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# DISH Wireless: next-generation telco

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# State of the US mobile market: the power of three

## US mobile market in numbers

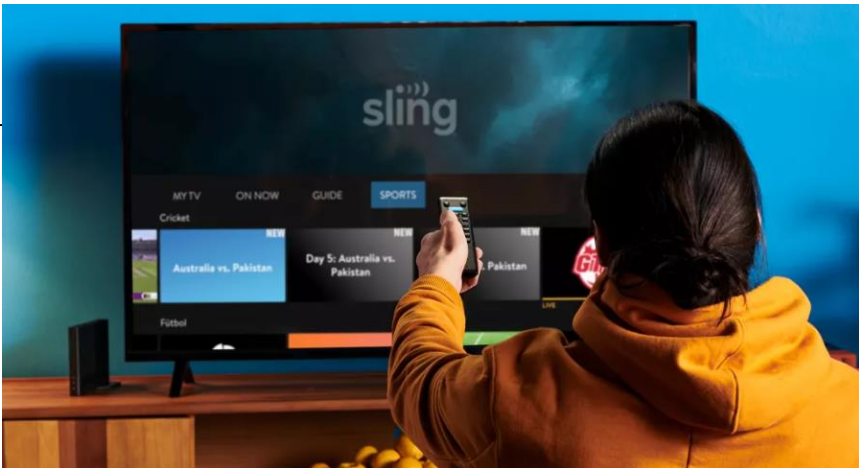
	2018	2019	2020	2021
<b>Mobile subscribers (millions)</b>				
AT&T	151,921	165,889	182,558	201,791
T-Mobile	63,656	67,894	102,064	108,539**
Verizon	94,507	94,544	94,373	115,395
Others	111,709	114,130	89,994	68,590
Total (CTIA data)	421,793	442,457	468,989	494,315*
Mobile penetration (%)	129.1%	134.8%	141.3%	148.6%
<b>Mobile service revenues (\$ millions)</b>				
AT&T	70,521	71,056	72,564	78,254
T-Mobile	43,310	44,998	68,397	71,133**
Verizon	64,223	65,383	64,884	67,733
<b>ARPU (\$/month)</b>				
AT&T	38.7	35.7	33.1	32.3
T-Mobile	56.7	55.2	55.8	54.6
Verizon	56.6	57.6	57.3	48.9

- Three mobile incumbents generating >\$200bn in annual revenues
- A renewed “network” focus from AT&T and Verizon
- An emerging wireless enterprise ecosystem.
- T-Mobile still positioned as “uncarrier” even though it is now an incumbent.
- Customer experience still lagging

# The long road to Las Vegas

Our journey began with a bold idea: to bring TV to rural America.

DISH was founded on adventure and an unshakable desire to win. It's what drove us to launch satellites into space when people said we couldn't. To take on the world's largest industrial corporation when people said we shouldn't. And to connect millions of Americans to the TV they love when the cable companies wouldn't.



dish wireless  
**America's First  
Smart Network™**

We launched satellites into space to bring TV to those without it. We invented the DVR to give people entertainment on their terms. Now, we're building America's First Smart Network™ to redefine the way people and things connect. It's the first cloud-native network of its kind.



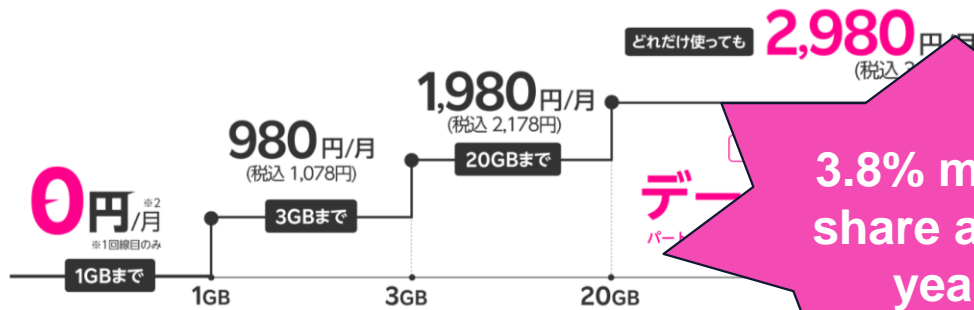
# Fourth operator lessons from Japan, India and Italy

10% market share after 4 years

Rakuten UN-LIMIT VI

\$8-\$23

毎月使ったデータ分だけお支払い



3.8% market share after 2 years

120GB  
MINUTI e SMS ILLIMITATI

9,99€  
AL MESE

5G INCLUSO

PER SEMPRE  
SIM: 9,99€

Registrati Scopri

\$5-\$10

34% market share after 4 years

MOST POPULAR

₹399

prime video +4 more

VALIDITY 75 GB

Get Now View details

\$5-\$7

FAMILY PLAN - 1 ADDITIONAL SIM CARD

₹599

prime video +4 more

VALIDITY 100 GB

Get Now View details

FAMILY PLAN - 2 ADDITIONAL SIM CARDS

₹799

prime video +4 more

VALIDITY 150 GB

Get Now View details



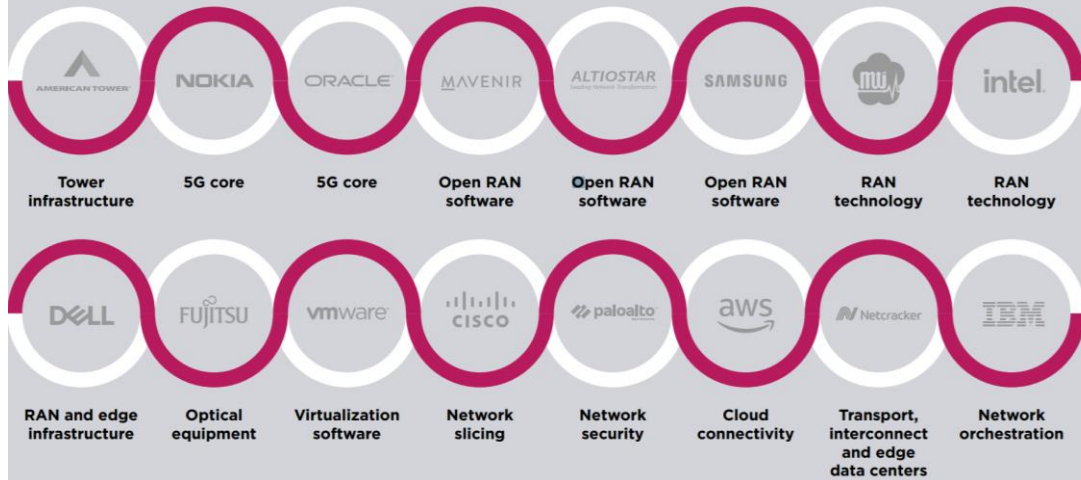
# The enterprise market: giving customers what they want

- Targeting a 20% share of a \$30 billion market
- Three enterprise models: spectrum, network design and a slice of the network
- An edge-ready network
- Wholesale and MVNOs? Resellers? Partnerships?
- Learning from an unsuccessful foray into IoT
- Giving enterprises what they want, including subscriber management?

**dish** wireless™

# Forging a new approach to technology and vendor relationships

## Network



## IT / Support Systems

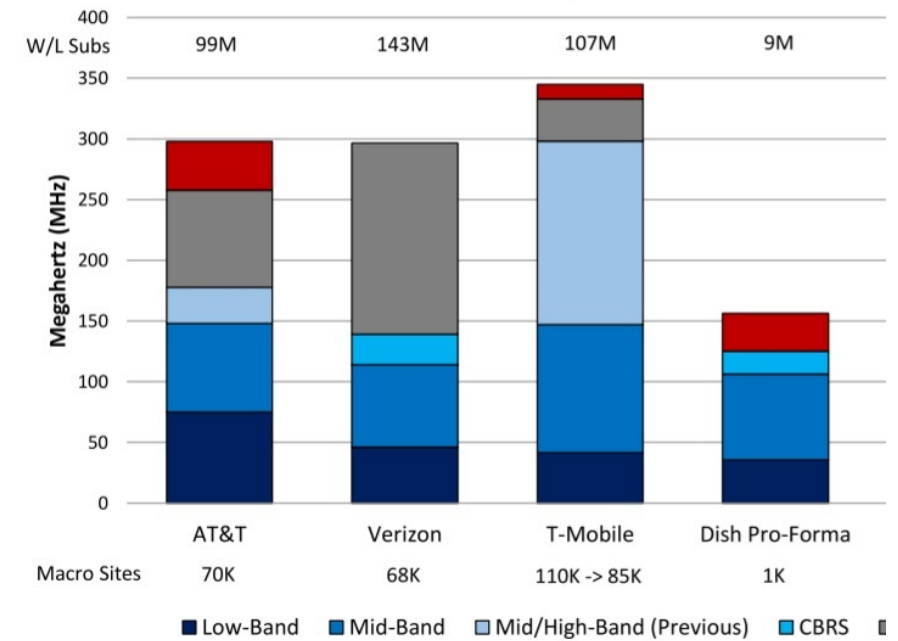


## Systems Integration



# Forging a new approach to technology and vendor relationships

- The third way: sourcing R&D from the ecosystem.
- Building in the cloud: an AWS cloud and a VMWare cloud
- Making open RAN a reality
- Making the best use of an unusual spectrum portfolio
- Delivering on automation
- Standards, features and cost implications
- An asset-light business model
- A devolved approach to systems integration
- No more operator labs





# An open, modular approach to support systems



- “Every component needs to be a unique entity that can stand on its own..[it must not] try to take on too much we're not, we're not replicating data across all these different platforms.”
- “The biggest challenge I was worry about every day is innovation”
- “I want the keys to the platform..everything we do is put into a sandbox first...we do all the configuration and testing..., we need ownership and control.”
- “Everything we do is catalog-driven...I consider the catalog to be at the heart of everything we're doing.
- “Whatever we're building internally, we also have the mindset that we could expose it externally.”



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# Make it Happen

- Customer experience: the only real differentiator in a commoditized consumer market?
- Building the right channels in B2B and becoming the connectivity partner of choice
- A sustainable approach to systems integration.
- Carrier aggregation and the right choice of devices
- Delivering on the vision to ensure the business gets fully funded
- Managing opex

# Discussion and Q&A

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