

Final Round Extended Case Spring 2023

OVERVIEW

You will be given the case questions and exhibits with information related to the prompt.

You will have a 40-minute prep period embedded in your interview slot to prepare your presentation. You will be allowed to use a calculator during this portion.

During the prep period, please: Examine the exhibits & utilize them in your answers Thoroughly answer all the case questions Structure your thoughts into a cohesive presentation

HINT: All the numerical information you need to answer questions will be found in the exhibits

After the prep period, you will be given 6 minutes to present your findings and a Q&A will follow. You are not allowed to use a calculator during this portion.

CASE BACKGROUND & QUESTIONS

Horizon has witnessed the lack of access to broadband internet in certain groups around the country. You are in contact with a senior VP at Horizon who is passionate about expanding broadband access into new underserved regions. She wants you to give her a recommendation on whether it is a feasible pitch before she shares with her team.

- 1. Approximate the cost for bringing broadband access to rural America on the high end
- 2. What are 3 potential/ new sources of revenue that can be generated from bringing access to WiFi (you can think of the implications for industries/companies beyond WiFi) THIS IS NOT A CALCULATION QUESTION
- 3. Recommend one area in the underserved market as a starting point and explain your reasoning
- 4. What are three potential obstacles Horizon would face in rural areas beyond costs?
- 5. Which of these is the biggest obstacle and how should Horizon address it?
- 6. Consider a government subsidy that would allow potential customers below the poverty line to pay \$15/month for WiFi instead of \$50. How would this government subsidy impact the feasibility of this project? Explain your reasoning

EXHIBIT 1

Main Reason for Not Using Internet at Home (% of offline households)

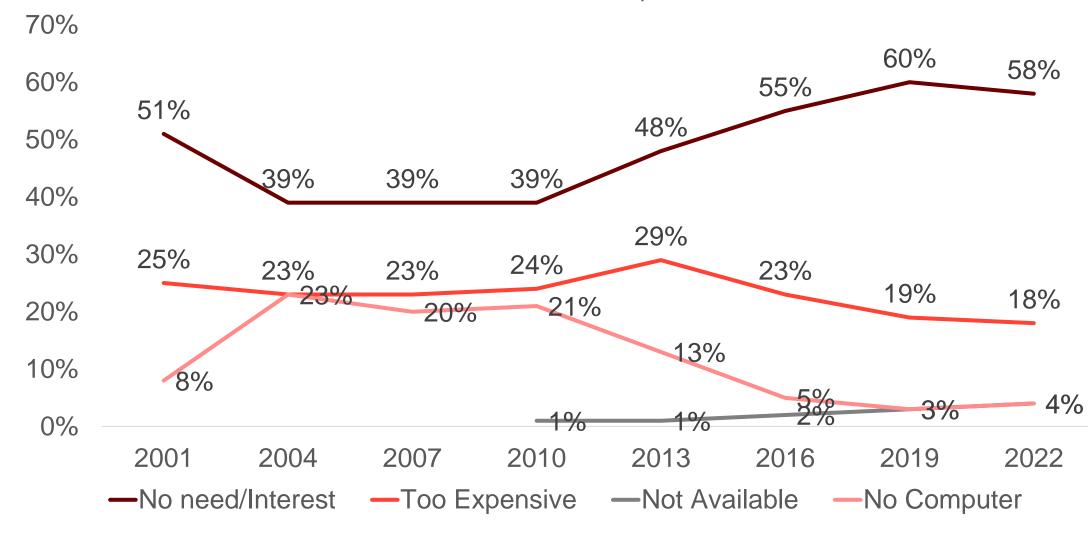


Exhibit is from a National Telecommunications and Information Agency (NTIA) research paper

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EXHIBIT 2

Figure 2: Selected Characteristics by Home Internet Use or Non-Use Percent or Mean Response of Households, 2021

	T () (T	No	Too Expensive	
	Internet at Home	Need/Interest		
Total Households	108.5 million	13.8 million	4.4 million	
Family Income < \$25K/Year	15%	35%	45%	
School-Age Child Present	24%	12%	19%	
Located in Rural Area	12%	16%	14%	
Internet Use at Other Locations	85%	13%	24%	
Previous Home Internet Use	N/A	14%	29%	
Household Re	eference Person* Char	acteristics		
Mean Age	50.6	60.5	51.3	
No Post-Secondary Education	30%	59%	57%	
White, non-Hispanic	66%	61%	49%	
African American, non-Hispanic	12%	16%	25%	
Hispanic	14%	17%	19%	
Willingness to Pay f	for Home Internet Serv	vice (Per Month)		
Mean Price	N/A	\$5.92	\$15.69	
Price is \$0 or "None"	N/A	83%	54%	

* The reference person is the first individual in each household who is identified as owning or renting the housing unit.

Exhibit is from a National Telecommunications and Information Agency (NTIA) research paper



Average cost to connect anchor in various U.S. topographies**

	Dense Metro	Intermediate Metro	Low Density Metro	Rural Eastern Mountain	Rural Western	Desert	Plains	Rural Eastern
Low	\$34,000	\$47,000	\$82,000	\$51,000	\$56,000	\$97,000	\$66,000	\$75,000
High	\$47,000	\$71,000	\$126,000	\$76,000	\$81,000	\$151,000	\$97,000	\$112,000

**An anchor is the infrastructure needed to bring Wifi/Broadband access to an area – it includes extending the fiber to an interconnection point, entering the building, and installing the network components in the building

**a topography is a type of natural/physical feature of a our land (i.e. desert, metro, plains etc)

**Average cost is per anchor, and you can assume that each anchor serves ~500 people and an average rural city in the U.S. has ~5,000 residents

**You can also assume that 60M Americans live in a rural city 50% of them do not have access to Wifi/broadband, and they are equally distributed between the rural areas of the U.S.

EXHIBIT 4

Percent of Residents with Internet Access

	2019	2020	2021	2022
Blue County	40%	30%	40%	50%
Pink County	10%	11%	11%	14%
Red County	75%	75%	76%	77%
Yellow County	20%	30%	35%	45%

ANSWERS

1. Approximate the cost for bringing broadband access to rural America

\$76K*60M*.5*.33+ \$81K*60M*.5*.33 + \$112*60M*.5*.33 =
(((60M*.5)/3)*(\$76K+\$81K+\$112K))/500 = (10M * 269K)/500= 538,000,000,000 ~ \$538B
50% of 60M to get percent of Americans in rural U.S. without Wifi access
Divide by 3 to equally weight each rural topography
\$76K + \$81K +\$112K is the high cost for one anchor in each rural topography
Divide by 500 to account for fact that each anchor services 500 people

- What are 3 potential/ new sources of revenue that can be generated from bringing access to WiFi (you should think of the implications for industries/companies including and beyond Horizon) Candidate can talk about jobs that are created which results in more spending in the local economies, residents buying internet plans,
- 2. Recommend one area in the underserved market as a starting point and explain your reasoning their rationale matters most here so honestly look for that over anything else

ANSWERS

- 1. What are three potential obstacles Horizon would face in rural areas beyond costs? Examples include convincing people to adopt internet, lack of access to computers/smartphones for it to be useful, connectivity & weather related issues
- 2. Which of these is the biggest obstacle and how should Horizon address it? Anything could be argued, example is convincing people to adopt internet because they've molded their lifestyles without it. A few ways to address this is by having educational programs, canvassing around the neighborhood, offering jobs to residents of these areas
- 3. Consider a government subsidy that would allow potential customers below the poverty line to pay \$15/month for WiFi instead of \$50. How would this government subsidy impact the feasibility of this project? Explain your reasoning It would allow Horizon to further expand into the market of people who did not get wifi because it was a cost burden to them allowing them to get hundreds of millions of dollars in additional revenue. Particularly, the 18% of the market who finds it too expensive, and even some of the 58% who might feel like they don't need it because it's expensive