

# Elevating the Customer Experience

Best Practices from around North America

April 30, 2019

# Introduction



**Pam Ferguson**  
AVP Subscriber Experience  
**Calix**





# Calix

Innovative communications service providers rely on Calix platforms to help them master and monetize the complex infrastructure between their subscribers and the cloud.

Calix is the leading global provider of the cloud and software platforms, systems and services required to deliver the **unified access network and smart premises of tomorrow**.


Our platforms and services help our customers build next generation networks by embracing a DevOps operating model, optimize the subscriber experience by leveraging big data analytics and turn the complexity of the smart home and business into new revenue streams.




# Our Customers

## We live to empower the Disruptors

- **Visionaries:** First to embrace challenges in automation, intelligent edge, smart home and subscriber analytics
- **Innovators:** Fast to adopt new technologies and business practices to achieve strategic objectives
- **Diverse:** From cooperatives to Global incumbents – ILECs, Cable operators, municipalities, electric coops, WISPs and more

**Brad Moline**  
Founder, President  
and CEO  


**Lee Hicks**  
VP Network Planning  


# The Evolution of Broadband Markets

Availability



2000

Bundling



2005

Speed



2010

Still Speed..



2015

Subscriber  
Experience



2020



# Agenda

## Elevating the Customer Experience

- **Getting Started: Understanding Your Subscribers**
- **Best Practice #1: Wi-Fi = Internet ???**
- **Best Practice #2: Offer Carrier-Class Solutions & Services**
- **Best Practice #3: Educate**
- **Best Practice #4: Marketing & Pricing**
- **Next Steps**



# Getting Started: Understanding Your Subscribers

# What you know today

**SMITH FAMILY**  
**2204 Robin Lane**  
**Madison WI 53715**

- Demographics: 3.2 Children
- Family Income: \$65,000-\$85,000
- Service Tier: "Basic"
- Monthly Bill: \$62

# What you NEED to know

## WORK FROM HOME

VPN: 40 hpw,  
Video Calls: 25 hpw

## STREAM QUEEN

HULU: 15 hpw

## SUPER SENIOR

Video Calls: 15 hpw

## SMART THINGER

Voice Control: 27/day

## GAMER

Xbox: 18 hpw

## SMITH FAMILY

- Speeds (D/U): 6/1 Mbps
- High Gaming: Yes
- High Social: Yes
- Work-From-Home: Yes
- Data Usage: 370 GB
- Streaming Usage: 280 GB
- Service Limit Hits: 42
- Speed Tests: 5
- Churn Risk: Yes
- Wi-Fi Score: 2
- No. of Client Devices: 14
- Smart Home Prospect: Yes

# The Best “Worker” in 2018...

...is not a machine, or an individual, of whatever skill or experience.

But if humans and machines work together, everyone wins!

*“A weak human + machine + better process was superior to a strong computer alone and, more remarkably, superior to a strong human + machine + inferior process.”*

- Gary Kasparov explaining his loss to IBM’s Deep Blue chess computer in 1996.



## How bad can too many robots be?

Tesla relied on too many robots to build the Model 3, Elon Musk says. Musk agreed with Tesla’s critics that there was over-reliance on automation and too few human assembly line workers building the Model 3.

Erik Brynjolfsson  
Andrew McAfee  
**Race Against  
The Machine**



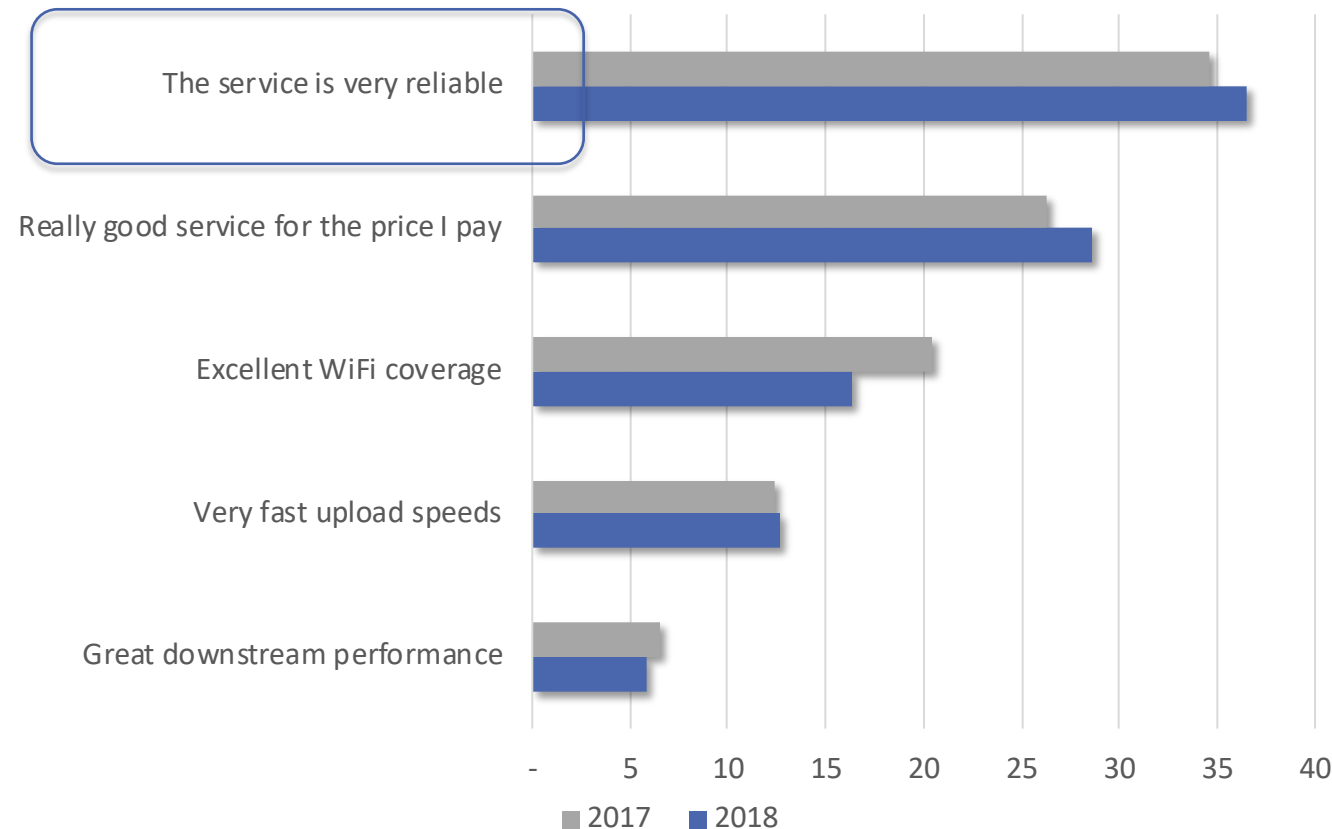
How the Digital Revolution is Accelerating Innovation,  
Driving Productivity, and Irreversibly Transforming  
Employment and the Economy

**Once I Understand Them....  
How can I Help Them?**

# Internet Top Features

***If you could name one feature that you like most about your Internet service - what would it be?***

Reliability is key to customer satisfaction – overall, speed is still important but is considered table stakes – difficult to continue to differentiate

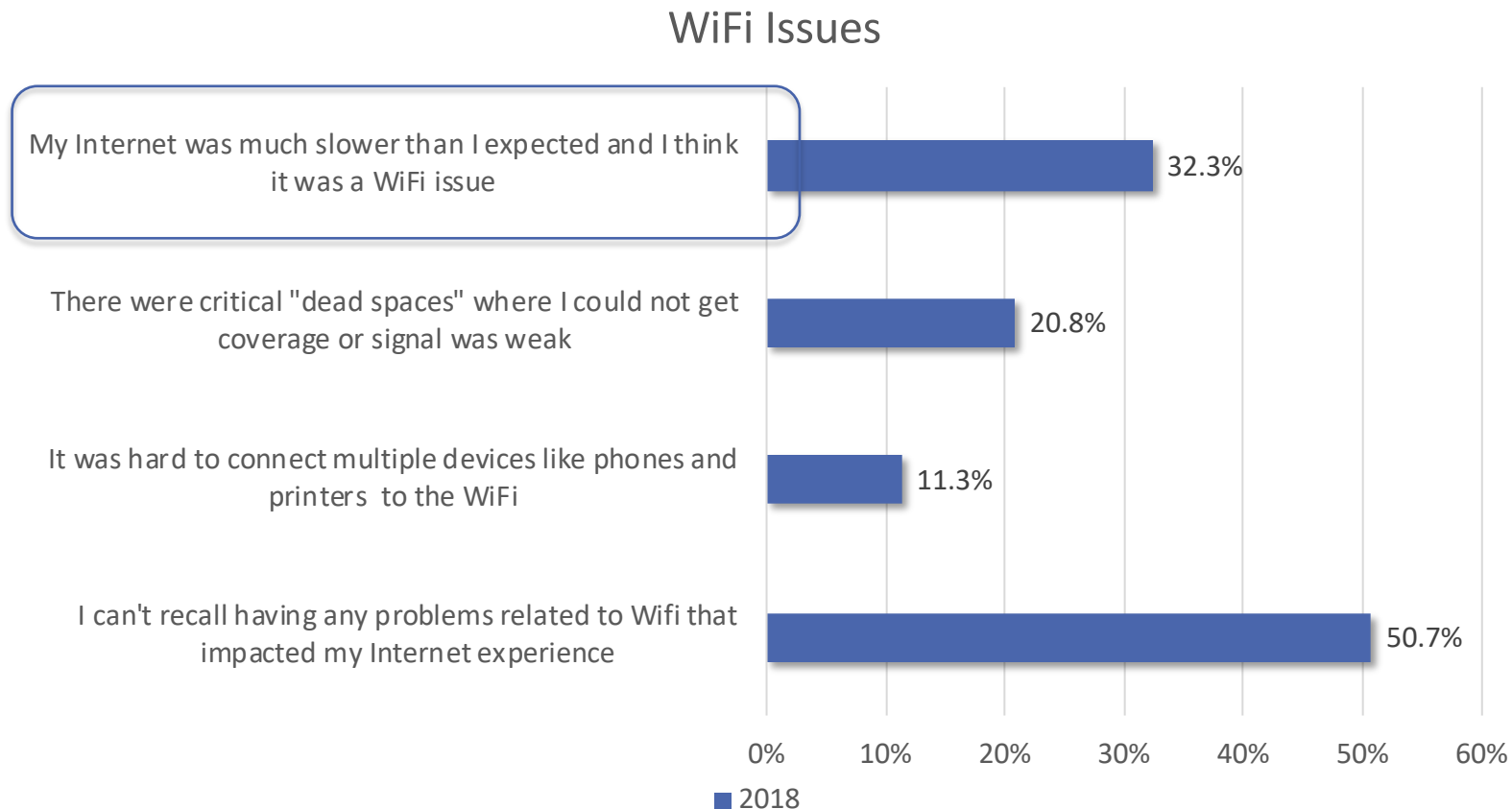


# Wi-Fi Issues

***WiFi is a convenient way to share a broadband connection, but sometimes runs into problems. Which of the following WiFi-related issues has your household encountered?***

Almost 50% of respondents indicated they encountered having WiFi problems

The perception that WiFi adversely impacted broadband speed was the top issue



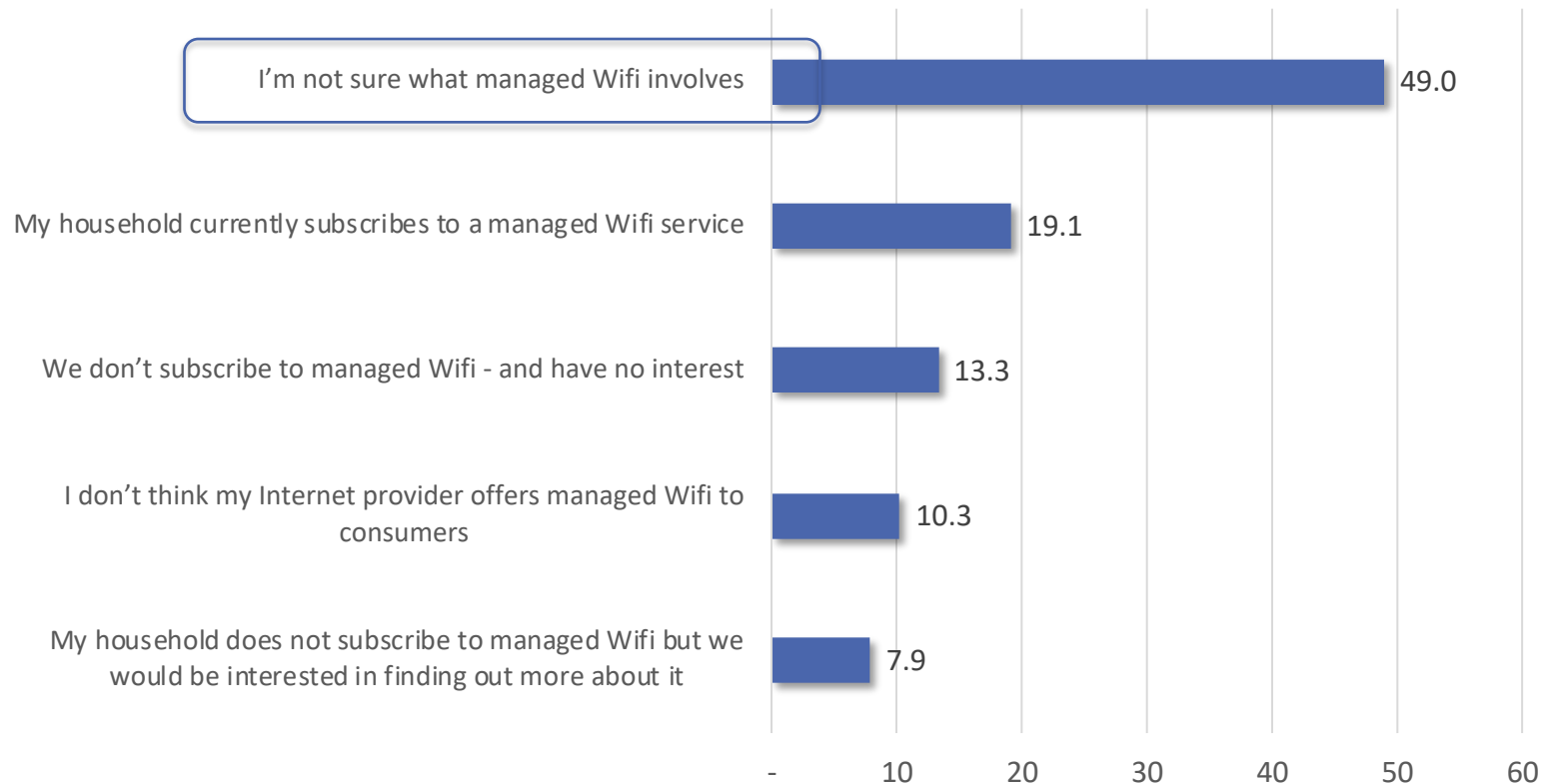
# Managed Wi-Fi Awareness

## *What is your view of managed Wi-Fi services?*

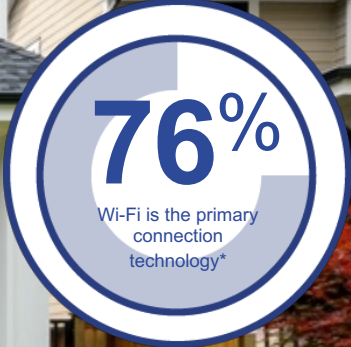
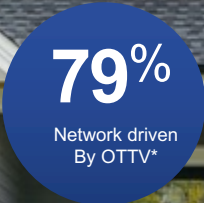
The desire for reliability and the potential for WiFi challenges create an opportunity for a managed WiFi service

*– but there is a need for customer education*

Managed WiFi Awareness



# Subscriber Experience in 2019?



25% Wi-Fi coverage  
Issues caused by:\*\*



Signal blockage  
within the  
premises



Interference  
from nearby  
Access points



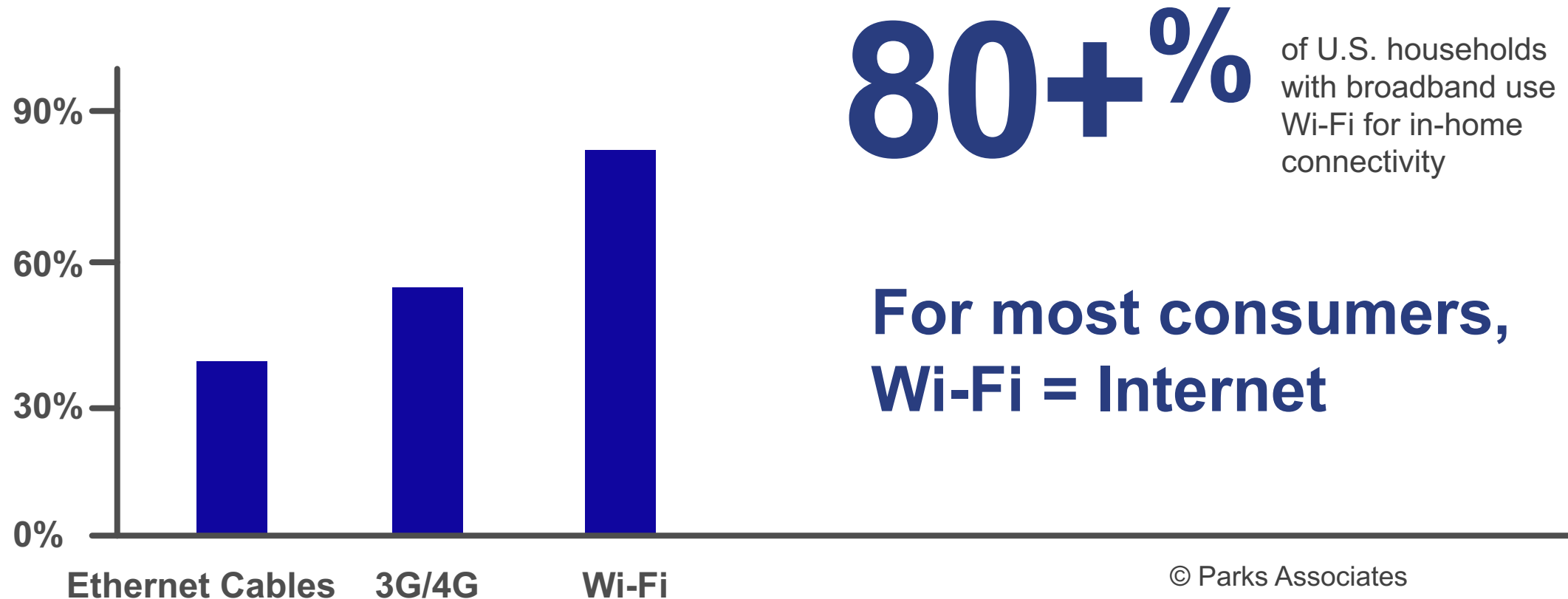
Interference  
from non-Wi-Fi  
signals

# **Best Practice #1: Understanding Perspectives Wi-Fi = Internet**

# What else is important? Ubiquitous Wi-Fi

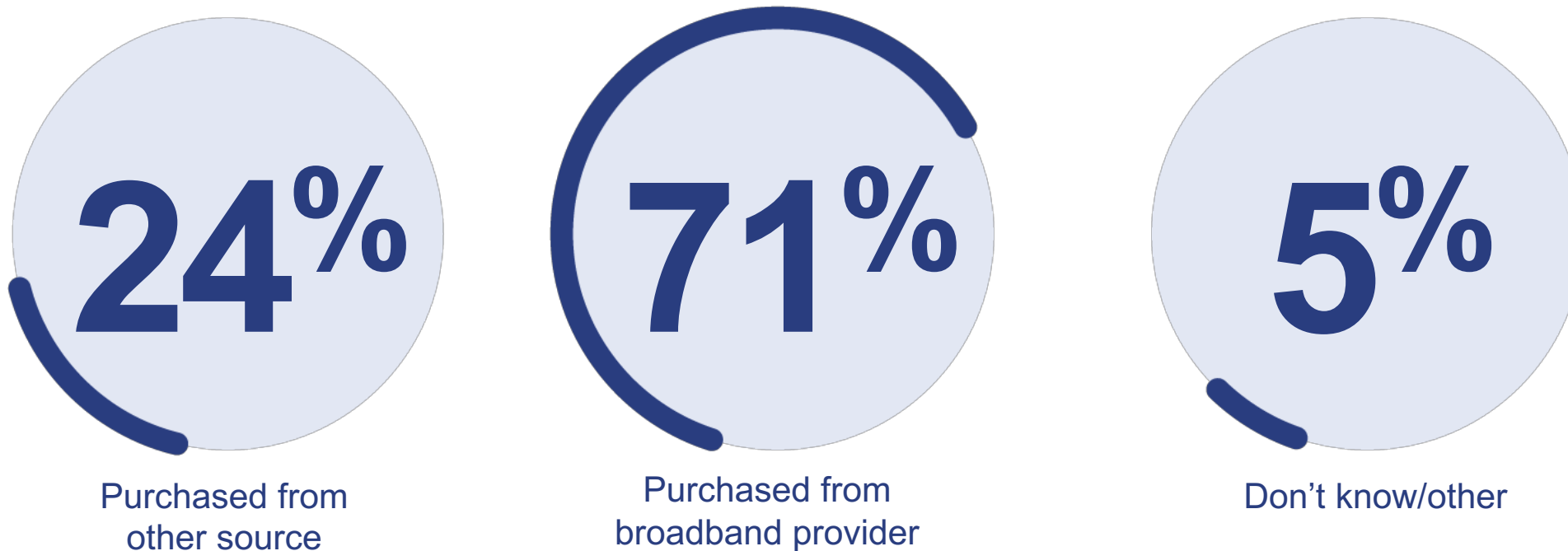
## Home Networking Method used to Access Internet in the Home

U.S. Broadband Households



# Most households use a Wi-Fi Gateway provided by their ISP

Most home network routers obtained from broadband service providers

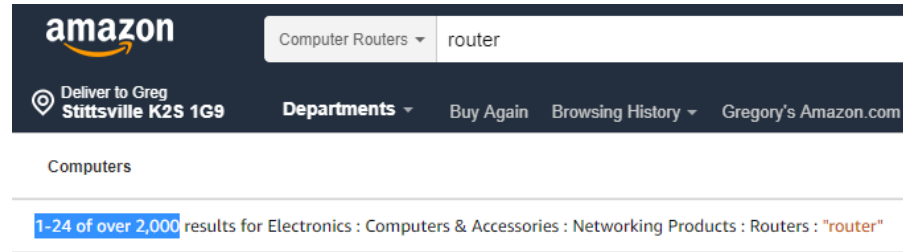


Source: BMMA 2019 Market Research (Canada and US)

# The 24% of consumers that are looking elsewhere for cutting edge technology...



# And there is a dizzying array of options



Many consumers would rather purchase a router/gateway from their service provider; a company whose recommendation they trust.

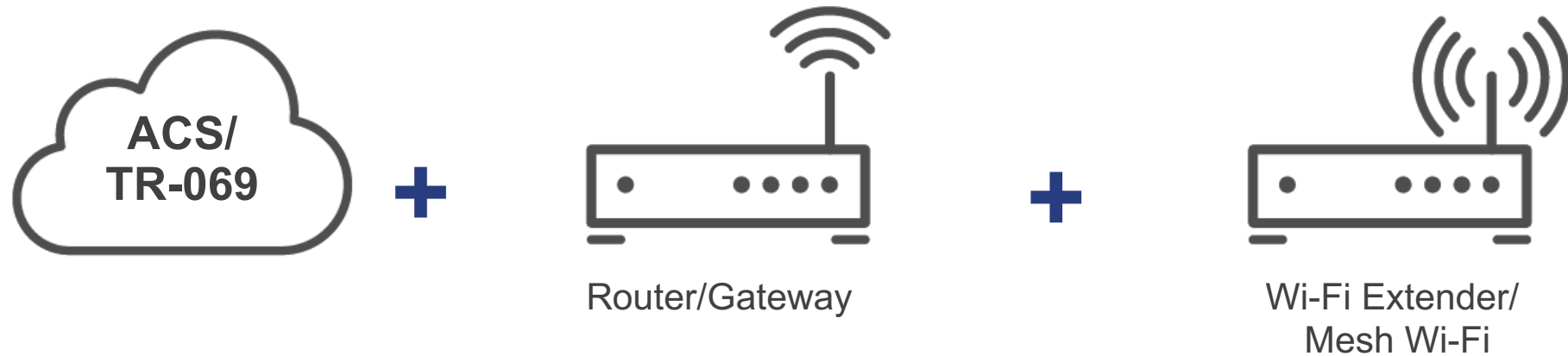


# Popularity of consumer-grade Wi-Fi extenders and mesh systems growing

- **22% of US broadband households own a Wi-Fi extender**
  - Extenders generally don't resolve issues unless hardware is optimized to work with the residential gateway.
- **11% of US broadband households have purchased a whole home mesh networking system**
  - Relegates the residential gateway to “bridge” mode, preventing many TR-069 features
- **Make sure that subscribers are aware that you have something to offer**



# A better alternative: 'Managed Wi-Fi'



## Why is Managed Wi-Fi better?:

- Improve subscriber satisfaction scores
- Reduce churn
- Increase revenue
- Lower support costs



# Transparency and Control in the Home?

## What you see today

**SMITH FAMILY**  
**2204 Robin Lane**  
**Madison WI 53715**

- Service Tier: “Basic”
- Monthly Bill: \$62
- Basic Gateway info
- Data consumption





GigaCenter

804 Mesh

Amazon Echo

Home  
Monitoring  
System

IoT Hub

### SMITH FAMILY

- Wi-Fi Score: 2
- Self Heal: Off
- Top Application: Hulu
- Number of Client Devices: 14
- Client Health: Red / Compromised
- Signal Strength: Poor
- WAN Health: Green / Good

# Transparency and Control in the Home!

## What you *NEED* to see



# **Best Practice #2: Select Carrier Class Solutions & Wrap Services Around Them**

# Before: Consolidated North Dakota



*“Other Consumer grade solutions that were not reliable, were hard to manage... customers would purchase the router from us & then a year later they’d be upset when it stopped working, and they got it from us!”*

*Joel Emter, Consolidated North Dakota*



# Best Practice: Leverage Managed Wi-Fi

## Managed Wi-Fi (started February 1, 2016)

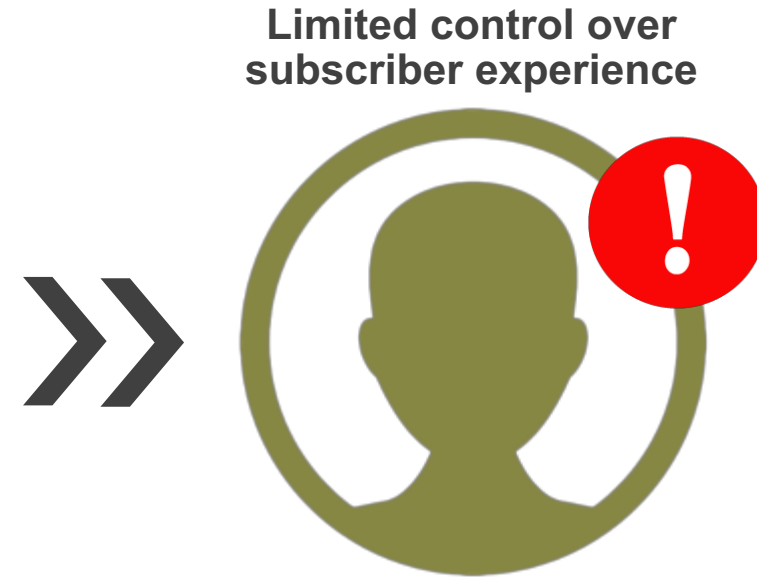
- Monthly Subscription (\$4.99/month)
  - Equipment rental (GigaCenter)  
+ management services & support
- Multiple package options:
  - 1+ GigaCenters for large homes
  - NEW! Calix 804Mesh
- 29% of customers are using managed router; 4,000+ units



# Challenges of the “old way”

## Off-The-Shelf-Routers

- Zero control & visibility  
= dismal first call resolution
- Cost of troubleshooting  
= trip charge + hourly
- Cost of Equipment on an annual or semi-annual basis as technology changes = \$\$\$, more than the cost of leasing router from Consolidated



# Best Practice: Own the Subscriber Experience

- **29%** take rate
- **94%** retention rate (Managed Wi-Fi)
- **80%** of new Internet customers have also taken Managed Wi-Fi
- Current Managed Wi-Fi Annual Recurring Revenue: \$241K



- **50%** reduction in support call times
- **50%** reduction in field technician deployments
- **95%** first call resolution
- **60%** less likely to roll a truck
- **85%** faster resolution = ~\$20 saving per trouble ticket
- reduced installation times



# Consolidated Telecom: Promotions



Gremlins in your  
Wi-Fi...again??

# Consolidated Telecom: Managed Wi-Fi is a Win-Win



You **need** Consolidated's Managed Wi-Fi Router!

Contact us today to get setup with Managed Wi-Fi Router Service **for only \$4.99/month!**

**Now get Router  
for 3 months free!!**

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[www.ctctel.com](http://www.ctctel.com) • 483-4000 • 888-225-5282

**Consolidated**  
*Reach the World, from here.*



# TbayTel Background

**Internet satisfaction** key area of improvement in customer research studies

Main drivers → **Internet reliability, spotty WiFi**

Focus: Managed WiFi - increase **customer satisfaction** and maintain churn

Partnered with Calix to launch GigaCenter, 804 Mesh Satellite, CSC and CMC



# Best Practice: TBayTel Home Wi-Fi Connect Hub & Connect Extender Marketing

Mass advertising campaign →

- Out of home, radio, social, print, web, commercial

Webpage updates

- Dedicated page, detailing features and benefits



**Connect Hub**

Powered by the Connect Hub, Tbaytel Home WiFi has many advanced features providing the latest and fastest WiFi technology for a truly exceptional in-home WiFi experience.



- Connect all your devices**  
Supercharged with 2x2/4x4 MU-MIMO antennas and beamforming technology, Tbaytel Home WiFi provides excellent coverage and speed simultaneously to all your connected devices.
- Optimal speed and reliability**  
With dynamic frequency and channel selection, your Tbaytel Home WiFi network automatically ensures you always have the optimal connection with the least interference.
- Hassle-free WiFi**  
One network (SSID) simultaneously broadcasting both 5 GHz and 2.4 GHz bands removes any confusion about which network to connect to. It's worry-free. Just connect your device to your Tbaytel Home WiFi network and the Connect Hub will do the rest.

**Connect Extender**

Ensure you have WiFi coverage no matter where you are in your home with the Connect Extender. By pairing your Connect Hub with a Connect Extender you can have optimal WiFi coverage no matter where you are in your home.



- Expanded coverage**  
For larger homes or busy households with many connected devices, Tbaytel Home WiFi allows you to expand your coverage to ensure those hard to reach places are covered.
- Seamless mesh connectivity**  
Pair your Connect Hub with up to four Connect Extenders to create a unified mesh WiFi experience. Simply connect to your Tbaytel Home WiFi network and your device will automatically connect to the strongest signal.
- Congestion-free WiFi**  
Powered with the same 2x2/4x4 MU-MIMO antennas as the Connect Hub, Connect Extenders further increase coverage and meet the demands of many devices connected simultaneously.

# TBay Tel: TBayTel Home Wi-Fi Connect Hub & Connect Extender Education

## Extender sales aid

- Distributed in home by installers

**Expand your WiFi coverage with Connect Extenders**

Did you know that the Connect Hub can be paired with up to four Connect Extenders for large or busy homes to expand your WiFi coverage? Ensure you have WiFi coverage no matter where you are with a Connect Extender!

Connect Extenders

Connect Hub

Connect Extenders

**LIMITED TIME OFFER**  
**\$49.95**  
PER EXTENDER  
\$99.95 REG.

Congestion-free WiFi

Optimal speed and reliability

Hassle-free WiFi

Seamless mesh connectivity

Visit the Tbaytel Store or call 807-684-2069  
Call Customer Care 807-623-4400 or 1-800-264-9501  
[tbaytel.net/homewifi](https://tbaytel.net/homewifi)

**tbaytel Home WiFi**

Actual WiFi performance is dependent upon network and device conditions. The 5 GHz WiFi frequency will only work on 5 GHz enabled devices. Many environmental factors beyond Tbaytel's control may adversely affect WiFi performance. Visit [tbaytel.net/homewifi](https://tbaytel.net/homewifi) for full details.

## Extender self install guide

- Available at retail locations

**Tbaytel Home WiFi**  
**Connect Extender**  
**Wireless Setup Guide**

**tbaytel**

**Connect Extender**  
**Wireless Setup Guide**

**2 Pair your Connect Extender to your Connect Hub**

**1** Press and hold until WPS light flashes amber

**2** Press WPS for 1 second

Maximum time between presses

Move Connect Extender further away from Connect Hub

Move Connect Extender closer to Connect Hub

**3 Find optimal placement in your home for Connect Extender using the Received Signal Strength Indicator**  
See next page for details



# TBay Tel: TBayTel Home Wi-Fi

## Results are in

### Proactive diagnostics

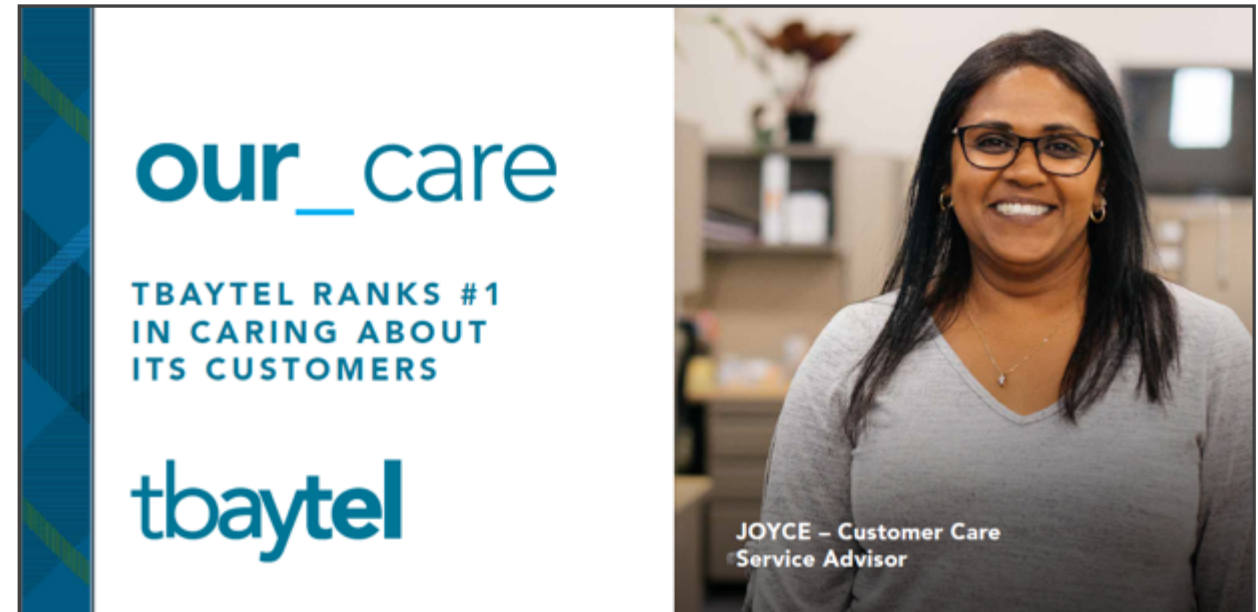
- Improved call times
- Reduced escalations
- Reduced truck rolls



Increased customer satisfaction

Increased ARPU

Continued subscriber growth



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"We treat every customer as if they are our only customer."

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# Deliver the best Managed Wi-Fi solution

CalixCloud



+



EXOS  
The Experience Platform

+



Proprietary and Confidential

# **Best Practice #3: Educate, Educate, Educate**

# Best Practice: Educate

The image shows a screenshot of the Nextech website. The top navigation bar includes the Nextech logo, "Four broadband & Technology Company", and links for PLANS & BUNDLES, BUSINESS, ABOUT, CONTACT, HELP DESK, CLASSIFIEDS, and DIRECTORY. Below the navigation bar, there are three featured articles:

- Wi-Fi security, explained.** (Image of a hand holding a glowing padlock)
- Optimizing your home Wi-Fi network to get the best coverage and performance** (Image of a person sitting on a couch with a laptop)
- What Is The Ideal Placement For Your Wi-Fi Router?** (Image of a family in a living room)

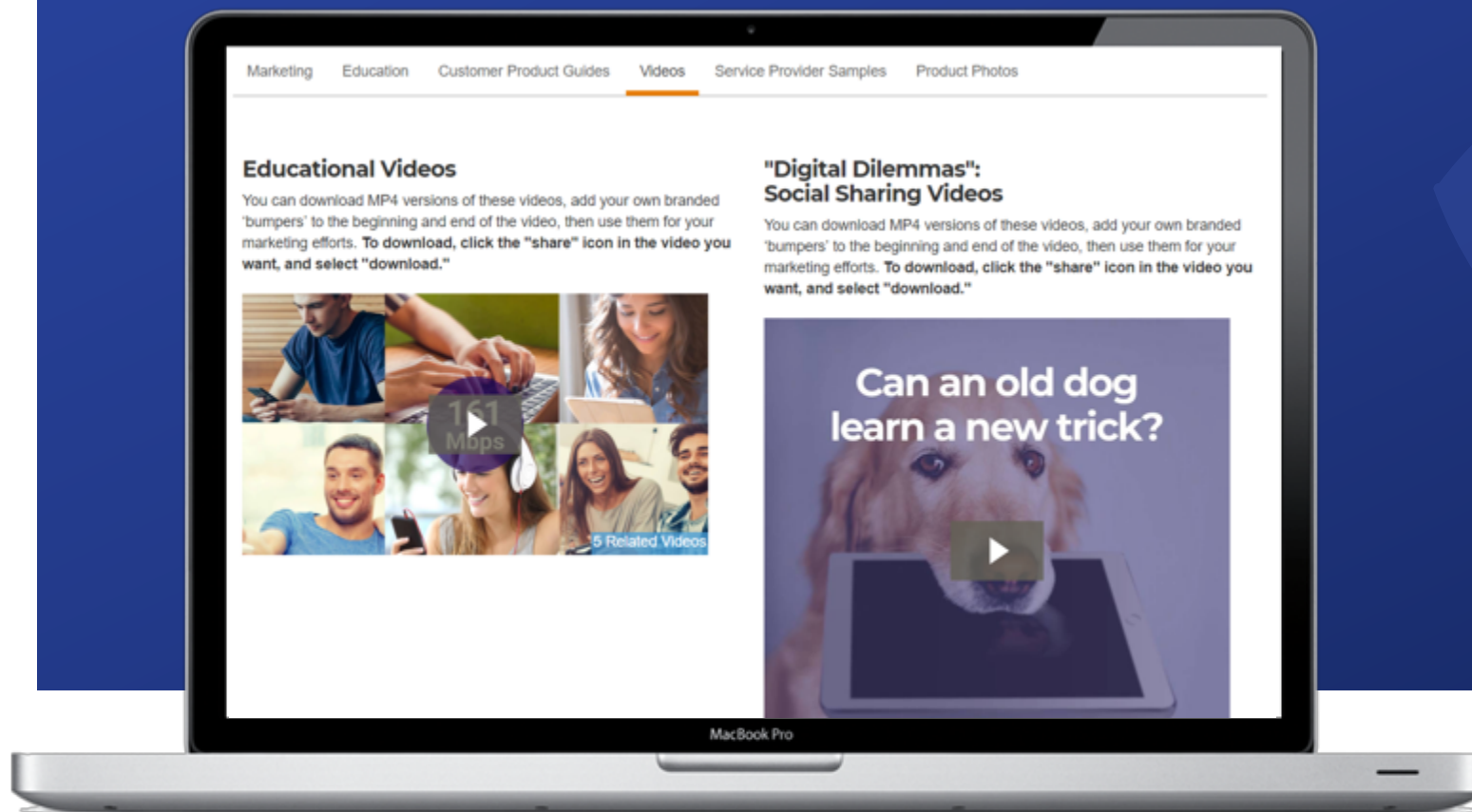
Below these articles is a section for SCTELCOM, featuring the SCTELCOM logo and contact information: "Contact Us - (877) 723-6875". There are also buttons for "PAY YOUR BILL ONLINE", "WEB PORTAL", and "INTERNET SUPPORT CHAT".

The bottom navigation bar includes links for Home Page, About Us, News, Business Services, Residential Services, and Resources. The main content area displays the article "What Is The Ideal Placement For Your Wi-Fi Router?" with a sub-header "Posted on April 23, 2019". The article text reads: "To enjoy the best possible online experience, your router needs to be able to send out a strong signal to your wireless devices, wherever you are in your home. In general, the signal gets weaker the farther you are from your Wi-Fi router. If possible, you should place the Wi-Fi router on a shelf. The [...]"

A "Continue reading" button is located at the bottom right of the article content.



# Educational Tools & Videos



# **Best Practice #4: Go-To-Market Marketing & Pricing**

# Developing the Offer

## Determine what will be included with your Managed Wi-Fi service?

- **GigaCenter**
- **GigaSpire + EXOS**
- **Mesh Extender**
- **Free Phone Support**
- **Free On-site Support**
  - For wi-fi only or connected devices
- **Warranty**
- **Free Replacement**
- **Installation or Self-install available**

## Determine your Options:

- **Include managed Wi-Fi with every broadband package**
  - Will you charge more for the package? Re-price your broadband services? Only incl with specific levels of service?
- **Charge a monthly fee for managed Wi-Fi service**
- **Charge customers if they want to use their own router**
- **Do you need different levels of service (basic, premium, business)**


# Best Practice: ABC Managed Wi-Fi

**ABC COMMUNICATIONS**

Why ABC   What's New   Get Connected

Home > Residential > Internet > Managed Home Wifi

## Managed Home WiFi



### Gigacentre Router

\$175 Purchase price with 2 year warranty\*

\$5 per month management and support fee

or

\$15 per month rent and management/support fee

Professional installation \$80



### Wifi Extender

\$150 Purchase price with 2 year warranty\*

\$2 per month management/support fee

Or

\$10 per month rent and management/support fee.

Professional installation \$80



# HASSLE-FREE MANAGED WI-FI

We create a seamless Wi-Fi network in your home.

Contact Arvig for details.



**FREE** Whole Home WiFi  
for 6 months & 50 Mbps for \$60/month  
for 1 year

Imagine powerful Wi-Fi  
in every nook and cranny  
of your home,  
even your backyard.

No upfront costs  
& only pennies a day.



Ask about our Whole Home  
Wi-Fi Support Plan!

**ITSFiber**



**Better Wi-Fi  
made easy.**

How to get superior coverage  
throughout your home –  
even your yard.



**Whole Home  
Wi-Fi Support Plan**

for ITS Fiber customers with Gigacenter service

**ITS Telecom**



## Premium Wi-Fi

Experience whole-home coverage in every  
corner of your home – **and beyond.**

Imagine powerful Wi-Fi in every nook and cranny  
of your home, even your backyard.



No upfront costs  
& only pennies a day.



Ask about our  
Whole Home Wi-Fi  
Support Plan!

**ITSFiber**

## SIMPLIFY YOUR LIFE **WITH OUR** GIGACENTER MANAGED WI-FI

You love having a Wi-Fi network, but not the  
hassles of equipment upgrades and trouble-  
shooting. That's why we offer Gigacenter  
Managed Wi-Fi for just \$9.95/mo.\* Our team  
handles it all for you, so you can simply enjoy  
strong signals and fast internet throughout  
your home.

► **SIGN UP FOR GIGACENTER MANAGED  
WI-FI TODAY AND WE'LL GIVE YOU  
A FREE FIRST MONTH PLUS FREE  
INSTALLATION. SAVE \$59.95!**

CALL 866-255-9378

## WORRY-FREE WI-FI

Easily share your Internet  
connection throughout  
your home.

See Arvig  
for details.



888.99.ARVIG | **arvig.com**



# What are SPs charging for Managed Wi-Fi?

Managed Wi-Fi solutions range from \$4.99 - \$15/month (installation from \$0 - \$75)

**\$4.99/month**



**\$7.95/month**



**\$9.95-\$10/month**



**\$15/month**



**\$8.95/month**



**\$6.95/month**



# What are SPs charging for Whole Home (Mesh)?

\$3.95/unit



\$10/unit



\$4.95-\$5.00/unit



ITSFiber



# Calix Marketing Starter Kit



**WELCOME TO  
CONNECTED  
GENERATIONS**

**FOR ONLY  
PENNIES A DAY**  
Experience extended  
Wi-Fi coverage.

With our GigaCenter and mesh satellites, now you can experience whole-home coverage in every corner of your home – and beyond.

Ask about a better Wi-Fi experience here!

YOUR LOGO HERE

Brought to you by Calix



**Welcome to the  
Greater Outdoors**

For only pennies a day, Experience extended Wi-Fi Coverage. With our GigaCenter and mesh satellites, now you can experience whole-home coverage in every corner of your home – and beyond.

Ask about a better Wi-Fi experience here:

YOUR LOGO HERE

1-800-123-1234 www.websiteneedsyourlogo.com/variety



**Calix Mesh-Enhanced Wi-Fi**  
Sponsored · Like Page

Play anywhere. For just pennies a day, the world's most advanced mesh Wi-Fi makes your gaming experience sensational. With our GigaCenter and mesh satellites, you'll enjoy an exceptional Wi-Fi experience anywhere in your home and beyond. Welcome to the mesh-enhanced game room.

**Mesh-enhanced gaming**  
With our GigaCenter and mesh satellites, you can enjoy the best in-home gaming experience.

WWW.CALIX.COM

124 Reactions · 5 Comments · 19 Shares

Like Comment Share



**Welcome to the  
connected backyard.**

Ask about a better Wi-Fi experience here:

**YOUR LOGO HERE**

**Link to dedicated site found from the Calix WISP site:**  
<https://www.calix.com/solutions/service-providers/wisps.html>



# Service Provider Samples



Triangle Communications



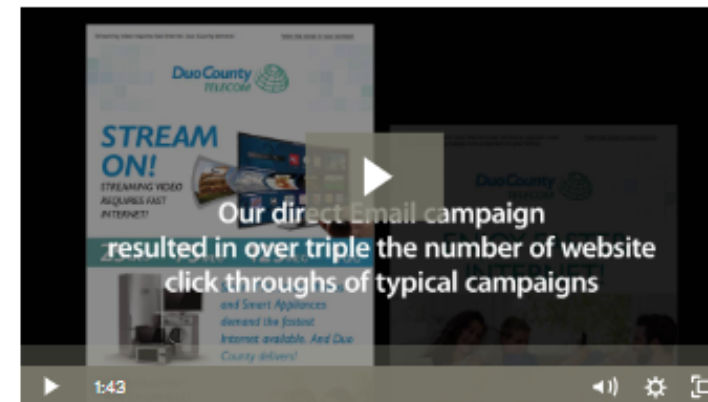
Silo Wireless



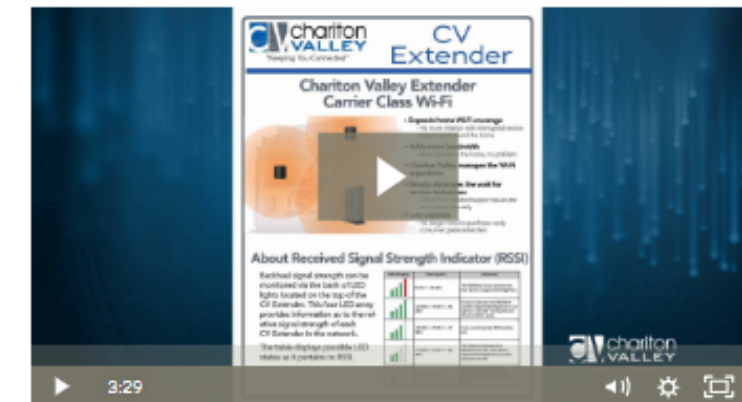
Nex-Tech



Citizens Fiber



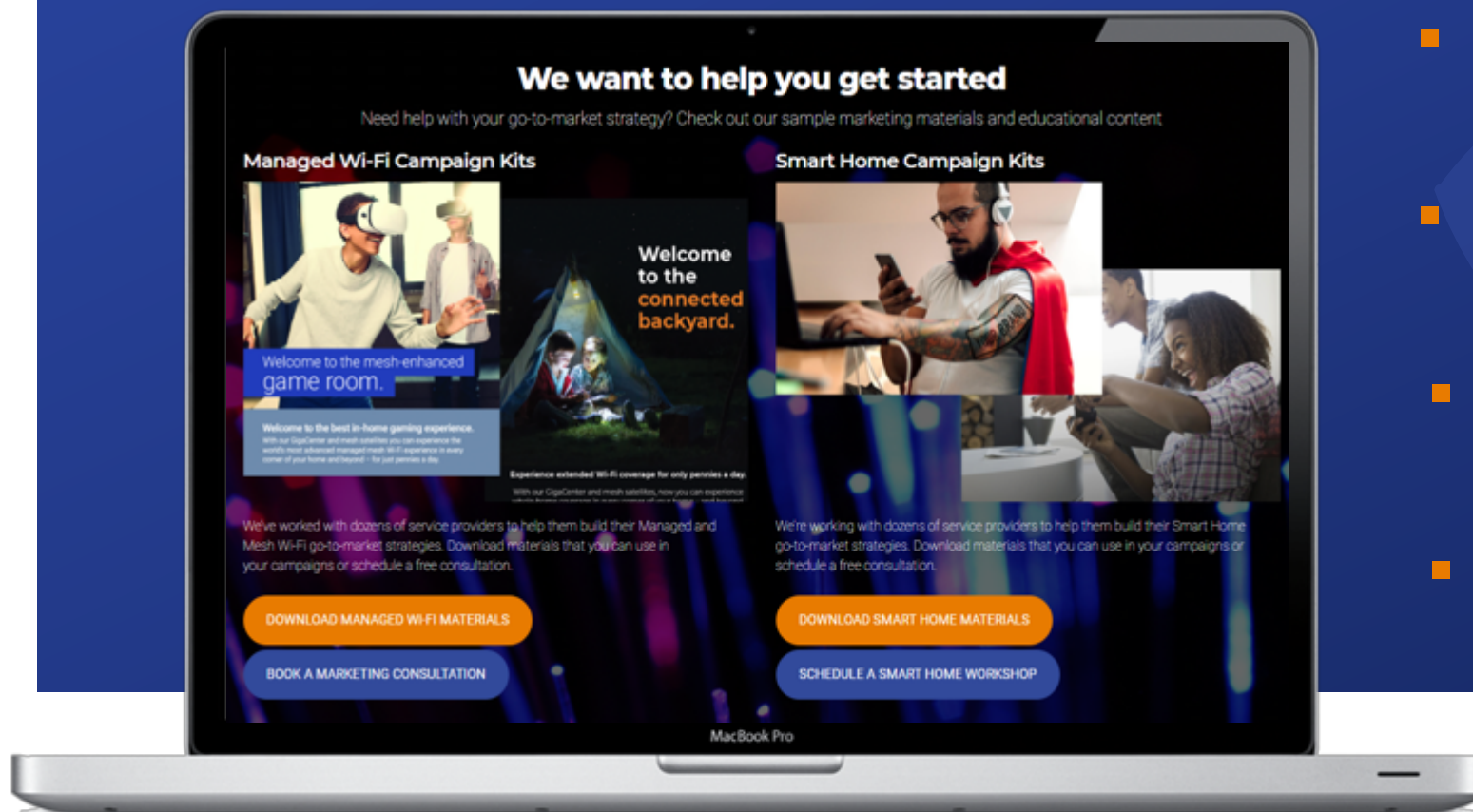
Duo County



Chariton Valley

# Interested in More Info

- Visit the Calix booth today
- Register: monthly webinar series
- Calix.com: Marketing and Educational Materials
- Free marketing consultation



THANK  
YOU