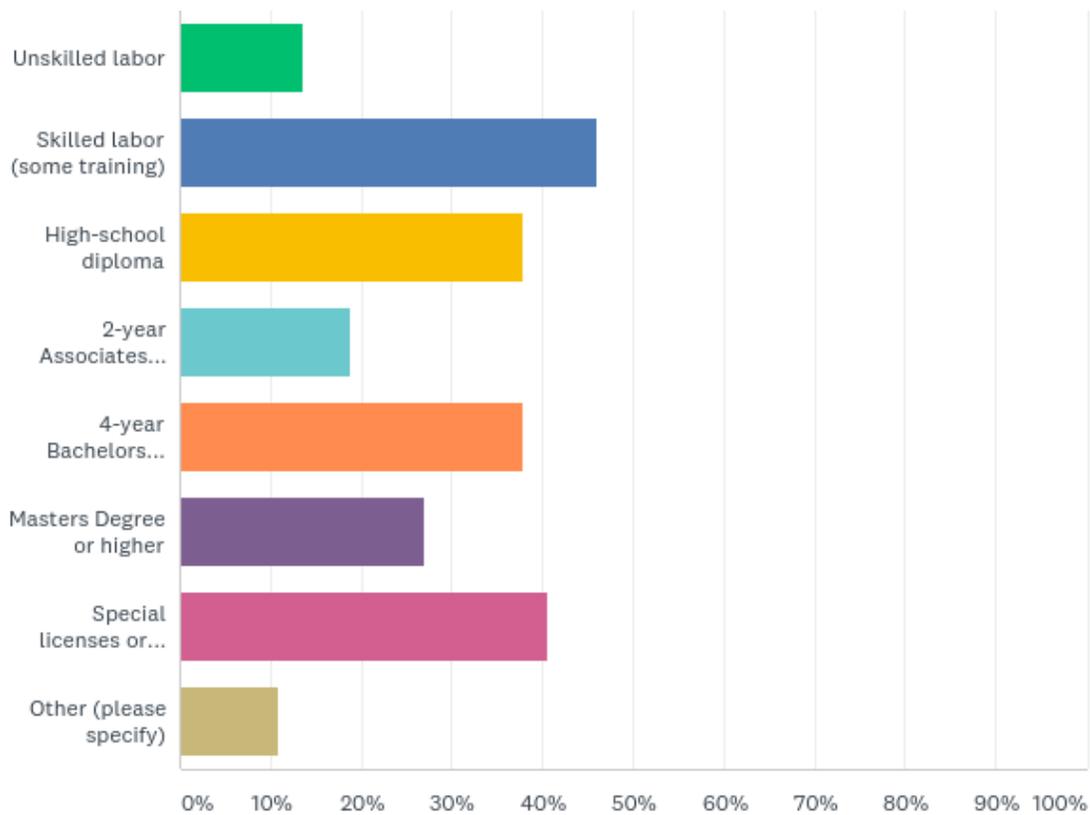
**Q29: What classes would be of interest to your staff?**



**Q30: Number of employees?**

ANSWER CHOICES	RESPONSES	
Self, it's only me!	29.55%	13
2-5	47.73%	21
5-10	11.36%	5
10-25	2.27%	1
Over 25	9.09%	4
<b>TOTAL</b>		<b>44</b>

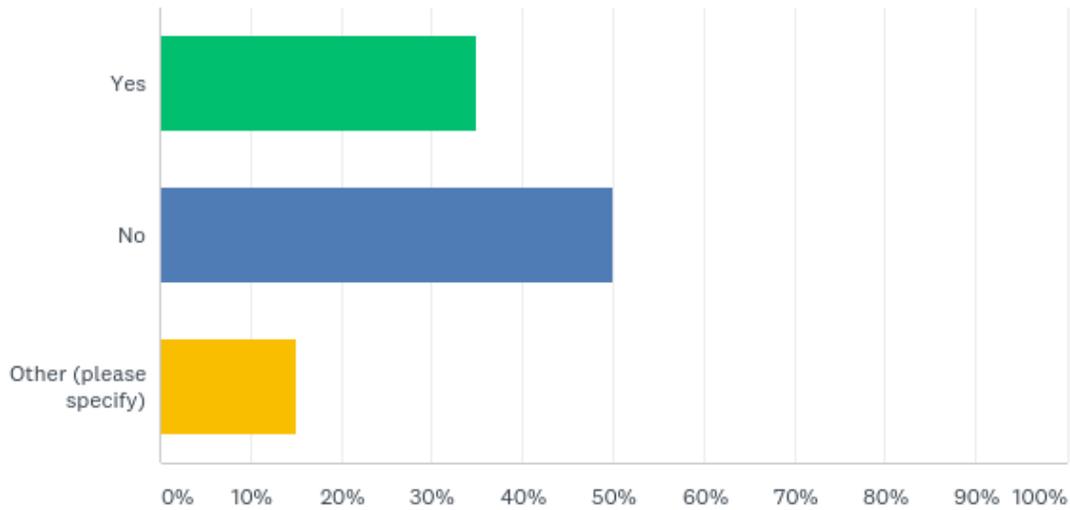
**Q32: Skill levels required in your business?**



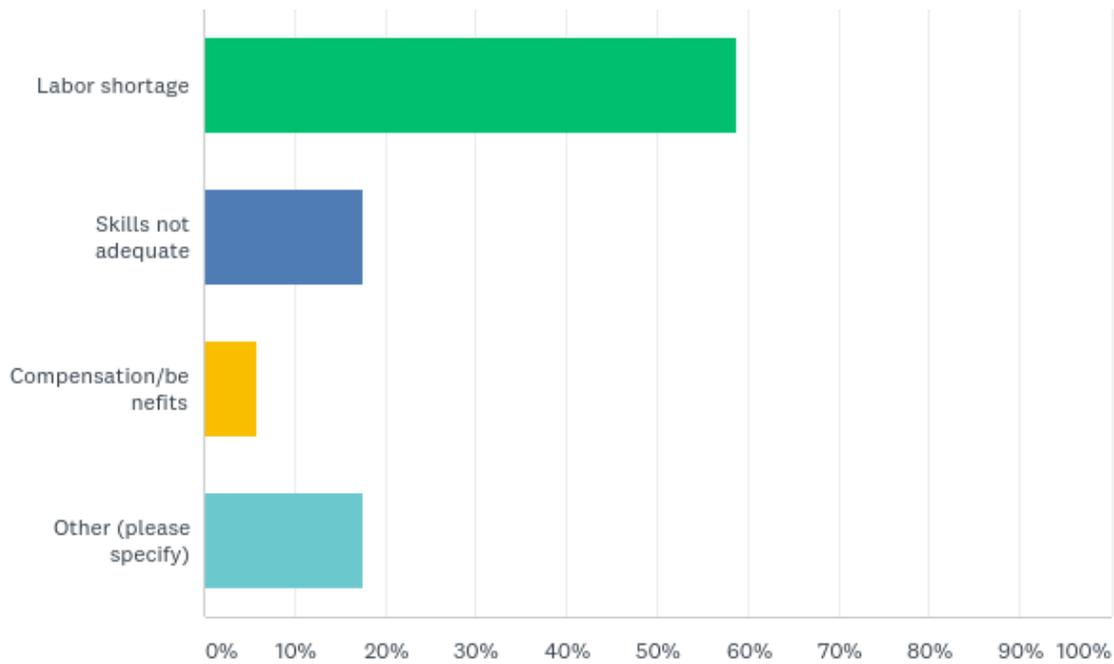
**Q33: Do you expect training will be needed for your new and existing employees over the next year?**

ANSWER CHOICES	RESPONSES	
Yes	47.50%	19
No	32.50%	13
Not Sure	20.00%	8
<b>TOTAL</b>		<b>40</b>

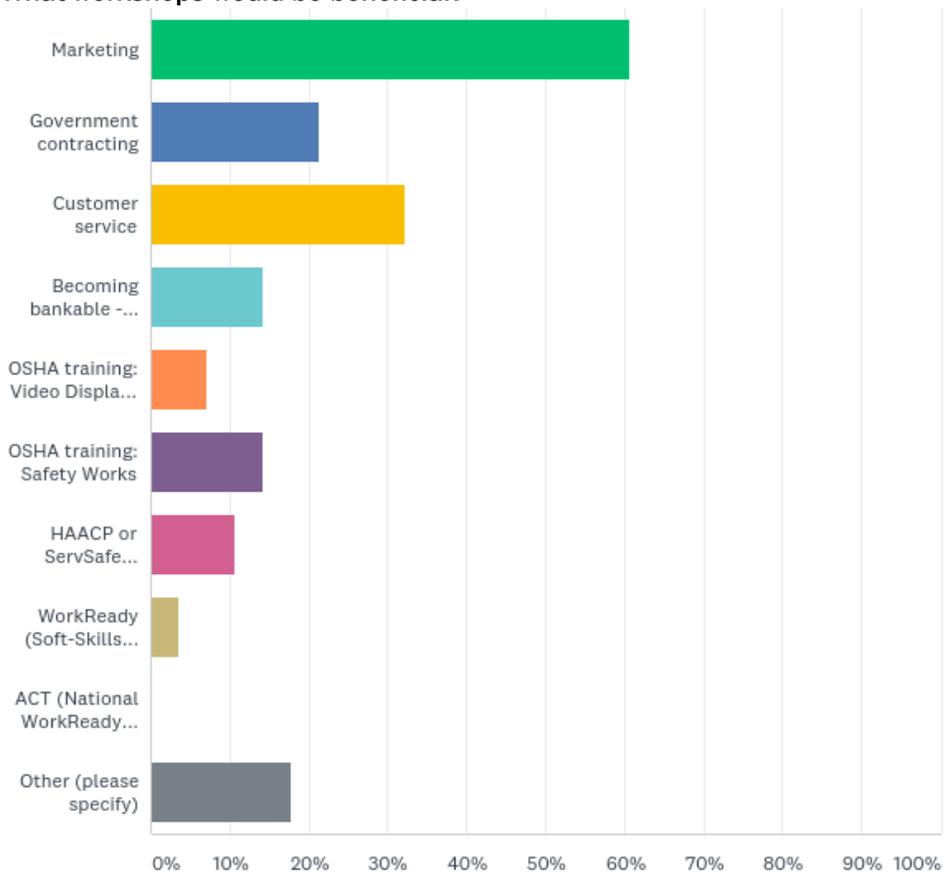
**Q34: Do you have difficulty recruiting new employees?**



**Q35: If so, what are the factors?**



**Q36: What workshops would be beneficial?**



ANSWER CHOICES	RESPONSES	
Marketing	60.71%	17
Government contracting	21.43%	6
Customer service	32.14%	9
Becoming bankable - basic recordkeeping	14.29%	4
OSHA training: Video Display Terminals	7.14%	2
OSHA training: Safety Works	14.29%	4
HAACP or ServSafe training	10.71%	3
WorkReady (Soft-Skills) (Maine Certification)	3.57%	1
ACT (National WorkReady Certification)	0.00%	0
Other (please specify)	17.86%	5
Total Respondents: 28		

### A Few Comments:

We need support with basic computer skills and IT Security training for employees and others in the labor force that may work for us in the future. - Moinlycke in Wiscasset

We need Westport Wired!!! Satellite internet is terrible. - Northeast Photographic, Westport Island

I get all the training I need through my company- Westport Island resident telecommuting for TERC (based in Cambridge, MA)

High speed is available already. What are you up to? This is not a government job!- ECHO Inc. Wiscasset

We have fiber, which is fine. - Cod Cove Inn, Edgecomb

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### Businesses who left their contact info:

Cod Cove Inn, Edgecomb  
 William Joyce, Edgecomb  
 Mid-Maine Millwork, Edgecomb  
 Jefferson Fire and Rescue, Jefferson  
 NC Hunt, Inc., Jefferson  
 Henry McInnis, Creditscore.com, Somerville  
 Reishus Consulting, LLC, Somerville  
 Karl Olson and Associates, Wiscasset  
 AK Energy Consultants, Somerville  
 Dresden Consulting Group, Dresden  
 Snowsquall Inn, Wiscasset  
 South Somerville Baptist Church, Somerville  
 ECHO Inc., Wiscasset  
 Briggs Farm, Somerville  
 California Contract Company, California- Russel Gates, Somerville

RN Heinlein Consulting, LLC, Jefferson  
 Deborah Myers- Self employed  
 Chesterfield Associates, Westport Island  
 Flutter Focus Photography, Westport Island  
 Sasanoa Brewing Company, Westport Island  
 Glidden Point Oyster, Edgecomb  
 Scully's Oyster & Lobster Market, Edgecomb  
 Violet Vaughn/Sugarloaf Publishing, Westport Island  
 Donna Curry, TERC (Cambridge,MA), Westport Island  
 Sweeney Ridge Studios, Edgecomb  
 Central Maine Pyrotechnics, Farmingdale  
 RJ Associates, LLC, Westport Island  
 Orff Realty, Jefferson  
 The Blueberry Moose, Westport Island  
 Northeast Photographic, Westport Island  
 Dan's Auto, Somerville  
 Plante's Lobster Vents, Somerville  
 James Kochan Fine Arts & Antiques, Wiscasset

## Business Survey Takeaways

- Business focused training should be strongly considered
  - The businesses that responded were generally open to training, and welcomed it
- Almost half of respondents say that the internet is not keeping up with their needs
- There are limited fiber assets available in some locations
- Spectrum- Costly and drops at high use times of day
- Consolidated- Frustratingly unreliable and suffer from slow speeds
- Satellite, wireless- Responders would choose other service if it was available

## Current Provider Meetings

Both Consolidated and LCI met with the communities to describe current service levels and the possibility of working together to improve service. Spectrum, who serves six of the seven communities, has not yet been able to be scheduled for a meeting with the communities they serve.

### Spectrum

It has been difficult to schedule Spectrum and they have not provided maps to some of the communities even when requested. We remain hopeful that schedules will allow Spectrum representatives to visit the region and speak with the various communities interested in understanding the coverage footprint in their town and how they might engage Spectrum to work more closely with them. Despite the difficulties in scheduling a meeting, one community has been working with Spectrum and recently was provided mapping and developed a plan to work with Spectrum to apply to ConnectME Authority for funding. Westport Island has been very interested in expanding Spectrum service to poorly served areas that are currently not served by Spectrum. It is possible that other communities would also be interested in working with Spectrum and in Phase II, identifying areas that might meet Spectrum's threshold to expand service that have at least 20 homes per mile will be a strategy that should be explored- if maps of currently served areas by Spectrum can be obtained.

## LCI

LCI has both DSL and fiber assets in the region and is open to working with communities to expand their fiber. LCI hosted a meeting at its headquarters in Nobleboro and all of the planning communities were invited and now have a better understanding of LCI's impressive service capabilities. Over the past few years LCI has been methodically expanding fiber and believes this is the future of their business. Axiom met with the Town of Jefferson's Board of Selectmen and recommended that they meet with LCI. LCI reported a positive meeting, and this is just one community that should explore a partnership with LCI through our work in Phase II. Expanded LCI service in Edgecomb might also be something to seriously explore. LCI is currently working with Bowdoinham and may be interested in a similar model in other communities.

## Consolidated

Consolidated met with the communities and distributed individualized community analysis that were asked to be kept confidential and are therefore not included here. That information showed communities what speed levels were available and how many homes had that speed level available to them. A companion chart showed current take rate by Consolidated subscribers at the various levels of service available. There was also an analysis of how many homes did not have Consolidated service in each community- a strong indication that those homes would likely only be served by a satellite service, or by using their cellular phone. Concern about Consolidated service varied by town to town. Somerville, the only community who has Consolidated as its only provider, was especially interested in seeing if Consolidated service could be improved. This will be explored in Phase II.

## Other Providers

Most others, who do not have either of these providers have a mix of solutions, including a small number of Red Zone users in Jefferson, satellite service from HughesNet or Verizon and ATT cellular service that provide hotspots to help consumers connect in some rural areas outside of the service of these three major providers. None of these are substantial enough or robust enough to warrant further investigation.

A map of served and unserved areas and associated speed levels is located at this address:

[https://geopower.jws.com/connectme/MapsPage.jsp?folder\\_currentfolder=156029](https://geopower.jws.com/connectme/MapsPage.jsp?folder_currentfolder=156029)

There is a search function or scroll down to the map of your community map and click on it to view.

## Phase II Recommendations

Axiom recommends that all communities involved in Phase I move to Phase II. There are several ingredients that reinforce this recommendation.

- All of the communities have strong Broadband advocates, several have BB Committees, and several are in the process of expanding their committees to help them move forward
- While several communities are hopeful that they *might* be able to work with current providers, there is strong support to do something, with or without current provider support

- With Lincoln County Regional Planning, Island Institute and several community members interested in a regional approach, one part of Phase II will be to develop plans and strategies on how like-minded communities might work together to form a public utility or to work together to attract an ISP partner
- Lincoln County Planning is meeting with a number of communities outside of the current planning process to begin discussions about a regional plan and gauge interest in those communities

The region and all of the communities involved are highly engaged in a process to bring high-speed, reliable internet service to the communities that are part of this planning process... and beyond.

## Appendix A

### Town of Whitefield Survey Results

#### Overview:

The Town of Whitefield Broadband Committee has done a fantastic job of collecting 269 surveys in the community. The majority (over 70%) from Spectrum customers, and a far second from Consolidated customers (16%). We did not have access to the “Other” category, but assume these would be homes using satellite or Wi-Fi hotspots. Typically, Spectrum would serve the more densely populated core of the community, while Consolidated would serve the whole community, including the more sparsely populated outer edges, typically with increasingly poor service the further the home from the equipment.

#### Analysis:

A number of questions were asked, but it remains unclear if citizens are dissatisfied with their service. That question was not asked. Given the responses, we assume that there is some level of dissatisfaction as people are typically more motivated to respond to a questionnaire if they are upset. That said, this is an assumption on our part, having done survey work of this type across Maine in many communities.

When asked what they used the internet for, it was revealing to understand that Business and Education were just under 50%, but Medical also drew 61 responses (22.68%) and Telecommuters also drew 61 responses (22.68%). This is important to help the select board and potential funders know how critical the need is that good connectivity be available, given their needs.

Last, not surprisingly, when asked what good internet would mean for the community, answers were pretty standard. Support Small business leading the pack with over 54% of respondents. Distant Learning coming in a close second, at 49%.

#### Next Steps:

Because of the two providers in the community, our instinct tells us that the Broadband Committee should be working on specific goals they would want to achieve. This will really help us move forward into Phase II. As we consider meetings with the providers, getting a Spectrum coverage map will be critical, as we are assuming... (All this will be clear once we talk) that your plans would be to try to expand Spectrum coverage, or overlay additional coverage over the more poorly served parts of the community that only Consolidated serves. You may have other goals.

- Spectrum mapping important
  - Work with Spectrum through Franchise agreement (if not updated) to price and expand service
- Has Consolidated used CAF funds to enhance service in the community- we can find out
- Unlikely that the new USDA funding would apply to your community
- Maybe ConnectME infrastructure funding, deadline in March-April, requires a 50% match, more match makes you more competitive