A Strategic Outlook for Rural Broadband Leaders

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CHARTING YOUR PATH

About the Presenter

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Independent management consultant and fractional head of Strategy for companies in, or serving, the telecommunications industry

I guide business owners in the TMT space to navigate disruption and opportunity to maximize the value of their business and achieve their dream exit

Here's what I hear when I talk to Rural Broadband Leaders

Irrational Fiber Overbuilders	Complex Grant "stacking" and delays	Uneconomical USF requirements from E-ACAM	Increased competition from Big cable, Big telcos
5G Fixed Wireless	Challenging rural Economics	Supply chain	Open Access Models
Changing Customer Demands	Private Investors	Rising equipment costs	Labor and Talent Shortages
"Grant fatigue"	Mapping fallacies	Creating Scale	Permitting & Environmental

"How do I build for the long term and manage all the pieces?"

The Typical Response to a Disruption or Issue

The Secret to Being More Effective than the Competition is to Shorten Our Response Times to Give Us More Time for Refining Strategy & Execution … this means <u>better forecasting of knowable issues</u>

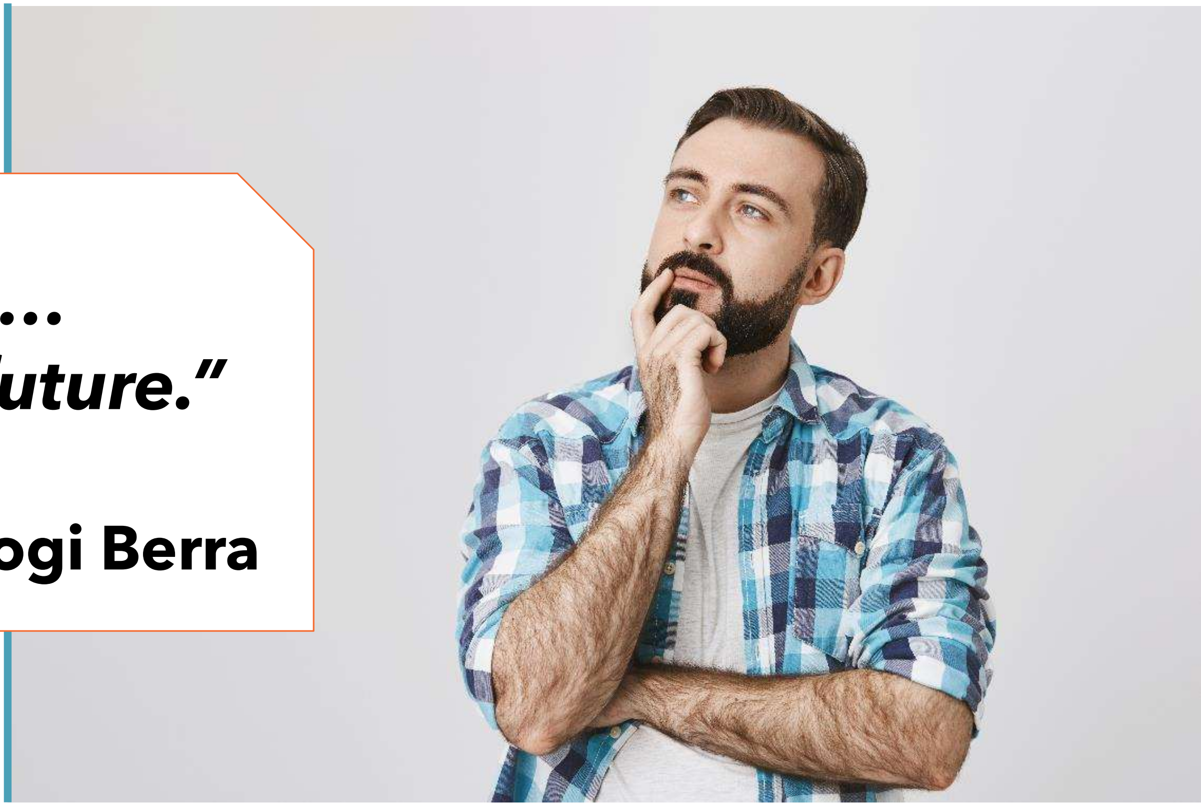
While much appears to have changed in the past 5 years, actually most things were known … you just had to look

	The Digital Divide	The 5G Business Case	New Technology
What we're seeing …	>$100B in programs towards closing the Digital Divide that will take us through the end of the decade?	Hundreds of billions to capital & spectrum for 5G but where's the return?	5M+ fixed wireless users for broadband … who would've thought?
… but what we knew	*"Efforts to close the digital divide may take several years to a decade, with governments and industry working together to expand broadband access in underserved areas."* - Telecommunications Analyst, 2017	*"Initial 5G revenue streams will emerge within the first few years, but significant gains will come as the ecosystem and user base mature over the next 5-10 years."* - Telecom Industry Insider, 2017.	*"The rise of 5G will significantly boost the capabilities of fixed wireless access, offering gigabit-speed internet to urban and suburban areas."* - Telecom Consultant, 2018

My Safe Harbor Statement

"Predictions are hard … especially about the future."

– Yogi Berra



Eight Big Trends

01

The Cable Conundrum

02

The Cost of Competition

03

The USF Migration

04

Private Equity Pressures

05

The Acceptance of 5G FWA

06

The Many, Confusing Faces of Government Funding

07

The BEAD Land Grab Moment

08

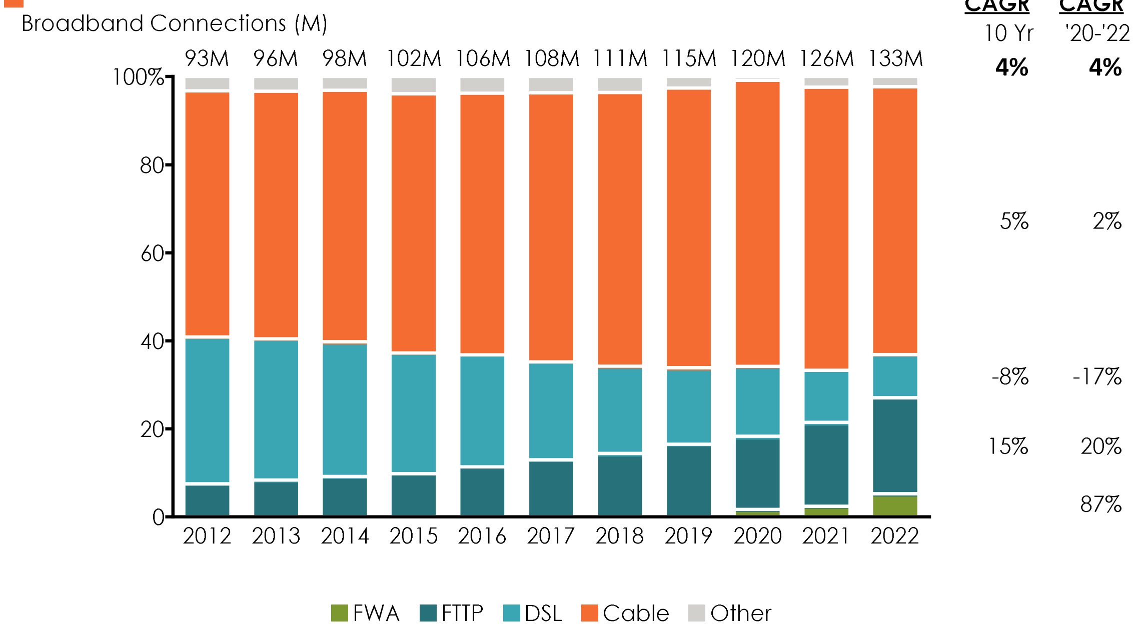
The Long Term M&A Potential

01

The Cable Conundrum

- **Consistent Industry Growth**
- **Last Two Years Seeing Shifts**
  - Cable Pressure
  - Cu to Fiber Transition
  - Fiber Growth
  - 5G FWA
- **Cable's Options:**
  - Pricing/ Tactics
  - Network Shifts
  - Bundles

Cable growth has slowed over the past few years



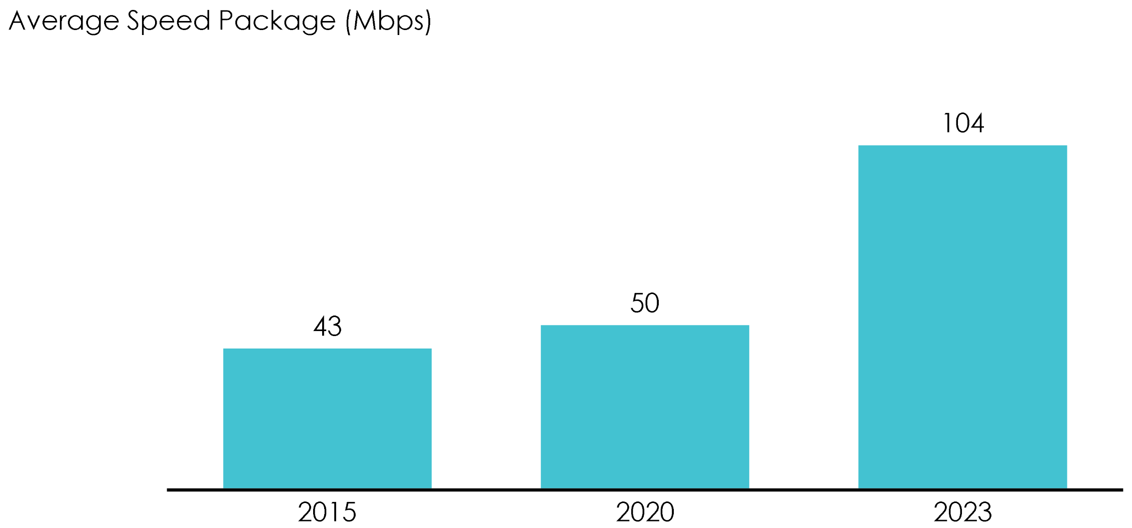
Source: U.S. Telecom Analysys Mason, 2023

02

The Cost of Competition

- **Consumer Shift to Streaming and Higher Speed Packages**
- **Growth of Multi-Gig Offers in the Market**
- **Competition for Subs and Pricing Impacts**
- **Implications**
  - Pricing
  - Margins
  - Upgrades

Adoption of Higher Package Tiers with Lower Pricing is impacting "Yield"



Source: U.S. Bureau of Labor Statistics; U.S. Telecom Pricing Report 2023; Packages for US Telecom "Consumer Choice" as part of Broadband Pricing Index study

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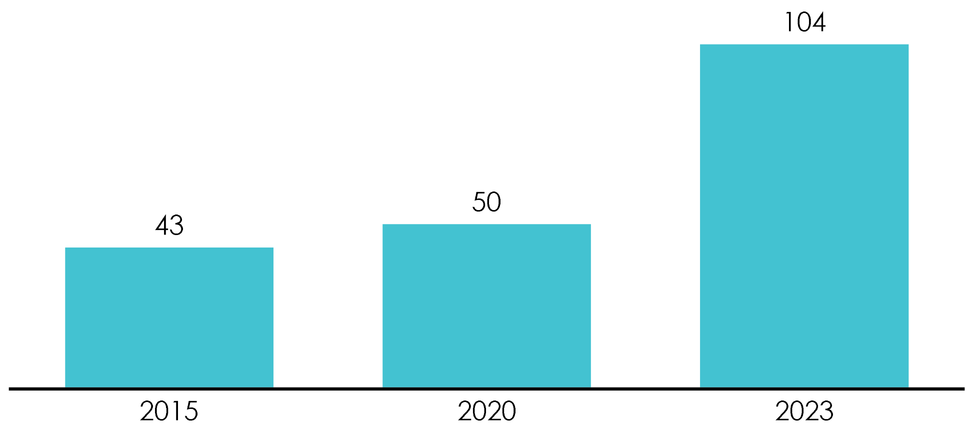
Average Speed Package (Mbps)



	2015	2020	2023
Monthly Price	$65.62	$52.37	$41.31

Source: U.S. Bureau of Labor Statistics; U.S. Telecom Pricing Report 2023; Packages for US Telecom "Consumer Choice" as part of Broadband Pricing Index study

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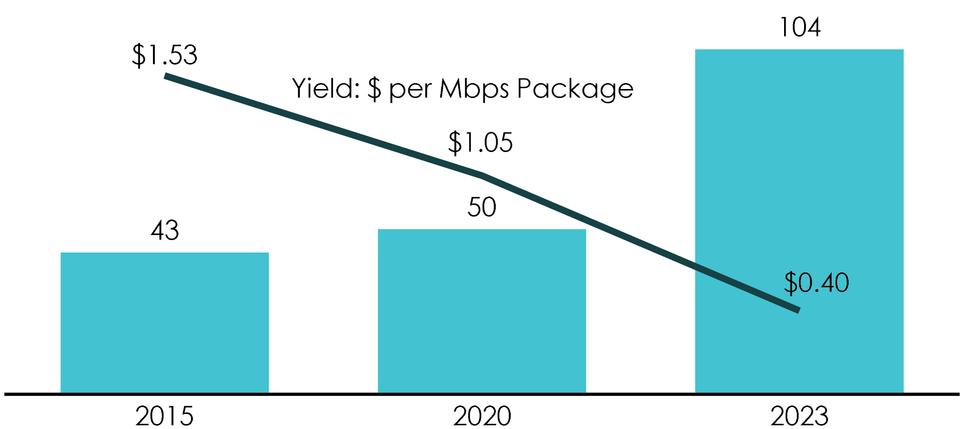

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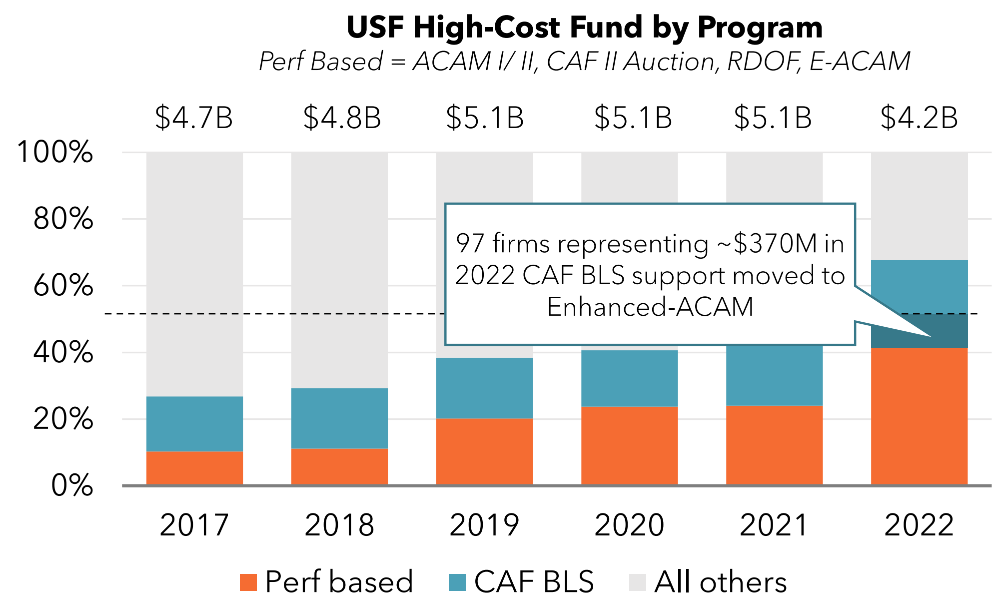
03

The USF Migration

- **USF Sustainability Trajectory**
- **Current Options on the Table**
- **Shifts to Performance-Based with End Dates**
- **Longer Term Implications**
  - ACAM (I, II, E-ACAM)
  - CAF BLS (ROR)

Enhanced ACAM opt-ins results in nearly 50% of USF funds becoming performance based



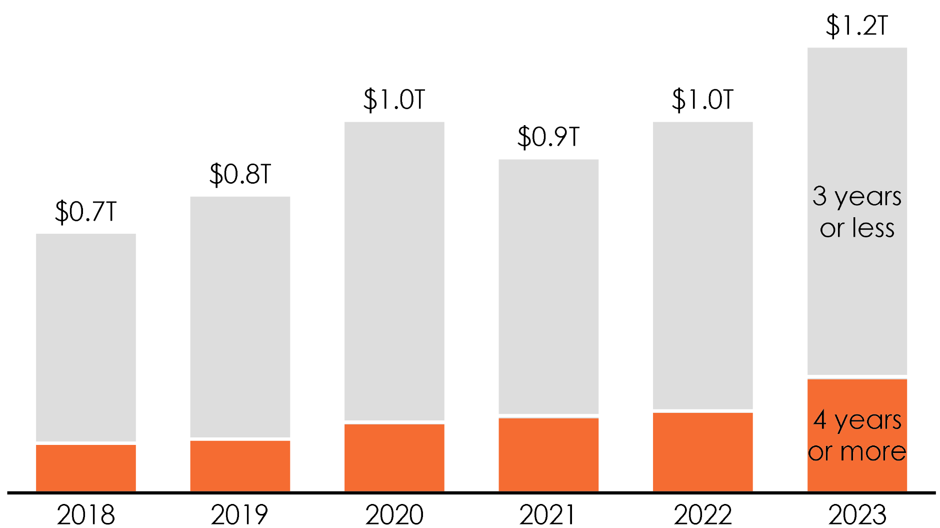
Source: USAC
Note: All Others includes Alaska Plan Support, Frozen High Cost Support, High Cost Loop Support, ICC

04

Private Equity Pressures

- **Significant PE Interest post-COVID – multiple deal theses**
- **High Interest Rates Lowering Exit Volumes**
- **Pressure to Make Investments**
- **Pressure to Realize Returns**

Global buyout dry powder, by years since capital raised ($T)



	2018	2019	2020	2021	2022	2023
% 4 yrs or more	19%	18%	19%	23%	22%	26%

Source: Bain & Company Global Private Equity Report, 2024

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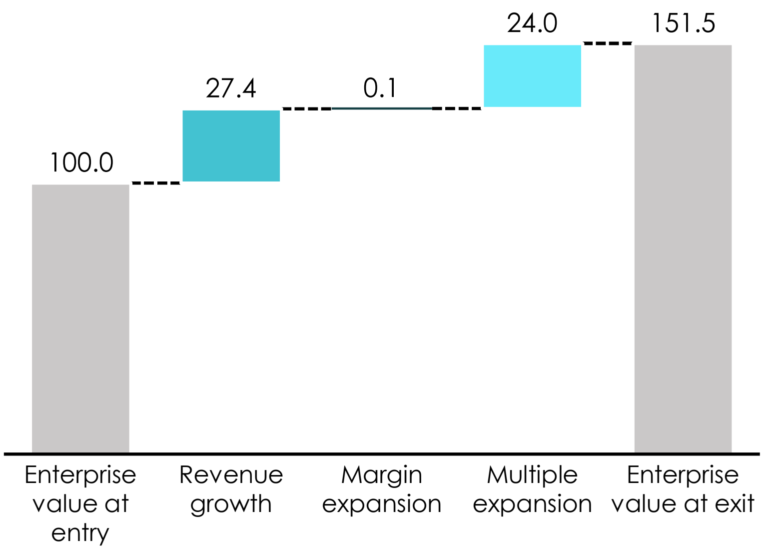
Median indexed value-creation drivers for global buyers (deal entry years 2013-2023)



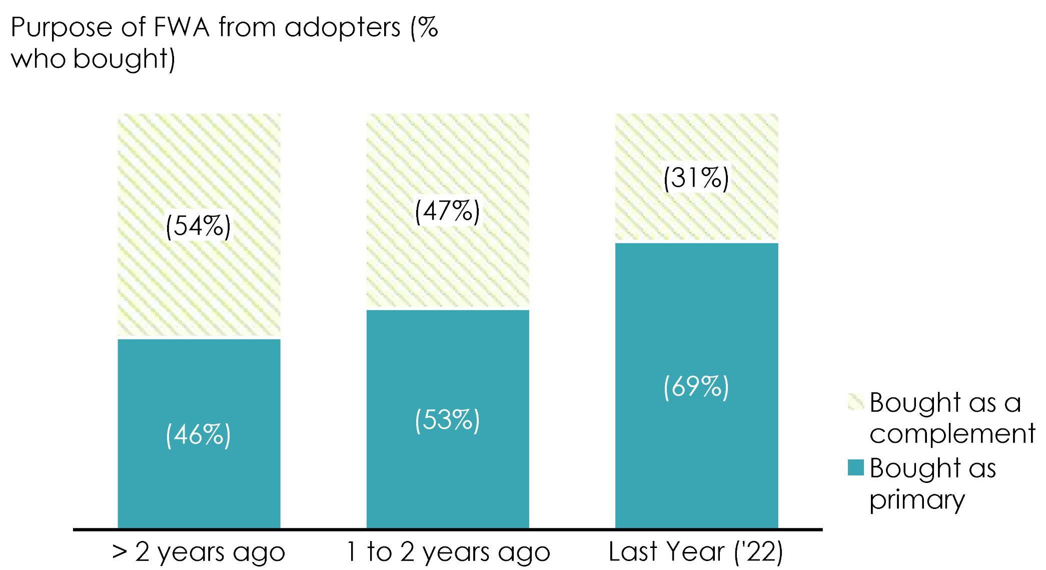
Source: Bain & Company Global M&A Report, 2024

05

Acceptance of 5G FWA

- **5G is a BIG investment for the mobility companies**
- **5G-based Fixed Wireless Access as the (currently) ONLY 5G Killer App**
- **Availability tied to "fallow" spectrum**
- **Customer behavior is changing**

Customers are becoming more comfortable with FWA as the primary form of connectivity



Source: Ericsson ConsumerLab FWA-study 2023/2024

06

The Many, Confusing Faces of Government Funding

Closed / In Award $36B

Rural Digital Opportunity Fund Phase I — $6.1B

Avg. Award: **$16M**	*Format:* Reverse Auction
Status:	**582** winners; **~$6.1B** currently approved

Emergency Connectivity Fund (Windows1,2,3) — $7.2B

Avg. Award: **$325K**	*Format:* Application
Status:	**21,804** awards with **$7.1B** obligated

Middle Mile Infrastructure Fund — $1B

Avg. Award: **$17.7M**	*Format:* Competitive Grant
Status:	**39** awardees for **$0.98B**

ReConnect Rounds III & IV — $3B

Avg. Award: **$18M**	*Format:* Grants & Loans
Status:	**195** awardees with **$3.5B** obligated

Tribal Connectivity Program I & II — $2.98B

Avg. Award: **$13M (I)**	*Format:* Grant
Status:	***130** awards for **$1.68B; (II) 160 apps $2.6B***

Data as of April 2024

Open / In Play $18B

ARPA Coronavirus Relief — ~$8B

Avg. Award: varies	*Format:* varies
Status:	For costs incurred 3/2021 thru 12/2024

Capital Projects Fund — $10B

Avg. Award: TBA	*Format:* varies by State
Status:	**50** states announced with **$9.0B** obligated

ReConnect Round V — $0.7B

Avg. Award: up to $25M/ $50M	*Format:* Grants & Loans
Status:	***Window closed May 2024***

Affordable Connectivity Program — $14.2B

Avg. Award: $30/mo/HH	*Format:* Subsidy program
Status:	***Closed; Funds could end anytime***

Not Shown:

- **FCC:** ACAM, ACAM II, E-ACAM, CAF BLS
- **USDA:** Community Connect, Distance Learning and Telemedicine
- **NTIA:** BIP, CMCP

Forthcoming $53B

Broadband Equity, Access, & Deployment (BEAD) — $41.6B

Avg. Award: varies	*Format:* varies by state
Status:	**Challenge processes ongoing**

Digital Equity — $2.75B

Avg. Award: TBA	*Format:* TBA
Status:	**$811M approved for 56 states & territories**

5G Mobility Fund — $9B

Avg. Award: TBD	*Format:* Reverse auction
Status:	Rules circulating

Target Recipients

- Consumers
- Schools, Libraries, Anchor Institutions
- Public-Private Partnerships
- Per State, Local Government, Tribe
- Open to all, incl. ISPs

Abbreviations

HH = Household
PPP = Public-Private Partnership
TBA = To Be Announced
1H = First Half

Federal Agency: FCC | NTIA | USDA | Treasury

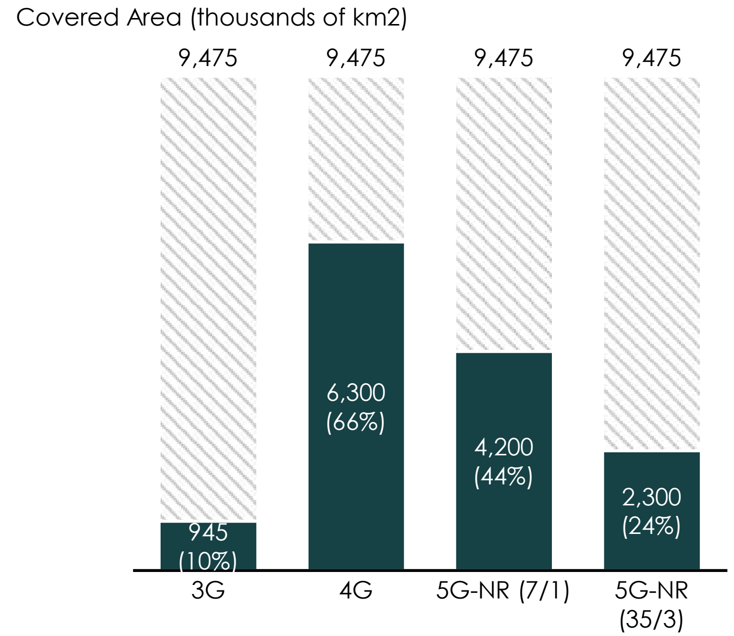
Fund Purpose: Construction & Deployment Capital | Operating Expenses (Subsidies)

06

The Many, Confusing Faces of Government Funding

- **More than $100B in funding on the board**
- **Varying Rules and Administrators**
- **Timing Considerations**
- **Areas Left Behind**
- **Here comes the $9B Mobility Fund**

5G Mobility Coverage in Rural areas



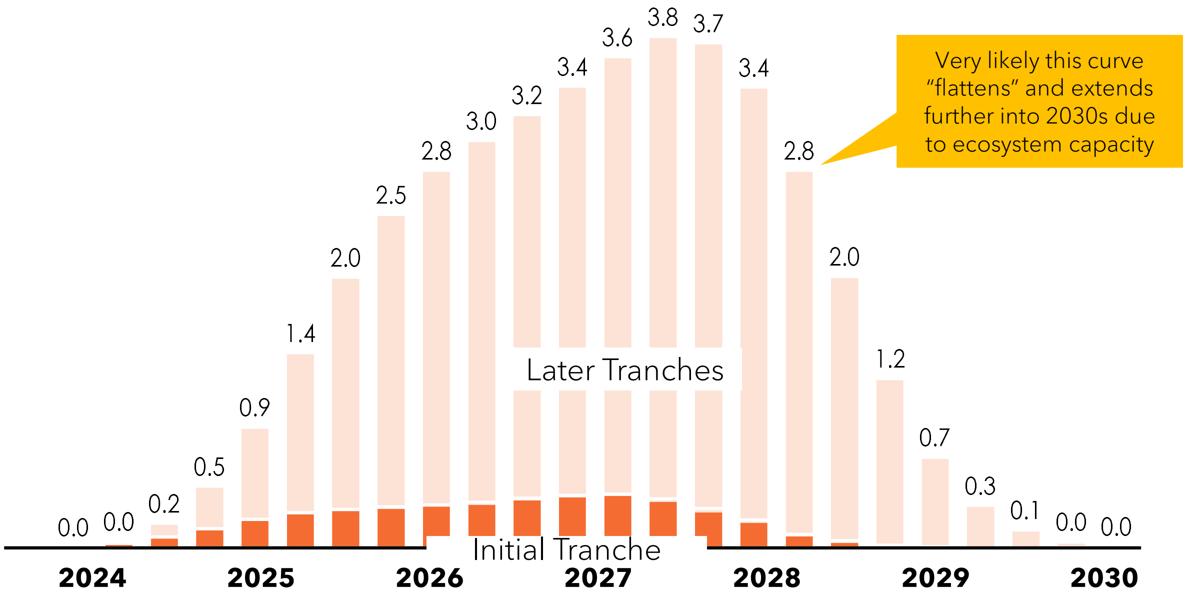
07

The BEAD Land Grab Moment

- **$42B Does Not Come All At Once**
- **State Timelines and Administrative Capacity Vary**
- **Ecosystem Capacity will Need to Grow**

Quarterly estimated spending forecast from BEAD dollars ($B)

Dollars spent by providers over a 4-year build



Source: Sunstone Analysis and Estimates based on "baseline" award timelines and estimated level of readiness by State using CPF awards, 5 Year Plan Submissions, Initial Proposal Vols I and II status

07

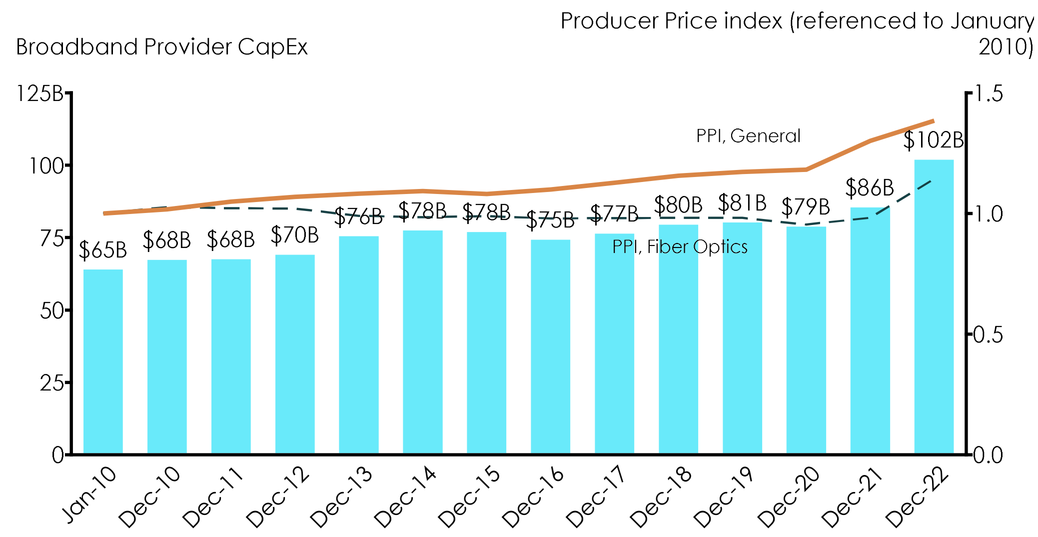
The BEAD Land Grab Moment

- **What History Tells Us About Spending and Pricing**

- **Other BEAD hidden costs**
  - Matching costs/ Bond/ LOC
  - BABA impacts
  - Labor
  - Environmental & Historical
  - Tax treatment

- **Long-term implications**

Correlation of Broadband Spending and Supply Prices



Source: U.S. Bureau of Labor Statistics; U.S. Telecom

08

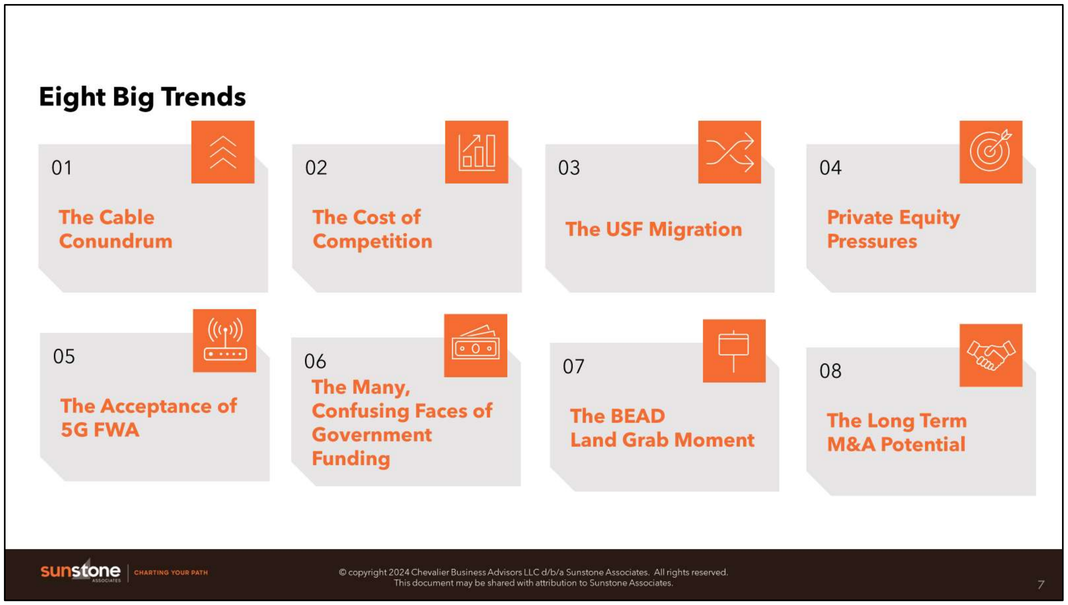
The Long-Term M&A Potential

- **Broader M&A Market Challenges**
- **Views on Interest Rates**
- **Pickup Opportunities Post Programs?**
- **Realities:**
  - Timing
  - Incentive Structure

Key inflection points in major programs -- asset pickup opportunities?

Program	First Milestone	Build Deadline
CAF Phase II Auction	2022	2025
Rural Digital Opportunity Fund	Q4 2024/ 2025	~2027-2028
Enhanced ACAM	2026	2028

What It All Means



The Land Grab moment won't last and there will be winners and losers

Competitive and subsidy dynamics will continue to challenge economics

Longer term growth will increasingly come from new services and products

A Strategic Roadmap to Navigate the Coming Years

Expansion

The Land Grab moment won't last and there will be winners and losers

Scale the Network

- Upgrade within ILEC territory
- Strategic Expansion outside ILEC territory
- Optimize BDC and BEAD challenges
- Leverage public/ private sources of funding

Strategic/ Opportunistic M&A

- Build your Deal team
- Know your Neighbors
- Monitor Builds and Milestones

Optimization

Competitive and subsidy dynamics will continue to challenge economics

Increase "EBITDU"

- Differentiate value and packages
- Increase automation and standardization where possible
- Look for "efficiency killers"
- Drive product-level profitability
- Enhance service differentiation
- Maximize service orders; minimize trouble tickets
- Lock in supplies at lower costs

Transformation

Longer term growth will increasingly come from new services and products

Expand Services

- Expand product sets & revenue streams (e.g., wholesale/ redundancy links, 5G backhaul, etc.)
- Seek new segments (e.g., Enterprise)
- Add Value-Added Services (e.g., MSP, hosted voice solutions, customized offers, etc.)
- Seek innovative models (e.g., IOT)
- Re-invest in the network to enable new service offerings

3 Final Tips

1

Set a Big Vision

2

Understand Value

3

Build a Playbook

If you feel like this

"There's two buttons
I never like to hit:
that's panic and snooze"

Ted Lasso

Reach Out If You Have Questions

Terry Chevalier

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