



Communication Technology In Next Generation Developments

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Institute

Research Sources



**350 Provider/ Vendor/ Expert Interviews:
RVA LLC March to September, 2013**

**2,100 Consumer Interviews:
RVA LLC June, 2013**

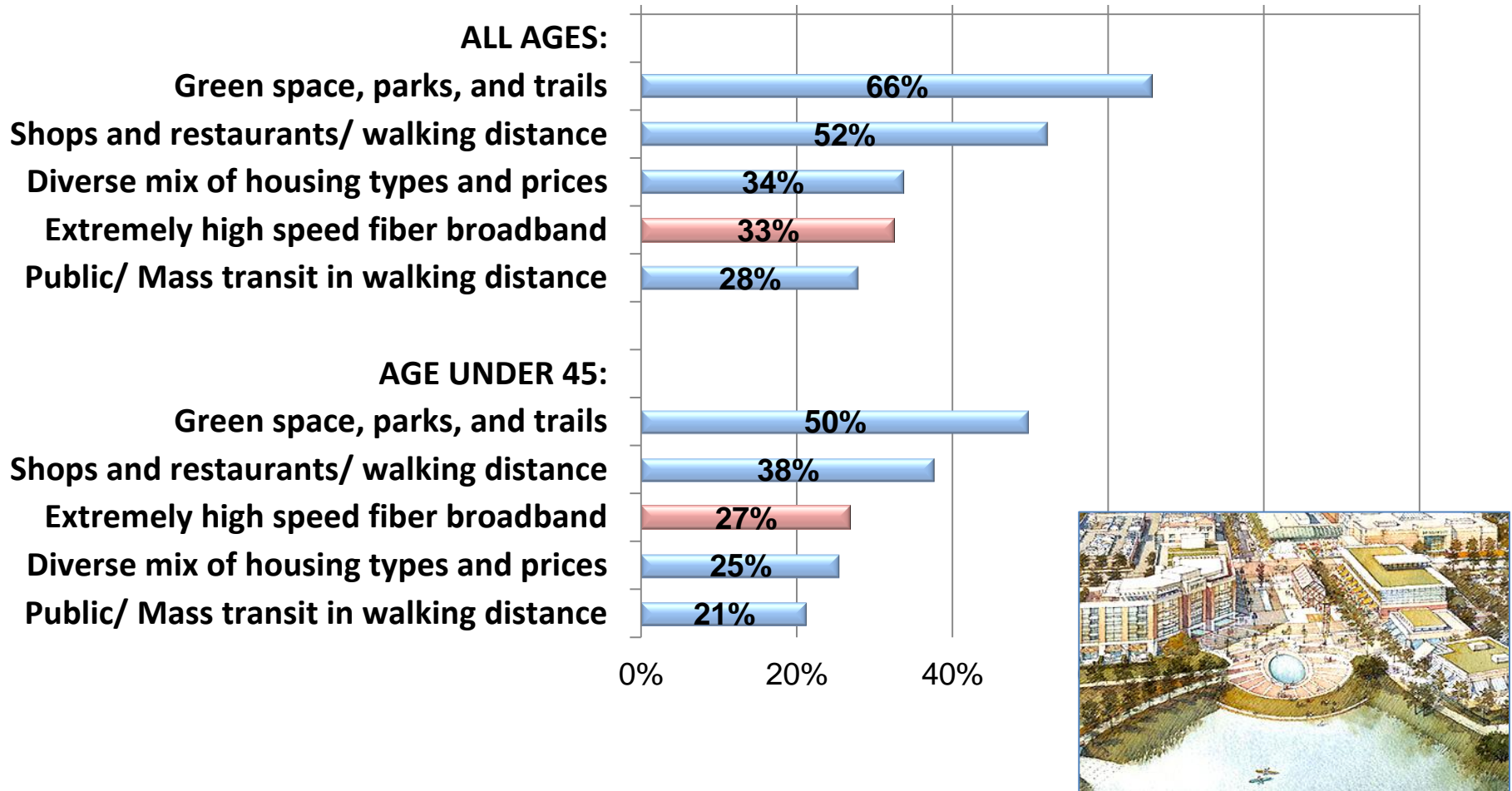


Conducted in part for the FTTH Council

Advanced Broadband Enhances Value

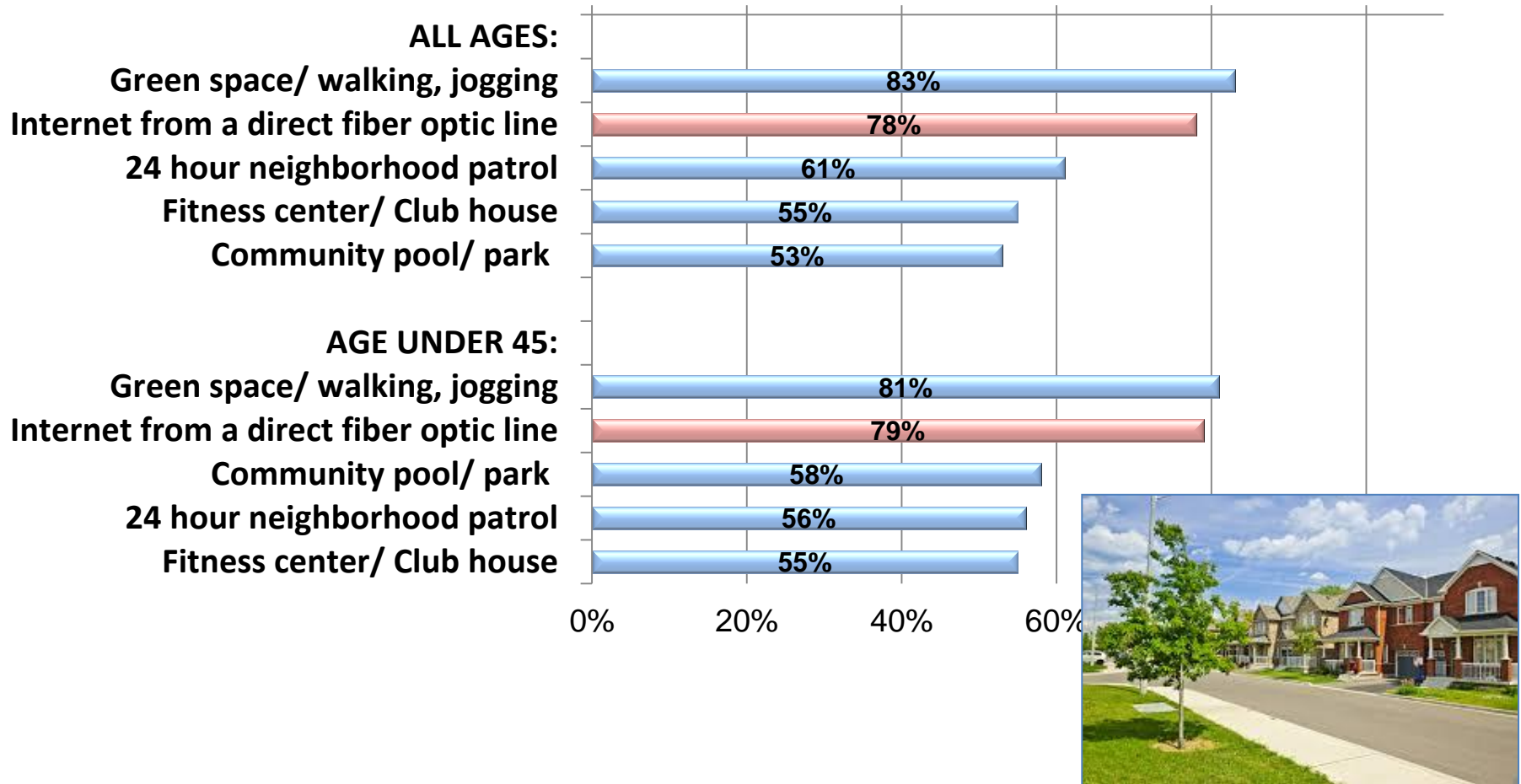
Advanced Broadband Is Important In A Community

Two -Three Elements Most Important To New Community



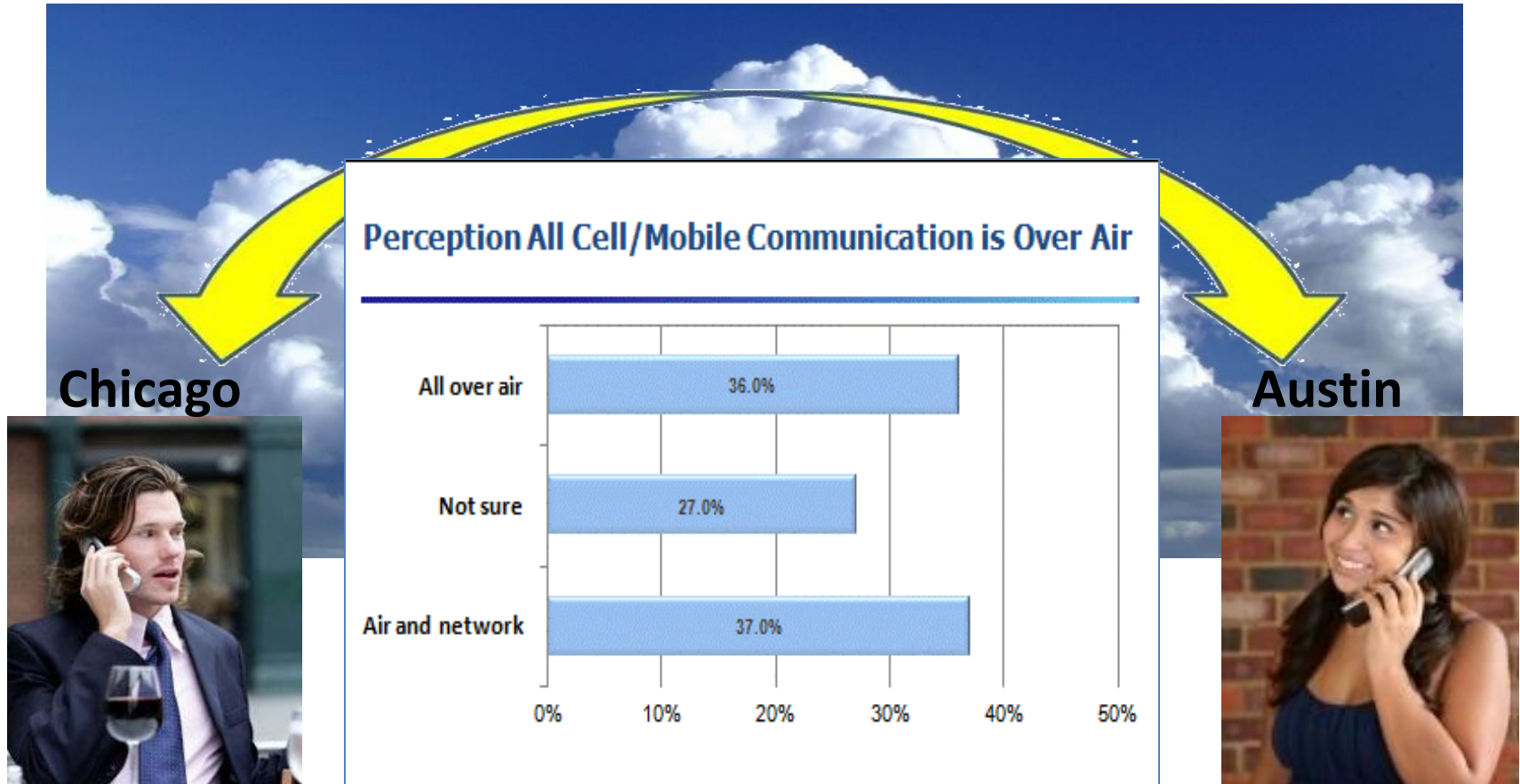
Advanced Broadband Is Important In A Neighborhood

Percent Saying Somewhat Or Very Important

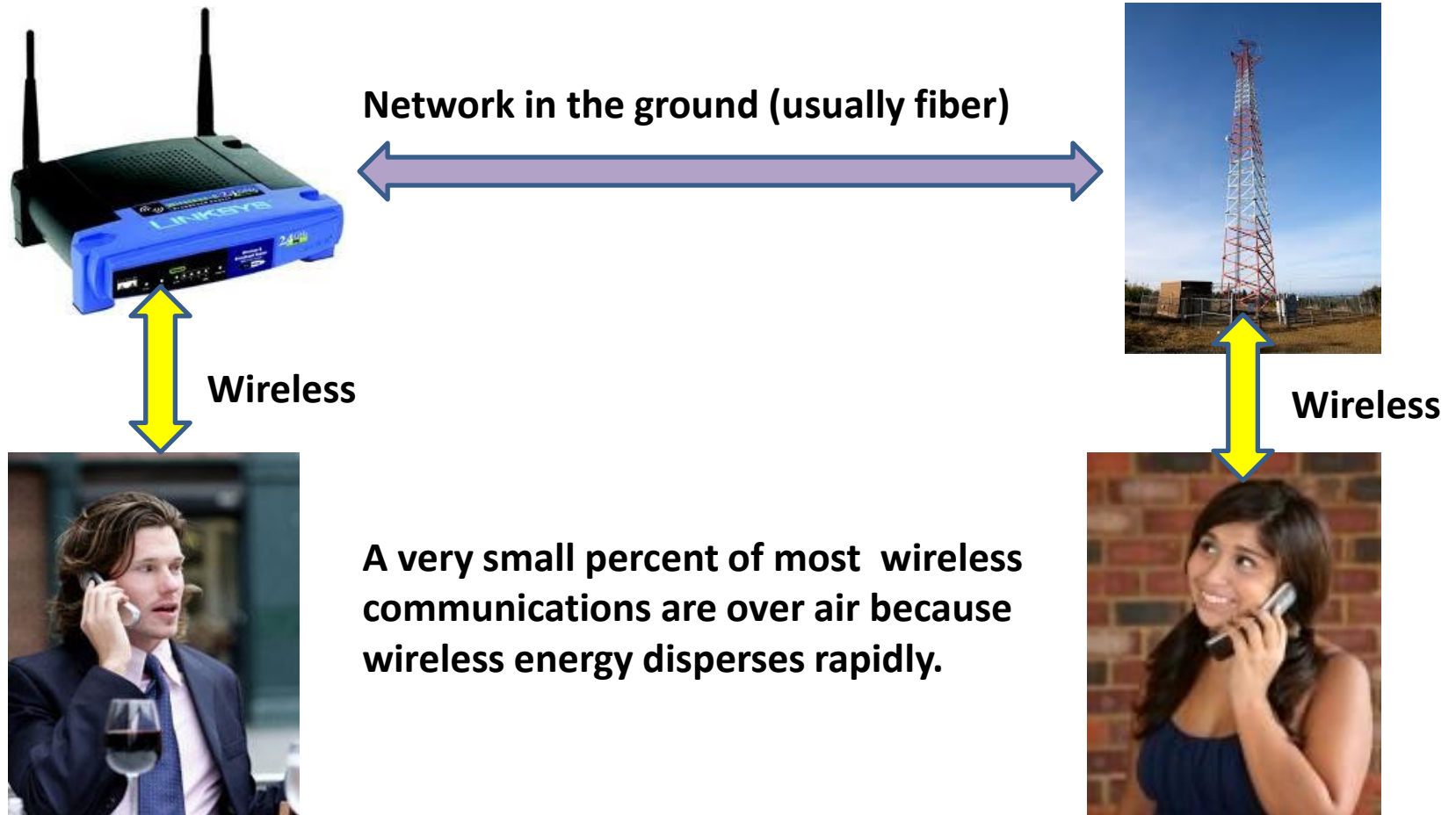


External Wireless Alone Is Insufficient

Many Mistakenly Think “Wireless” Is Really Wireless



Wireless Is Actually An Important App On Fiber!

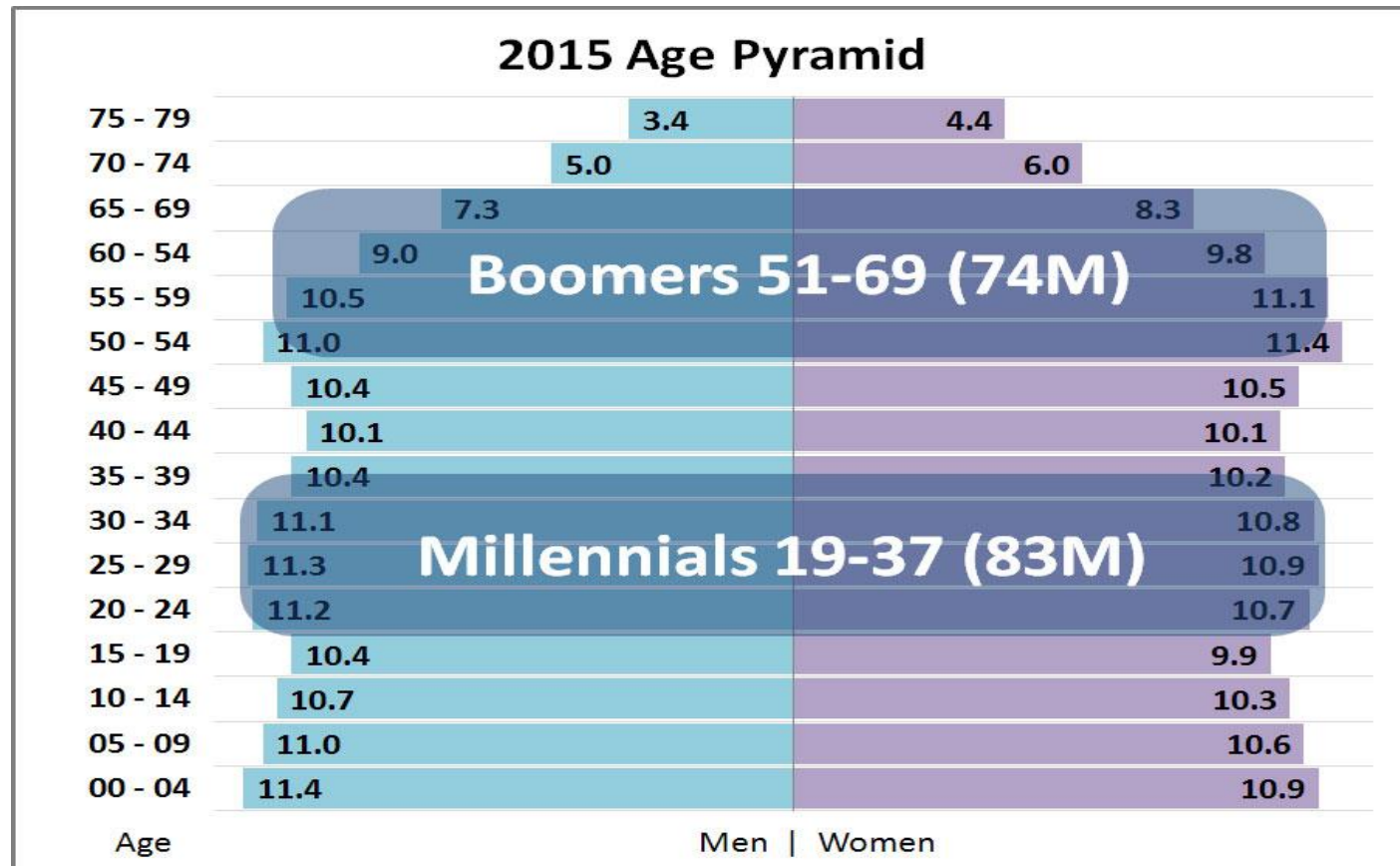


Small External Fiber Fed Antennas Are Needed



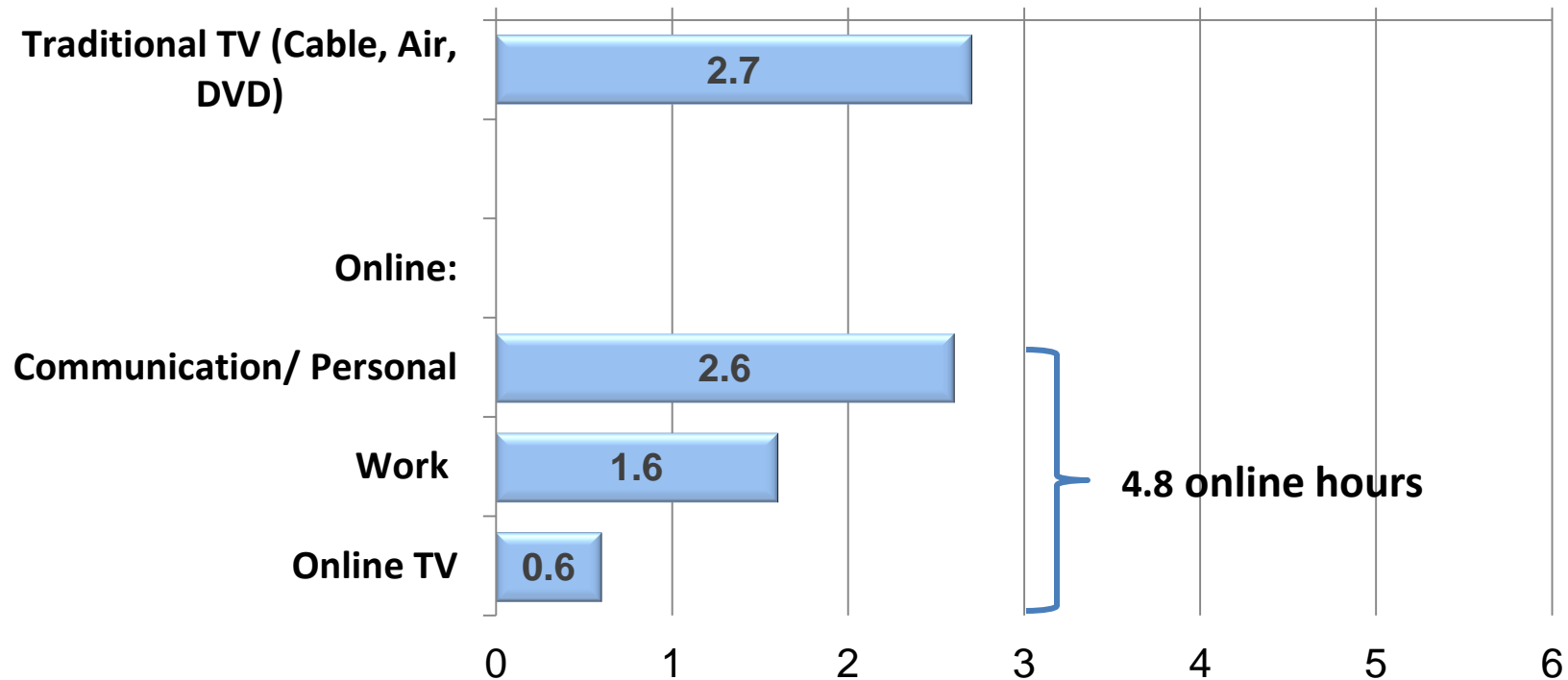
Lifestyles Are Changing

The Majority Of Adults Are Now Internet Dependent



In-Home Broadband Time Is Increasing

Online Hrs. For Average Person Spending 9 Waking Hours At Home



Estimated "screen time" is 7.5 hours - 83% of waking hours at home. (Note: some time could be screen-to-screen multitasking and screen-to-non screen multitasking.)

The Number Of In-Home Internet Devices Is Growing

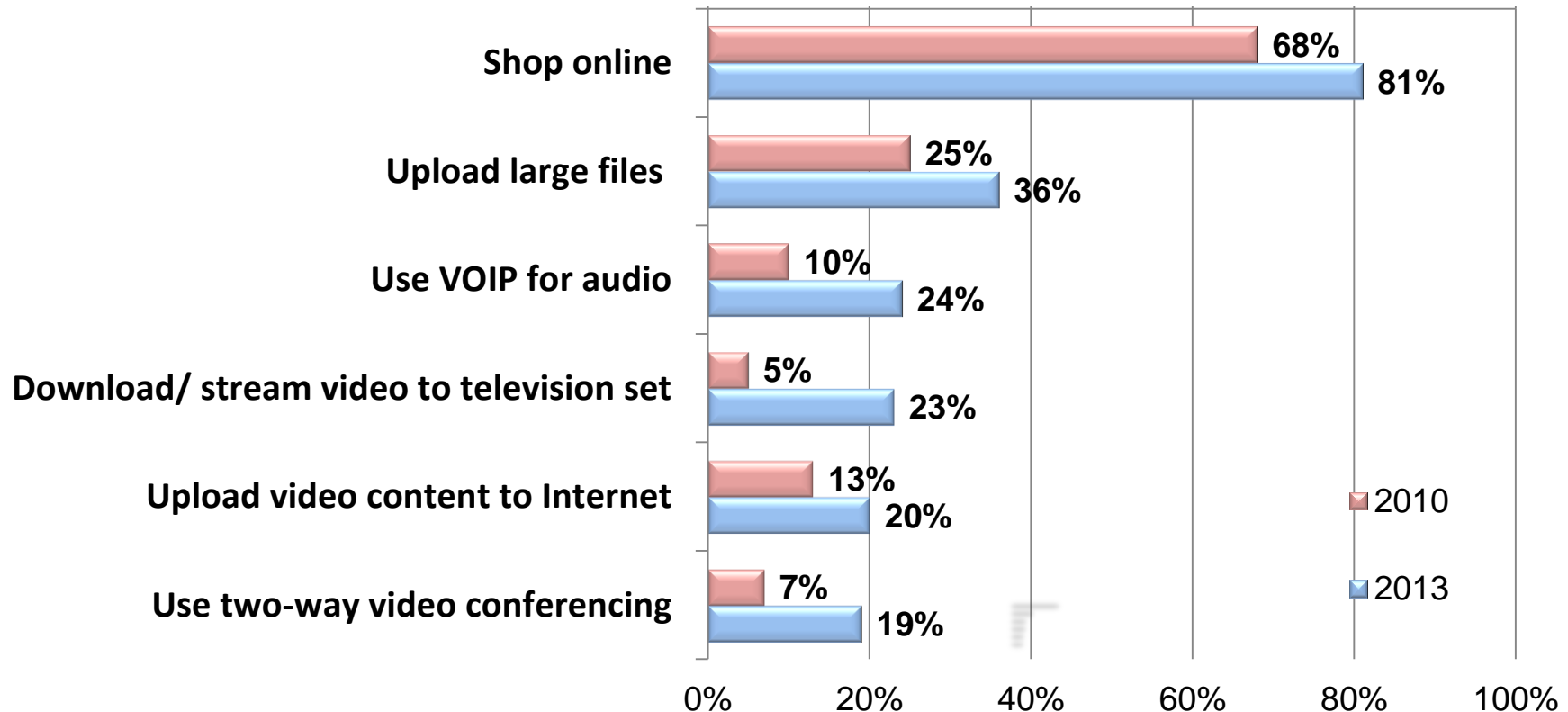
Consumers believe their home now supports approximately five Internet-ready devices....



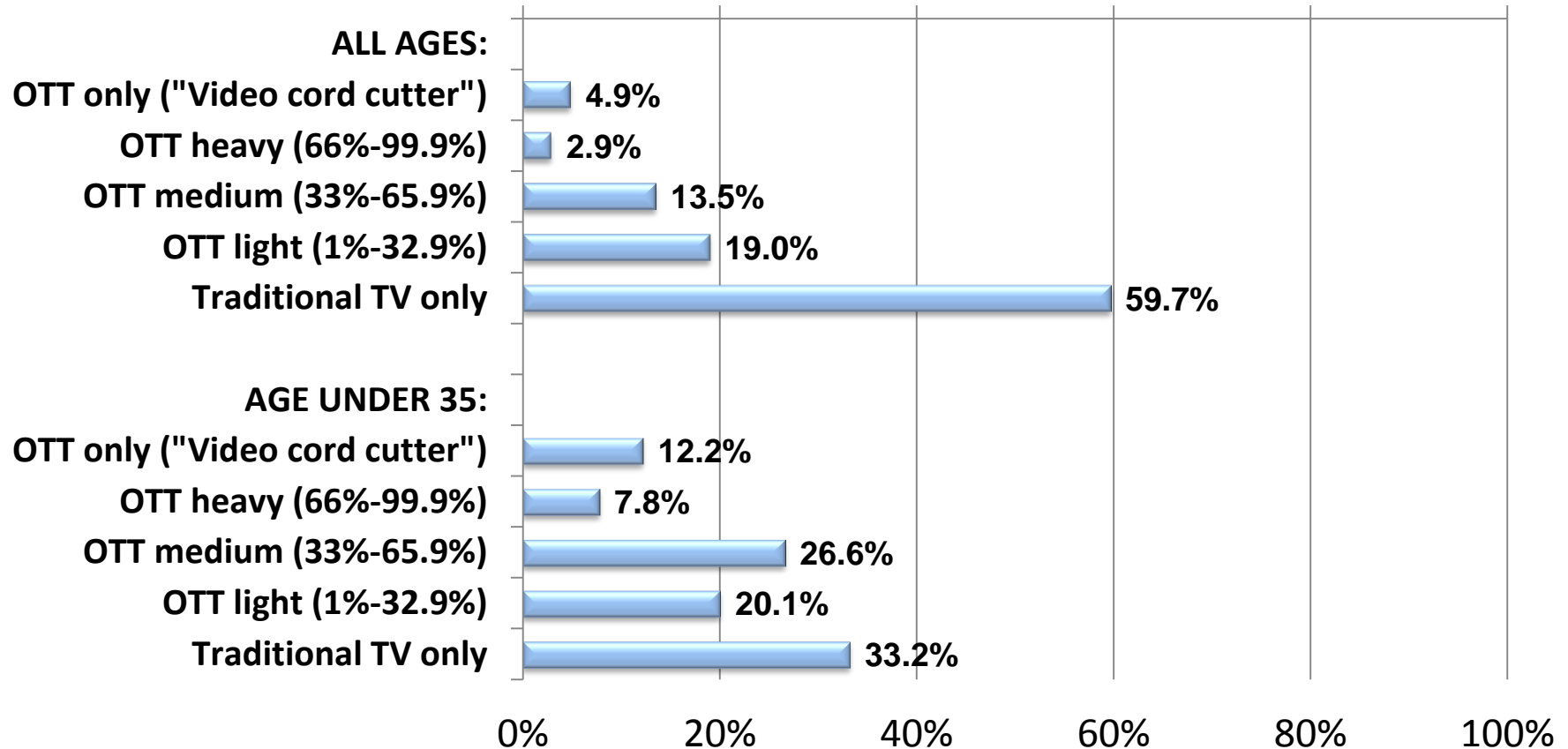
... and an estimated 2.8 HD televisions/
DVRs (many fed by IP).

The Use Of Apps Already Available Is Increasing Rapidly

Internet Activities Completed At Least Once/Month By FTTH Users



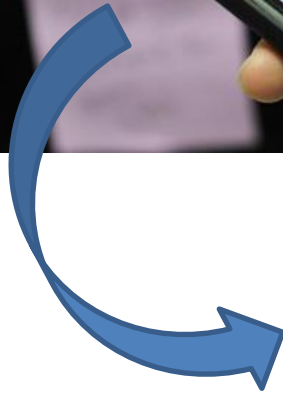
OTT Video Has Only Started To Drive More Wireline Traffic



Home Mobile Devices Are Being Handed Off To Wireline



A total of 67% of mobile users say they already at least sometimes connect their devices to in-home WiFi to increase speed or avoid cellular charges.



Multi Screen Use Is Increasing

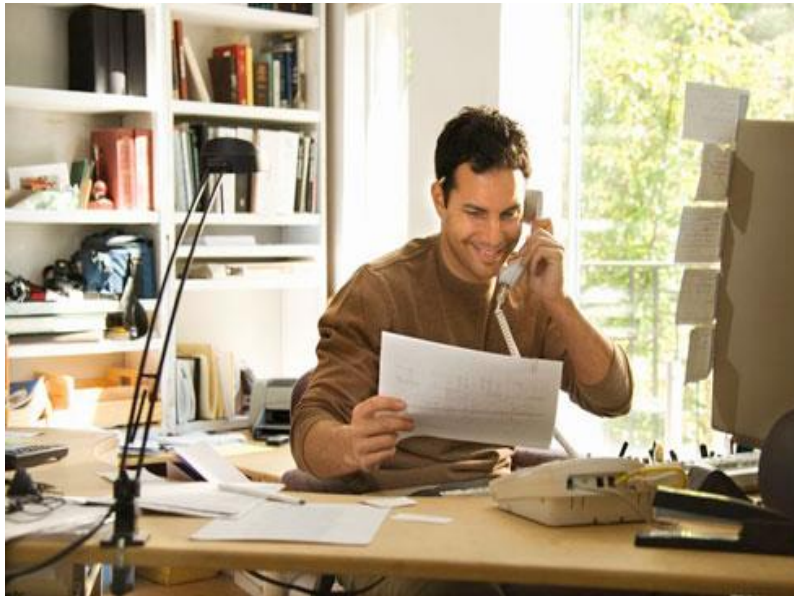
Tablet Devices Are Often Used While Watching TV



A total of 34% percent of random fixed broadband users own both a Smartphone and a Tablet.

This heavy mobile device user group estimates they use a second device about 47% of the time while watching TV.

Advanced Broadband Is Changing How We Work



- Employed FTTH users say they work 1.3 extra days per month from home (on average).
- 14% of FTTH users have a home-based business with over \$10,000 in estimated incremental income from having advanced broadband.

"I have a young baby so I work around his napping schedule."

"Saves gas, tolls, clothes, and lunch costs."

"I have seizures and my driving is limited."

Emerging Applications Will Require Extreme Bandwidth



Special Interest now: Young Men & Women



Special Interest now: Seniors, Young Mothers



Special Interest now: Women



Special Interest now: Young Males

Our Homes Will Have HD Perimeter Monitoring Saved To The Cloud



We Will Even Travel From Our Home



In our lifetimes....

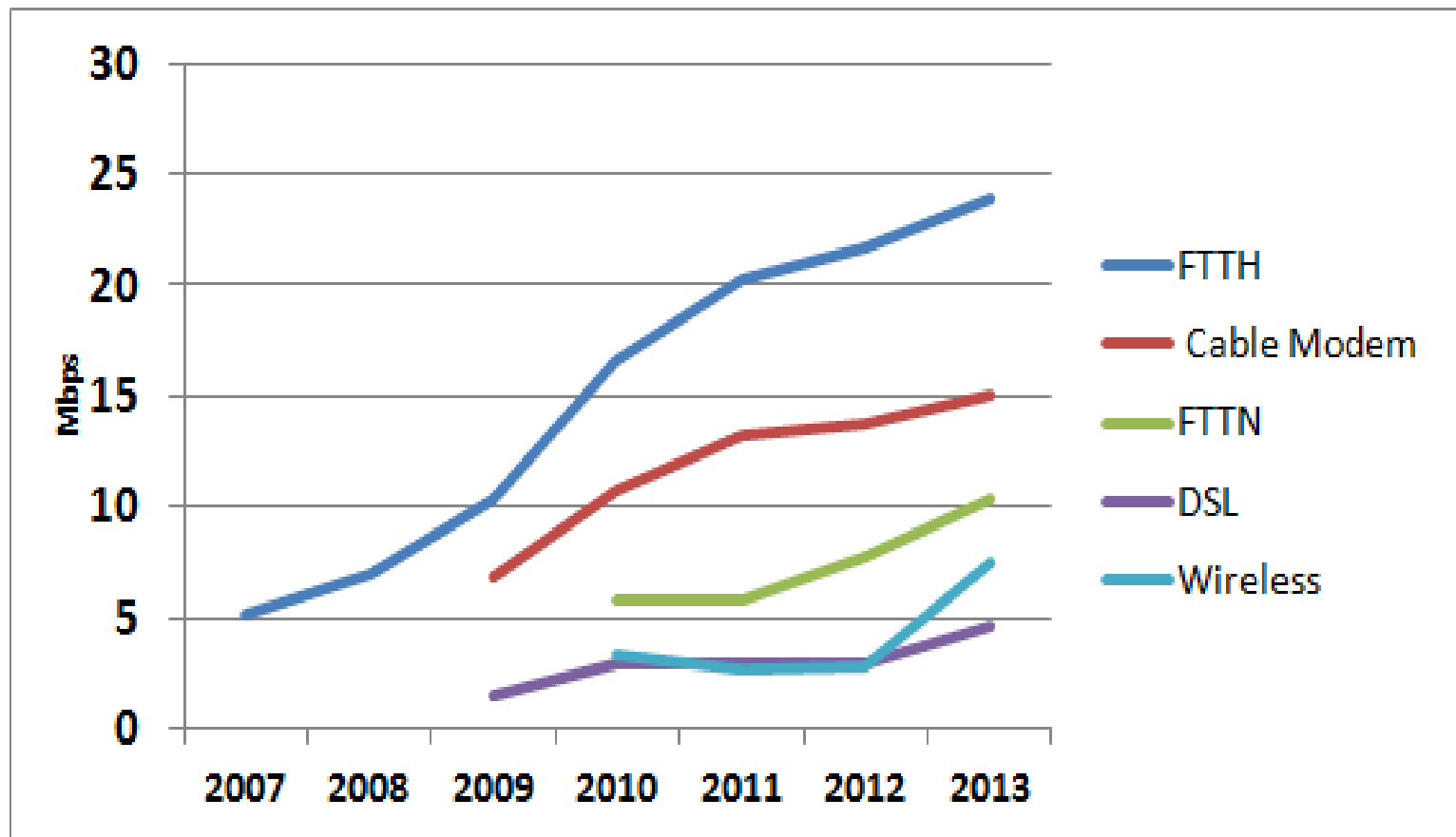
We may be getting a full diagnostic in-home checkup from a clinic in Germany.

We may be playing tag with our grandchildren across the country by “inhabiting” an “Avatar”-like robot.

Broadband Is Not A Commodity

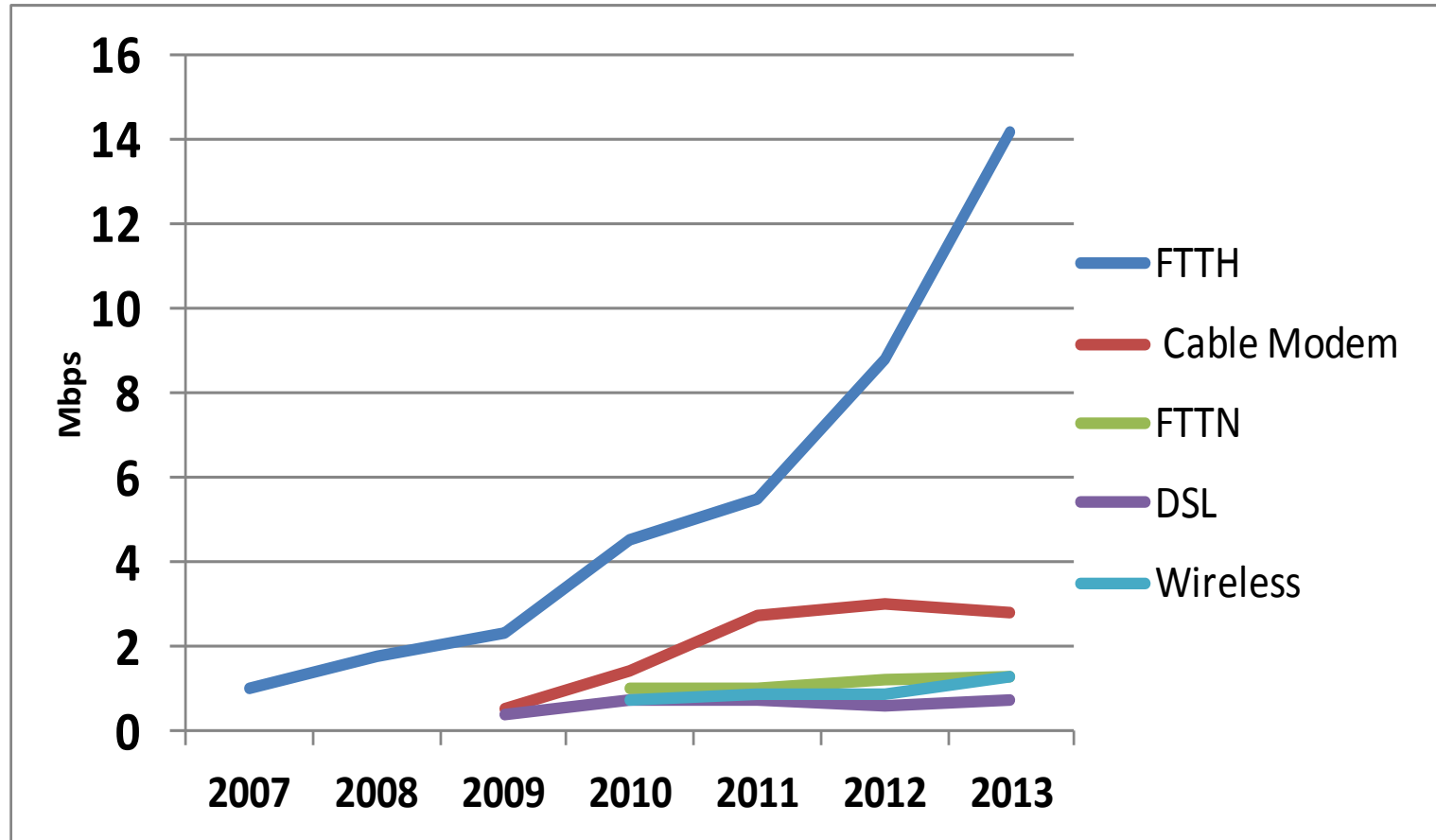
FTTH Has The Highest Tested Download Speeds

Median Tested Download Speeds

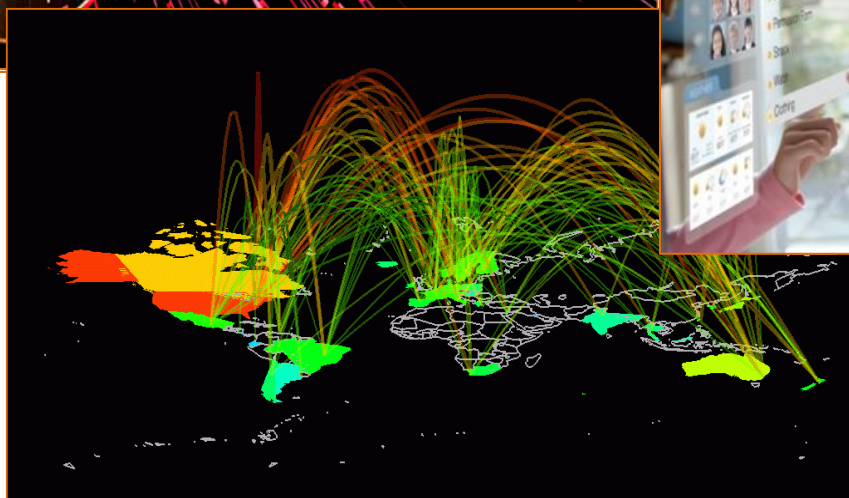
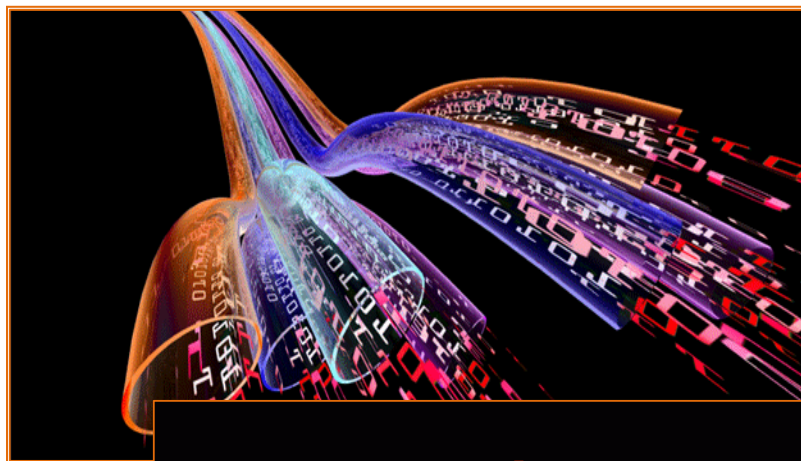


FTTH Is "Pulling Away" With Tested Upload Speeds

Median Tested Upload Speeds



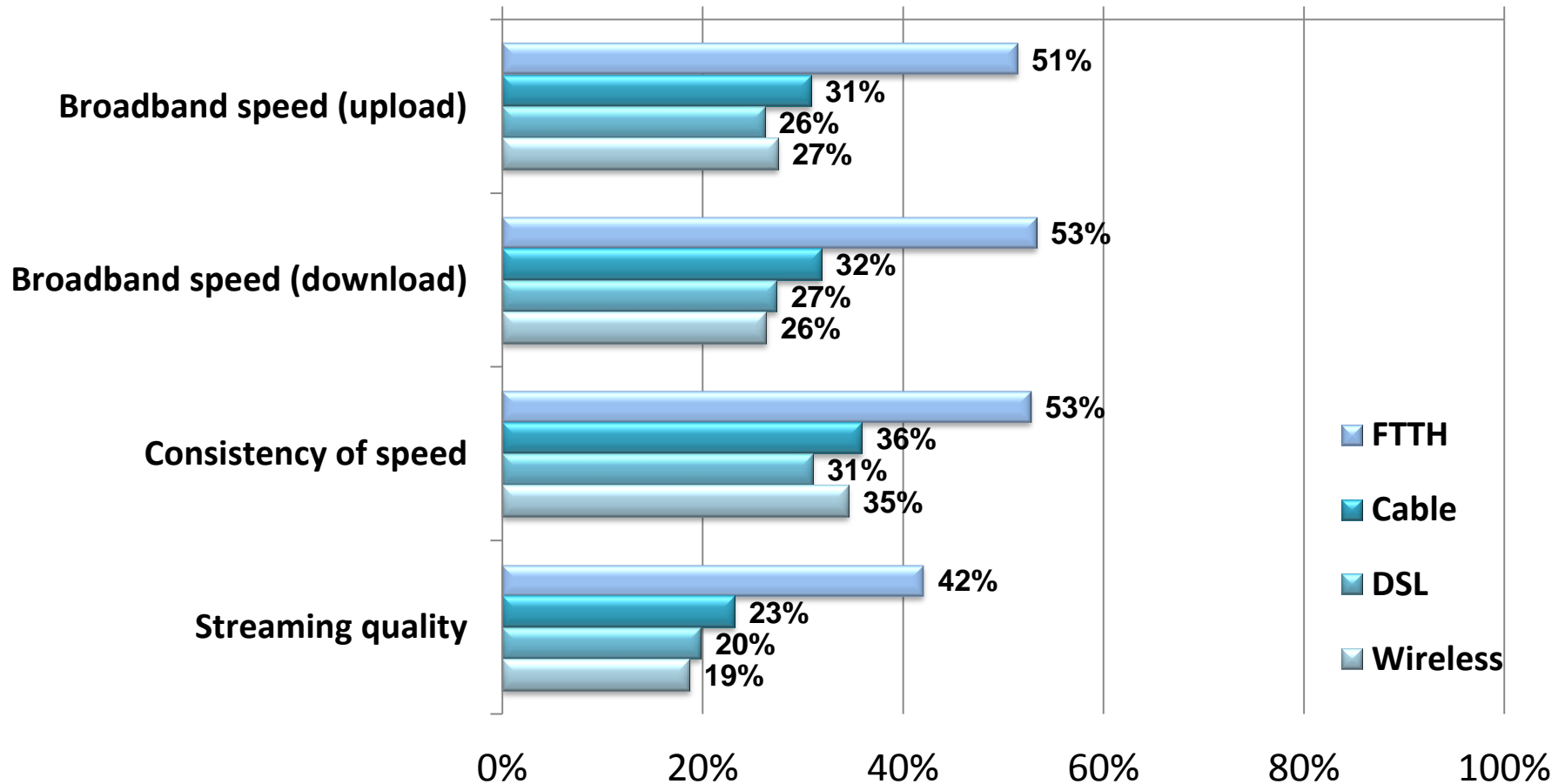
For The Home, Gigabit Internet Is Coming!



Advanced Broadband Is Appreciated

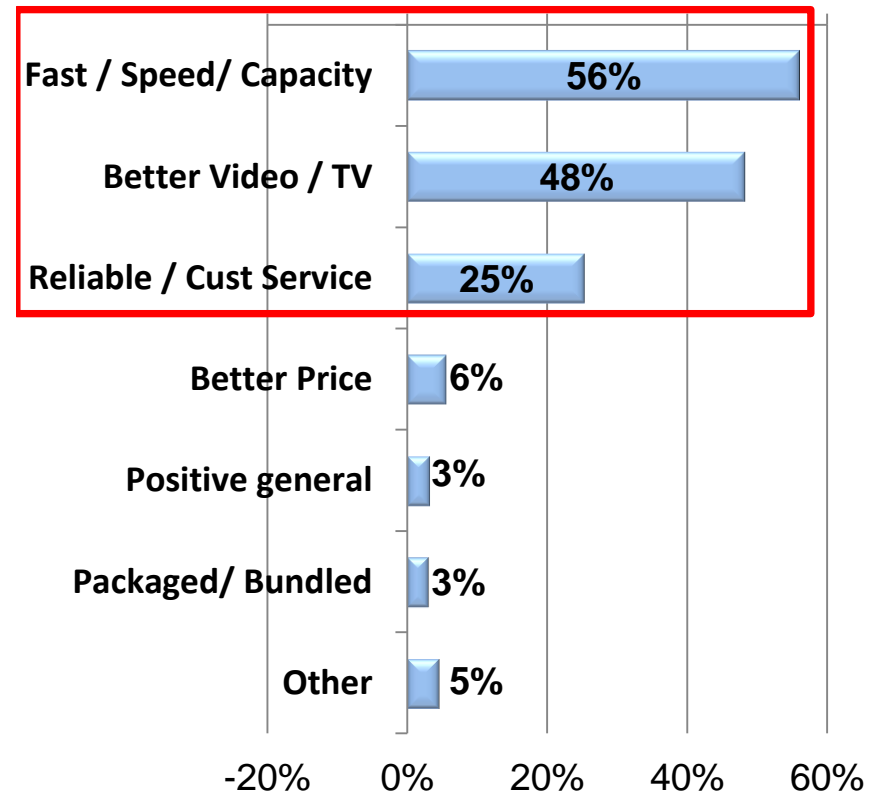
Users Are More Satisfied With The FTTH Experience

Percent "Very Satisfied" With Aspects Of Data

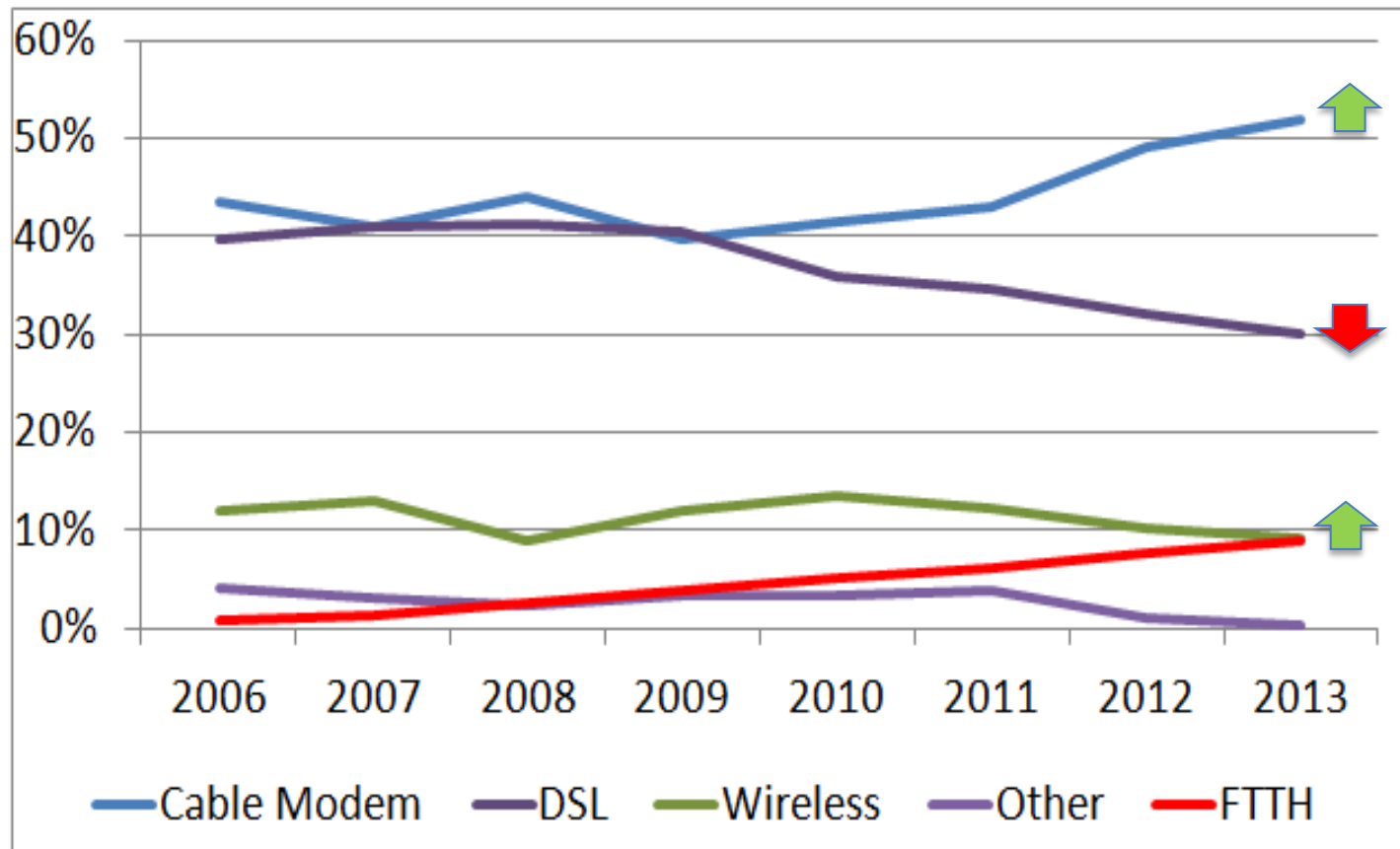


Customers Describe Diverse FTTH Advantages

Categorization Of Open-End Responses



Higher Capacity Broadband Is Winning



Advanced Broadband Enhances Value

FTTH Increases Home Value

Perceived Increase When Considering \$300,000 Home With FTTH

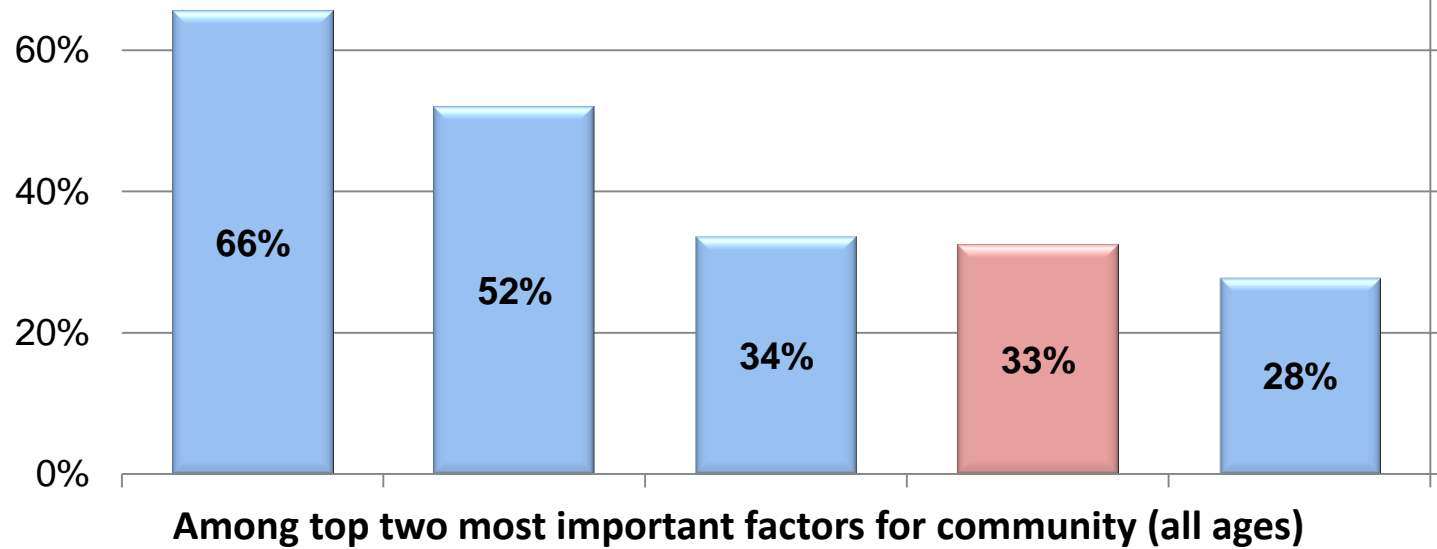


Advanced Broadband Has Excellent ROI

Amenity Cost Per Home Versus Top Two Importance

Cost Estimates – Extremely Rough, Directional Only!

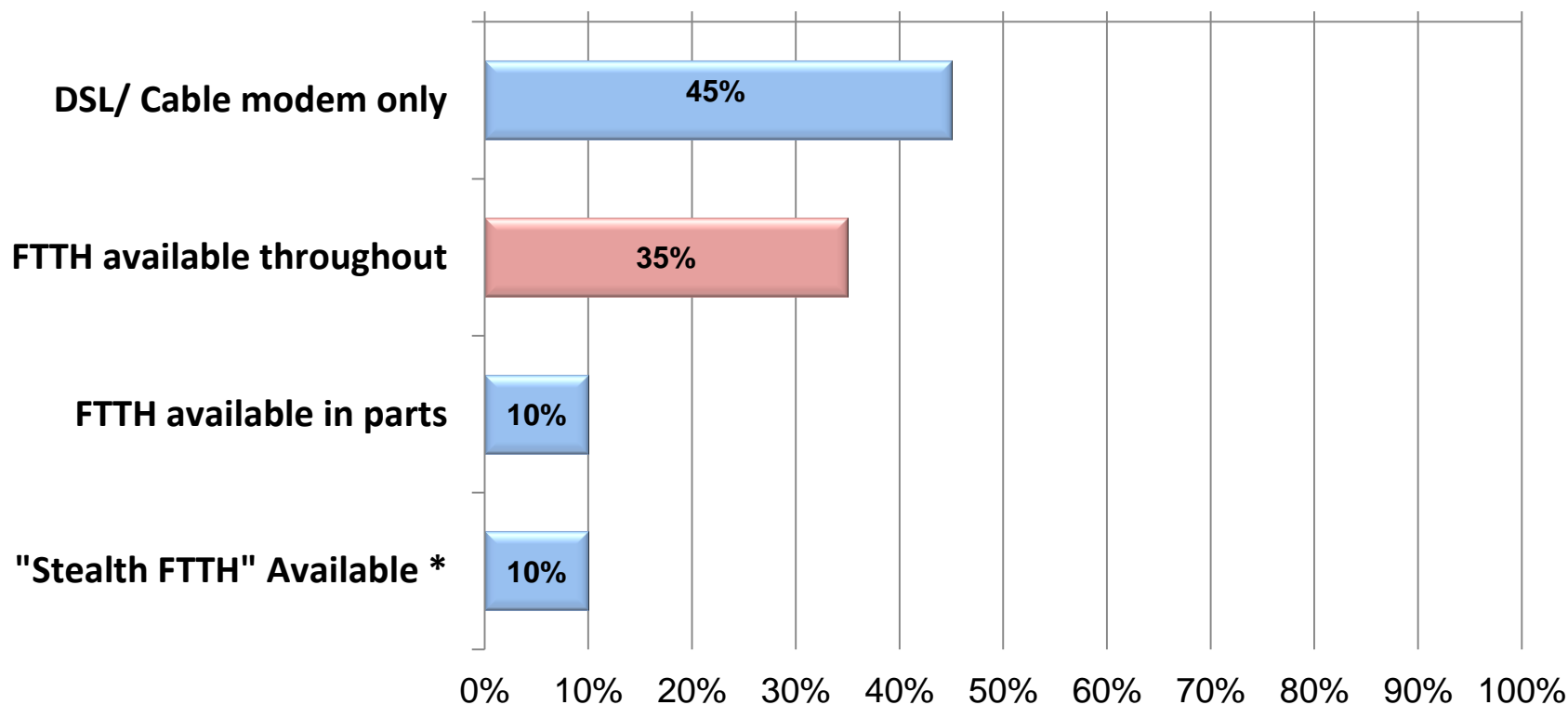
	Green Space	Town Center	Diverse Housing	Technology / Broadband	Mass Transit Link
Cost of planning	\$300,000	\$400,000	\$300,000	\$75,000	\$1,500,000
Costs not directly recoverable	\$5,000,000	\$15,000,000	\$0	\$0	\$125,000,000
Total cost	\$5,300,000	\$15,400,000	\$300,000	\$75,000	\$126,500,000
Homes	10,000	10,000	10,000	10,000	10,000
Cost per home	\$500.00	\$1,500.00	\$30.00	\$7.50	\$12,500.00



Developers Have Room To Improve

FTTH In RCLCO Top 20 MPCs

Based On Survey Of Developments, November 2013



* AT&T FTTH with little current service differentiation from non FTTH Uverse

Possible Development Technology Planning Needs

- Very high capacity fiber broadband to each home
- Densely distributed small cell antennas
- In home wiring (or “fibering”)
- Applications that have local planning component
(Security, Telemedicine , Energy Management, Local content...)



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