

# SAN JUAN COUNTY BROADBAND INITIATIVE

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San Juan County Economic Development Council  
PO Box 3053  
Friday Harbor, WA 98250  
(360) 378-2906  
[info@sanjuansedc.org](mailto:info@sanjuansedc.org)  
[www.sanjuansedc.org](http://www.sanjuansedc.org)

# BROADBAND MARKET RESEARCH RESULTS

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Prepared by  
Tom Schramm  
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# San Juan County Broadband Initiative

- Founded in 2009
  - Sponsored by the San Juan Island Community Foundation's Critical Needs Task Force with support from The San Juan County Economic Development Council
- Mission:
  - To drive economic development and support community services through universal, open access to broadband services via an advanced, world-class broadband network throughout San Juan County.

# Market Research Project Goals

- Analyze local market offerings
  - Providers
  - Products
- Survey users
  - Residential and Business
  - Explore:
    - Penetration of providers and products
    - Satisfaction and needs
    - Correlation between improved Internet and business growth

# Technology Overview

- How Internet access is delivered to the end user:
  1. DSL - uses telephone lines, thus widely available
  2. Cable TV infrastructure
  3. Wireless (e.g., Canopy, ClearWire)
  4. Fiber optic cable
- Speed (bandwidth)
  - Higher speeds are required for advanced functions such as video
  - Most local offerings range from 384Kbps (very slow) to 10 Mbps (moderately fast) download speeds
  - National average is 5.1 Mbps; 20 Mbps becoming common in urban areas
  - Most current products, including DSL, are asymmetric, meaning they have much slower speeds for upload than download

# Local Market Offerings

- DSL is the only available option for most customers
  - DSL speed varies with location
  - Most of the County can access only slower speeds
- Wireless and Cable provide better price/performance, but available only in limited geographical areas
- OPALCO's Island Network uses very fast fiber optics
  - Geographically limited; expensive to extend
  - Most customers are public sector (Courthouse, Medical Center)
  - Small number of private firms

# Local Market Oct. 2011

## San Juan County local market offerings October, 2011

Service Area	Service Provider	Advertised Products			Comments
		Technology Platform	Service Tier	Downstream/upstream speeds (kbps)	
County-wide	CenturyLink	DSL	Phone bundle	768/256 1500/256 3000/256 10000/768	Bundle means DSL added to existing phone service. Pricing is different for residential and business.
	Rockisland Communications	DSL	Bronze	384/128	Coverage limited.
			Gold	768/256	
			Platinum	1500/256	
	Canopy Wireless			1000/256 2000/256 3000/256	
The Computer Place	DSL		384/128 512/128 768/256 1500/256		
	Island Network (OPALCO)	Fiber Optic	Managed Services	10000 100000	Fiber construction line extensions are the same as extensions for electrical services, member is required to pay 100% of construction costs associated with the line extension.
San Juan Island	Windjammer Cable	Cable		256/ 2000/ 5000/ 10000/	Limited geographic coverage; only available in or very near downtown FH.
Orcas Island	Orcas Online	DSL		1500/512 3000/512	Back end is OPALCO fiber (Island Network).
			Wireless		
	Mt. Baker Cable	Cable		3000/1000	
Friday Harbor downtown	ClearWire	Wireless		1500+	Speed is variable, claim average is 3-6Mbps, minimum 1.5 Mbps.

Note: Product information is provided by the Internet Service Providers and is subject to change. Believed to be accurate as of October 31, 2011.

# User Surveys

- Two separate surveys
  - Residential
  - Business/organization
- Launched September 21
  - Support from Journal Op-ed
  - Over 520 submitted to date
- Both statistical and anecdotal information obtained
- Managed online
  - Residential responses submitted online
  - About half of the business surveys were conducted personally by EDC

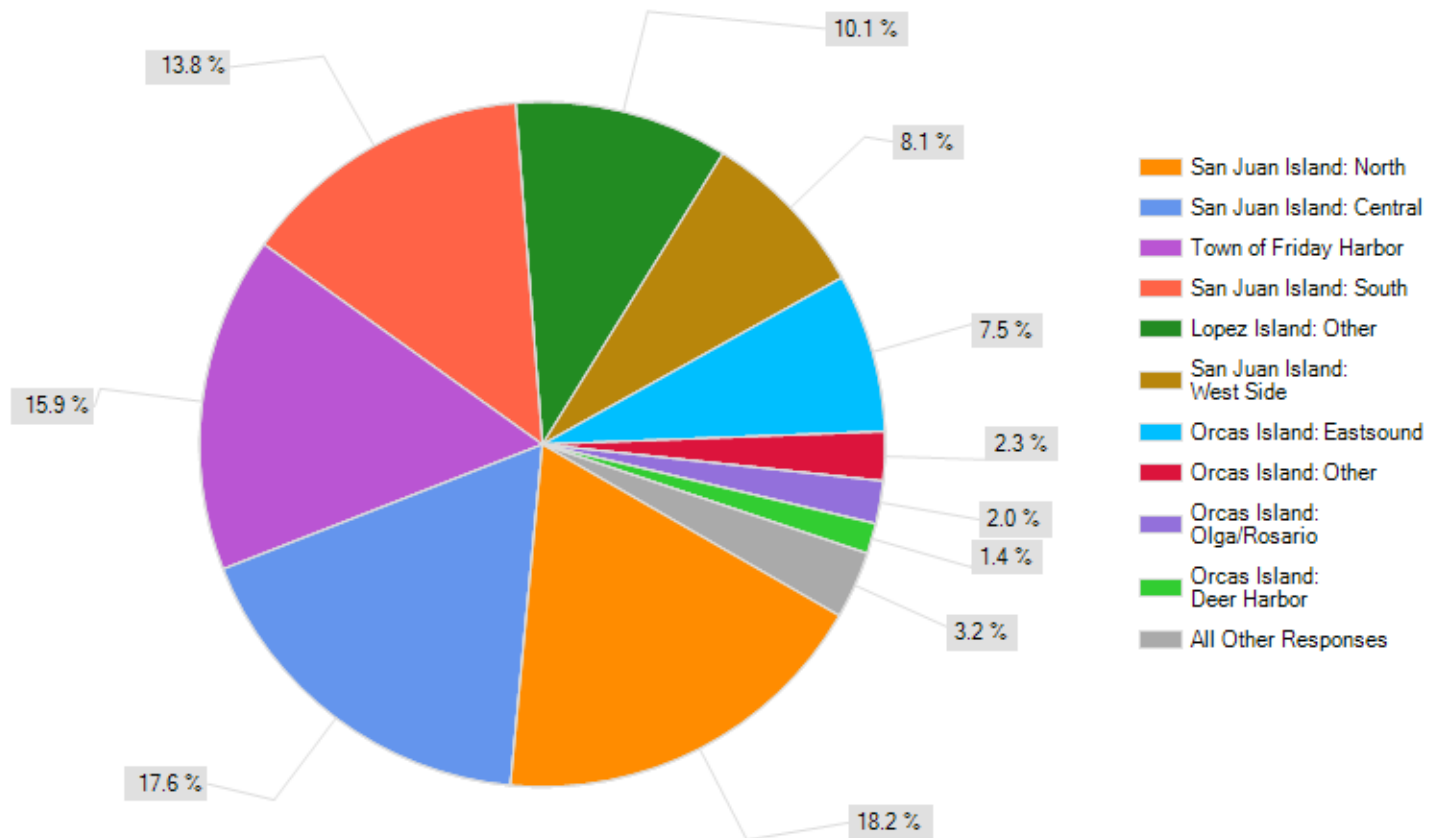


# Geography

- Responses obtained from San Juan, Orcas, Lopez, Blakely, Shaw, and at least one other island
- 74% from San Juan Island
  - All parts of the island well represented
- 13% from Orcas Island
  - Approx. 60% of them in Eastsound
- 12% from Lopez Island

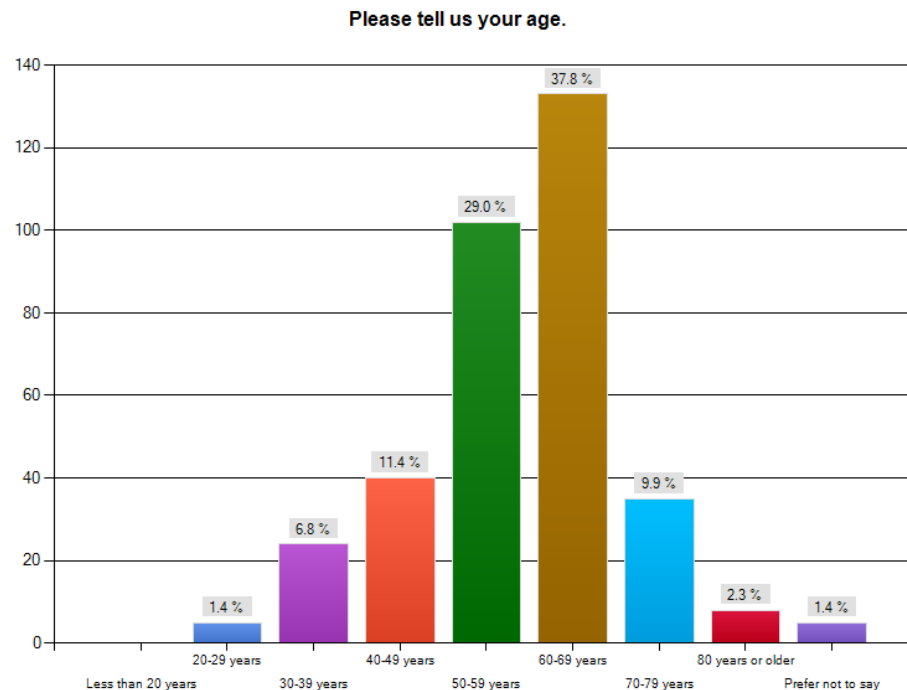
# Geography

In what part of San Juan County do you reside?



# Demographics

- 91% are full-time residents
- 81% were one or two-resident households
- Age was also typical of the community:



# Industries Surveyed

- Over 100 business responses, including:
  - IT/software/web
  - Hospitality
  - Construction/trades/architecture
  - Surveying/civil engineering
  - Business Services
  - Real Estate
  - Manufacturing
  - Insurance
  - Education
  - Legal

# Home-based business activity

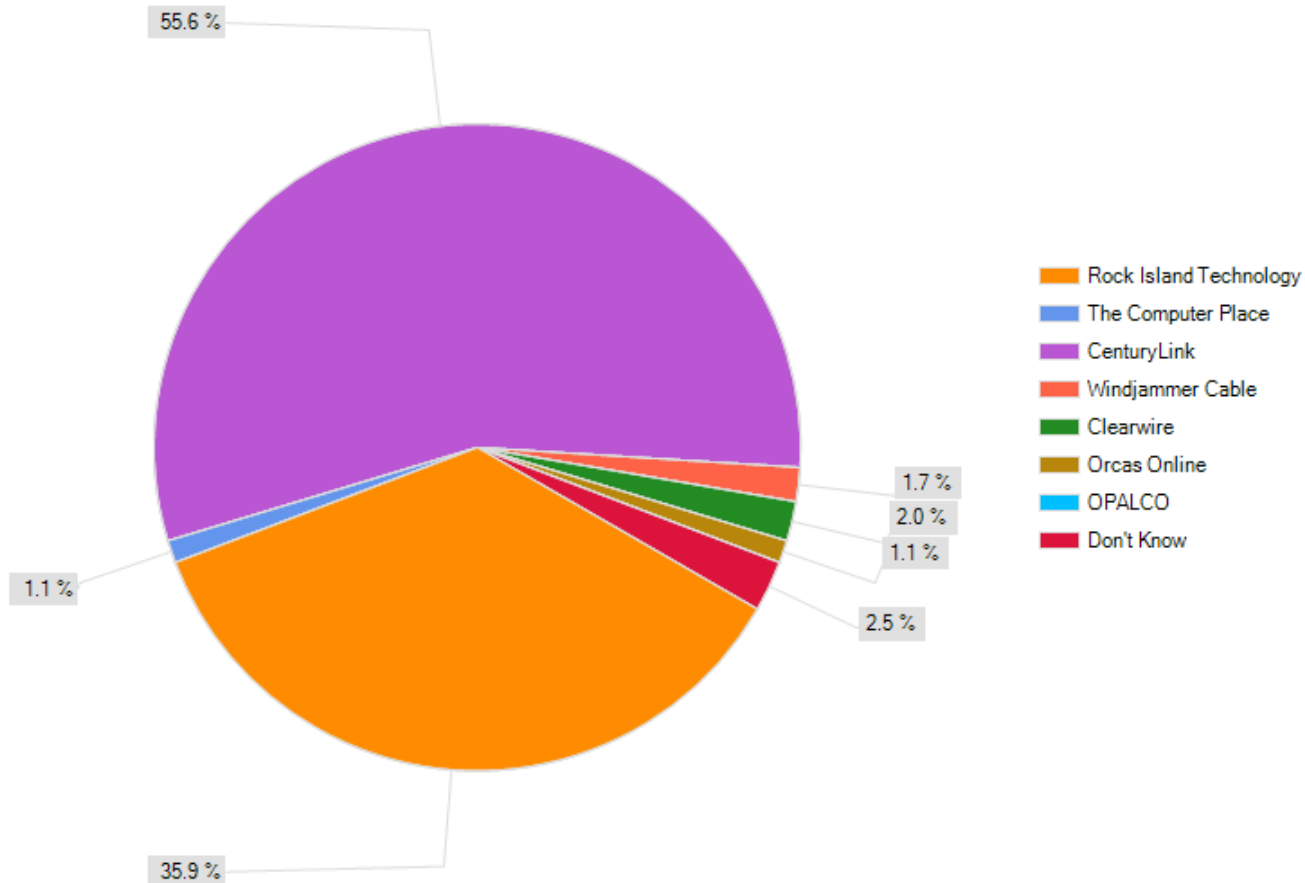
- An important finding
- Asked:
  - *Do you conduct any sort of business out of your home (including any part-time business)?*
  - *Yes: 57%*
- These home-based businesses are an important part of SJ County's business environment
  - They allow residents to locate and stay here
  - The revenues generated flow through the local economy

# ISP Market Penetration

- Two providers dominate
  - Residential: 56% CenturyLink, 36% Rock Island
  - Business: each of these providers has 41%
- CenturyLink has built a lead in residential by talking customers away from local ISPs through special pricing that bundles Internet service with phone service
  - Practically all CenturyLink customers are bundled

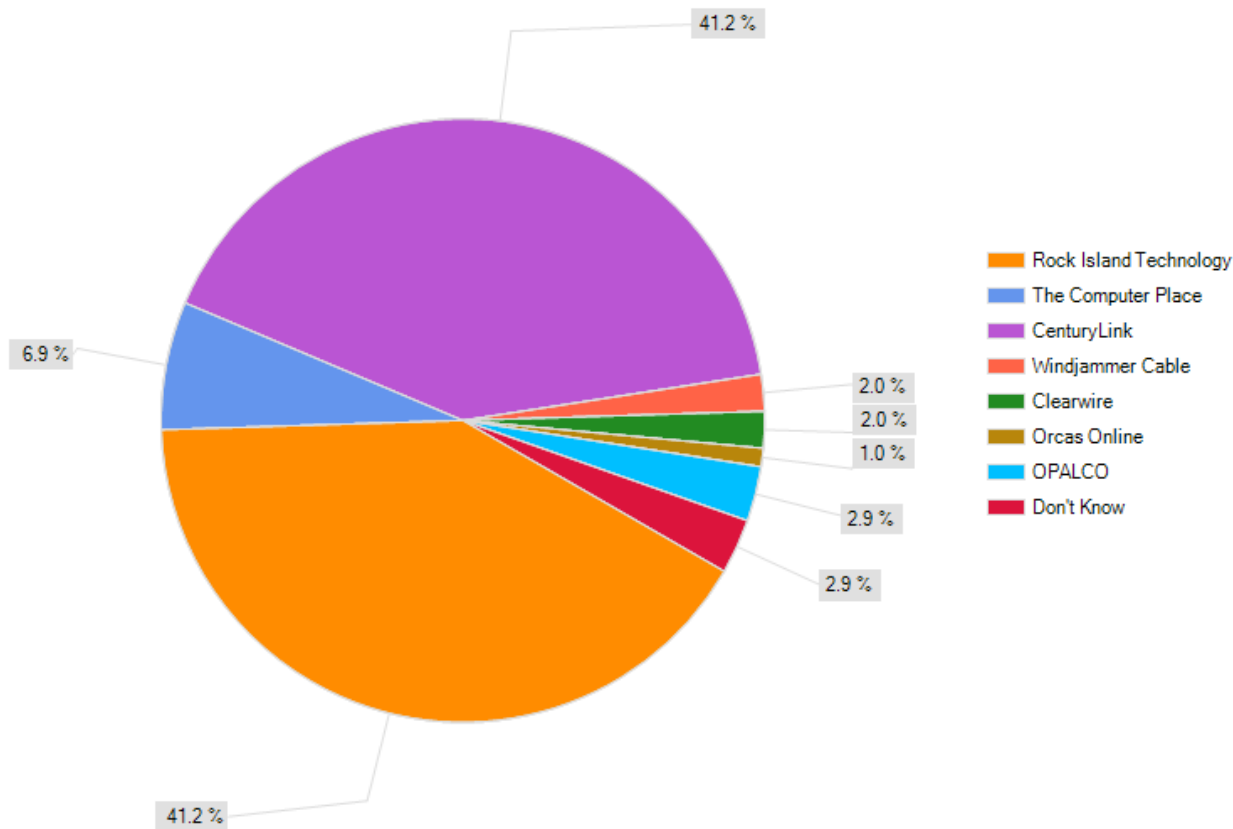
# ISP Penetration: Residential

Who is your Internet Service Provider at your home?



# ISP Penetration: Business

Who is your Internet Service Provider?



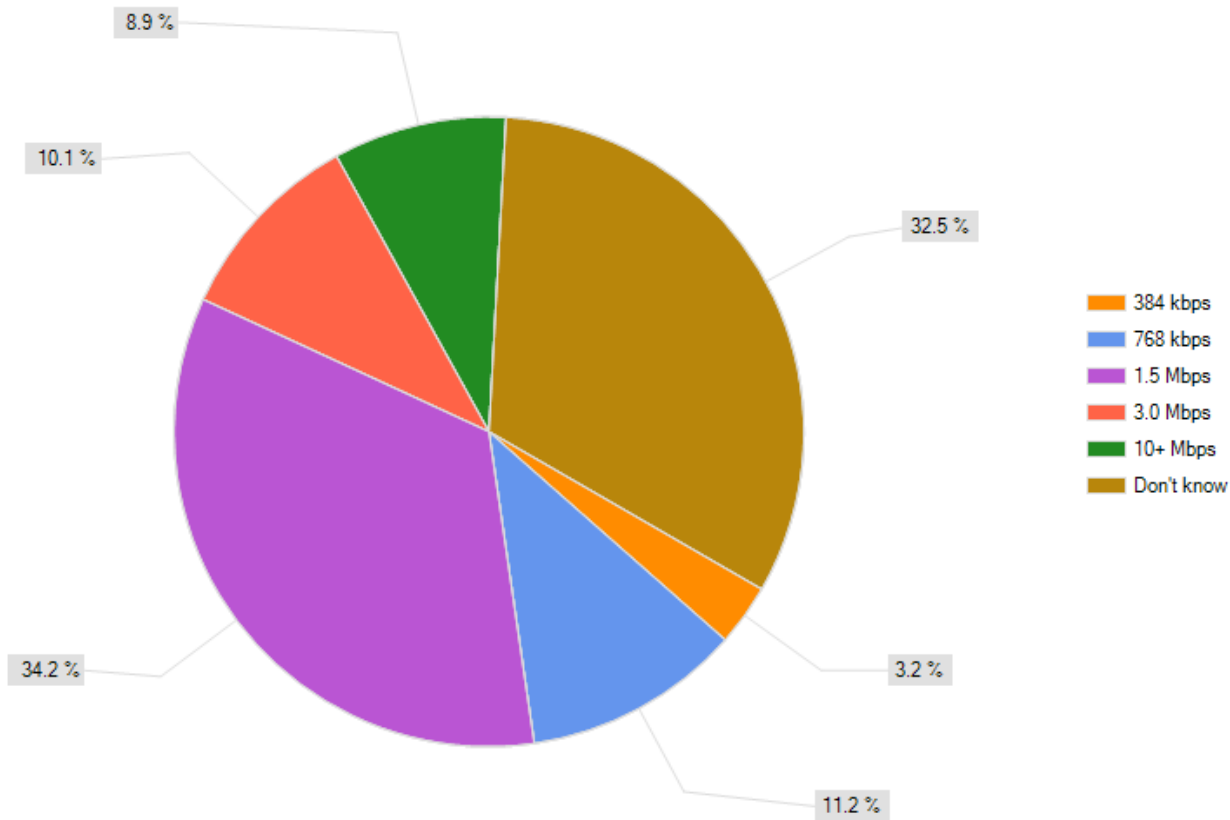


# Speed Chosen

- 1.5 Mbps is most common
  - 50% of respondents who know what speed they are buying indicate they have chosen 1.5 Mbps
  - This is the fastest speed available to most County residents, but is less than one-third the national average speed.
- Bandwidth/speed issue is poorly understood
  - Many don't know what speed they are buying
- Two kinds of customers: either they want the best service they can get, or they want to pick a price point.
  - About one third knowingly choose a lower speed, i.e., they choose price over performance

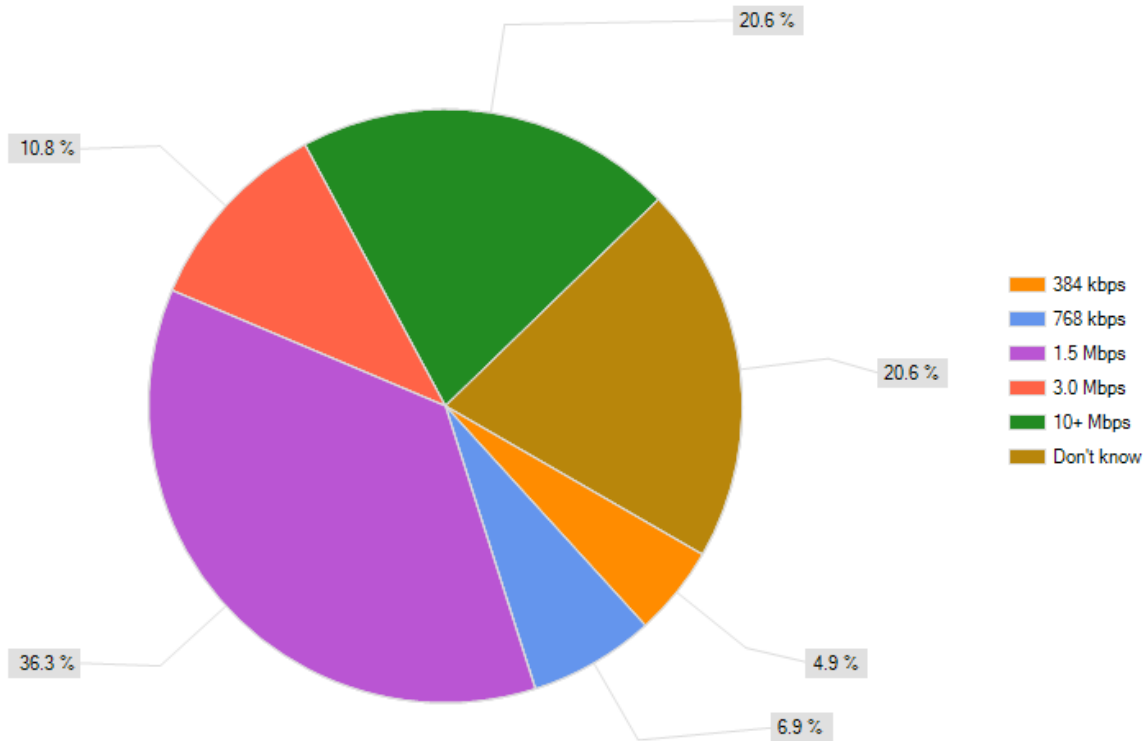
# Speed Chosen: Residential

What is the speed of the Internet service that you subscribe to?



# Speed Chosen: Business

What is the speed of the Internet service that you subscribe to?



# Price Paid

- Respondent data not directly useful
  - 36% of respondents didn't answer the price question
  - Many answered that they don't know; many mentioned difficulty in determining the Internet portion of a bundle price
- Useful data must be inferred from provider/speed responses and ISP product prices
- Analysis: Rock Island and Computer Place
  - A reasonable test of product selection because:
    - Their pricing is stable (vs. CenturyLink's frequent promotions)
    - Products and pricing are the same for residential and business
    - They offer three levels of product topping out at 1.5 Mbps, which is available most places

# Product and Price Choice

## Product Adoption: Rock Island/Computer Place

Product	Price	Responses indicating this choice
384 Kbps	\$35	11%
768 Kbps	\$50	25%
1.5 Mbps	\$60	64%

Note: This high level of selection of the best available product is consistent across residential (63%) and business customers (66%).

Prices are current advertised prices 10/31/11.

# CenturyLink Product Adoption

## Residential

Product	Price	Responses indicating this choice
768 K	\$30	14%
1.5 M	\$40	52%
3 M	\$45	15%
10 M	\$50	18%

Prices are current advertised prices 10/31/11

## Business

Product	Price	Responses indicating this choice
768 K	\$30	3%
1.5 M	\$20	47%
3 M	\$25	14%
10 M	\$60	36%

Note: High rate of 10M selection may be related to the fact that many businesses are located in the downtown areas, where 10M is more likely to be available.

Prices are current advertised promotional prices, good for first year, as of 10/31/11

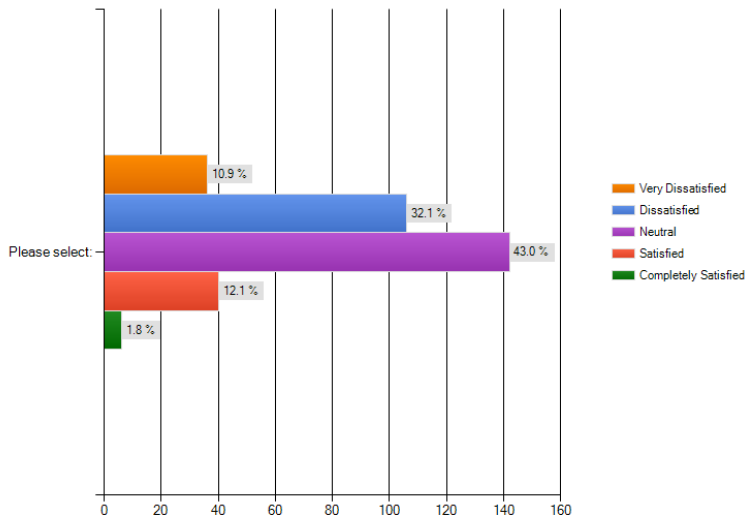
# User Satisfaction with Internet Service

- We asked users to rate their satisfaction levels on five issues related to their Internet service:
  - Price paid
  - Speed
  - Reliability
  - Customer Service
  - Overall
- Dissatisfaction with speed is high
- Local providers (e.g., Rock Island) scored much higher for customer service
  - Many respondents, especially business, indicated customer service was a major factor in choosing a provider

# Satisfaction with price

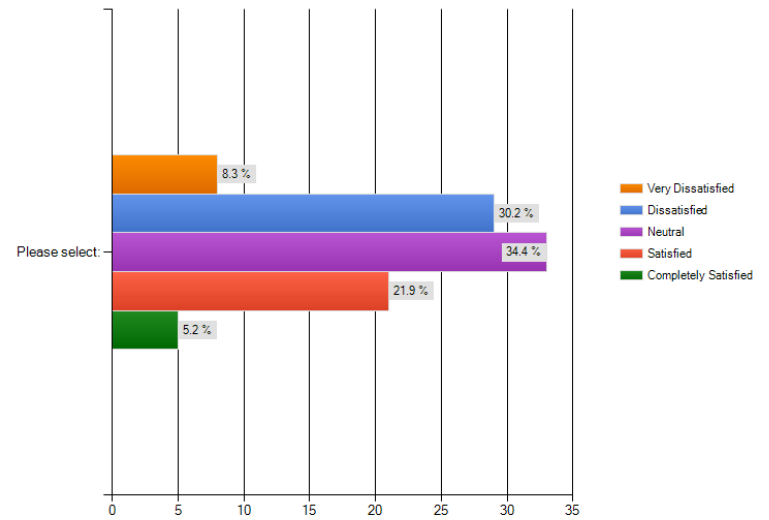
## Residential

How satisfied are you with the PRICE you pay for your Internet service?



## Business

How satisfied are you with the PRICE you pay for your Internet service?

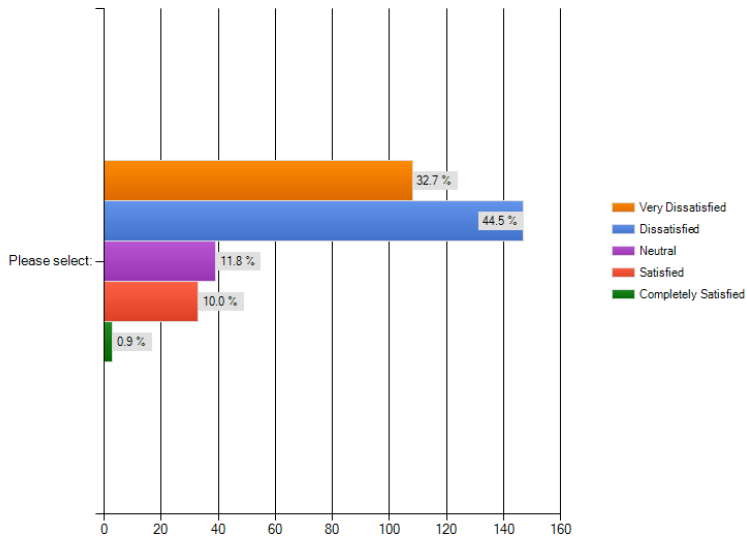




# Satisfaction with speed

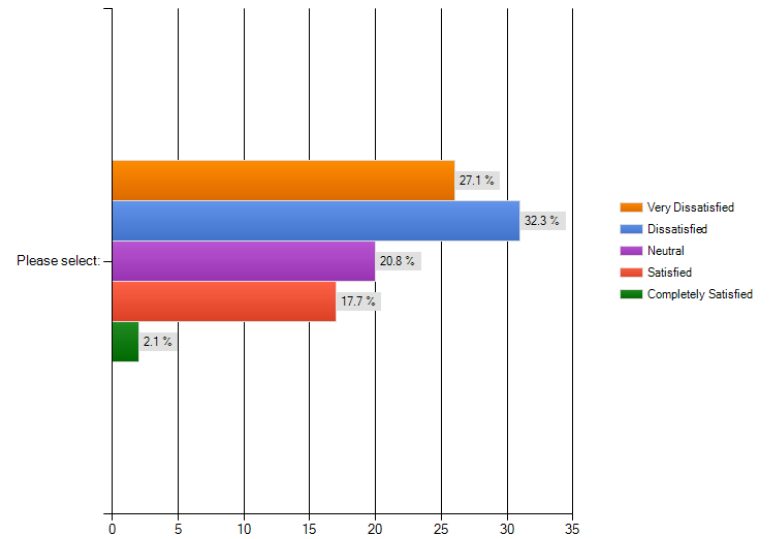
## Residential

How satisfied are you with the SPEED of your Internet service?



## Business

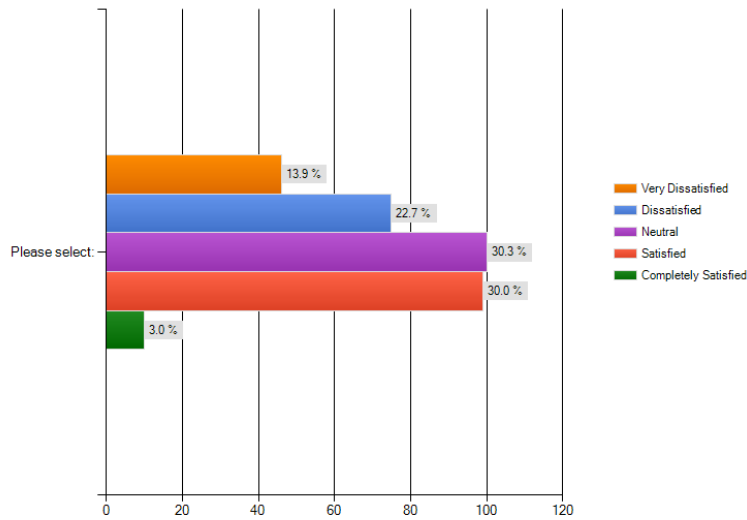
How satisfied are you with the SPEED of your Internet service?



# Satisfaction with reliability

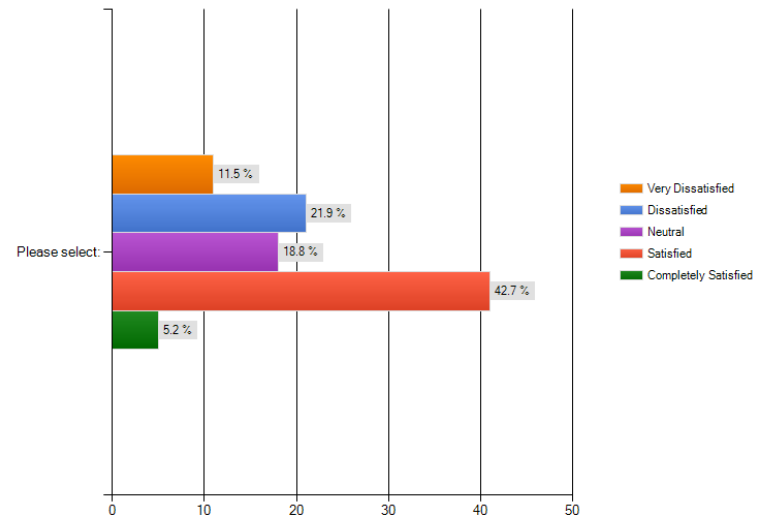
## Residential

How satisfied are you with the RELIABILITY of your Internet service?



## Business

How satisfied are you with the RELIABILITY of your Internet service?

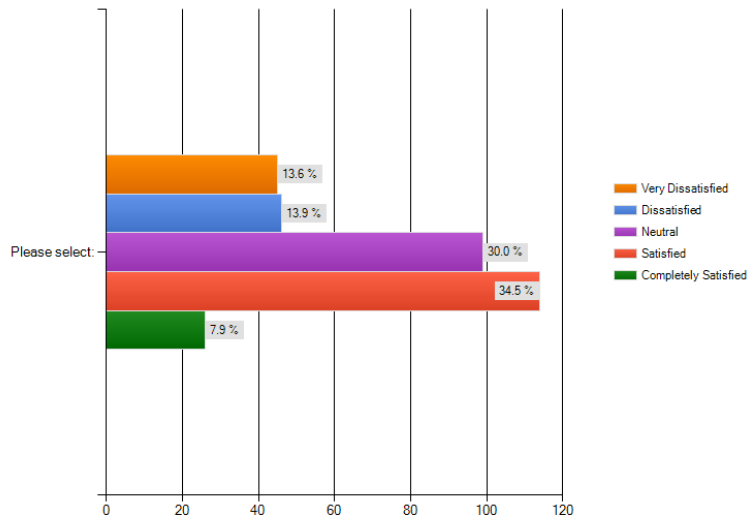


# Satisfaction with Customer Service

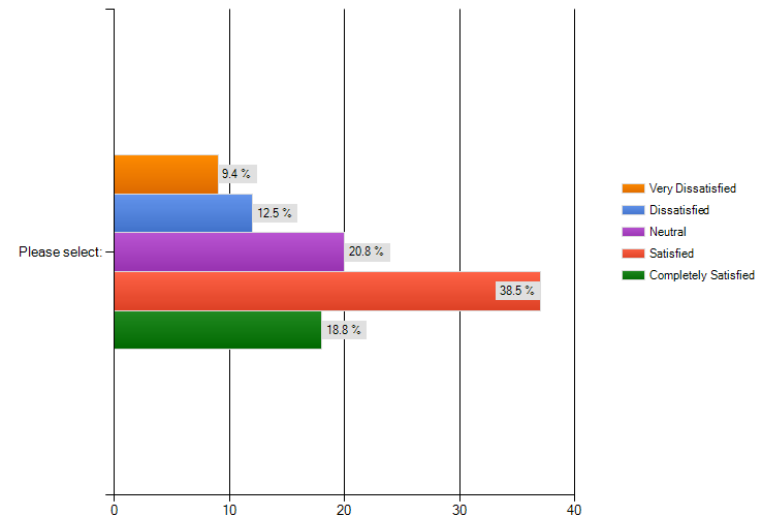
## Residential

## Business

How satisfied are you with the CUSTOMER SERVICE you receive from your Internet Service Provider?



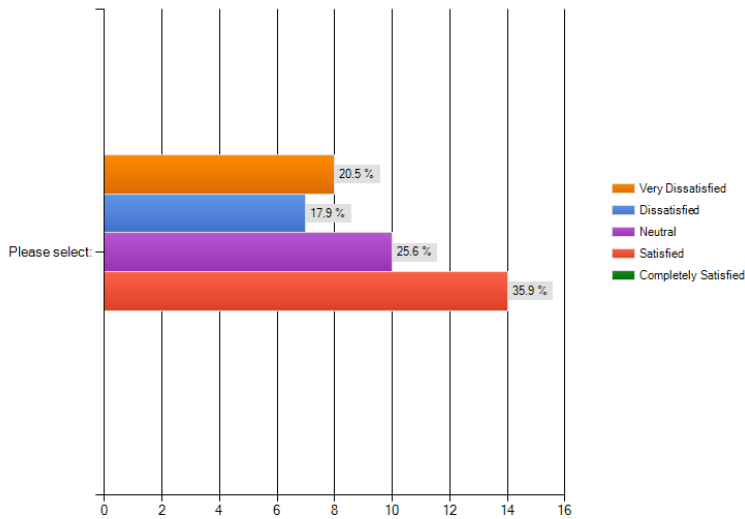
How satisfied are you with the CUSTOMER SERVICE you receive from your Internet Service Provider?



# Business Satisfaction with Customer Service: ISPs compared

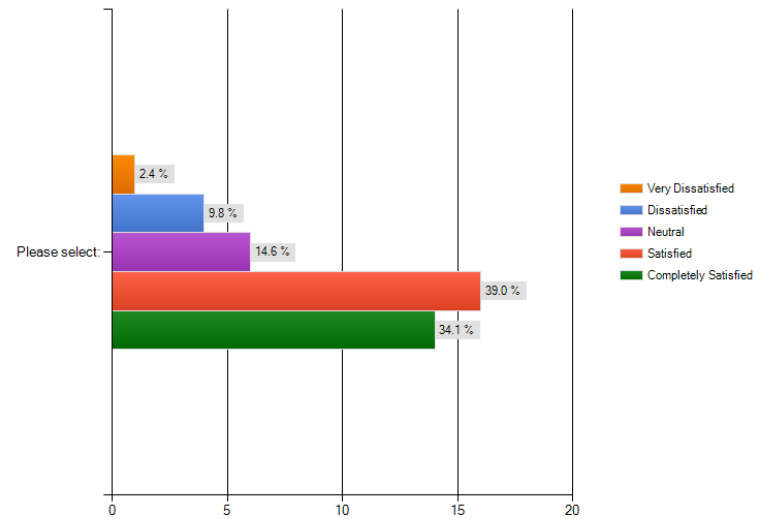
## CenturyLink

How satisfied are you with the CUSTOMER SERVICE you receive from your Internet Service Provider?



## Rock Island

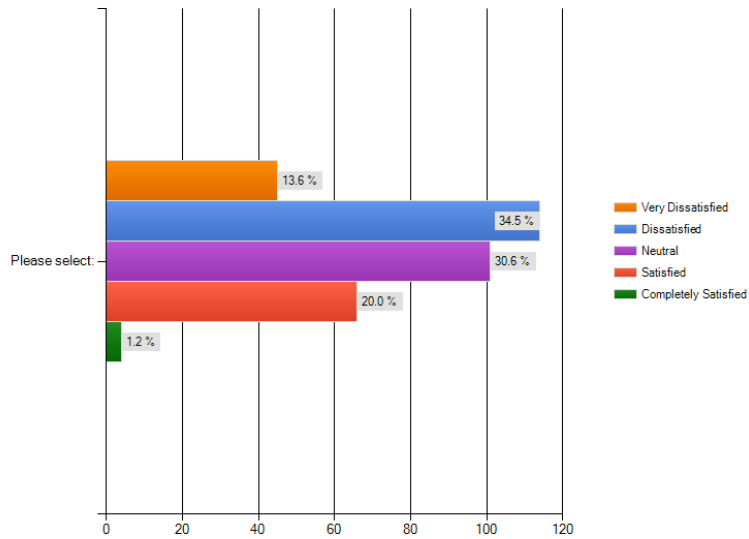
How satisfied are you with the CUSTOMER SERVICE you receive from your Internet Service Provider?



# Satisfaction overall

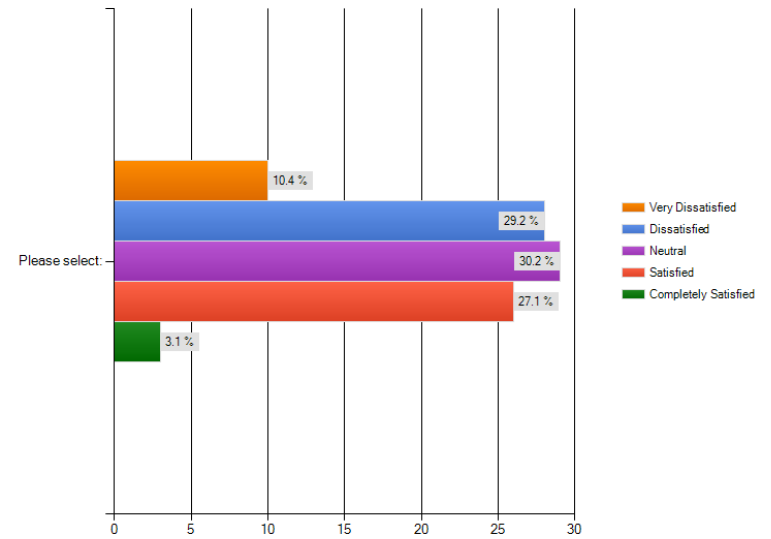
## Residential

How satisfied are you OVERALL with your Internet service?



## Business

How satisfied are you OVERALL with your internet service?



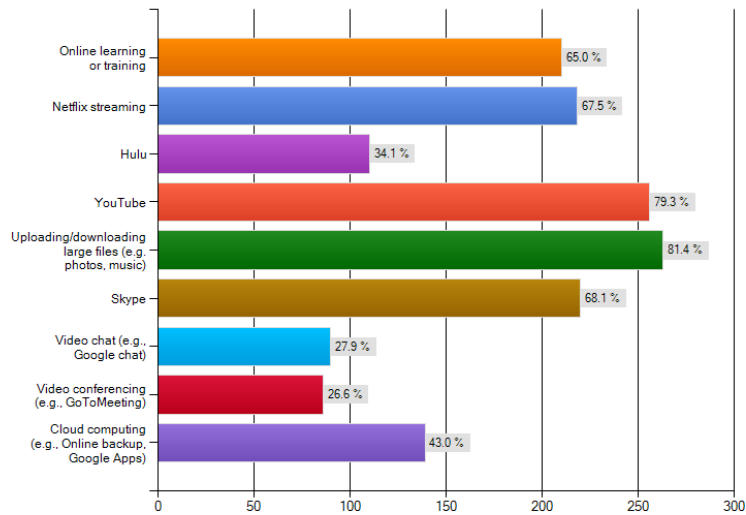
# Use of bandwidth-intensive applications

- We asked users about their use of Internet applications that require fast broadband connections
- Results indicated a high level of demand for most of these applications
- Approximately 88% of both residential and business respondents place a very high value on faster Internet speed.

# Use of demanding applications

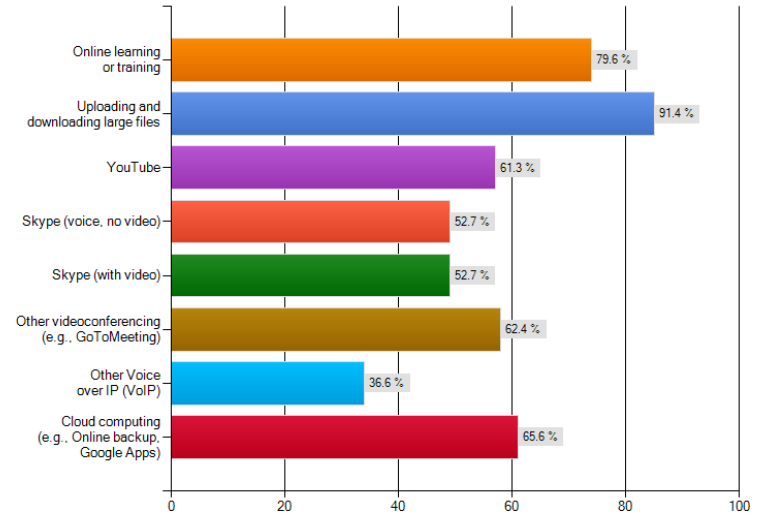
## Residential

In your home, do you use (or do you anticipate using) any of these Internet capabilities (Click all that apply):



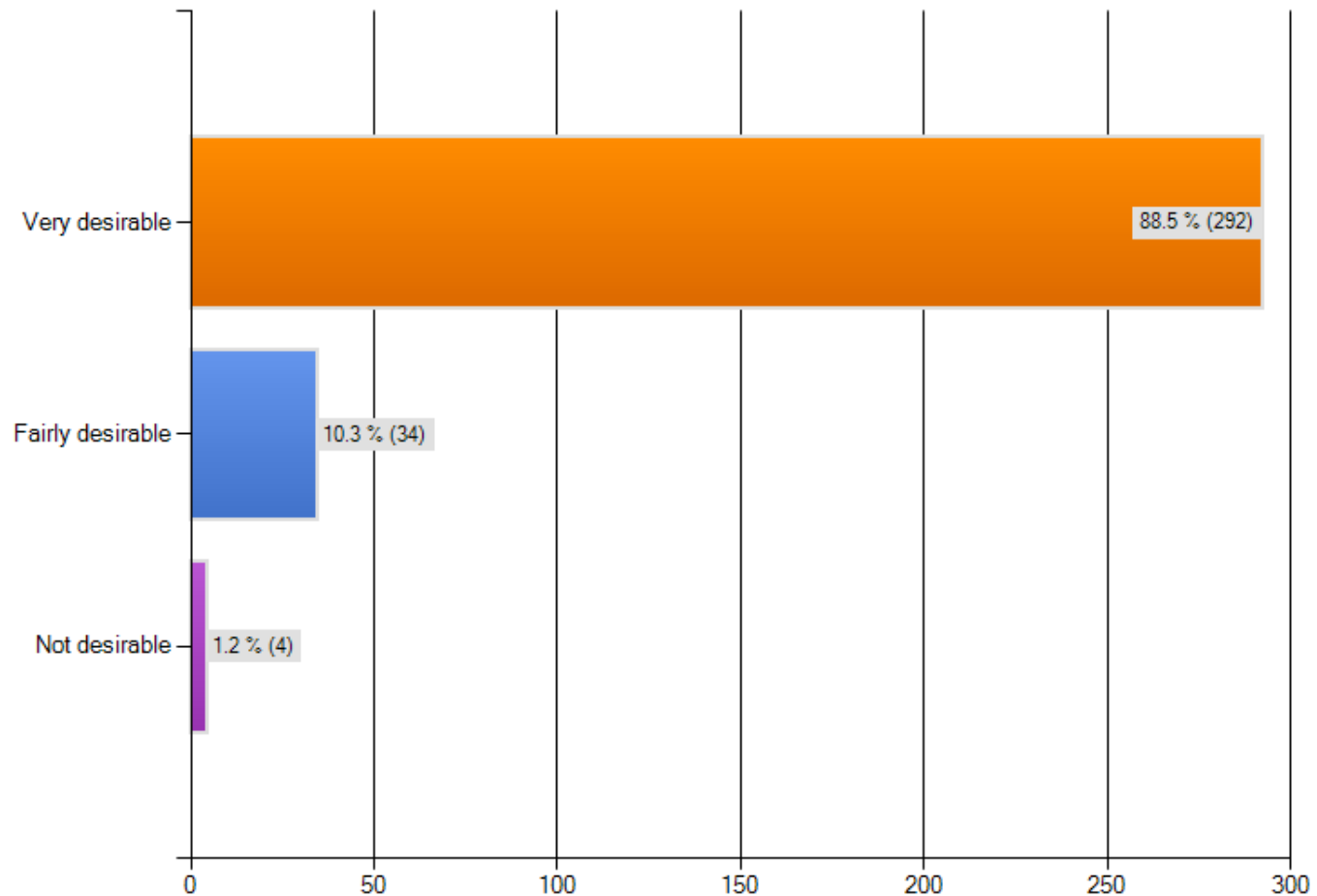
## Business

In your organization, do you use (or do you anticipate using) any of these Internet capabilities (Click all that apply):



# Residential Demand

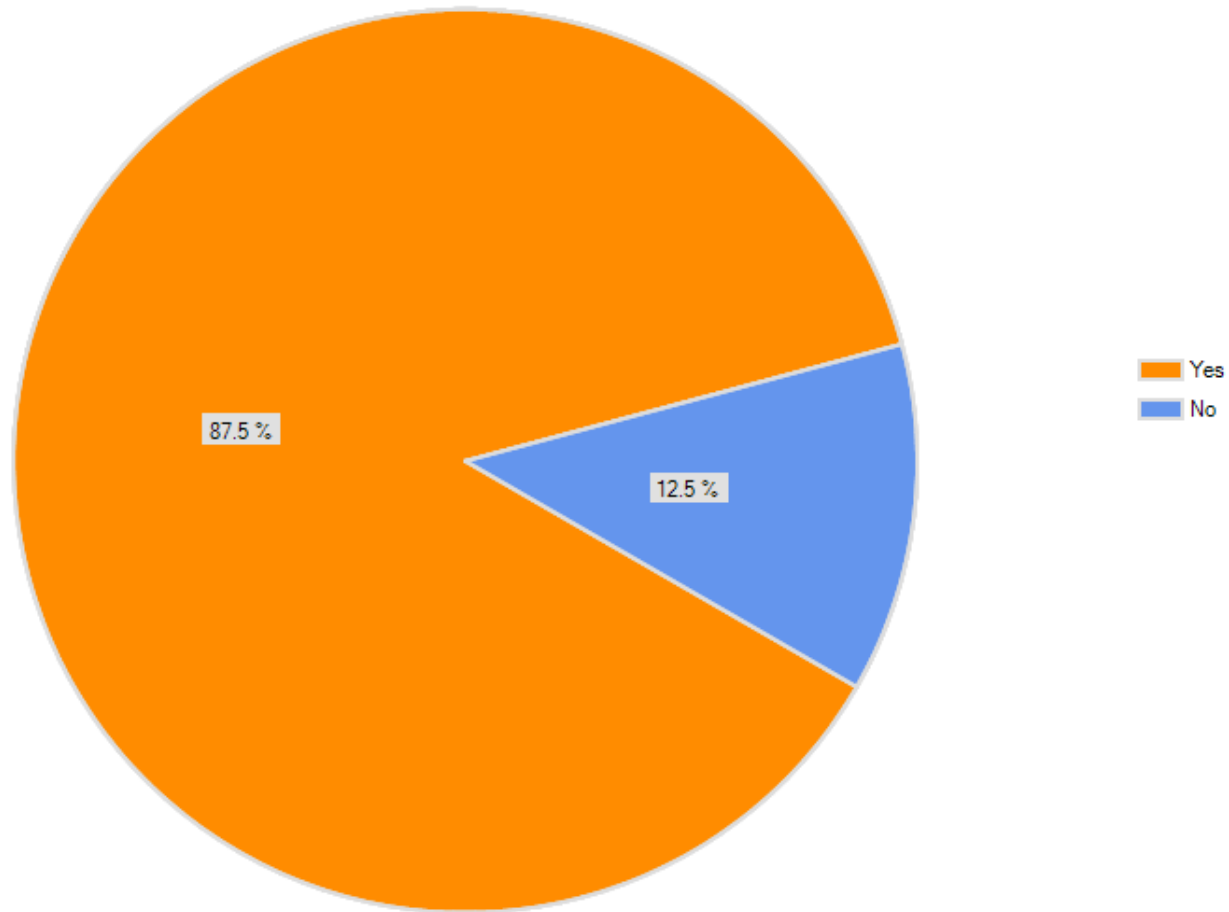
Access to features like those listed in the last question requires true high-speed Internet access.  
How desirable to you would it be to have FASTER internet access?





# Business Perceived Benefit

Access to features like those listed in the last question, which require high-speed Internet access, has been shown to help businesses grow. Would faster Internet access speed help your business grow?



# What Businesses Say

*We asked how broadband would help businesses*

1. Time lost to poor Internet is a major issue
  - The most common user comment: faster speed = more time available to take on more business = growth
    - Significant issue across all industries
  - Business is getting turned away
    - Can't pursue or accept certain business opportunities
2. Fast upload speed is needed by many businesses
  - Mentioned by researchers, manufacturing, technology firms, surveyors, resorts, consultants, artists
  - DSL architecture inherently limits upload speed

# What Businesses Say

3. Online collaboration is a core business tool
  - Enables virtual corporations
  - Allows global reach
4. Interactive distance learning is increasingly important
  - For individuals, to attain skills and employment
  - For businesses, where training is sometimes mandatory
5. Hospitality businesses would see benefits
  - Fast and reliable Internet is becoming critical as operations management goes to the cloud
    - Helps control labor costs
  - Must meet customer expectations for high-speed connectivity

# Need to broaden industry base

- Broadband's economic benefit is industry-specific<sup>1</sup>
- IT-intensive industries lead in benefit, retail lags
- A major focus must be on enabling new industries
  - Much of SJC's current non-government employment is in industries where broadband's influence is less, e.g., construction and retail<sup>2</sup>
  - IT-intensive industries generally have low environmental impact, and are compatible with Island values

1. Does Broadband Boost Local Economic Development? Public Policy Institute of California, 2010

2. San Juan County Economic Almanac 2011, SJ County EDC

# Blueprints for the future

- Frontline Call Center (Customer Service Industry)
  - Large employer, based on Orcas
  - Uses OPALCO's Island Network fiber optic system
- UW Friday Harbor Labs (Research)
  - Researchers move massive amounts of data at 30-90 Mbps
  - Uses Island Network fiber through NOANET
- Northwest Marine Technologies (Fisheries)
  - Uses private T-1 line to achieve necessary upload speeds
- High Cloud Security: (Software)
  - Virtual corporation
  - Built on online collaboration

# Conclusions

1. Economic development through broadband in SJC requires improved *residential* service county-wide
2. Time saved by faster Internet would help businesses
3. Several industries would benefit from faster upload speeds
4. Broadband has helped create businesses and jobs (Frontline Call Center, UW Labs)
5. The broad community overwhelmingly (88%) sees high value to increased Internet speed
6. County's current industry mix doesn't optimize broadband benefit; need to focus on IT-intensive industries

## The San Juan County Broadband Initiative

A joint effort of the San Juan Island Community Foundation/Critical Needs Task Force and the San Juan County Economic Development Council

The San Juan Island Community Foundation  
PO Box 1352  
Friday Harbor, WA 98250  
(360) 378-1001  
susan@sjicf.org

Charles Anderson, Chair

San Juan County Economic Development Council  
PO Box 3053  
Friday Harbor, WA 98250  
(360) 378-2906  
info@sanjuansedc.com

Jim Hooper, President  
Victoria Compton, Executive Director  
Tom Schramm, Market Research