MAPLETON
UTAH

Request for Proposal (RFP) for a Strategic Internet Network Consultant

The Need/Goals: As Mapleton City continues to grow, we recognize that fiber internet is a big part of our community. Many within our community have limited high speed internet service available, are lacking in finding affordable internet, as well as poor customer service. Currently the local incumbent providers continue telling our City leaders that they do not have a plan of when are area will be upgraded and we continue to get passed over. More and more of our resident's work from home and require access to the internet. A few of our residents have commented that they have drove to their office in Provo as it was faster than getting internet connection. New and old businesses suffer as they search for the best provider to accommodate their needs.

At the direction of the Mayor and City Council we are considering a "Community Network" built, owned and operated by Mapleton City thus we are looking for a Consultant to provide us with a Comprehensive Final Plan and Recommendations.

Work Process and Timeline: The Attached work plan documents the work process and deliverables for each project phase. The work shown in the Attachment must be performed over the course of ten (10) weeks. All work products will be owned by Mapleton City. The submitted RFP must describe three closely related areas:

1. Approximately how many hours per week will the Consultant need to complete the Attached Work Plan;

2. What will be the hourly rate and estimated total billing for the Proposal; and

3. As per the Attached Feasibility Study completed by Uptown Services what areas from the study does the Consultant agree or disagree with and what would be the Consultants plan moving forward to provide the best "Community Network" to Mapleton.

Posted Date: 09/21/2020
Closing Date: 10/05/2020 at 5:00pm
Proposals will be accepted by closing date at the City Office, by email at cbrown@mapleton.org or by mail to:

Mapleton City
Attn: Camille Brown, City Recorder
125 West 400 North
Mapleton, UT 84664

Work Plan for Strategic Internet Network Consultant

1. Estimate construction cost
    a. Get competitive bids for installation
2. Enumerate capital expenditures
   Headend Electronics
    a. Necessary vehicles and equipment
        i. Bucket Trucks, Directional Drilling Machines, Cable Trailer, etc.
    b. Fiber splicing equipment
3. Outline staffing requirements and create job descriptions
4. Create a bond expenditure list for each year
5. Complete budgets for the first 5 years of the project
6. Complete a revised pro forma
7. Secure funding options
8. Prepare a Mapleton Fiber Project website
9. Complete a project management chart
10. Prepare press releases
11. Meet with resident's committee and keep them as a resource
12. Meet with businesses, chamber of commerce, Rotary club?
13. Design the entire FTTH system
   Calculate fiber footages and counts
    a. Map fiber paths
    b. Locations of both active and passive nodes
14. Calculate total cost of construction
   Feet of drilling per day
    a. 200-300 feet per day per drill
   Feet aerial per day
    a. 4000 feet per day strand
    b. 5280 feet fiber lashed
15. Give a comprehensive final plan presentation to the City Council

Broadband Feasibility Study

for

Mapleton City

June 2020

Uptown Services, LLC
Dave Stockton & Neil Shaw, Principals

STUDY OBJECTIVE & SCOPE

OBJECTIVE: *Identify and evaluate the financially feasibility of a range of options for the City to significantly enhance the availability, reliability, and capacity of broadband infrastructure to residents and businesses*

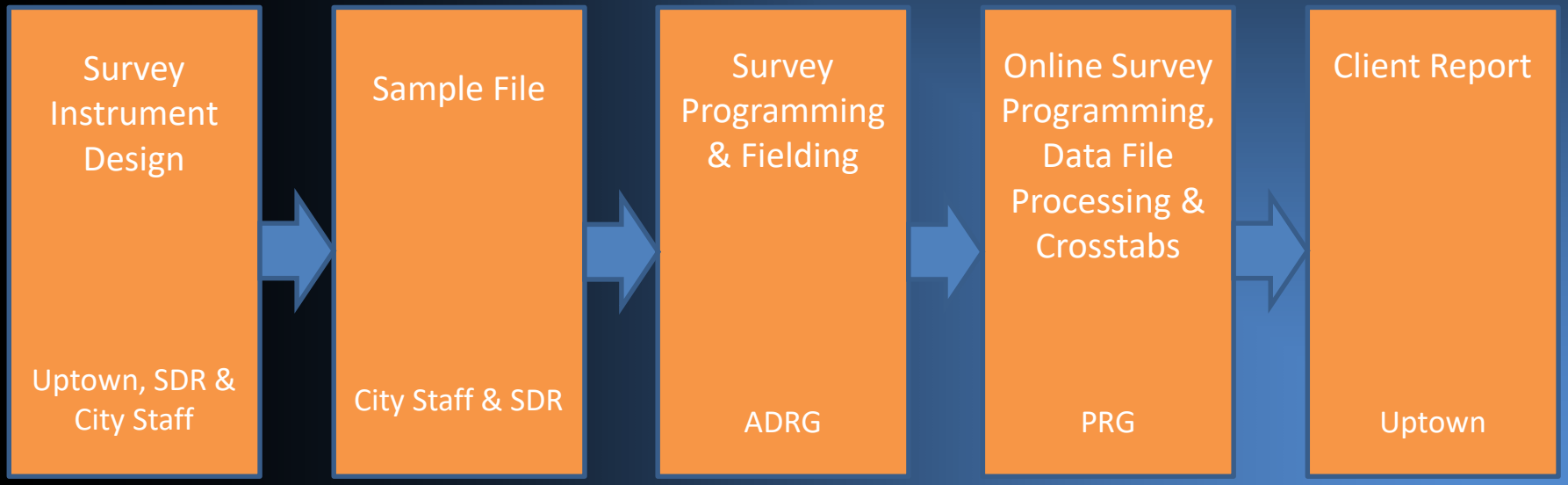
SCOPE:

1. Market Analysis
   - Quantitative market research
   - Demand estimation
2. Technology Strategy, Design, and Capital Budget
   - Reference architecture
   - Sample designs
3. Product Strategy
   - Data and Voice services
   - Current and near-term multi-Gig offerings
4. Potential Business Models & Funding Sources
5. Pro Forma Financial Analysis
   - Revenue, Opex, and Capex detail
   - Pro forma outcomes

Residential Quantitative Survey

RESEARCH TEAM

- The quantitative research process utilized both subject matter and functional expertise across multiple contractors by specialty:
  - **Uptown Services**: Subject expertise and study data needs
  - **SDR Consulting (Rick Hunter)**: Research expert overseeing design and execution (23 years experience with 200k completed research projects)
  - **American Directions Research Group**: Survey fielding and data collection (7 US-based call centers with capacity to complete 85k person-hours of call interviews per month)
  - **Prairie Research Group (James Wolken)**: Online survey programming, crosstab analysis and production of output banners (25 years experience)

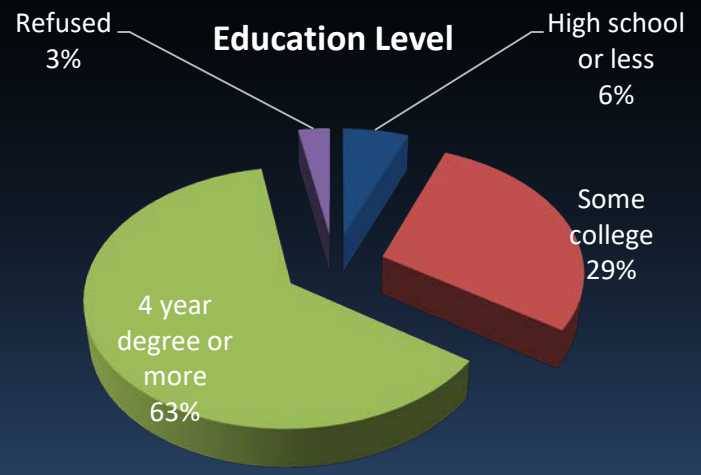


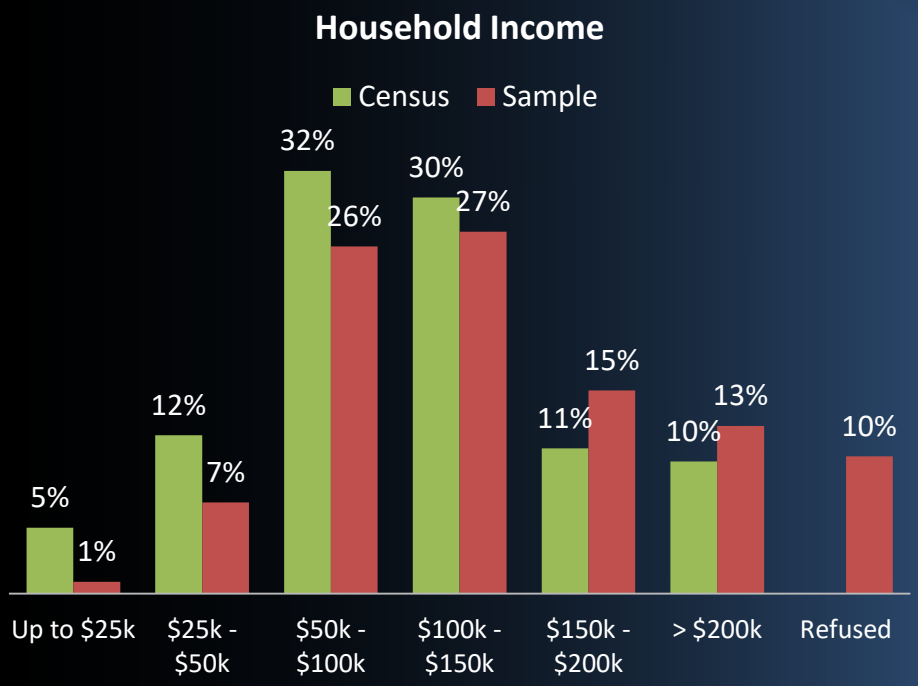
DESIGN FRAMEWORK

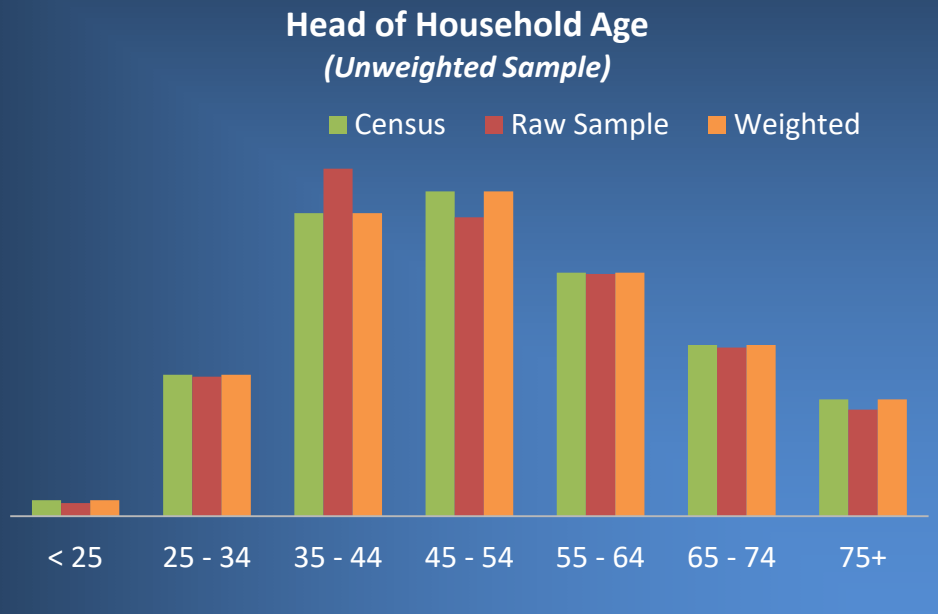
- Phone and online surveys
  - Total sample of 670 respondents (401 via phone and 269 online) of universe of 2,582 households
  - ± 3.3% sample error at 95% confidence interval
  - List included wireline and wireless numbers
- Age quotas used to ensure robust sample across all age groups. Results weighted to reflect actual age distribution from 2010 Census data
- Respondents screened to ensure
  - Decision-maker for telecommunications and entertainment services in the home
  - Reside within city limits
  - Respondents with immediate family members employed by any of the following were excluded:
    - Mapleton City
    - Comcast
    - CenturyLink
    - CentraCom
    - Rise Broadband
    - Utah Broadband

SAMPLE DEMOGRAPHICS

- Survey results are weighted to reflect the actual age distribution (by age decile) per the 2010 Census of Mapleton.
- While unweighted, the income profile of the sample is not dissimilar to the universe of residents.





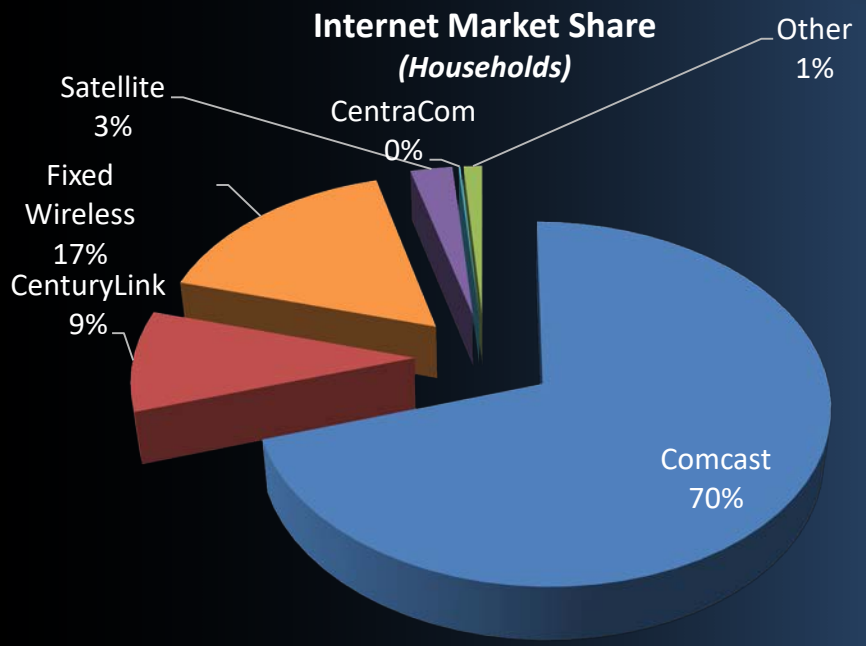


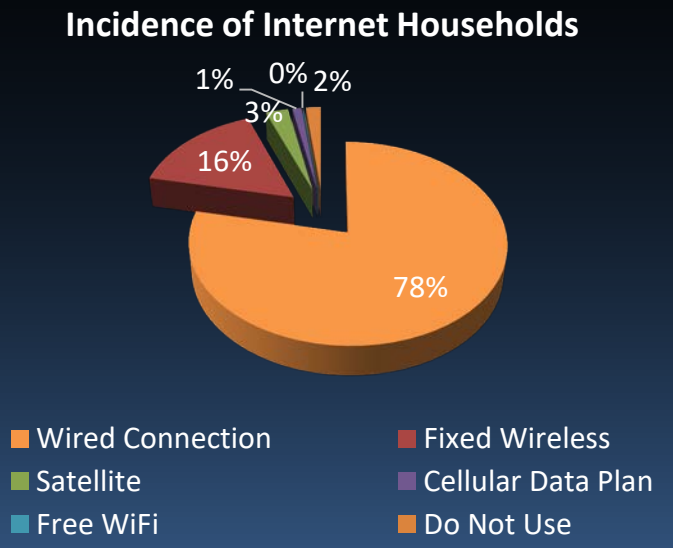
FTTP Residential Quantitative Survey

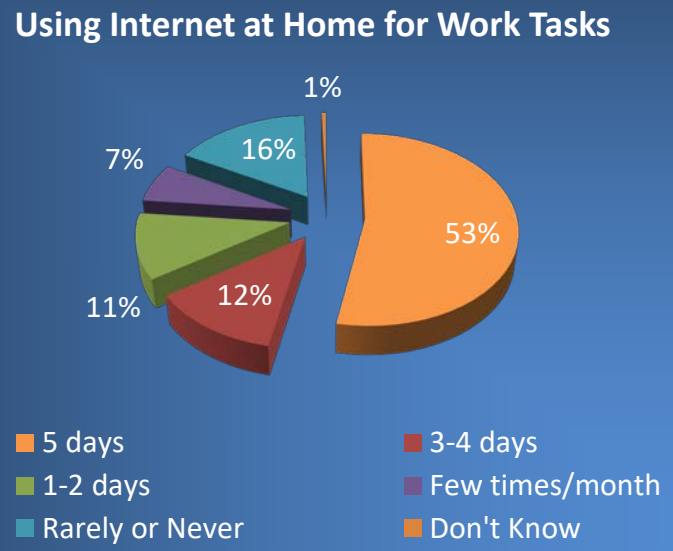
Current Broadband Services Usage

INTERNET SERVICE PURCHASING BEHAVIOR

- 97% of Mapleton households subscribe to Internet service at home, with 78% via a wired connection
- Comcast has 70% market share
- About 1 in 2 households use their home Internet service to perform job tasks 5 or more days per week



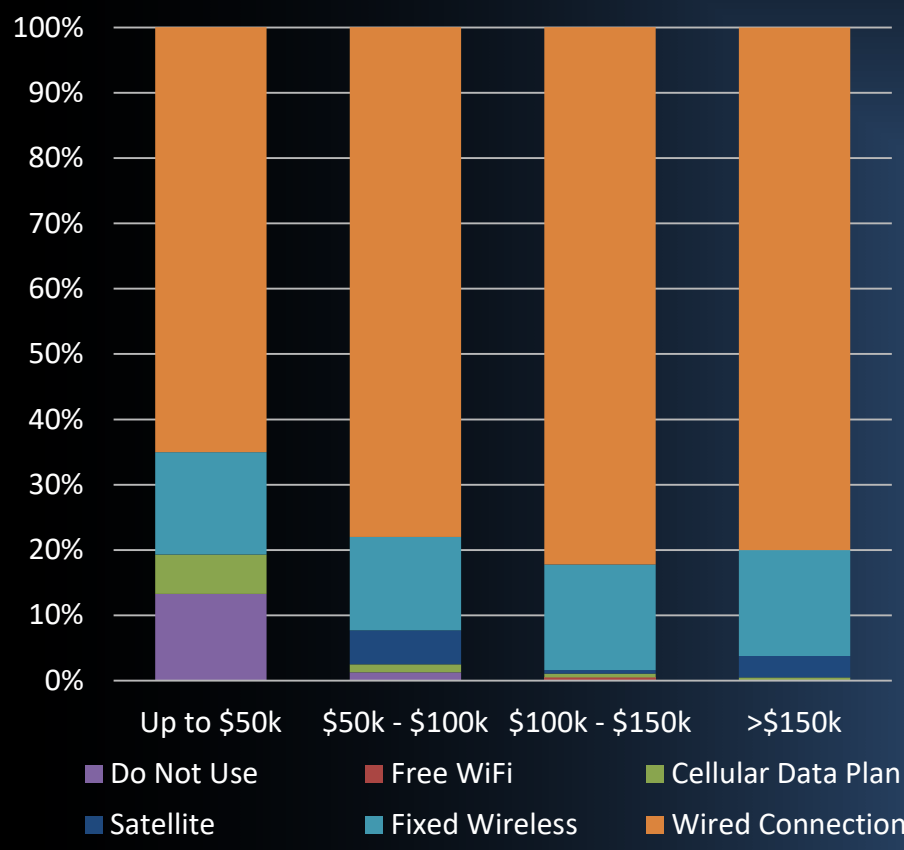




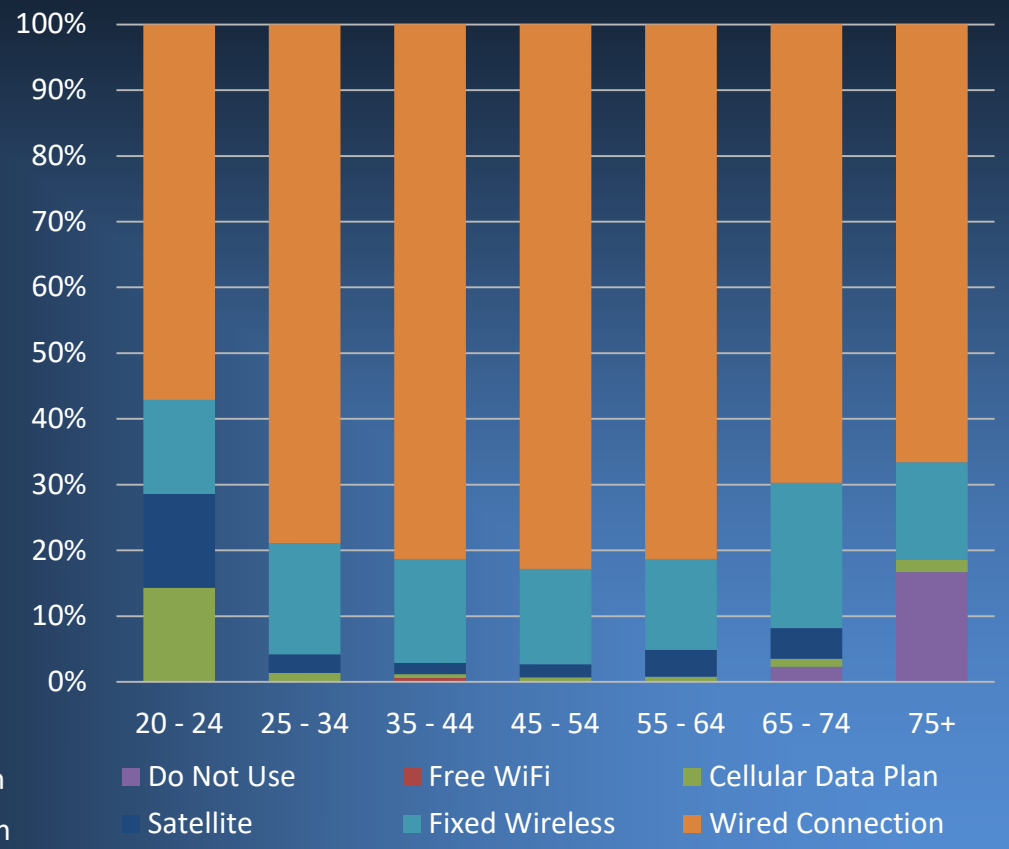
INTERNET ACCESS METHOD DEMOGRAPHICS

- Income has a slight impact on use of a wired Internet connection
- The youngest and oldest households are less likely to have a wireline connection
  - 14% 0f 20-24 use their cellular data plan
  - 17% of 75+ do not access the Internet

Internet Access Method by Income

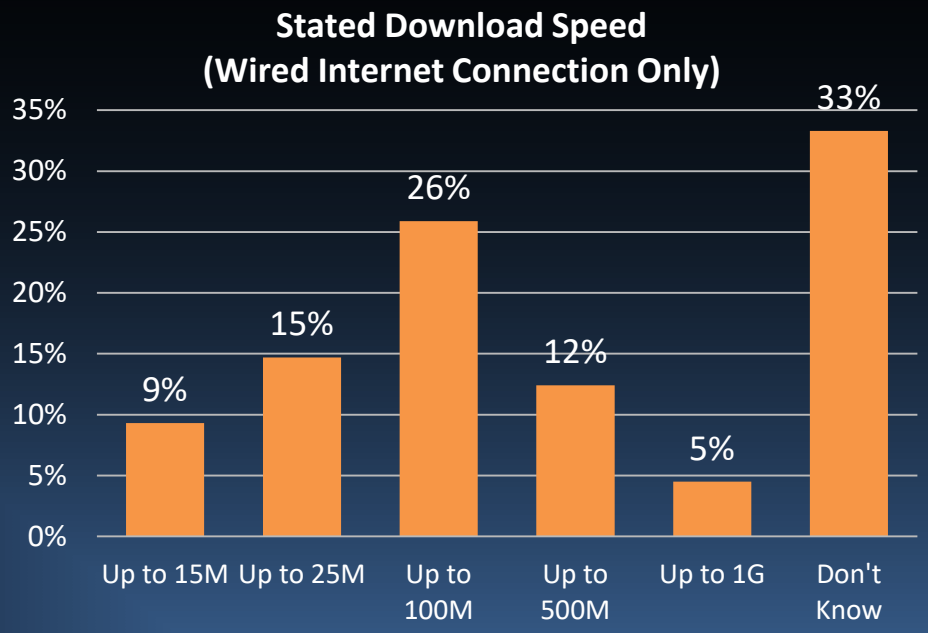


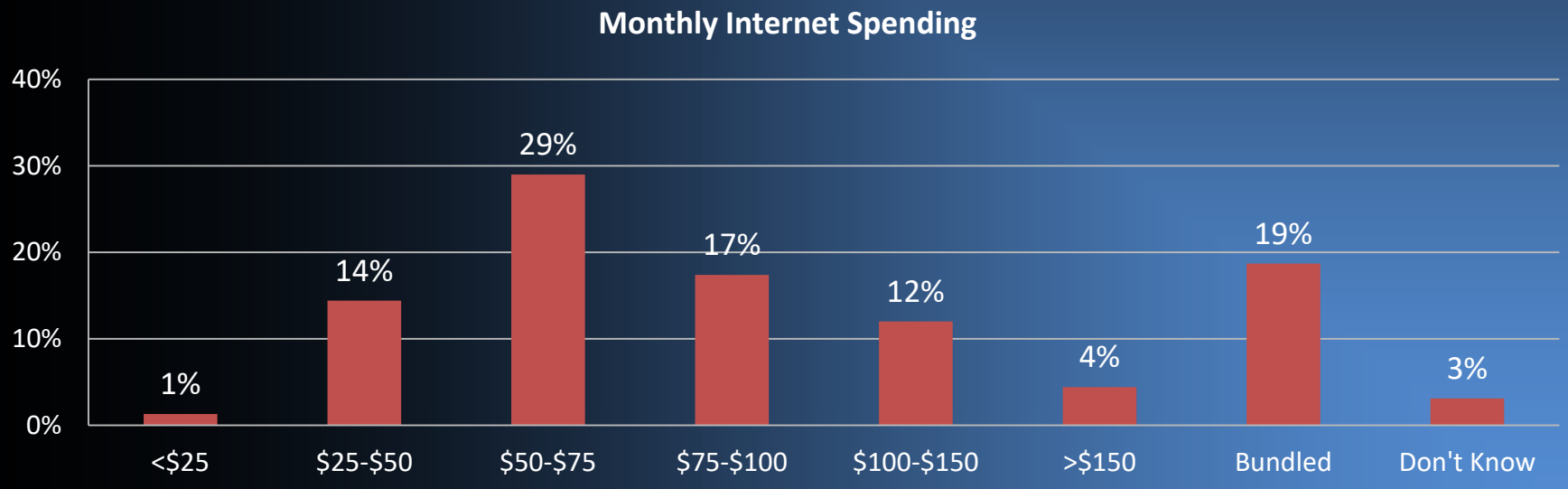
Internet Access Method by Age



STATED DOWNLOAD SPEED AND SPENDING

- 33% of households do not know what speed they subscribe to
- About 1 in 2 Mapleton households *state* they subscribe to 100M or less
- Monthly spending averages $62



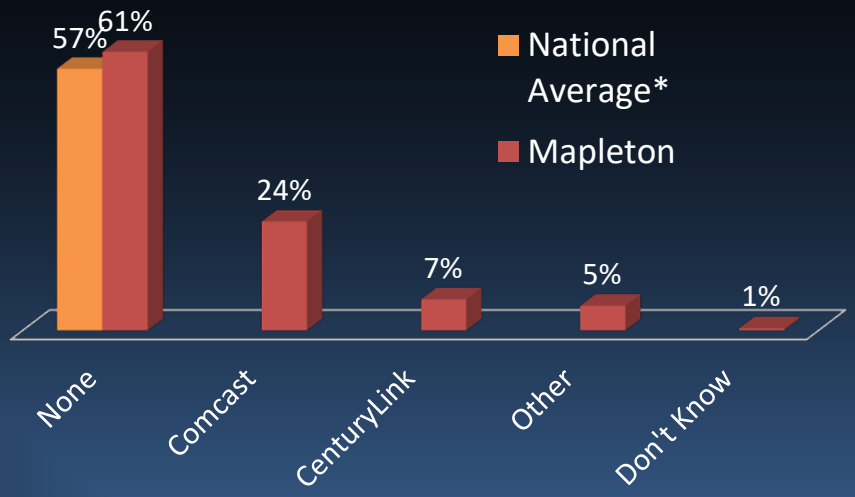


WIRELINE VOICE SERVICE

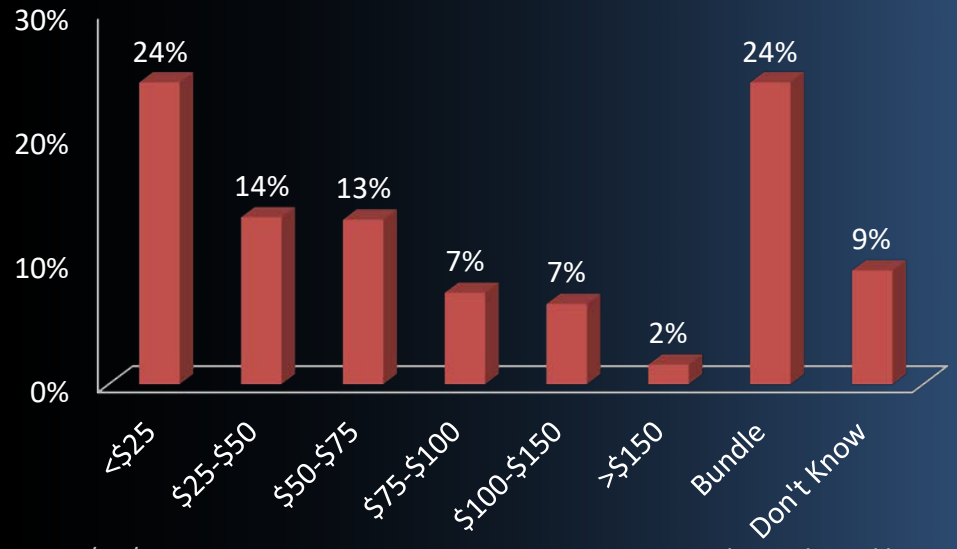
- Wireless substitution is slightly higher than the national average at 61% of HHs.
- This substitution is strongly correlated to age, with older households more likely to retain wireline phone service
- Monthly spending averages $36 for those households with a wireline phone

Home Phone Provider

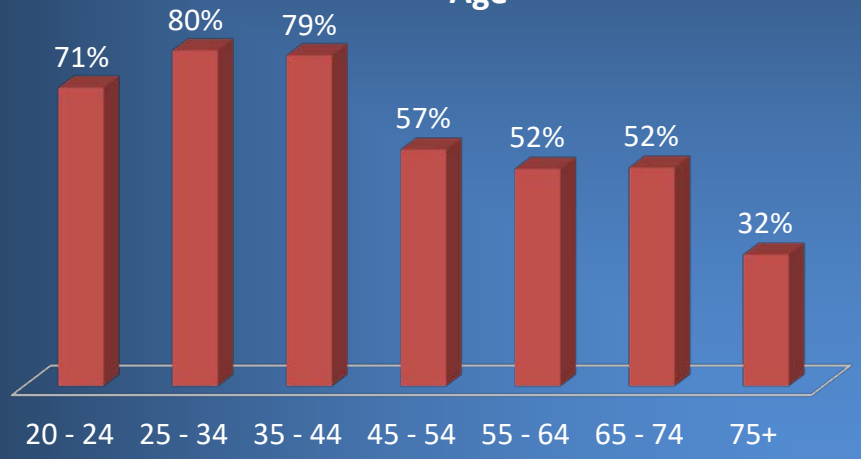
(*source: National Health Interview Survey, 2018)



Monthly Voice Spending



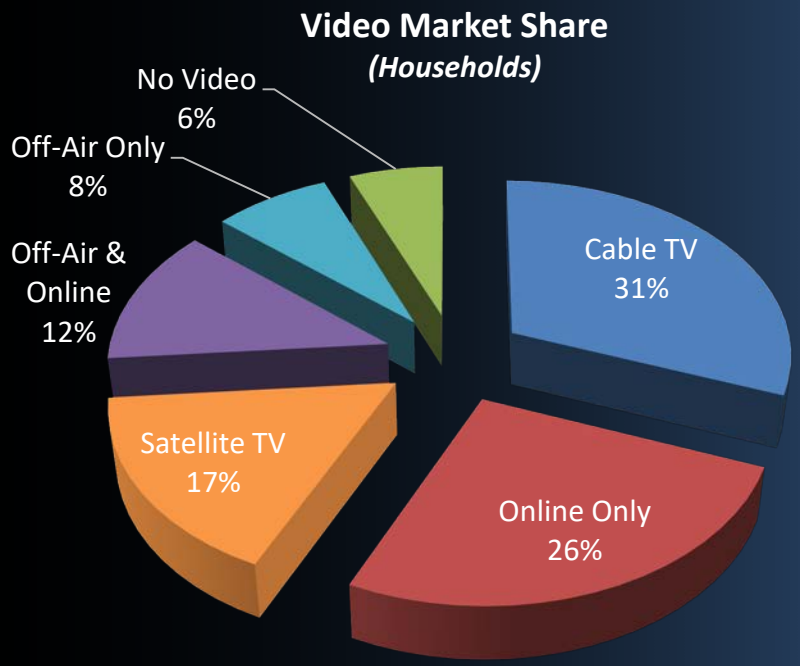
Households Without Wireline Phone Service by Age

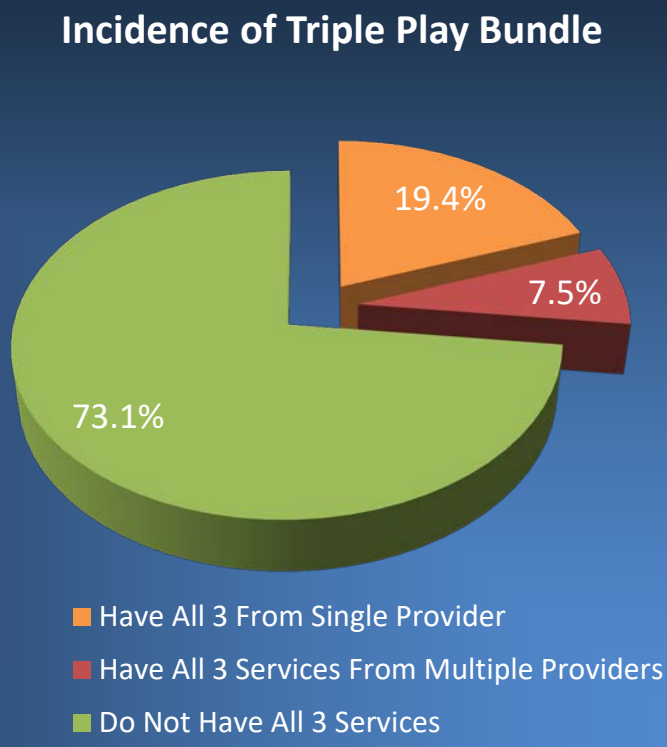


VIDEO AND SERVICE BUNDLING

Across all of Mapleton households, only 19% have all 3 services from a 'single' provider. This is being driven by wireless substitution and cord cutting (dropping Traditional Pay TV). Ramifications to FTTP strategy include:

- Limited and decreasing need to offer video service as households abandon cable TV
- 57% of Mapleton households have 'cut the cord' and do not use Traditional Pay TV
- Higher bandwidth demand to accommodate video streaming over the broadband connection (next slide)



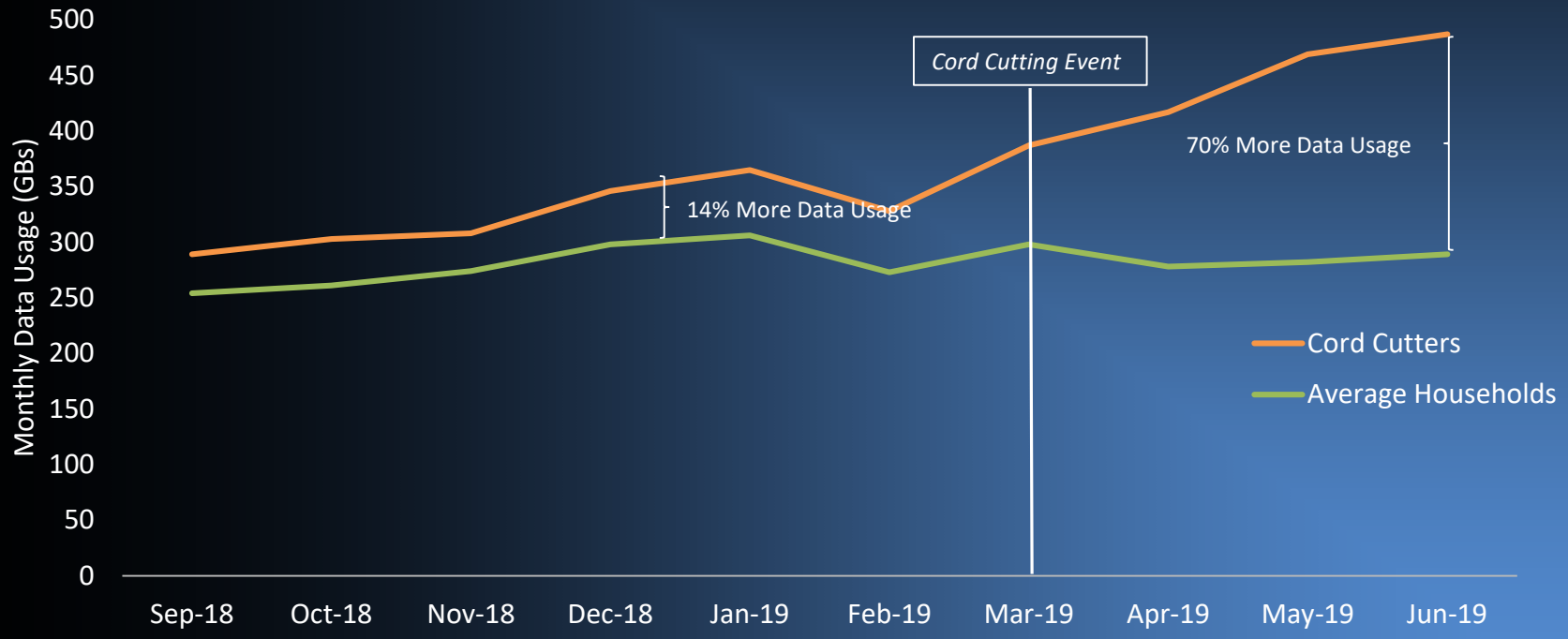


MORE CAPACITY FOR CORD-CUTTERS

Traditional Pay TV is losing subs to cord cutting – resulting in fewer bundled households. The households will not need bundle discount pricing but will need much more data capacity:

- *Tracking the impact to data usage prior to and then after cord cutting reveals households use 70% more than average within 3 months of dropping traditional Pay TV*
- *This matched usage data comparing video/Internet bundled households to 'broadband-only' households with the single service households using 85% more data each month (211 GB vs. 390 GB)*

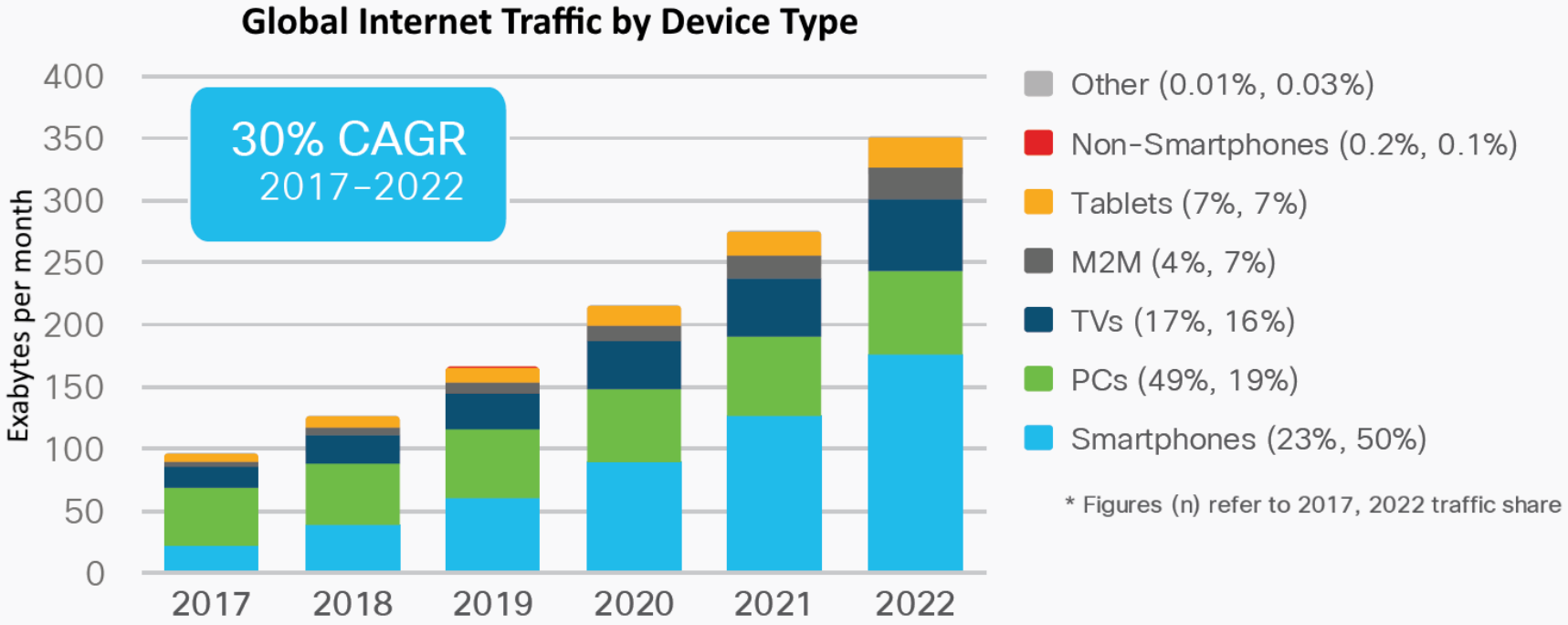
Monthly Household Data Usage Before and After Cord Cutting Event (OpenVault, August 2019))



Source: OpenVault Q2 2019 OVBI Report

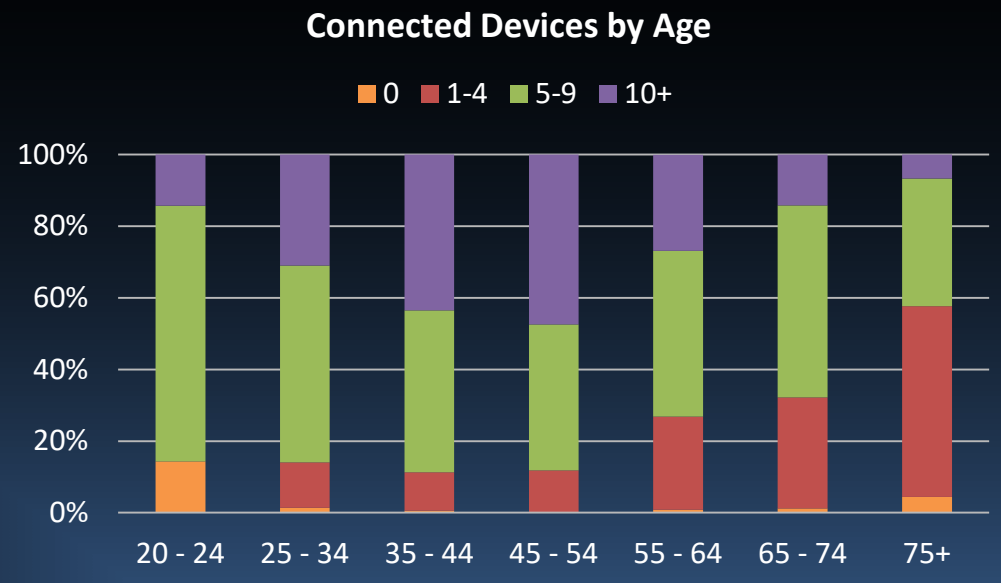
CONNECTED DEVICES NATIONAL GROWTH TREND

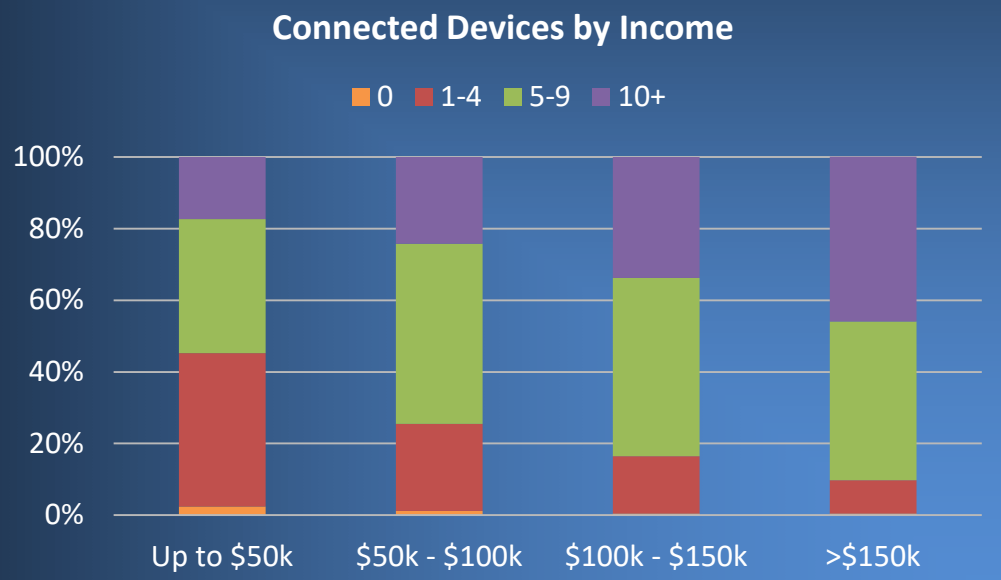
U.S. households are seeing both a significant increase in the number of Internet connected devices as well as significant growth in total IP traffic across these devices…



CONNECTED DEVICES BY AGE & INCOME

- Across all Mapleton households, the number of connected devices is distributed as:
  - 0 devices: 1%
  - 1-4 devices: 20%
  - 5-9 devices: 46%
  - 10+ devices: 33%
- The number of connected devices increases with household income
- Middle-aged households (35-54) have more connected devices, likely due to the presence of children



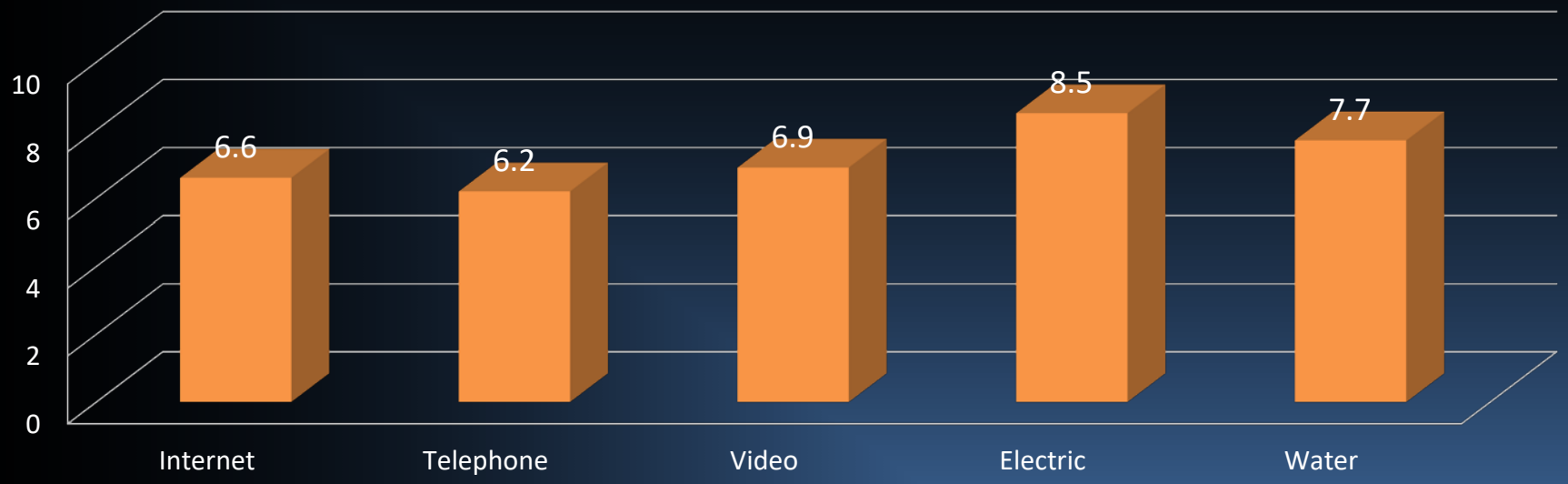


FTTP Residential Quantitative Survey

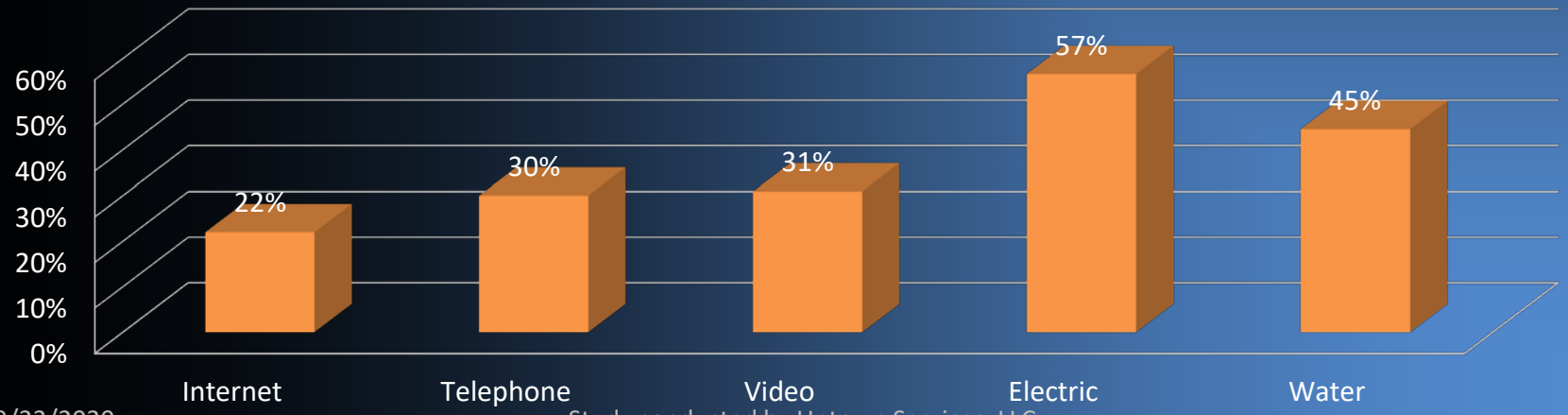
Satisfaction & Attribute Importance

SATISFACTION RATINGS

Satisfaction Rating by Service/Service Provider
(Mean Rating on a 1-10 Scale)



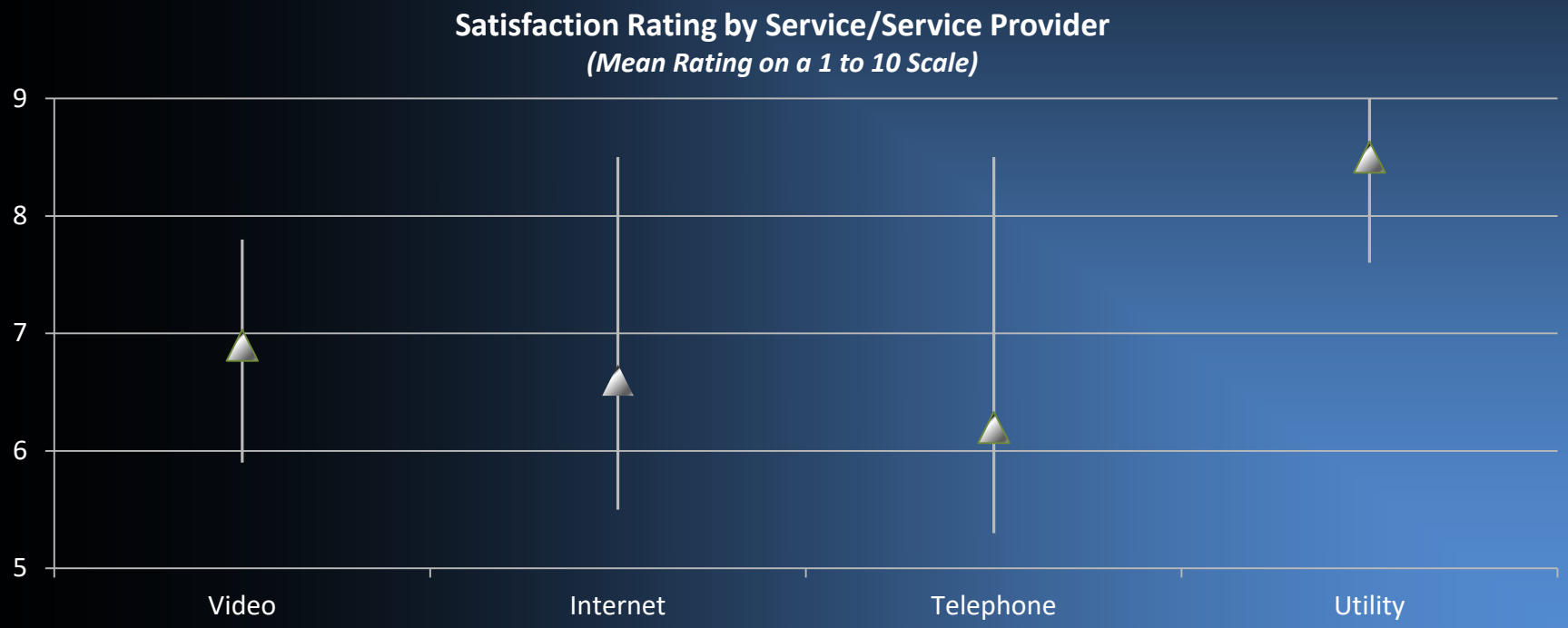
Satisfaction Rating by Service/Service Provider
(Percent Rating a '9' or '10')



SATISFACTION RATING BENCHMARKS

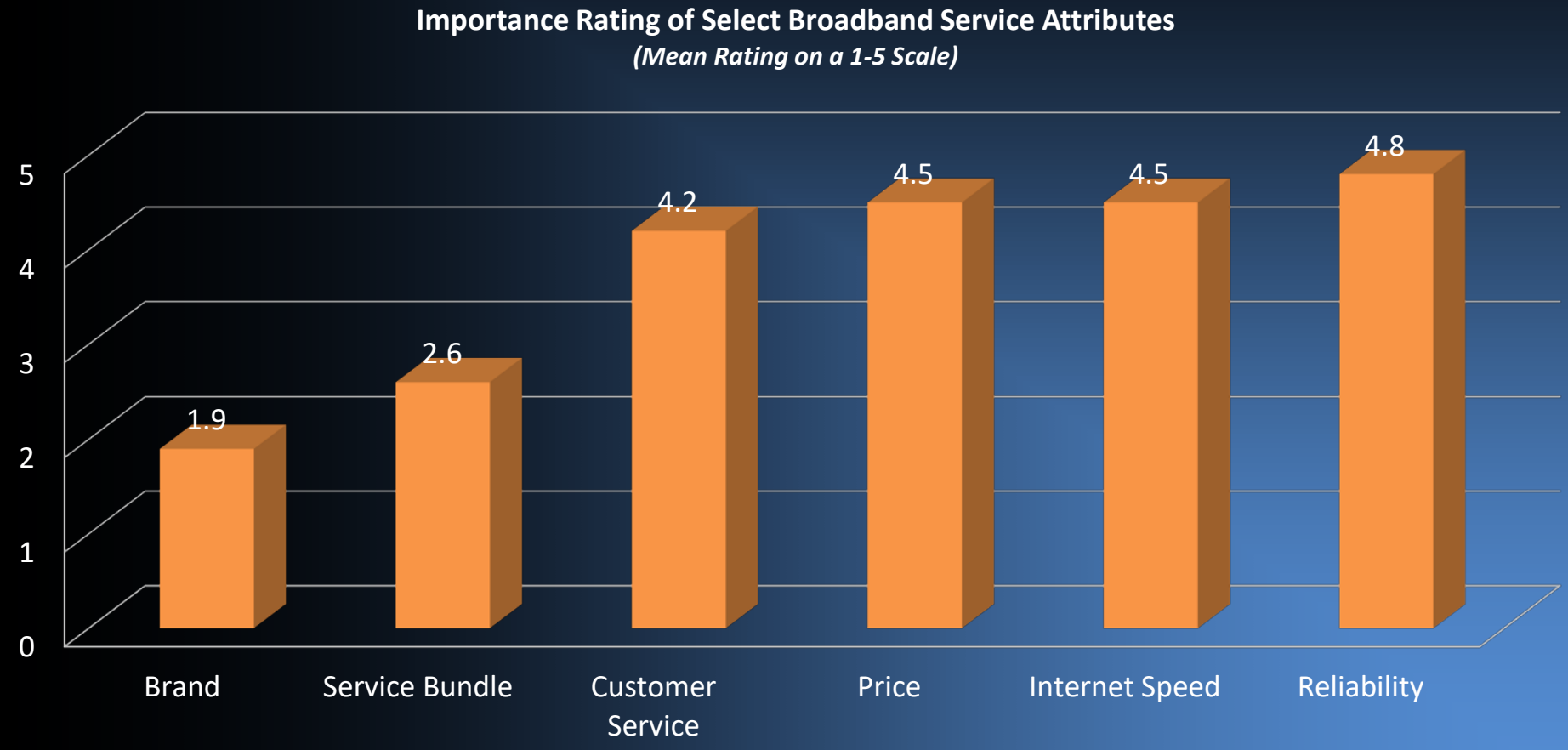
The chart below compares the results of this study with over 30 other markets where Uptown has completed similar quantitative research:

Ohio (3)	*Washington*	*North Carolina*	*Oregon (2)*
Iowa	*Wisconsin*	*Kansas (2)*	*Alabama*
Georgia	*Oklahoma (2)*	*New York*	*Arkansas*
Tennessee (4)	*Michigan*	*Kentucky*	*Colorado (7)*
Utah			

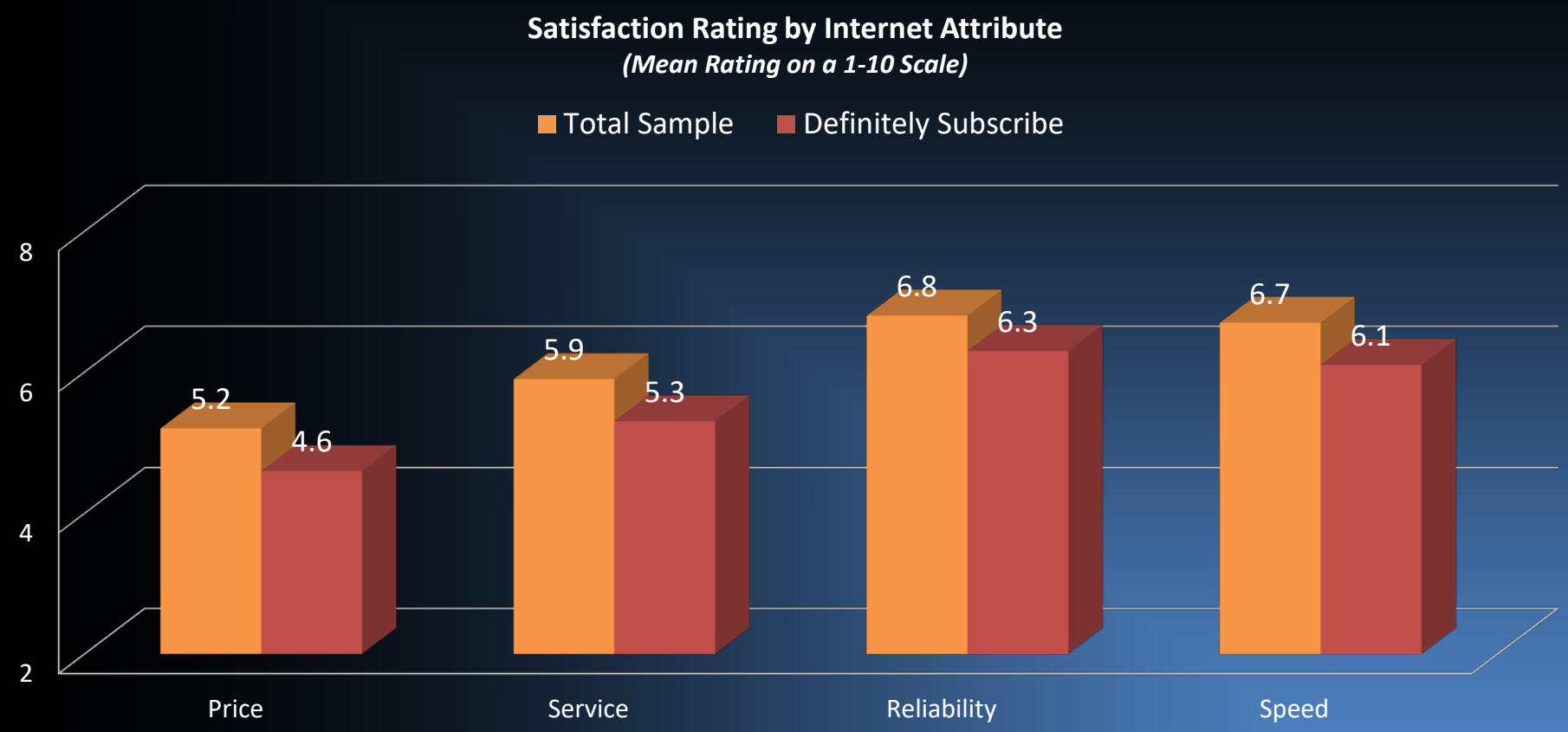


ATTRIBUTE IMPORTANCE

- While reliability and price are always important, Internet speed is perceived as very important in Mapleton. Bundling and Brand are secondary in importance to other attributes…



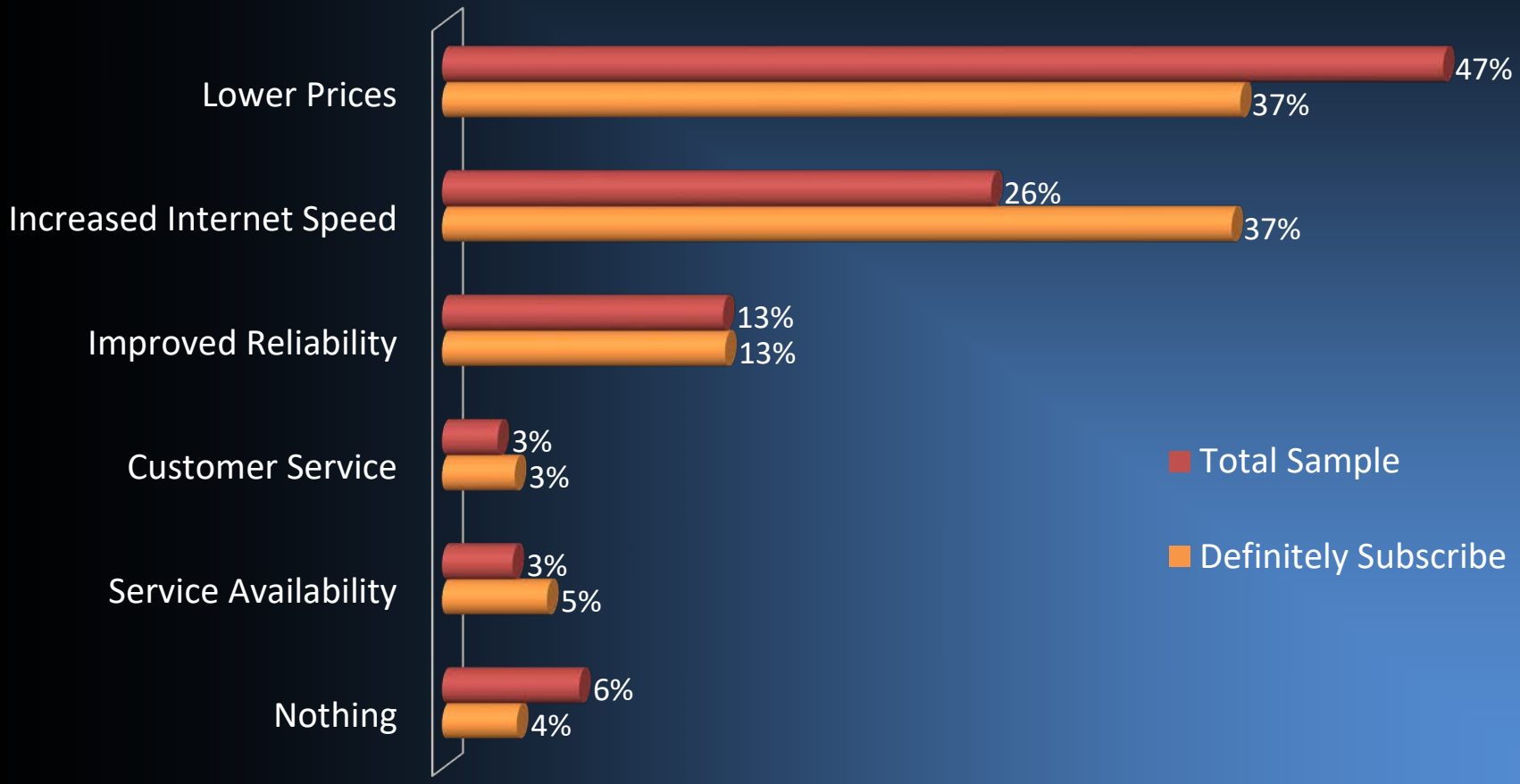
SATISFACTION WITH SPECIFIC INTERNET ATTRIBUTES



CUSTOMER NEEDS

Mapleton residents see increased Internet speed and lower prices as the most important dimension for improving their broadband…

Q29: *"What would you like to see most improved from your current broadband services?"*



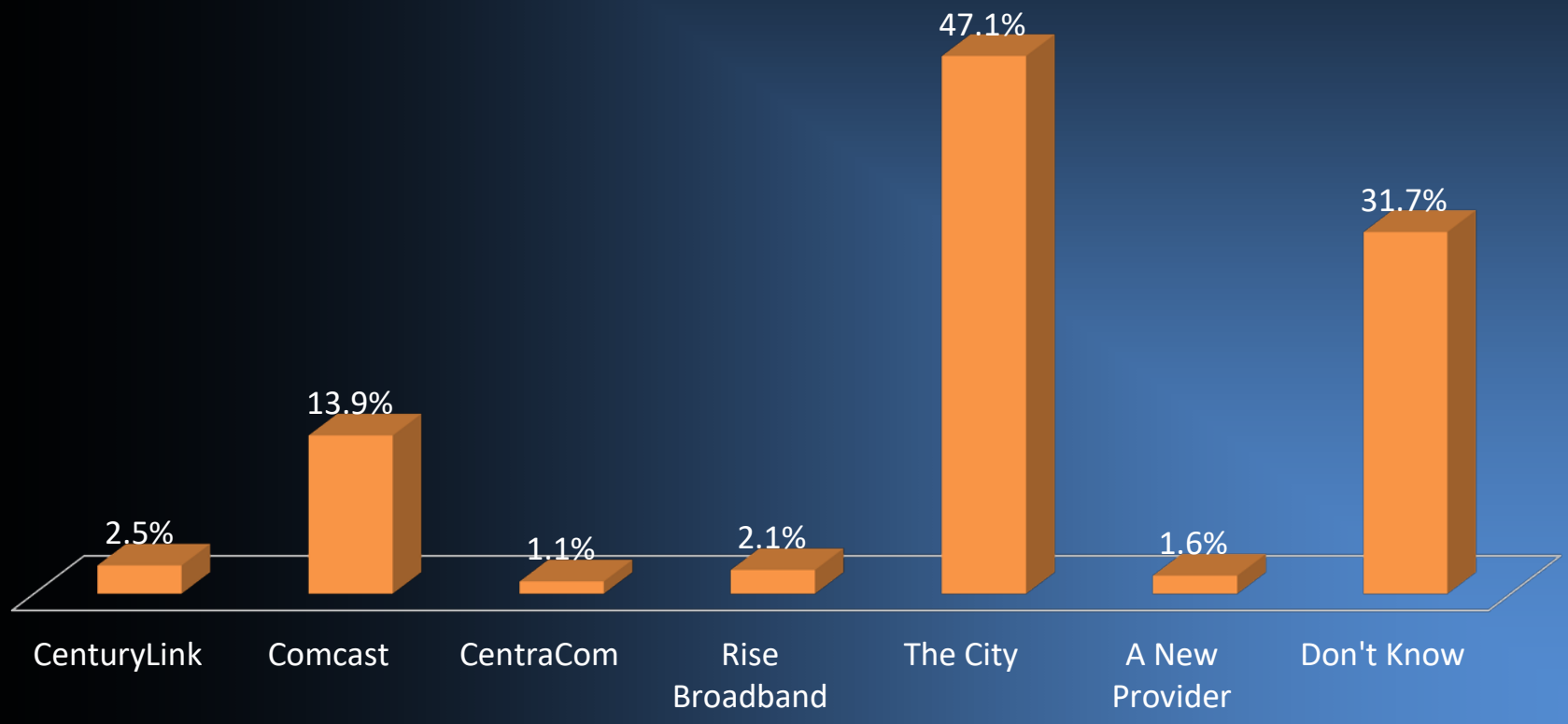
FTTP Residential Quantitative Survey

Fiber Broadband Market Potential

PROVIDER PREFERENCE

- 47% of respondents, when given the choice, would prefer to receive high speed Internet from the City, but 1 in 3 households are undecided…

Q27: ***"Among the following list of potential providers, who would you prefer to receive high-speed Internet service from?"***



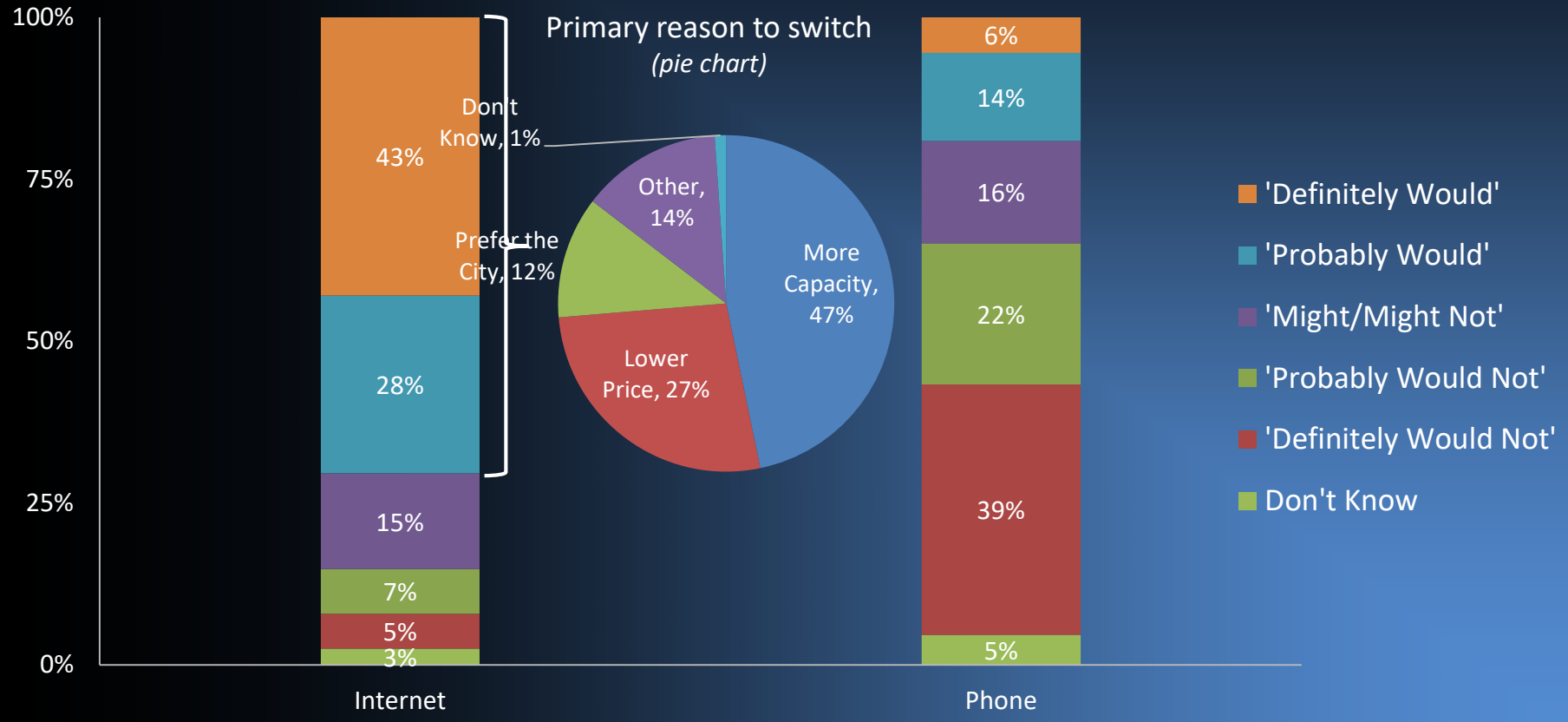
PURCHASE INTENT

- 71% of respondents indicated they would definitely or probably switch their Internet service to a fiber system installed by the City…

Q24/Q27: *Stated purchase intent for:*

- Internet at $70/mo. for 1Gbps

- Voice at 10% Less than CenturyLink



PENETRATION CALCULATIONS

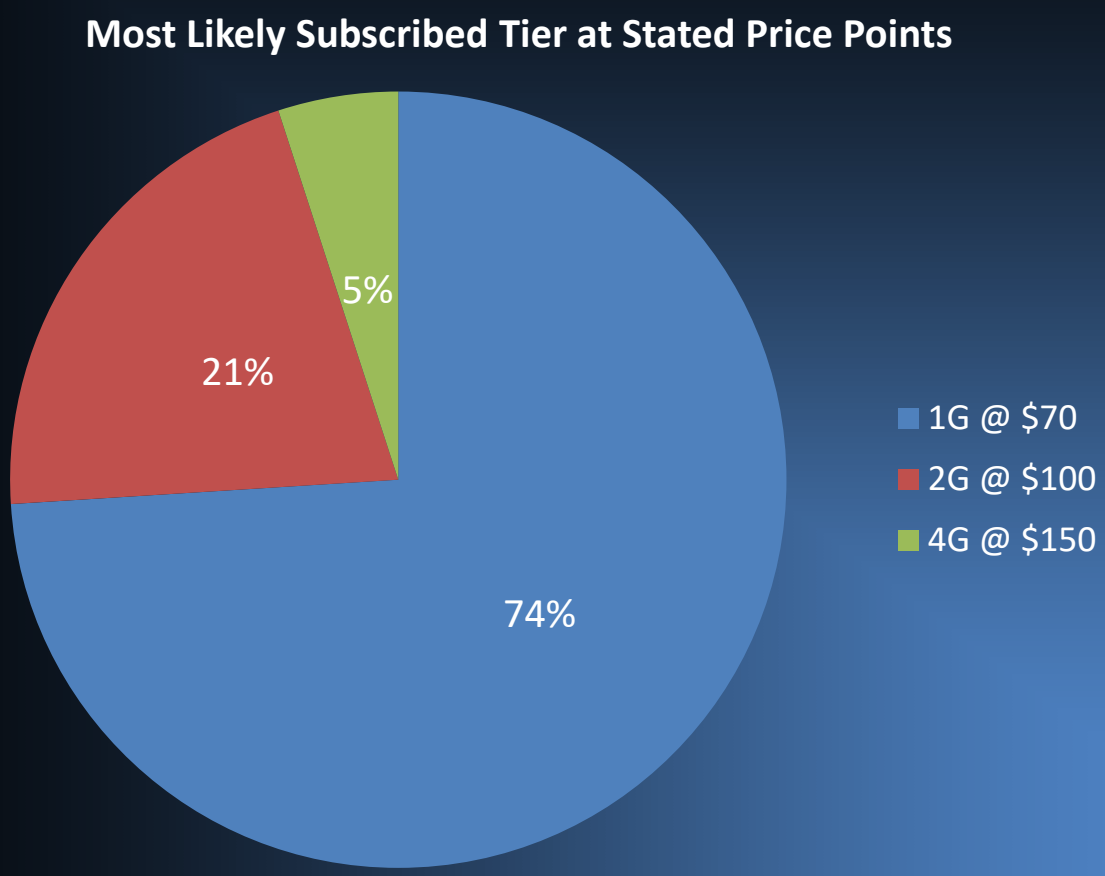
- Uptown uses a 'Likert Scale' with Overstatement Adjustment
  - Conservative research techniques from the Packaged Goods sector
  - Clearly specify purchase intent vs. "interest" and removes overstatement bias
- Example: "How likely would you be to subscribe?"

Definitely Would	21.5%	x 70% =	15.0%
Probably Would	35.6%	x 30% =	10.7%
Might/Might Not	20.0%	x 10% =	2.0%
Probably Would Not	10.4%		27.7**%** = Penetration Estimate
Definitely Would Not	4.4%		
Don't Know	8.1%		

	Residential Research (Terminal / Year 5 Eroded)	Small Business (Terminal)
Internet	**40% @ $70**	**40%**
Telephone	**10% / 8% @ 10% Less**	**35%**

INTERNET DISPERSION & ARPU

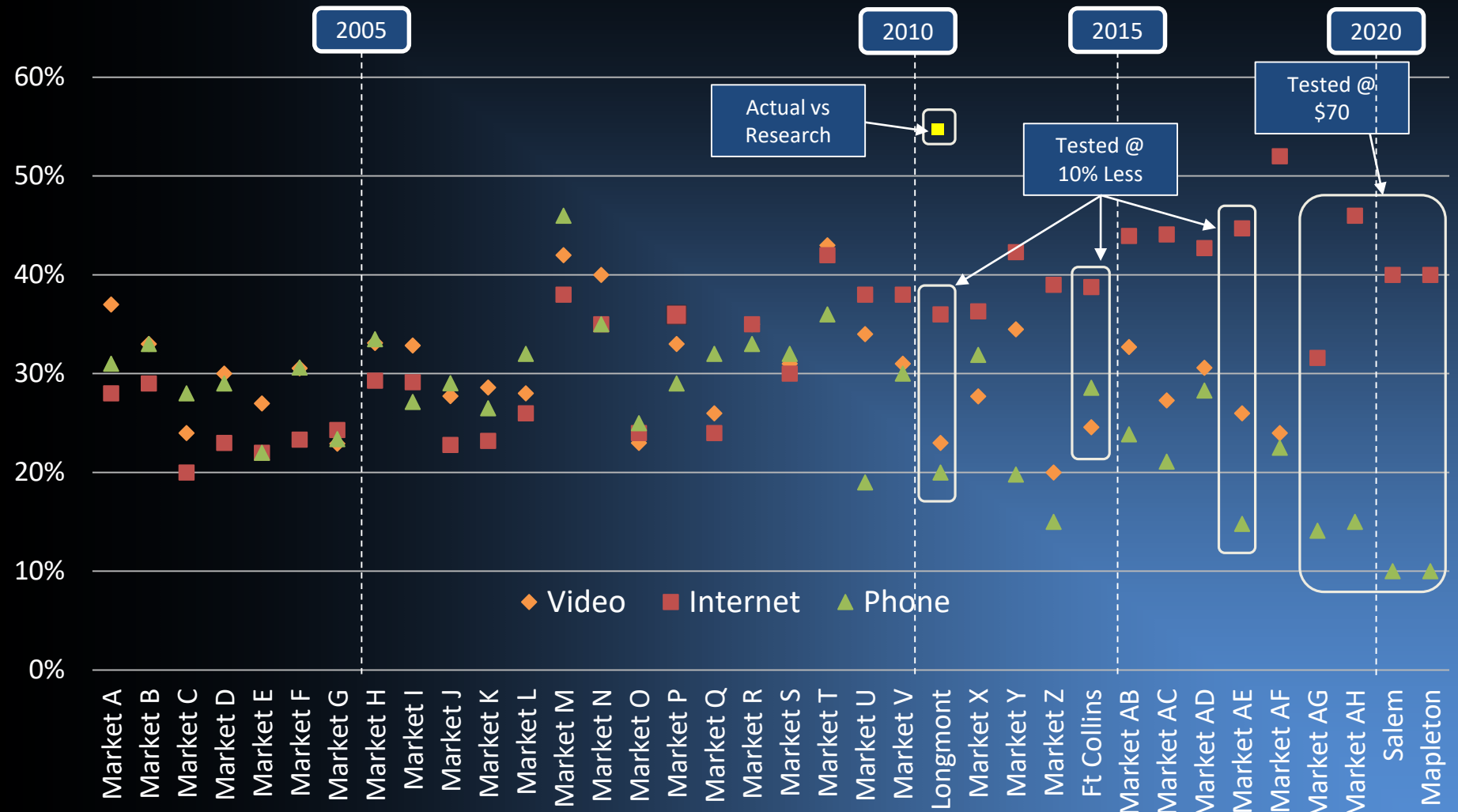
The survey results indicate strong interest in multi-Gig tiers. The resulting Average Revenue Per User (ARPU) is $80 per month….



PURCHASE INTENT BENCHMARKING

Terminal Penetration by Service

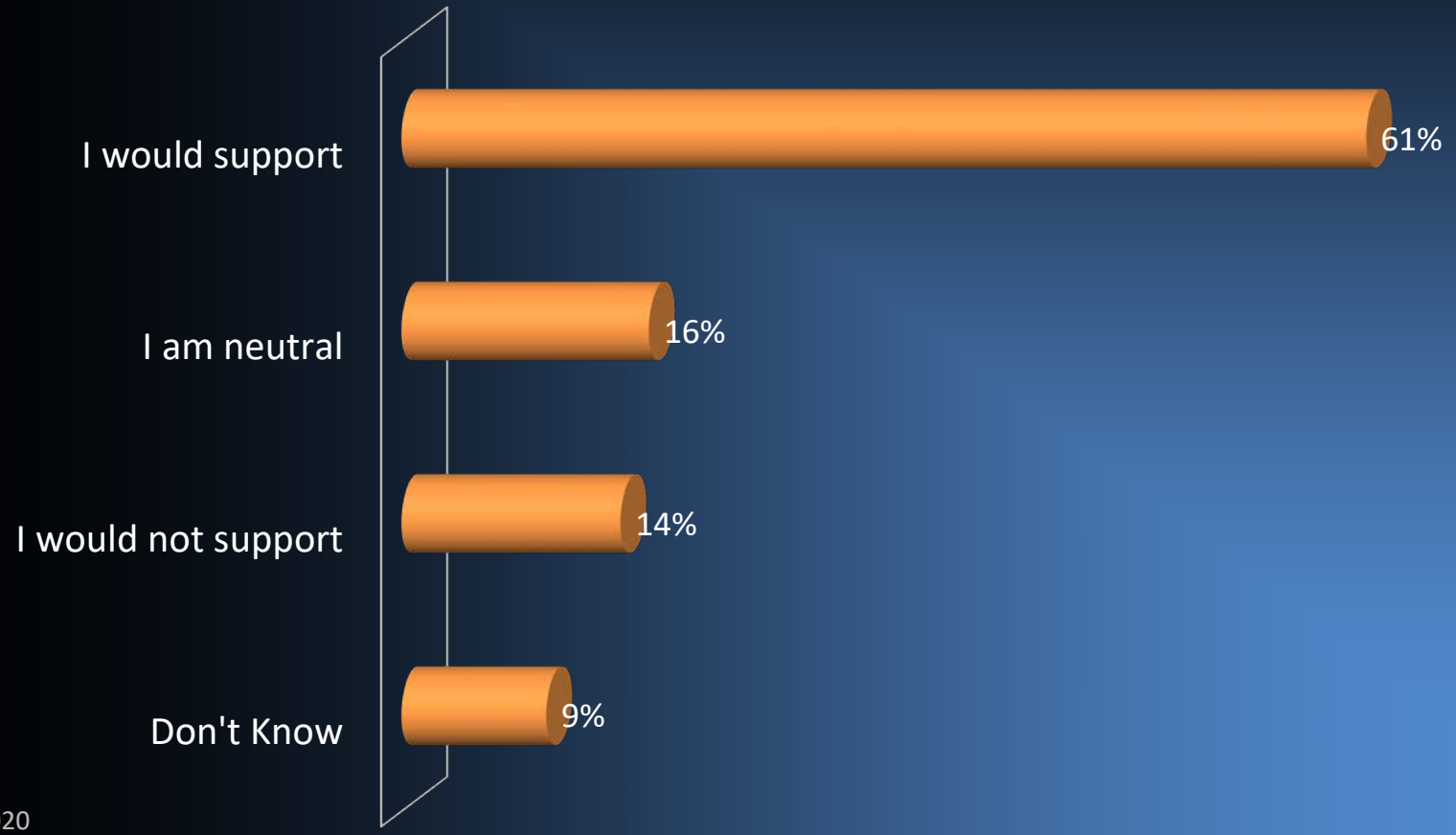
(Across all Tested Price Points)



REVENUE BOND SUPPORT

Six out of ten Mapleton households support the issuance of a revenue bond to help fund the new fiber network…

Q30: "Without raising taxes, would you support the City of Mapleton issuing a Revenue Bond to fund the construction of the fiber network, if the service subscription revenues were used to pay off the bond?"



SUMMARY OF RESIDENTIAL RESEARCH FINDINGS

- Overall, 97% of households use Internet at home with Comcast as the dominant provider
- Internet and phone service satisfaction levels benchmark below average
- Improved Internet speed and lower prices are the predominant need for improvement with current Internet service
- Forecasted residential take rates of 40% (Internet) and 10% (voice) with Gig Internet at $70
- Strong interest in multi-Gig tiers at higher price points resulting in ARPU of $80
- The City is the preferred provider versus over the current incumbent providers
- Nearly 2 out of 3 households support the issuance of a revenue bond to fund construction

Technology Analysis and Capital Budgeting
Evaluation of Current Network Capabilities

CITY OF MAPLETON BROADBAND ASSET INVENTORY

- City of Mapleton lacks applicable outside plant infrastructure
  - Outside plant = aerial and underground pathway systems
  - City does not operate a municipal electric system
  - Rocky Mountain Power owns all utility poles in the City
- No existing fiber infrastructure
  - City does not own or operate a fiber network currently
  - There are limited fiber-based carrier options in the area
- Proximity to Spanish Fork is greatest asset
  - City can easily connect via fiber to Spanish Fork
  - Interconnecting facilities would be part of any last mile FTTP build

Technology Analysis and Capital Budgeting Reference Architecture

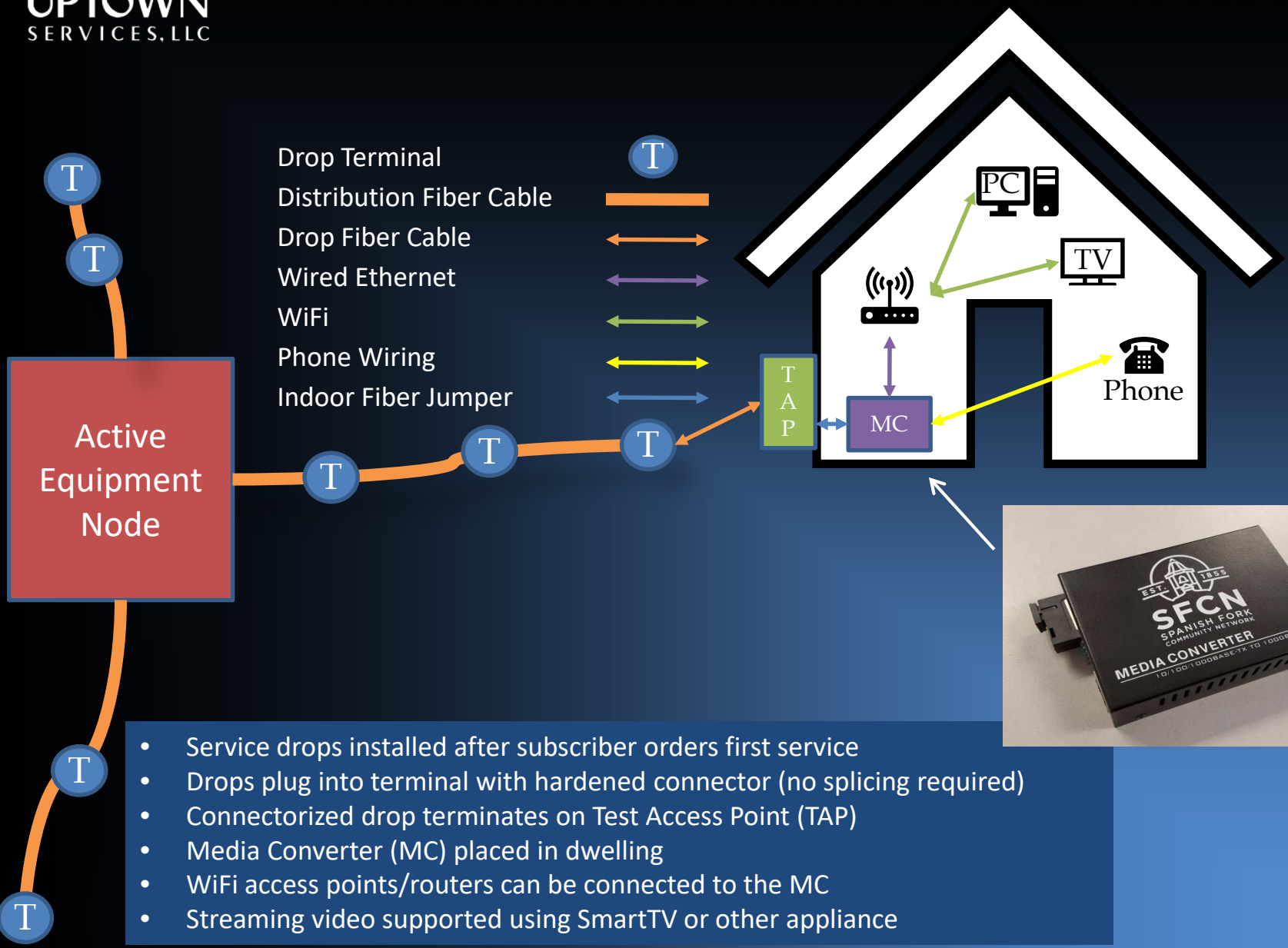
PREMISES EQUIPMENT AND INSIDE WIRE

- Provider Owned Premises Equipment
  - Media Converter – indoor wall mount or desktop versions
  - Add On Wi-Fi routers available
- Customer Owned Premises Equipment
  - Router – may not be GigE capable
  - All end user computing devices
  - Standard telephones for telephone service
  - Streaming video appliances – AppleTV, FireStick, Roku, etc.
- Inside Wire
  - Phone services use the existing phone wiring
  - Digital streaming services use new CAT6 wiring or Wi-Fi
  - Data services delivered over new CAT6 cable or Wi-Fi

SERVICE DROP AND DROP TERMINAL

- Drop Terminal
  - Drop terminals connect service drops to the distribution network
  - One terminal serves between two and twelve passings
  - Terminals allow for plug and play at the serving pedestal / pole
  - Terminals attach directly to distribution fiber cable
- Service Drop and Test Access Point
  - Drops only installed after subscriber orders service
  - One fiber drop cable installed from terminal to each premises
  - Fiber drop pushed or pulled in shallow drop conduit in underground
  - Aerial drops are flat self support cable
  - Drop fiber terminated in test access point (TAP) mounted on dwelling
  - TAP provides demarcation between outside and inside fiber (bulkhead)

FTTP DISTRIBUTION NETWORK BUILDING BLOCKS



- Service drops installed after subscriber orders first service
- Drops plug into terminal with hardened connector (no splicing required)
- Connectorized drop terminates on Test Access Point (TAP)
- Media Converter (MC) placed in dwelling
- WiFi access points/routers can be connected to the MC
- Streaming video supported using SmartTV or other appliance

LOCAL DISTRIBUTION NETWORK

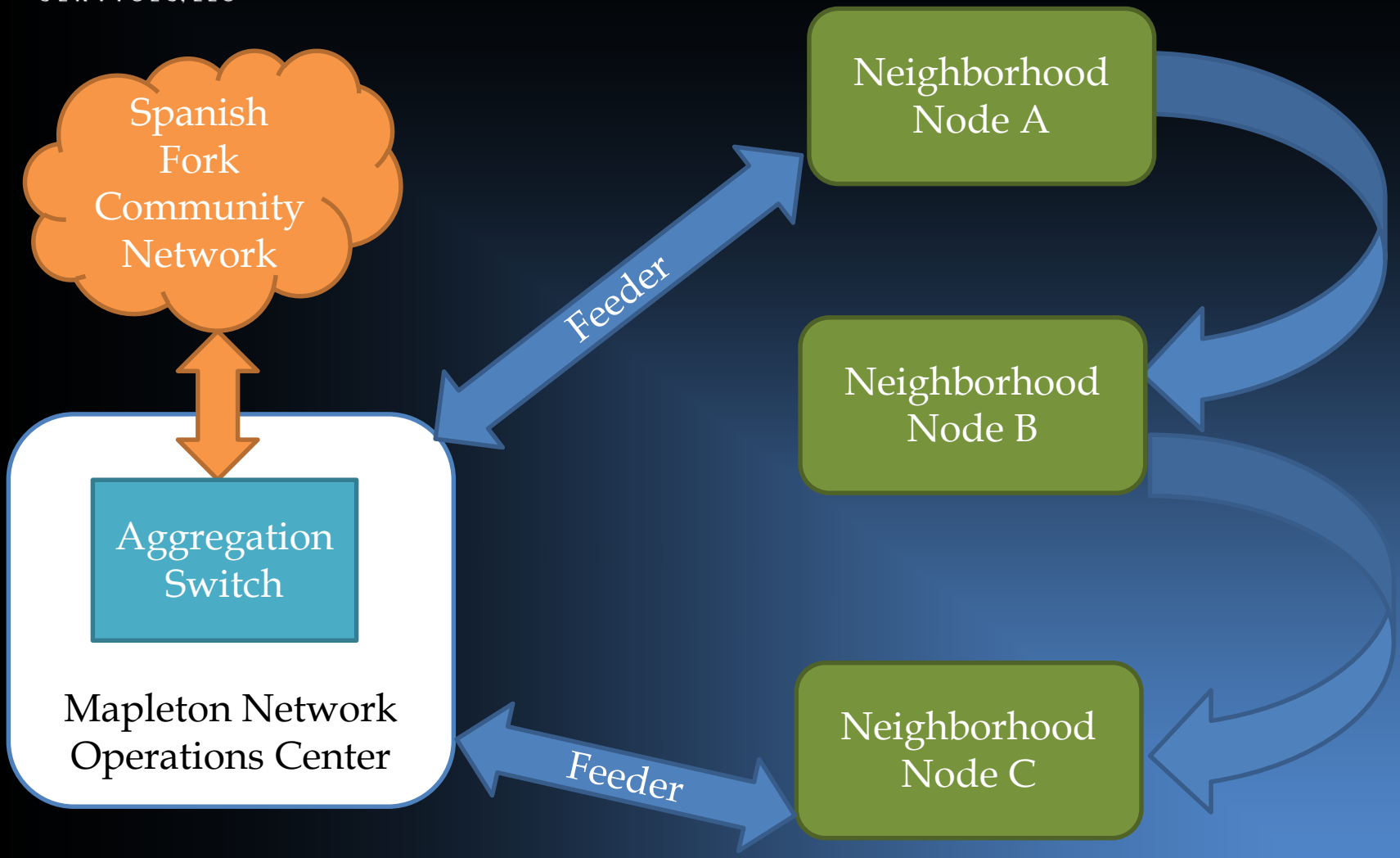
- Distribution network
  - Distribution fiber connects drop terminals to an active node
  - One fiber per home and business passed by the distribution cable
- Neighborhood active equipment node
  - Aggregates traffic for up to 200 homes and businesses
  - Contains fiber termination panels for distribution and feeder fiber
  - Houses Ethernet switches that are fed from primary network switch
- Feeder / backbone network
  - Neighborhood nodes are fed by a new feeder network
  - Feeder network is sized to feed each node with at least 12 fibers
- Network operations center (NOC)
  - Mapleton would have a primary switching location in the City (NOC)
  - One large switch in the NOC would aggregate all subtending node traffic
  - NOC would then connect via dark fiber to SFCN

NETWORK BACKBONE AND CORE

- Core Network – Layer 3
  - Core network safely routes traffic to and from the outside world
  - Border Gateway Protocol (BGP) routers connect to the Internet
  - BGP routers deployed in pairs
  - Typically installed on backbone network in physically diverse locations
  - Each router connects to at least two Internet backbone providers
- Outside World – Content
  - Two physically diverse Internet backbone connections desired
  - Video content would come in over one or both Internet connections
  - Phone would also route over one or both Internet connections
- Spanish Fork Community Network
  - Mapleton will rely on SFCN for all Core Network functions
  - Mapleton will connect to SFCN over high capacity Layer 2 links

UPTOWN SERVICES, LLC

EQUIPMENT SITE COMPONENTS



* Preliminary design calls for (16) Nodes within the City limits of Mapleton

Technology Analysis

Sample Designs

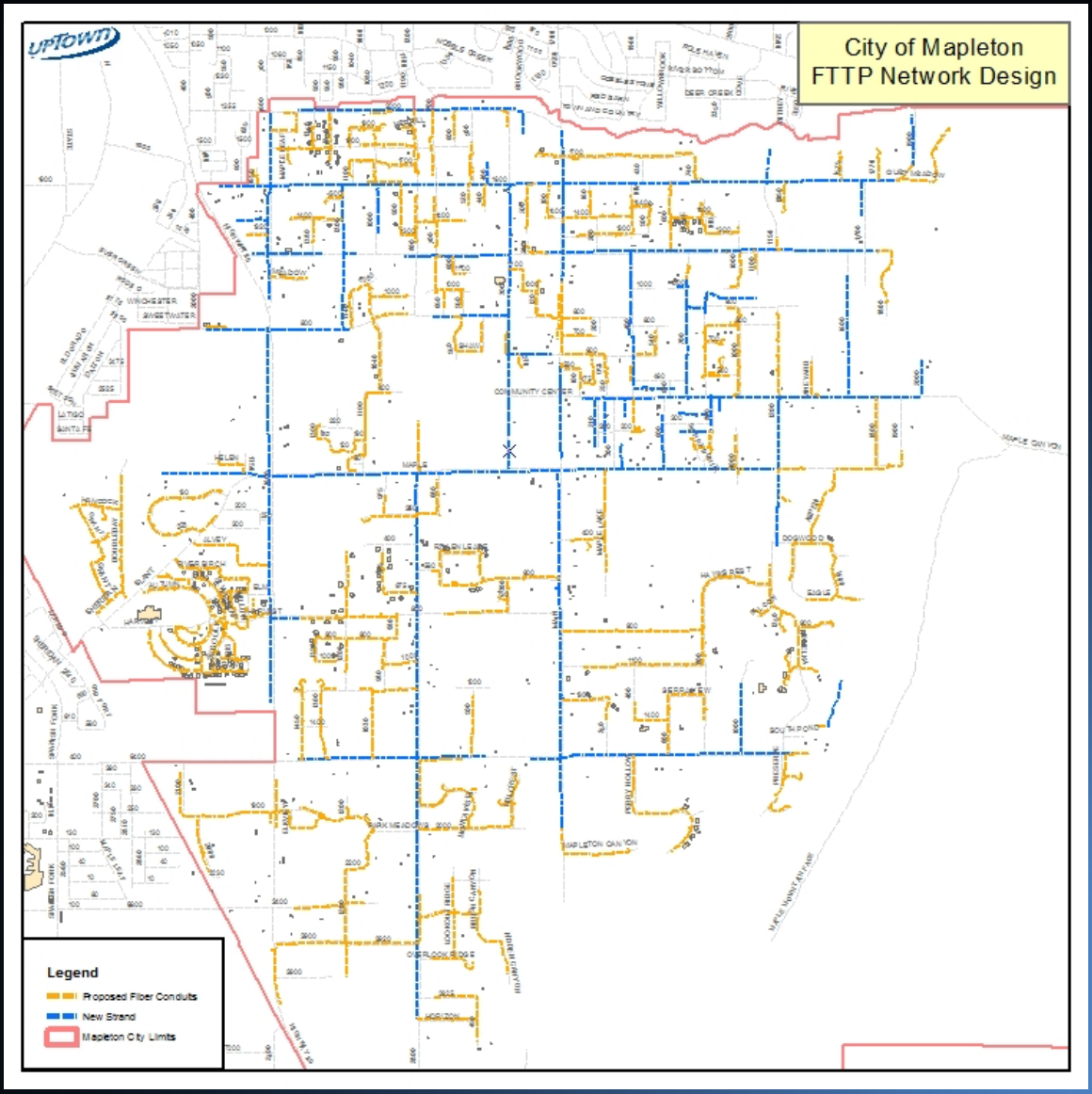
REFERENCE ARCHITECTURE

- 100% Active Ethernet standards based
  - Based on SFCN network architecture
  - Delivers 40Gig capacity to every neighborhood node
  - Delivers up to 10Gig capacity from each neighborhood node to any premises
- Distribution fiber network allocation (from each node)
  - One fiber per home and business from each node for FTTP
  - At least 10% spare fibers in each distribution cable
- Feeder fiber network allocation (to each node)
  - At least 12 fibers per node to feed FTTP equipment
  - At least 10% spare fibers in each feeder cable
- Design assumes the use of standard cable technology
  - Single jacket, light armor cable for aerial (com zone)
  - Single jacket all dielectric for underground

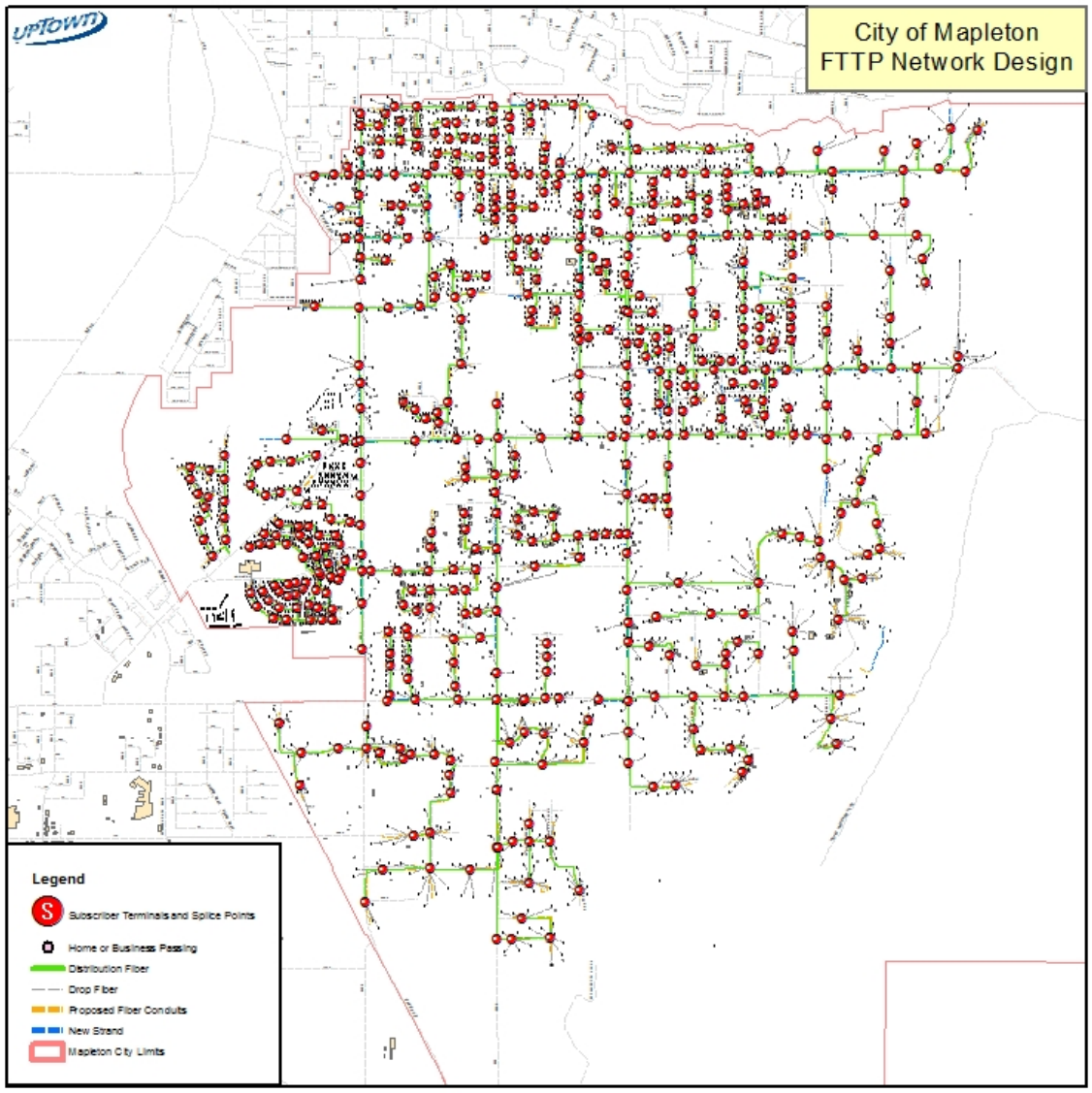
OUTSIDE PLANT COST ASSUMPTIONS

- New underground path creation
  - $15.10 per foot composite for conduit placement (primarily boring)
  - $1.13 per foot for conduit materials
  - Per structure adder for all vaults, pedestals and handholes
- Fiber placement
  - $1.25 per foot labor to install fiber cable in new conduit system
  - $0.75 per foot average fiber material cost
- Aerial construction costs
  - $1.75 per foot composite rate to install new messenger in com zone
  - $1.25 per foot to lash each cable to strand in com zone
- Technical services
  - $30 per fusion splice
  - $250 - $450 closure prep for terminals, splice points and feeder taps
- Material pricing assumptions
  - Fiber, terminal and structure pricing based on recent client bids
  - Pricing subject to change over time
- 10% contingency added for all materials and labor estimates

MAPLETON OUTSIDE PLANT CHARACTERISTICS



OUTSIDE PLANT CAPITAL BUDGET



Design Metric	Value
New Aerial Plant Miles	23.4
Underground Plant Miles	42.1
Total Poles	625
% Aerial	36%
% UG	64%
Passings	3,292
Nodes	16
Passings per Mile of Plant	50
Materials Cost per Passing	$325
Labor Cost per Passing	$1,499
Total Cost per Passing	**$1,824**
Total Materials (no drops)	$1.1M
Total Labor (no drops)	$4.9M
Total Cost	**$6.0M**

* - Does not include engineering, fixed equipment, subscriber capital and installation costs.

OUTSIDE PLANT COST DRIVERS

- SFCN crews may be less than 3rd party contractors
  - All work assumed to be completed by contractors
  - SFCN is willing to do certain technical services tasks node by node
    - Fiber placement (aerial and underground)
    - Closure prep, splicing and testing
  - Apples to apples cost comparison was not achievable for this study
- Soil conditions may drive higher construction costs
  - Boring assumed for 75% of all underground path creation
  - Cobble adder ($18/foot) applied to drilling rate for 15% of footage
  - Trenching assumed for 10% of footage
- Aerial construction
  - Rocky Mountain Power pole attachment process looks to be okay
  - Pole attachment process introduces significant cost and schedule risk
  - Additional expenses for survey, administration, design and construction
  - Schedule risk introduced by 3rd party review and approval of attachments

Incumbent and Proposed FTTP Service Offerings

Internet and Data Services

INCUMBENT RESIDENTIAL WIRELINE INTERNET

	Download	Upload	Price	Technology
CenturyLink	60M 100M	5M	$55.00 $65.00	DSL
Comcast	25M 100M 200M 300M	2M 5M 10M 25M	1st Year / Month-Month $19.99 / $29.99 $34.99 / $55.00 $49.99 / $70.00 $64.99 / $80.00	Cable Modem (DOCSIS 3.0)
	600M* 1G* 2G*	-	1st Year / Month-Month $74.99 / $90.00 $84.99 / $100.00 $299.95 (monthly only)	Cable Modem (DOCSIS 3.1)

Prices reflect subscription to Internet service at non-promotional rates. CenturyLink pricing per centurylink.com as of March 2020. Comcast pricing from xfinity.com as of March 2020.

*DOCSIS3.1 is not available in all areas that Comcast currently serves.

INCUMBENT RESIDENTIAL WIRELESS INTERNET

	Download	Upload	Price	Technology
Utah Broadband	10M 15M 20M 35M 60M	-	$49.95 $59.95 $69.95 $79.95 $89.95	Fixed Wireless
Rise Broadband	25M ($3.50/10GB) 25M (unlimited data)	-	$34.95 + $10.99 equipment rental $54.95 + $10.99 equipment rental	
CentraCom	20M 40M 60M 100M	-	$35.95 + $2.95 equipment rental $55.95+ $2.95 equipment rental $69.95+ $2.95 equipment rental $99.95+ $2.95 equipment rental	

Prices reflect subscription to Internet service at non-promotional rates. UBB pricing from utahbroadband.com as of March 2020. Rise Broadband pricing from risebroadband.com as of March 2020. CentraCom pricing from centracom.com as of March 2020.

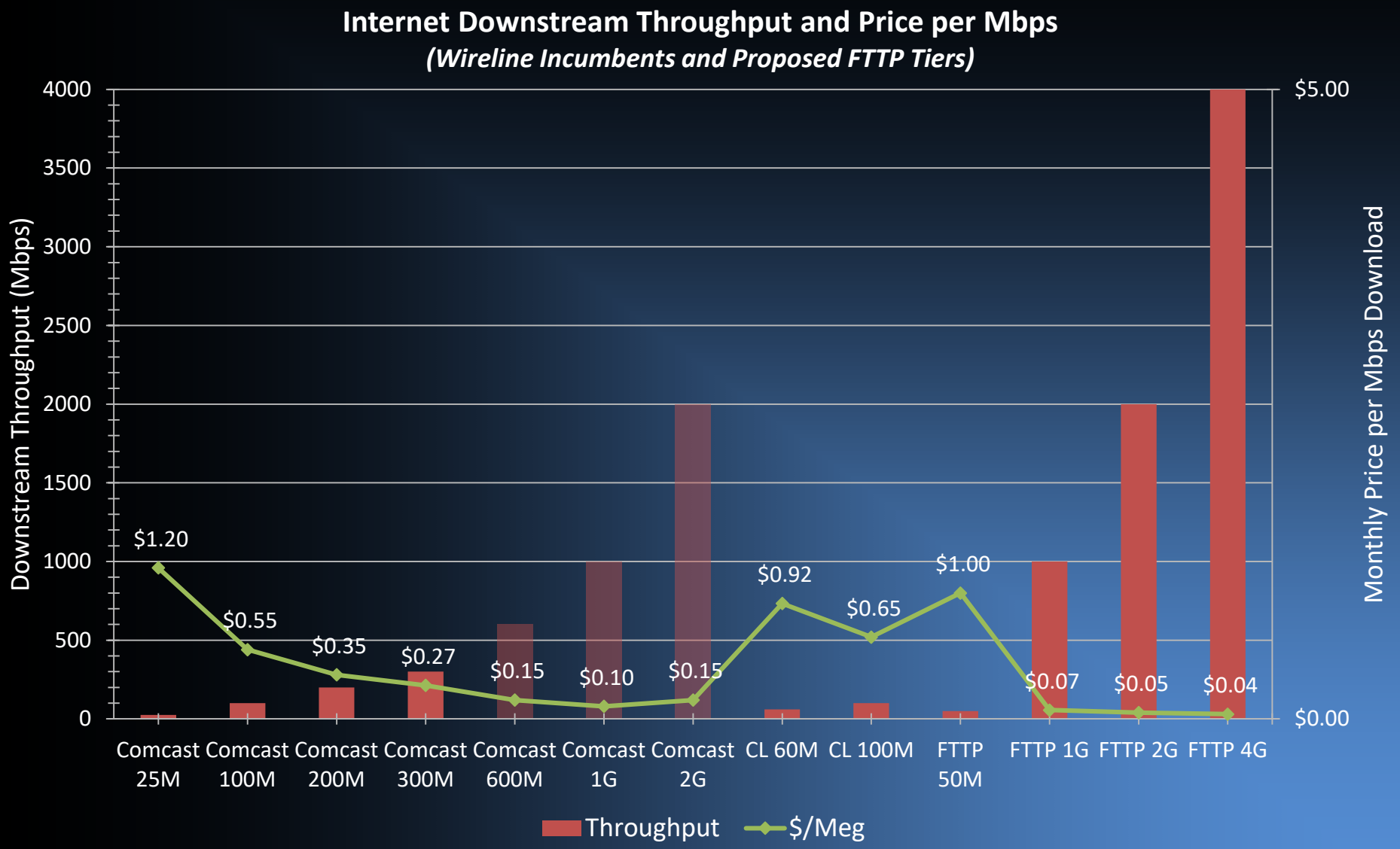
PROPOSED RESIDENTIAL INTERNET PRICING

Internet Tier Download / Upload	Monthly Price	Media Converter Model(s) / Cost
1G / 1G	$70	$35 for Media Converter
2G / 2G	$100	$345 for Media Converter
4G / 4G	$150	
Wireless Gateway Upgrade *Resell Plume managed WiFi ($2/sub/mo.)**	Add $10	Adds $160 for Plume wireless device

* Requires $2,000 monthly minimum but can be pooled with SFCN.

UPTOWN SERVICES, LLC

RESIDENTIAL INTERNET VALUE



PROPOSED COMMERCIAL INTERNET PRICING

Internet Tier Download / Upload	Monthly Price	Media Converter Model(s) / Cost
1G / 1G	$80	$35 for Media Converter
2G / 2G	$130	$345 for Media Converter
4G / 4G	$250	
Wireless Gateway Upgrade *Resell Plume managed WiFi ($2/sub/mo.)**	Add $10	Adds $160 for Plume wireless device

UPTOWN SERVICES, LLC

VOICE PROVIDER ROLE

Function	Operational Responsibility	FTTP System	CLEC
Capital	Local Loop and Premises NIU	✓	
	Fiber MUX, Transport, and Switch		✓
Interconnect	LNP, Operator Services, PSAP, IC Agreements		✓
Marketing & Sales	Advertising, Sales	✓	
	Brand, Pricing	✓	✓
Provisioning	Work Order Creation	✓	
	Bell Processes		✓
	Switch Provisioning		✓
	Customer Install	✓	
Billing	Bill Fulfillment	✓	
	Call Detail Record (LD), Taxes & Fees		✓
Internet	Backbone Interconnection		✓

UPTOWN SERVICES, LLC

VOICE SERVICES

With the below retail voice pricing, net revenue per line (retail less wholesale voice fees) will be the following at current CLEC wholesale market rates:

- Residential: $28 per month
- Commercial: $16 per month

Segment	Service	With Internet Rates	Without Internet Rates
Residential	Access Line, Features, & Unlimited LD	• Monthly: $35	Not Offered
Commercial	Access Line, Features, & Unlimited LD	• Monthly: $30 • 2 Year: $26 • 3 Year: $24	• Monthly: $40 • 2 Year: $36 • 3 Year: $34
	Digital SIP Trunk (per channel)	• 2 Year: $25 • 3 Year: $23	• 2 Year: $30 • 3 Year: $28
	Hosted PBX (per seat)	Requires Internet and minimum 3 year term: • 1-5 Seats: $25 • 6-24 Seats: $23 • 25-49 Seats: $22 • 50+ Seats: $21	

Potential Business Models & Funding Sources

BUSINESS MODEL OPTIONS

- OPTION 1: City as stand-alone Operator
  - All customer and network operation functions performed with incremental staff positions (Total of 8 FTEs in Year 5)
  - Voice service provided by CLEC partner

- OPTION 2: Operating partnership with Spanish Fork Community Network (SFCN)
  - SFCN performs customer operations and Internet Service Provider tasks
  - City staff positions reduced from 8 FTE → 2 FTE
    - System GM
    - Account Rep/Customer Service Coordinator

- RECOMMENDATION: SFCN Partnership Model
  - Utilize SFCN expertise to construct and operate a broadband system
  - Efficient use of existing SFCN personnel and equipment
  - Significantly lower total funding requirement

SFCN OPERATING PARTNERSHIP FRAMEWORK

Exploratory discussions with SFCN leadership have generated a preliminary framework for how the operating partnership could be structured…

Ownership Role of the City	• City funds capex for fiber build (FTTP), working capital, and all operating expenses • City is 100% owner of the FTTP system.
Operating Role of the City	• City is the service provider and performs some administrative functions (e.g. billing), general management, and on-site account support.
Operating Role of SFCN	• Customer Operations: SFCN provides customer care, customer installs and provisioning, service truck rolls, and network maintenance. • Data Network Services: Network configuration/administration, hardware/software platform, bandwidth , system monitoring.
Services Offered	• Internet and Voice (SFCN video would not be offered)
Services Revenue	• All revenue retained by the City • Partner compensated with monthly fee per connected end-user.
Partnership Terms	• Initial term commitment of 5 or 10 years • Monthly fee per connected premises (household or business) of $15 (years 1-5) and $25 (years 6-10) • Transport circuit fixed fee of $200/month • Bandwidth fee at current SFCN cost of $.57/Mbps starting at 10Gbps

INCREMENTAL BROADBAND FTE REQUIRED

The total FTE requirement levels at 8 in Year 4. Under the Operating Partner model, this is reduced to 2 FTE by moving the shaded functions to the operating partner…

Position Title	Salary (unloaded)	Year1	Year2	Year3	Year4	Year5
System GM	$125,000	1.0	1.0	1.0	1.0	1.0
Comm./MDU Account Manager	$65,000	1.0	1.0	1.0	1.0	1.0
Network Engineer	$75,000	0.5	1.0	1.0	1.0	1.0
CSRs	$50,000	-	1.0	1.0	1.0	1.0
TSRs	$55,000	-	1.0	1.0	1.0	1.0
Install Techs	$55,000	-	-	-	1.0	1.0
Maintenance Techs	$65,000	-	1.0	1.0	1.0	1.0
Service Techs	$55,000	-	1.0	1.0	1.0	1.0
Total Headcount: Stand-Alone Model		**2.5**	**7.0**	**7.0**	**8.0**	**8.0**
Total Headcount: Operating Partner Model		**2.0**	**2.0**	**2.0**	**2.0**	**2.0**

SFCN PARTNERSHIP PRO FORMA IMPACTS

In exchange for the ongoing monthly fee to be paid to SFCN, the following impacts to the financial analysis are incorporated into the pro forma…

Revenue	• Monthly fee per connected premises (household or business) of $15 (Years 1-5) and then $25 (Years 6-10) as contra-revenue • Years 11-20: Insource all operations (baseline) or continue at reduced fee
Operating Expense	• Staffing requirement reduced to 2 full-time employees • Transport circuit fixed fee of $200/month • Bandwidth fee at current SFCN cost of $.57/Mbps starting at 10Gbps • Billing system integration to Caselle previously developed by SFCN
Capital Expense	• Generator/UPS is not required • Core switch/router of $200k is not required • Internet service back-office platform of $100k is not required • Testing equipment of $50k is not required • Splicing trailer of $25k is not required • Field technician tools of $23k is not required • Service van ($45k) and bucket truck ($90k) is not required • Customer installs of $500 each is not required (avoided contractor fee)

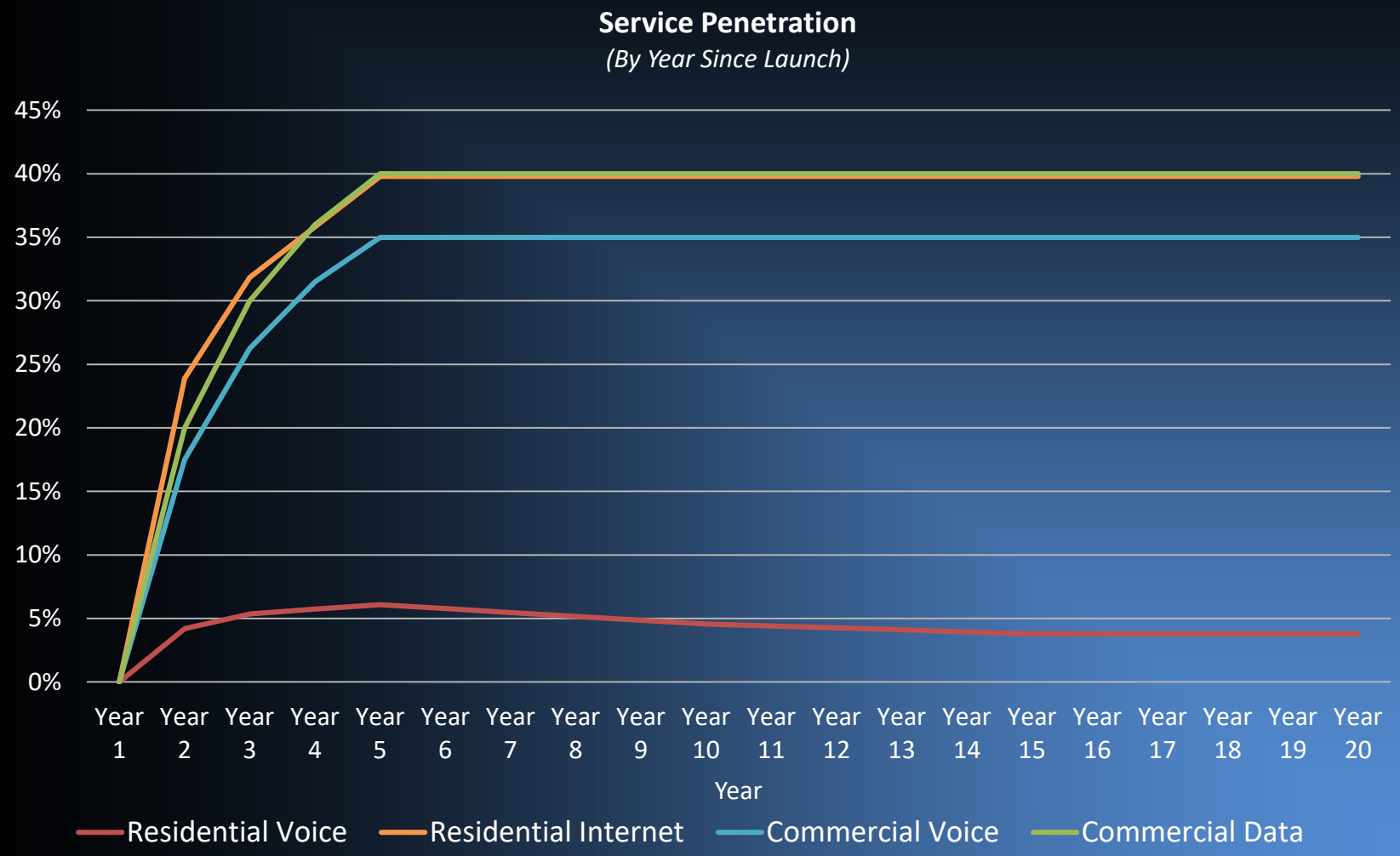
Pro Forma Financial Analysis

SFCN Operating Partner Model

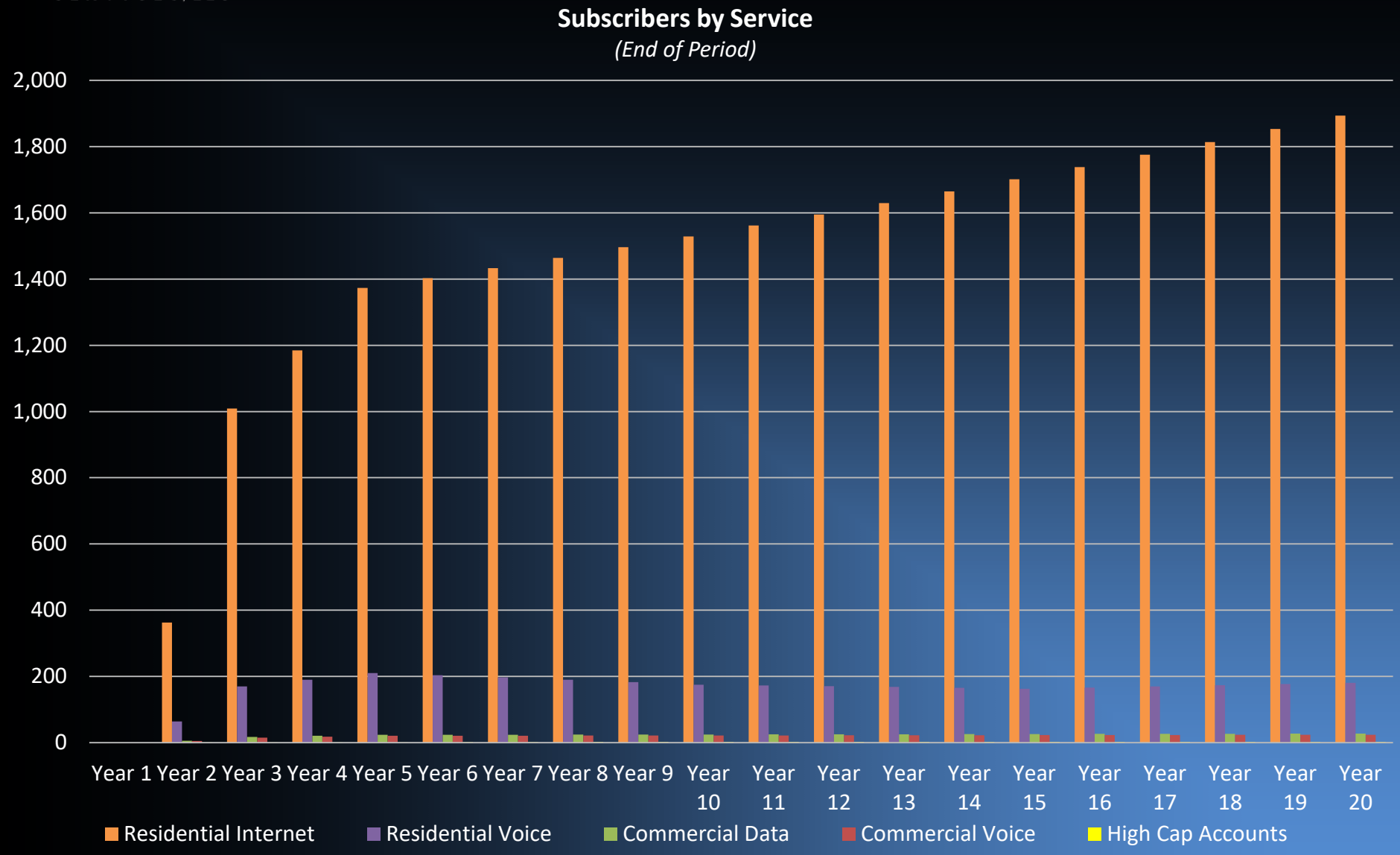
Revenue Forecast

PENETRATION FORECAST

- Pro forma take-rate projections were evaluated via quantitative market research and reflect ongoing wireless (voice) substitution within the residential segment…



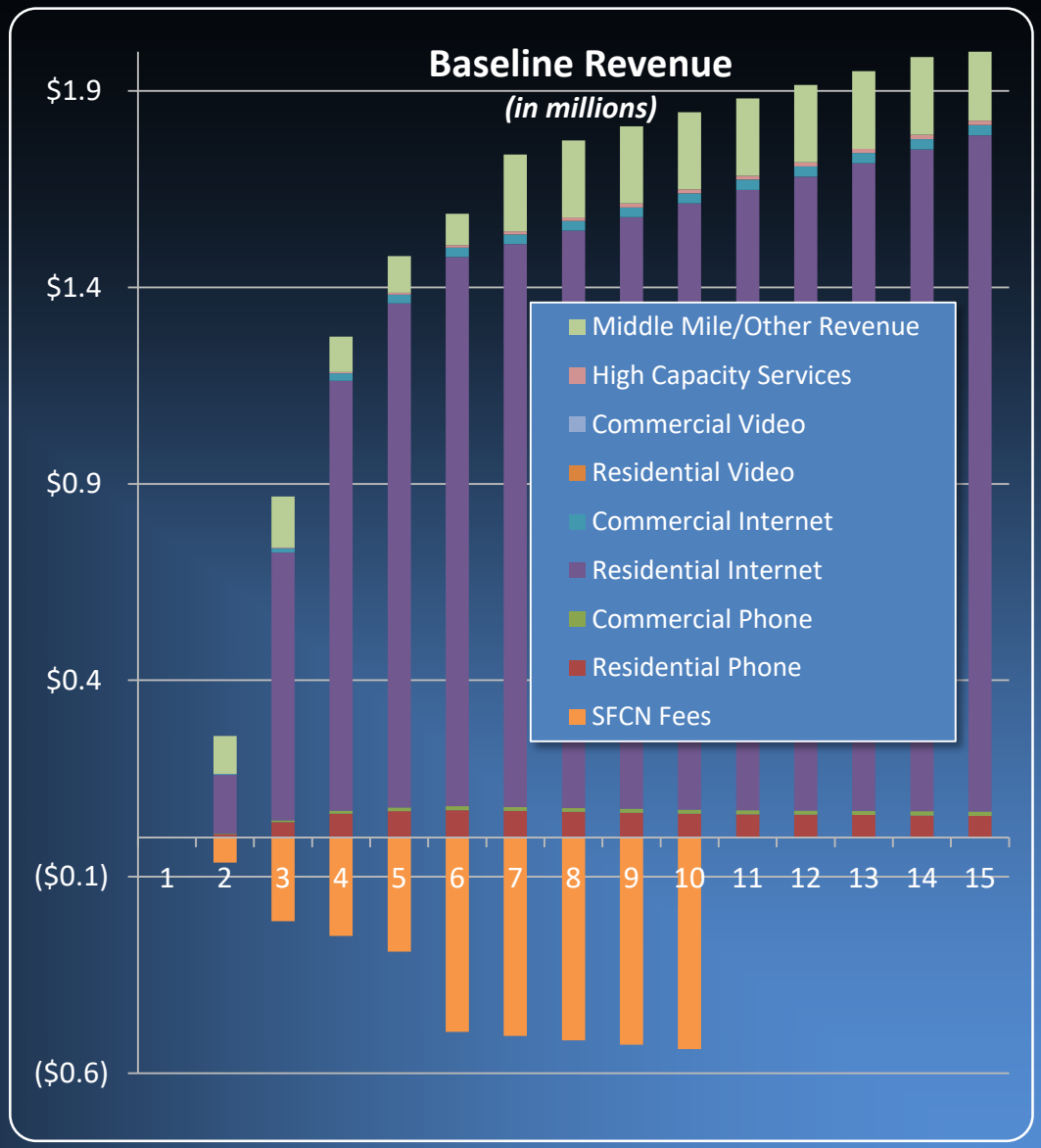
SUBSCRIBER FORECAST



REVENUES

KEY INPUTS

- Year 1 Premises
  - Residential: 2,800
  - Commercial: 60
  - Household Growth: 4.3% Yrs. 2-5, then 2.2%
  - Commercial Growth: 2% Yrs. 2-5, then 1%
- Year 5 Penetration
  - Internet: 39.8% Res / 40% Com
  - Voice (eroded): 6.1% / 35% Com
- Residential Internet
  - 3 Tiers (1G/2G/4G): $70-$150
  - Wireless Gateway: $10 ($8 net)
- Commercial Internet
  - 3 Tiers (1G/2G/4G): $80-$250
  - Wireless Gateway: $10 ($8 net)
- Voice
  - Residential: $28 net wholesale
  - Commercial: $16 net per line
- Inter-Departmental Lease Fee
  - 21% of annual debt service ($56k in Yr. 2 increasing to $165k in Yr. 7)
- Install Fees
  - Residential: $100
  - Commercial: $100
- SFCN Fees
  - Treated as Contra-Revenue
  - Annual fees per detail slide



Operating Budget

INCREMENTAL STAFFING

- Mapleton City New FTTP Positions (full-time)
  - Years 1-20: System General Manager (1), Commercial/MDU Account Rep (1)
  - Years 11-20: Network Engineer (1), CSRs (2), Field Techs (2)
  - Position salaries based on SFCN wages
  - 52% benefits loading and 2.5% annual salary increase

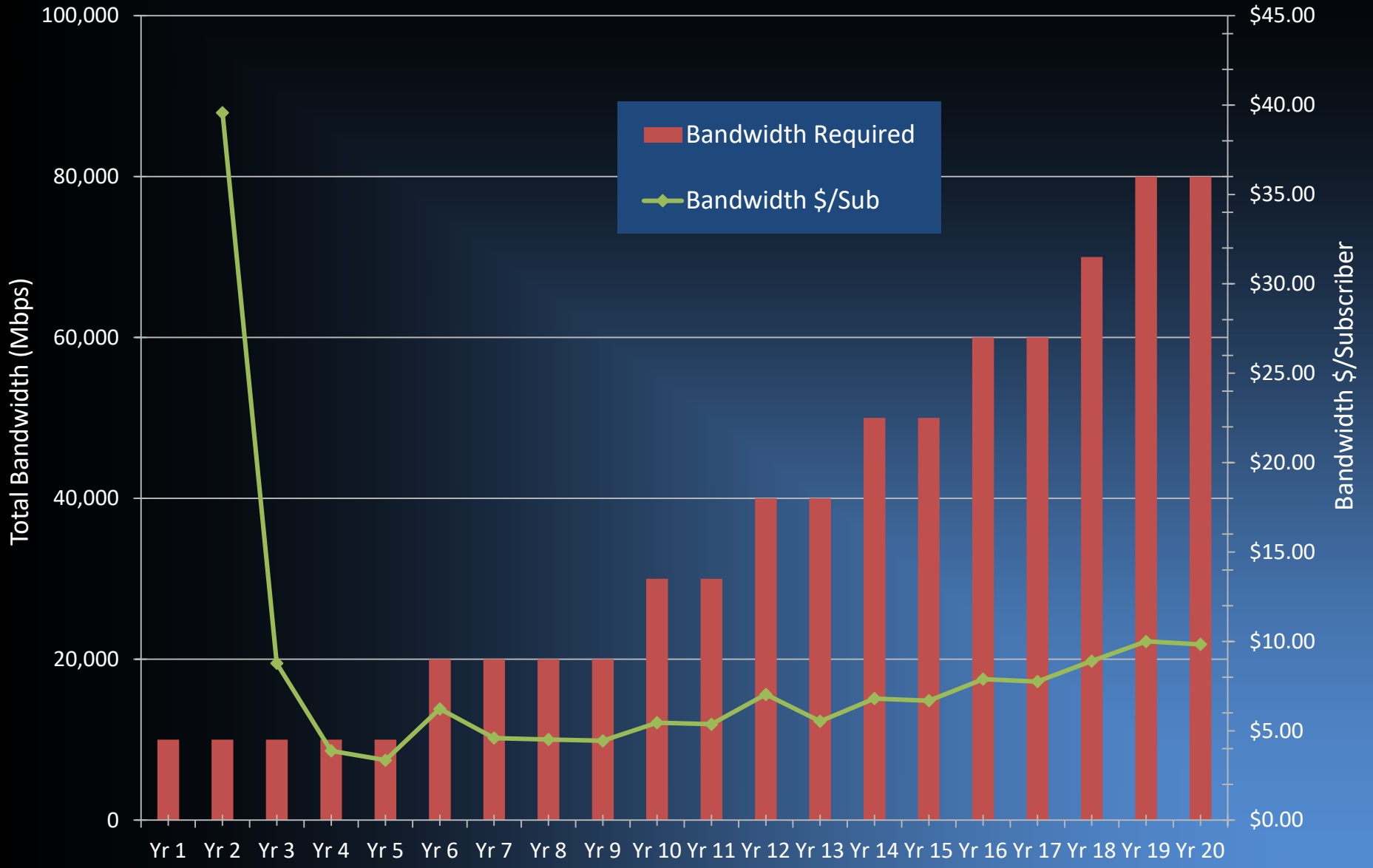
- SFCN Functions (Years 1-10)
  - Customer Care (help desk, sales, billing support, work orders)
  - Customer Installs and service calls (truck rolls)
  - Network administration (inside plant)
  - Network maintenance (outside plant)

BANDWIDTH SOURCING & USAGE INPUTS

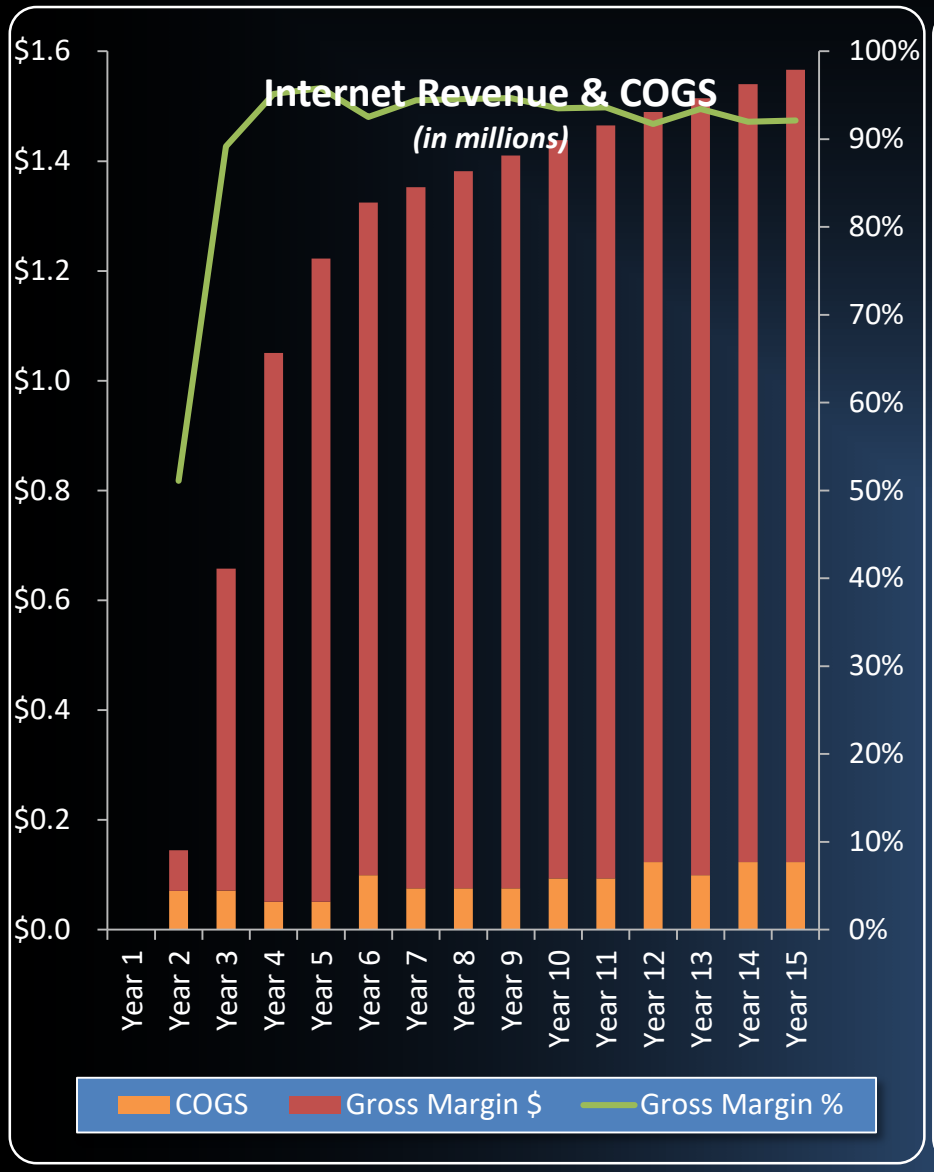
Cost Requirement	Sourcing Details	Monthly Recurring Cost
Transport	Dedicated fiber route to SFCN headend at $200/month • Existing fiber: SFCN network to edge of Mapleton City limits • New fiber: SFCN will construct to 125 W 400 North (10' x 10' equipment room)	$200
Access	Bandwidth via SFC starting at $0.57/Mbps/month and declining every 3 years to reflect market conditions	$5,700 in Year 2
Other Fees	IP Addresses: $.50 each/month	Varies with subscriber growth
Bandwidth Usage Per Subscriber	Residential: 3M in Year 1 growing at 25%/year reducing to 10% by Year 10 Commercial: 1.5M in Year 1 growing at flat 10%/year High Capacity: 1M in Year 1 growing at flat 10%/year	

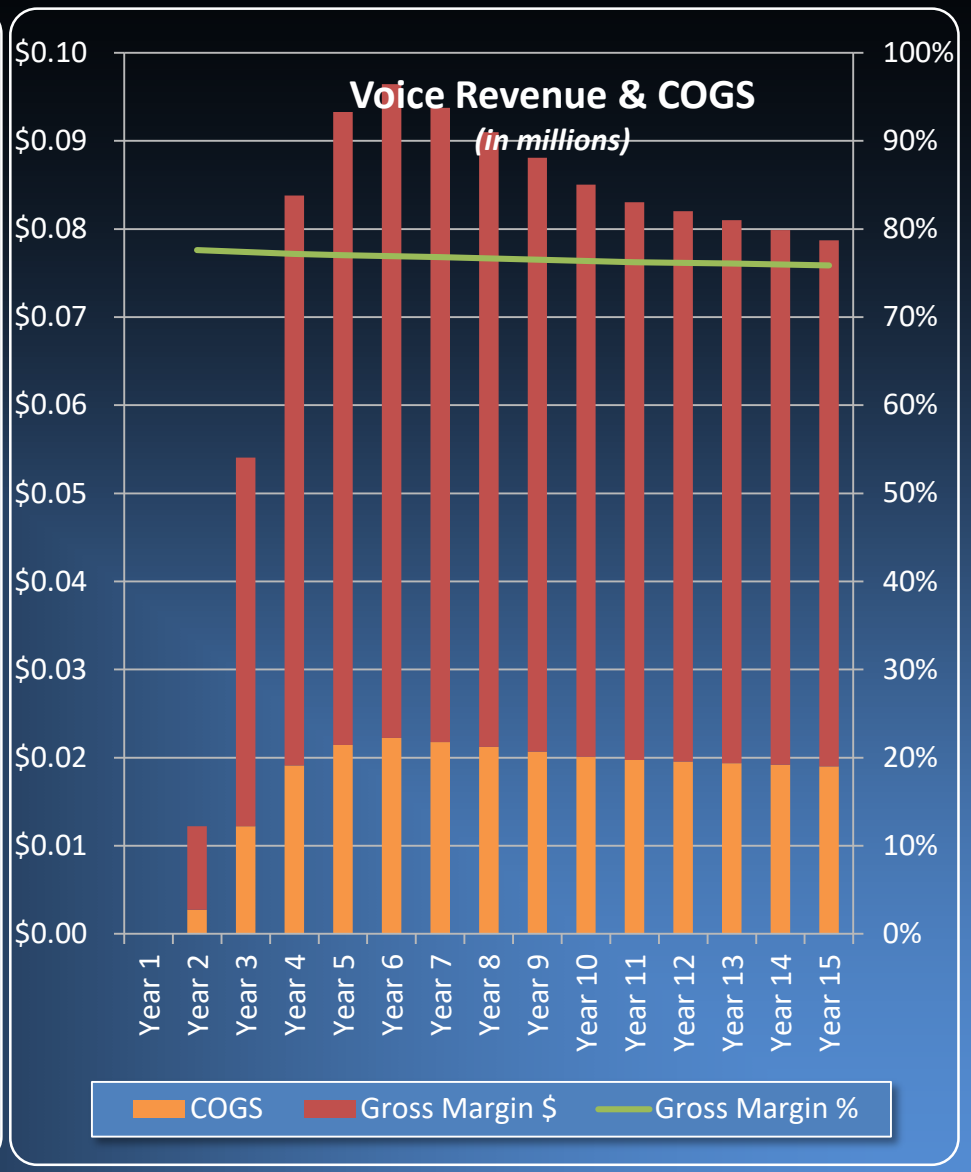
UPTOWN SERVICES, LLC

BANDWIDTH FORECAST



BASELINE COGS & GROSS MARGIN

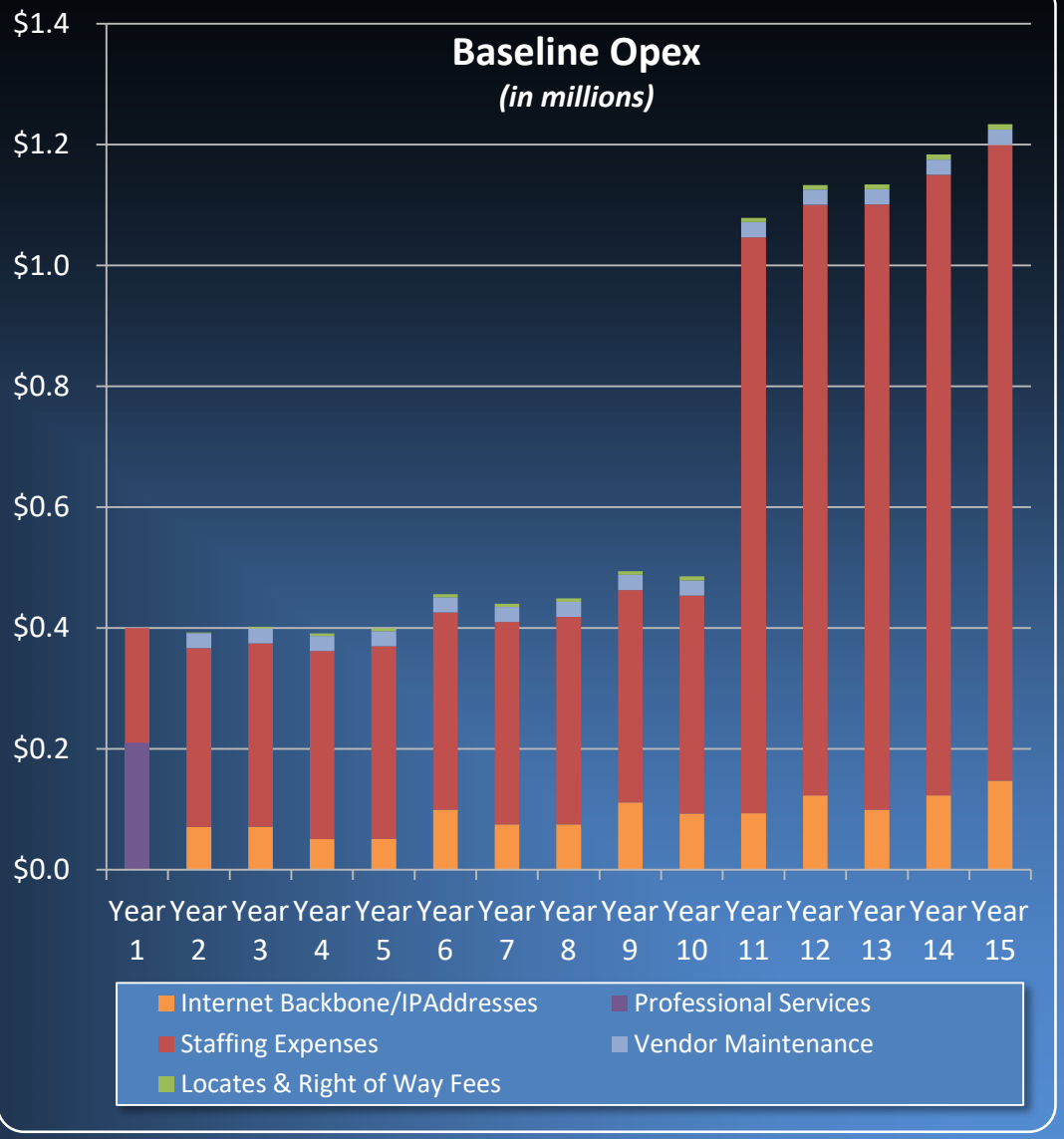




OPERATING EXPENSE

KEY INPUTS

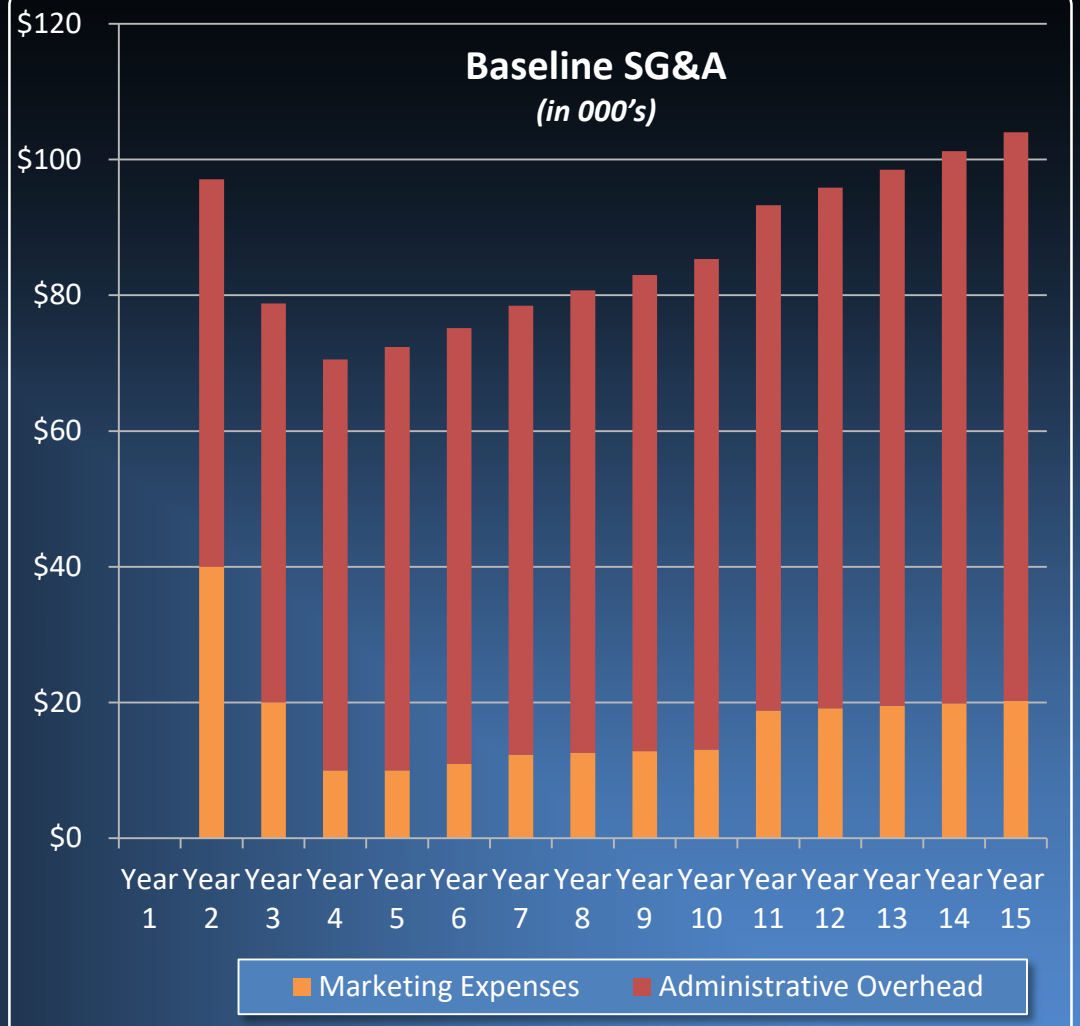
- Transport/Bandwidth/IP Addresses
  - Fees and usage per detail slide
- Staffing
  - Headcount per detail slide
  - 2.5% annual wage increase
  - 52% benefits loading
- Vendor Maintenance
  - $25k/year for FTTP electronics (starts Yr. 1)
- Professional Services
  - Implementation Support: $180k
  - Legal/Acct: $30k (Yr. 1) → $5k/year
- Locates & ROW Fees
  - Year 5 total attachments: 616
  - Annual cost per attachment: $5.76
  - Annual fee increase: 5%
  - Application fee of $56/pole included in OSP construction capex



GENERAL & ADMINISTRATIVE EXPENSE

KEY INPUTS

- Marketing
  - Year 1: $0k
  - Year 2: $40k
  - Year 3: $20k
  - Years 4-5: $10k
  - Year 6+: 1% of revenues
- Billing
  - No incremental cost given broadband services fees added to electric billing statement
- Overhead
  - Broadband imputes an allocation of administrative overhead costs as an enterprise fund
  - $57k in Year 1
  - Increases 3% annually
- Facilities & Workspace
  - No incremental budget required



Capital Budget

CAPITAL: YEAR 1

- Network Construction
  - OSP Construction: $1,824 composite cost per premise passed
  - Subsequent plant extensions: $300/meter passed
  - Neighborhood Node cost: $210/meter passed
  - Make ready cost: $700/pole (may be lower depending on state of RMP poles)
  - Pole attachment application fee: $55.64/pole
  - Year 10 Network electronics upgrade: $75/premise passed

- Software
  - Fiber Management & Network Management: $50k

- Media Converters (MCs)
  - Media Converter for 1G tier: $35 each
  - Media Converter for 10G tier: $345 each
  - Plume Wireless Device: $160 each
  - Year 7 MC upgrade: $45k ($35/ea.)

CAPITAL: YEAR 1

- Fiber Drop & Customer Equipment
  - Fiber drop and connectors: $125 each
  - Power cord and UPS: $52 each ($12 for non-voice install without UPS)

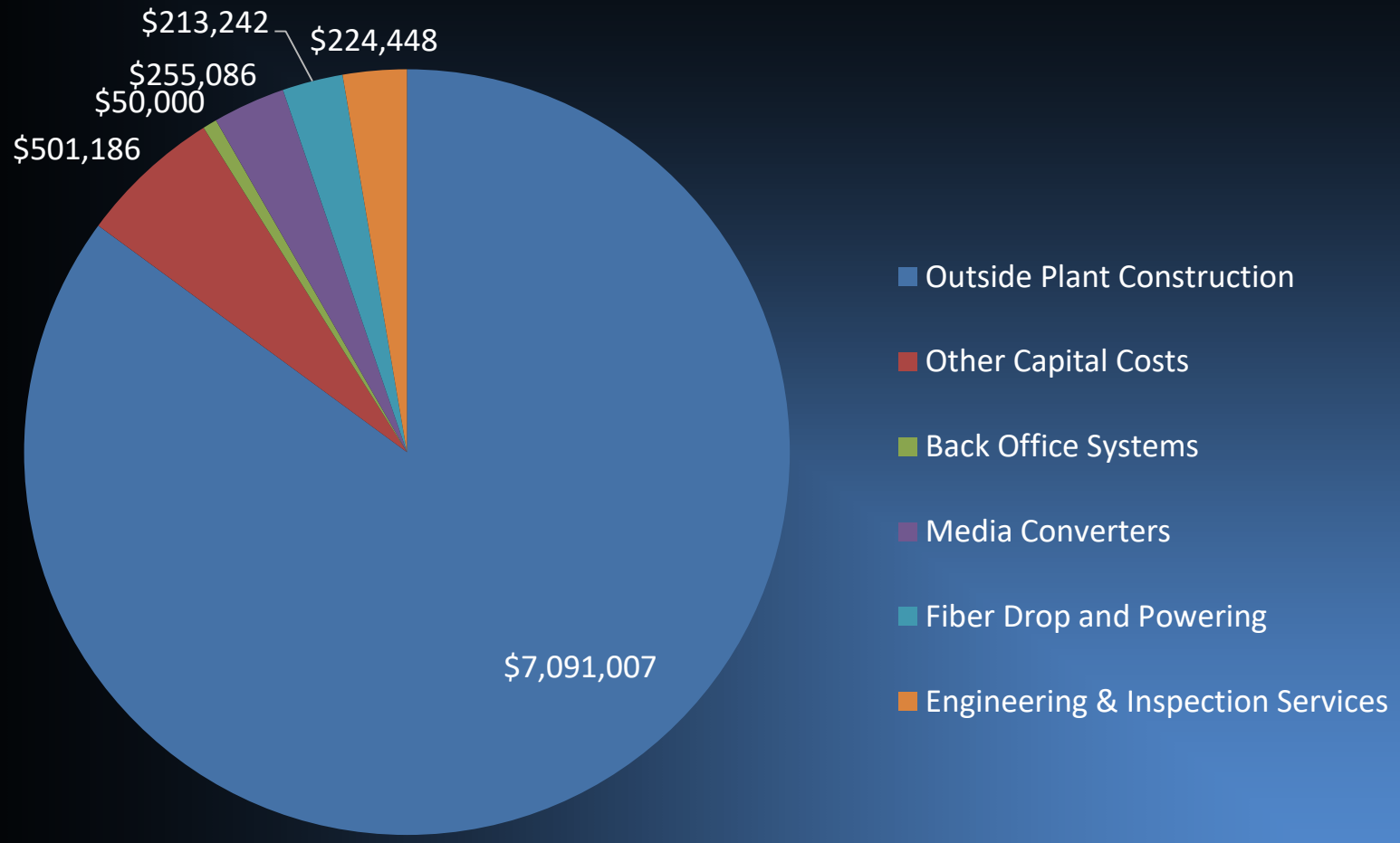
- Engineering and Integration
  - GPS Walkout and Survey of RMP Poles: $500 per mile
  - Make ready engineering: $500 per mile
  - FTTP design: $1,500 per mile
  - Construction Management Services: $5,000 per mile
  - As-built drawings: $250 per mile

CAPITAL: YEAR 11

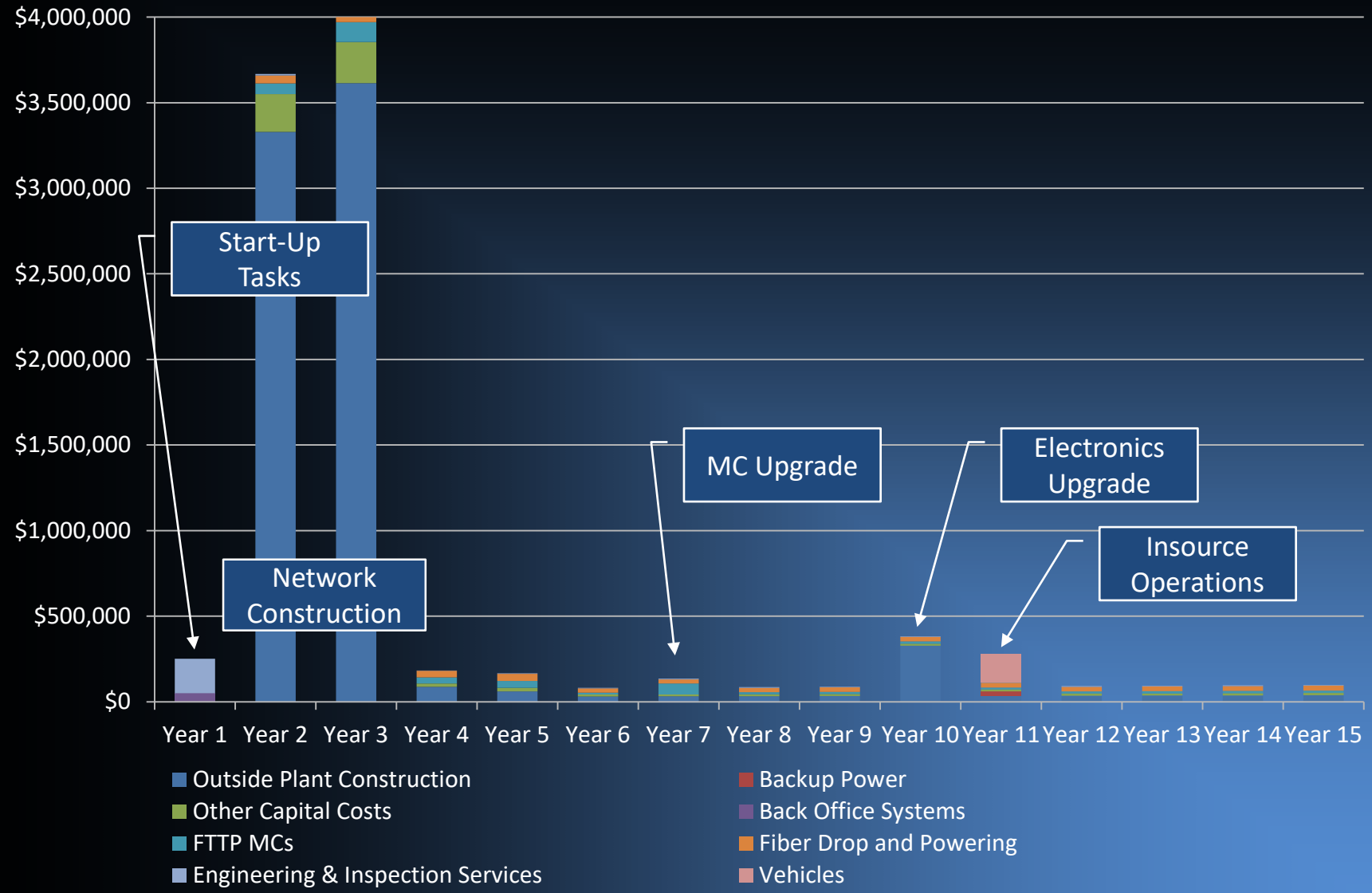
- Fixed Equipment
  - Generator (Year 11): $25,000
  - Core HE switch/router: $200k
  - Internet systems back office: $100k
  - Field Tech Equipment/Tools: $98k
- Software
  - OSS/BSS: $250k
- Vehicles
  - Service Vans Per Install Technician: 1.0
  - Heavy Service Trucks Per Maintenance Technician: 1.0
  - Service vans: 1 at $45k each
  - Heavy Service Trucks (non-insulated): 1 at $90k each
  - Install Rigs: 1 per Install Technician at $20k each
  - Vehicles replaced at 6 year intervals

BASELINE CAPEX – YEARS 1-5

Five Year Capex = $8.3M



BASELINE CAPEX BY YEAR



Pro Forma Outcomes

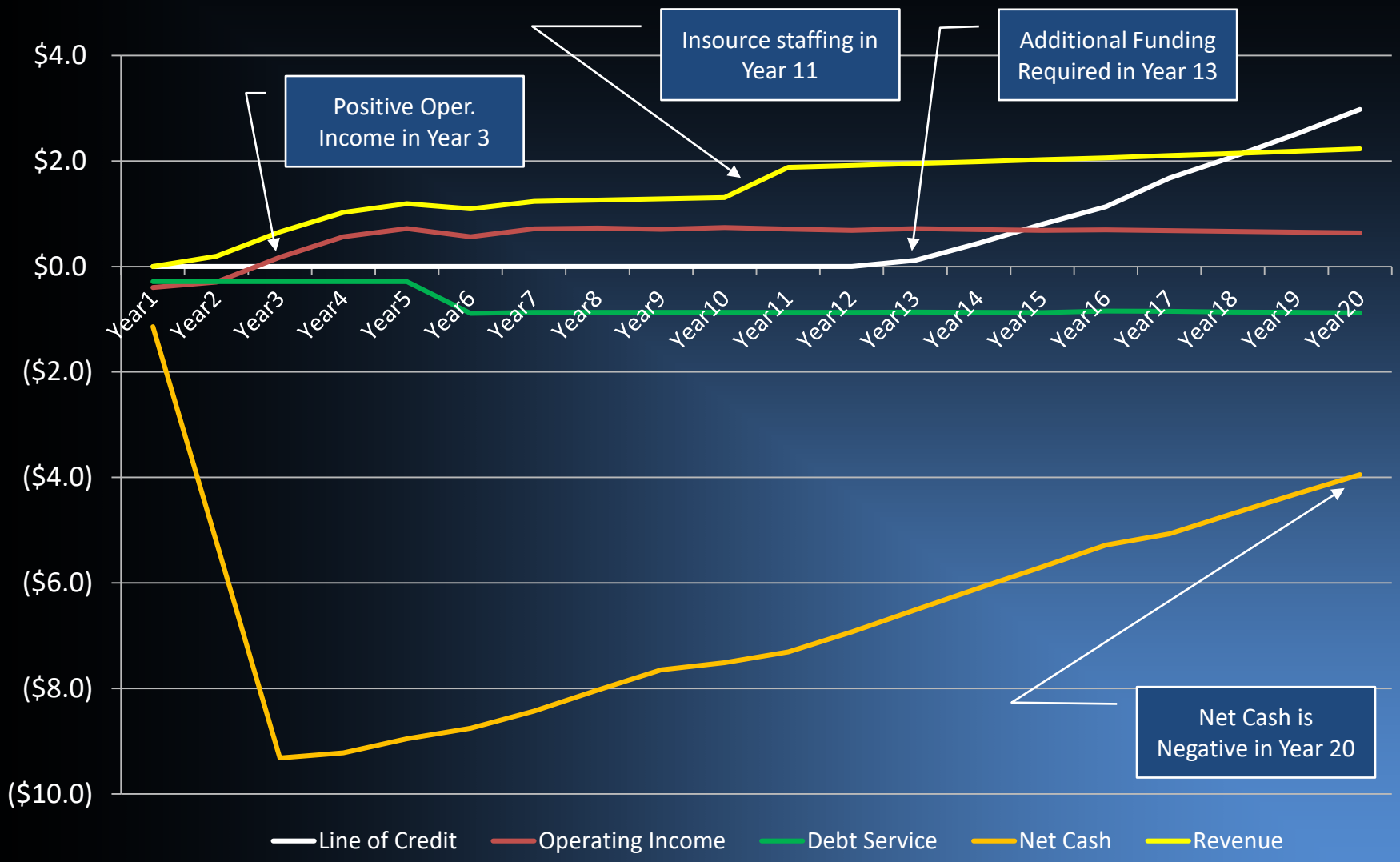
FUNDING SOURCES

1. Equity
   - City provides $1,000,000 contribution in Year 1
   - As equity, no imputed interest rate
2. Long Term Bond
   - Single round of financing (Year 1) via 20-year tax exempt bond
   - Backed by taxing authority of the City (sales tax & energy sales tax)
   - Interest rate of 2.75% and five years of capitalized interest
   - Principal payments starting in Year 6
   - 2.0% issuance cost, $0 reserve requirement
3. Working Capital Loan
   - Provides for cash needs not covered by long term financing
   - 15 year term with interest rate of 2.0% based upon current PTIF* rate
   - Interest accumulates over first 5 years with Year 6 balloon payment
   - Level payments begin in Year 6 and complete in Year 15

** Public Treasurers Investment Fund*

UPTOWN SERVICES, LLC

FINANCIAL MILESTONES OVER 20 YEARS



FINANCIAL OUTCOMES

Input/Outcome	Baseline View: Insource in Year 11	Scenario: Breakeven Penetration	Scenario: Breakeven Cost/Passing	*Scenario: 1G at $50 (Longmont Strategy)*
Construction Cost / Passing	$1,824	$1,824	**$1,100**	$1,824
Internet Penetration (residential)	39.8%	**44.0%**	39.8%	**54%**
Price for 1G Tier (residential)	$70/month	$70/month	$70/month	**$50/month**
SFCN Fee Per Sub/Month	Years 1-5: $15 Years 6-10: $25	Years 1-5: $15 Years 6-10: $25	Years 1-5: $15 Years 6-10: $25	Years 1-5: $15 Years 6-10: $25
Equity	$1.0M	$1.0M	$1.0M	$1.0M
Long Term Bond	$10.4M	$10.4M	$7.6M	$10.5M
Working Capital Loan	$0.3M	$0.3M	$0.3M	$0.3M
Line of Credit	$3.0M	-	-	-
Total Funding	**$14.6M**	**$11.7M**	**$8.9M**	**$11.8M**
Net Cash – Year 20	($3.0M)	$0.1M	$0.1M	$0.3M
Project Break Even	**> 20**	**20**	**20**	**20**
Financially Feasible?	**NO**	**YES**	**YES**	**YES**

STUDY CONCLUSIONS & NEXT STEPS

- To achieve financial self-sufficiency, the fiber system performance would need to exceed our 'most likely' take rate estimates
  - Goal: Prior to the retirement of the debt in year 20, cash flow is sufficient to cover debt service without any additional funding after Year 1
  - The residential Internet penetration rate needs to reach 44% versus our research-based estimate of 39.8%
  - However, the SFCN partnership presents a tremendous opportunity for Mapleton City given their existing broadband operation and operating expertise

- Key Next Steps
  - ✓ Review with Citizen Committee
  - ✓ Legal review of HB149 requirements
  - Validate financing terms and pro forma review by Zions Public Finance
  - Initial presentation to City Council prior to June 30th