

mmWave solutions and opportunities



Christopher Price Director, Advanced Technology

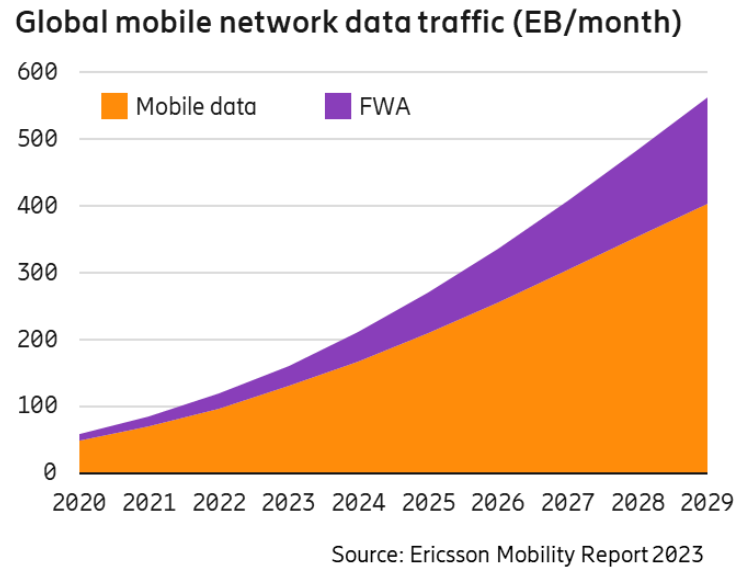
CTO Office
Ericsson

Leveraging the potential of 5G mmWave



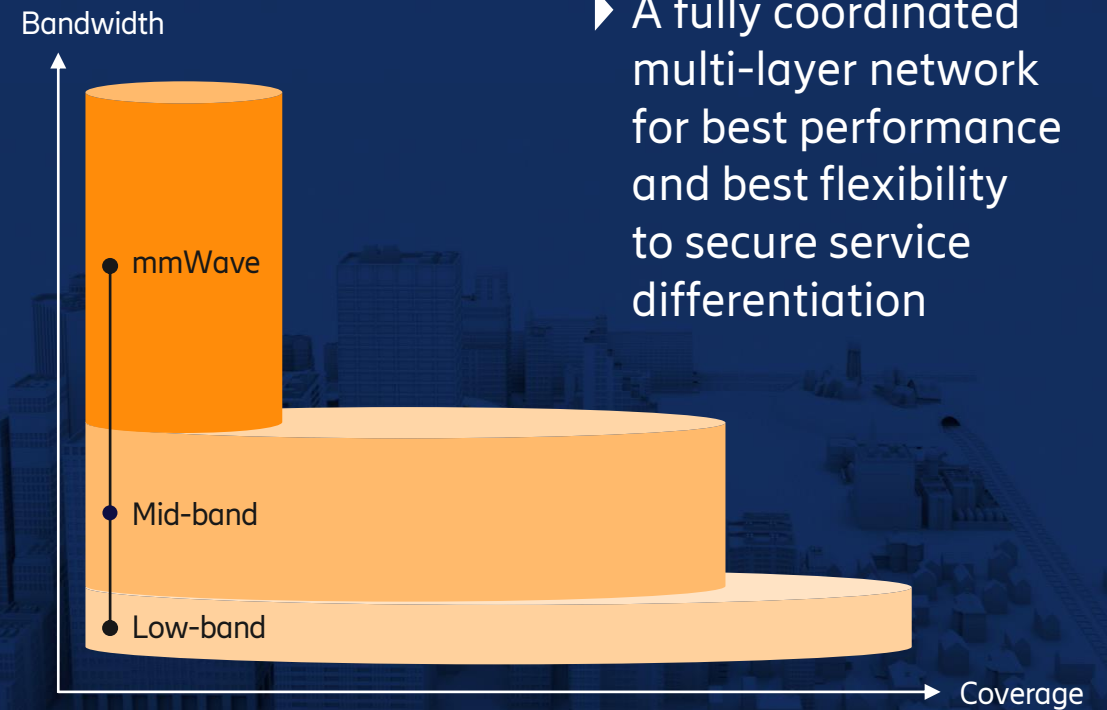
4x

Global mobile network data traffic growth to 2029



A complete 5G network for all use cases

▶ A fully coordinated multi-layer network for best performance and best flexibility to secure service differentiation

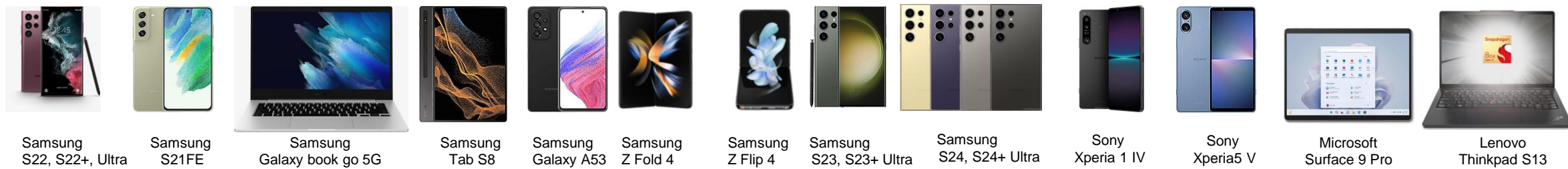


10x more spectrum with mmWave

Provide a leap in capacity

Enable revenues from new use cases

Some mmWave devices released since 2022 *



Samsung S22, S22+, Ultra Samsung S21FE Samsung Galaxy book go 5G Samsung Tab S8 Samsung Galaxy A53 Samsung Z Fold 4 Samsung Z Flip 4 Samsung S23, S23+ Ultra Samsung S24, S24+ Ultra Sony Xperia 1 IV Sony Xperia5 V Microsoft Surface 9 Pro Lenovo Thinkpad S13



Apple Ipad Air Apple Iphone 14, +, Pro, Max Apple Iphone 15, +, Pro, Max Google Pixel 6 Pro (LSI-based) Google Pixel /a (LSI based) Google Pixel fold (LSI based) Google Pixel 8 / 8 Pro (LSI-based) Motorola Edge (2022) (MediaTek based) Motorola Edge 30 Pro Sharp Aquos R7 AQUOS R7 Leica (Sharp) Leitz 2



TCL 30V 5G Quectel RM530N-GL Telit MV31 Razr Edge 5G Netgear M6 Pro



FWA + more ... Sony PDT - FP1

* this is not a full inventory of all mmw devices

mmWave sweet spot for eMBB



High traffic area

- mmWave adds the needed capacity in crowded locations where sub6 band will not handle the growing eMBB traffic.

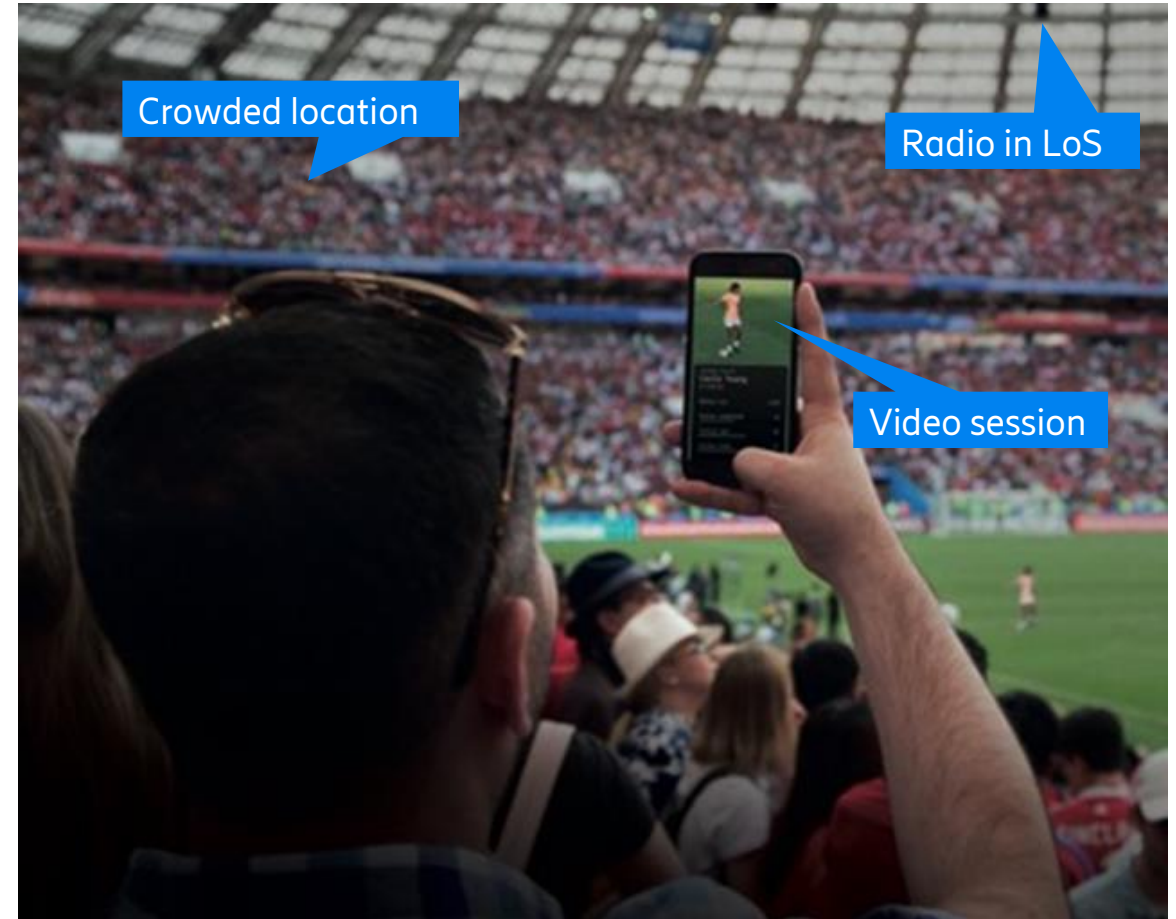
Good radio conditions

- mmWave delivers to the majority of user that are in good radio conditions (LoS). More capacity and better performance left for user in poorer conditions on other bands

Large data sessions

- mmWave only activated for larger data sessions, as video, while saving signaling and UE battery.

mmWave adds spectrum for network capacity and user experience



Verizon uses mmWave in every NFL stadium to create a premium experience for its customers

30

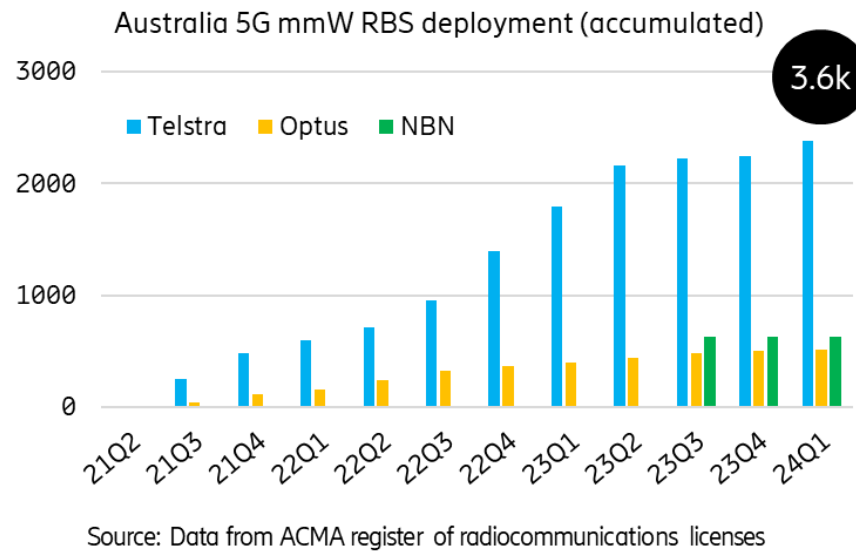
NFL stadiums for
Verizon customers

>1 TB

of data at NFL
games for Verizon
customers.



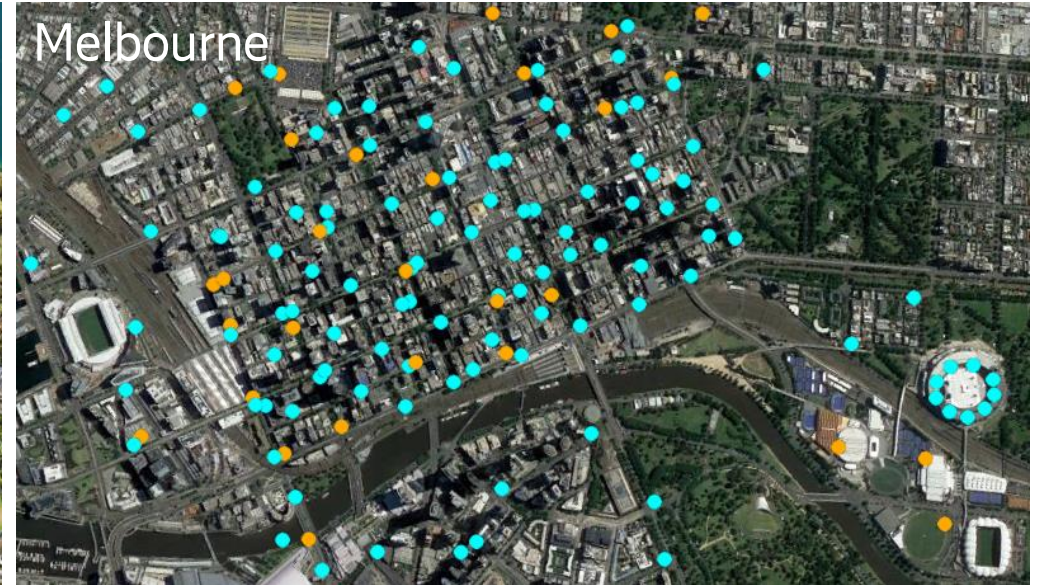
mmWave in Australia



3.6k

n258 aka 26GHz
Telstra 1000MHz
Optus 800MHz

n257 aka 28GHz
NBN 1000MHz



● Telstra 26GHz site
● Optus 26GHz site


Source: Data from ACMA register of radiocommunications licenses

Next wave of gigabit FWA with mmWave



Start early with trials and pilots to identify most suitable deployment scenarios to add mmWave FWA

Verizon (US)



Mid-band for nationwide FWA coverage.
mmWave+Mid-band in areas with high demand.

USCC (US)



Mid-band for regional FWA coverage.
mmWave+Mid-band in areas with high demand.

NBN (AU)



Add mmWave to large mid-band FWA network to support higher speeds and capacity.

Global focus



All CSPs with mmWave spectrum explore the use as the next wave beyond mid-band FWA.

Trials & Pilots

- T-Mobile
- Jio
- Airtel
- Omantel
- Telia

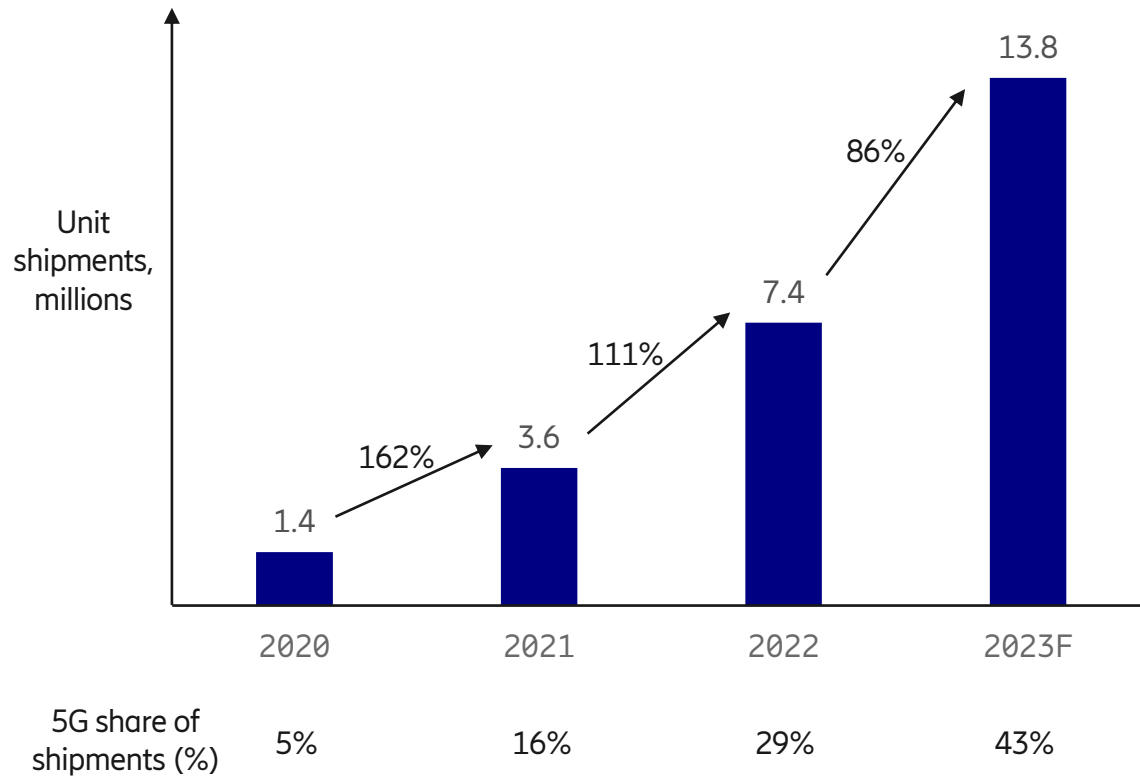
← A wide variety of commercial deployments from urban to sparse rural →

Source: Service provider public information

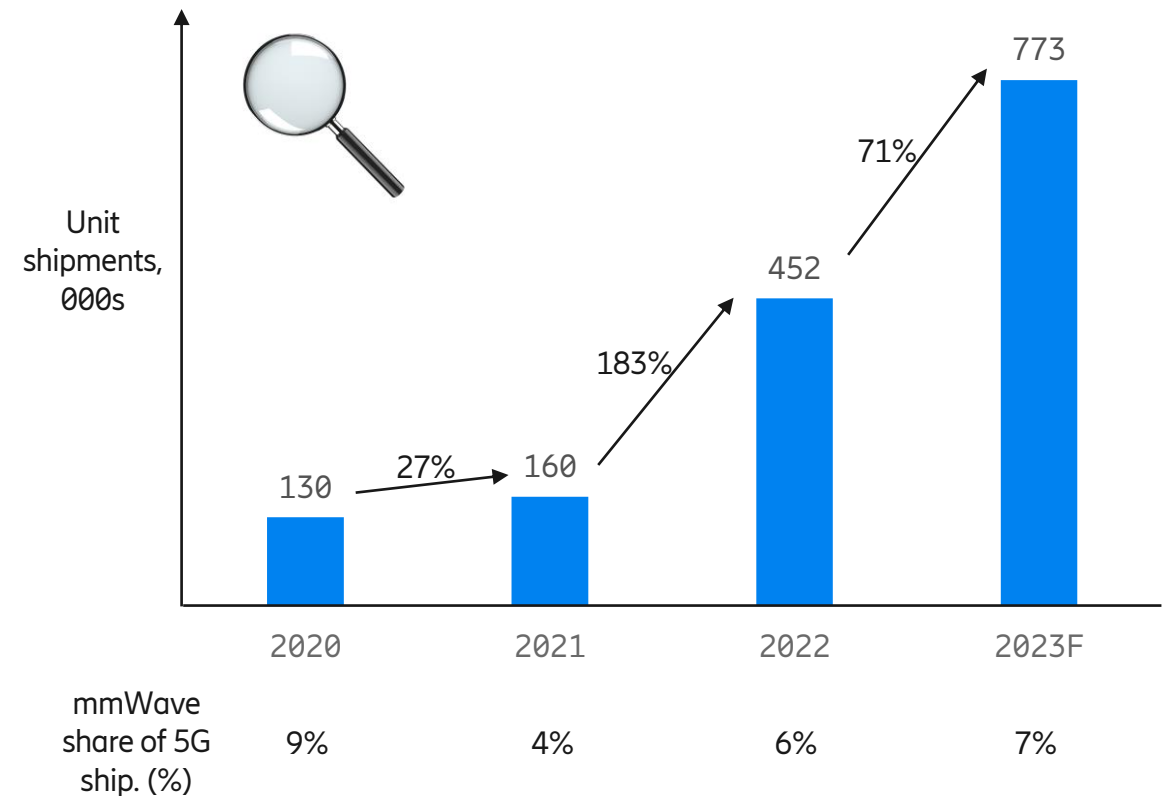
5G mmWave FWA momentum accelerating



5G-capable FWA CPE shipments



mmWave-capable 5G FWA CPE shipments

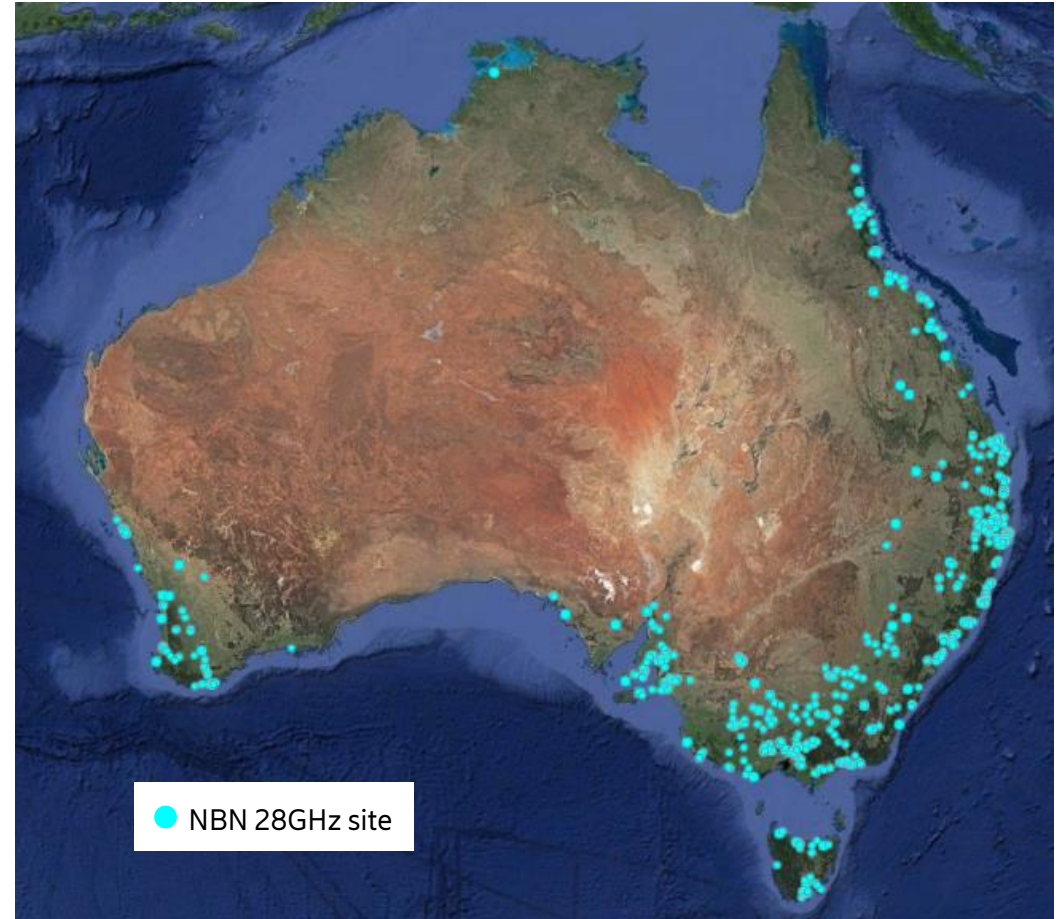


Source: GSA 4G/5G FWA Forum Survey 2023

Australia, NBN – mmWave for rural FWA



- NBN's Mid-Band FWA network currently covers more than 650,000 premises across Australia
- NBN are now adding 5G mmWave to support higher speeds and deliver improved customer experiences
- The additional capacity and reach of the upgraded network will also provide up to 120,000 homes and businesses in NBN's satellite footprint access to FWA for the first time




Source: Data from ACMA register of radiocommunications licenses

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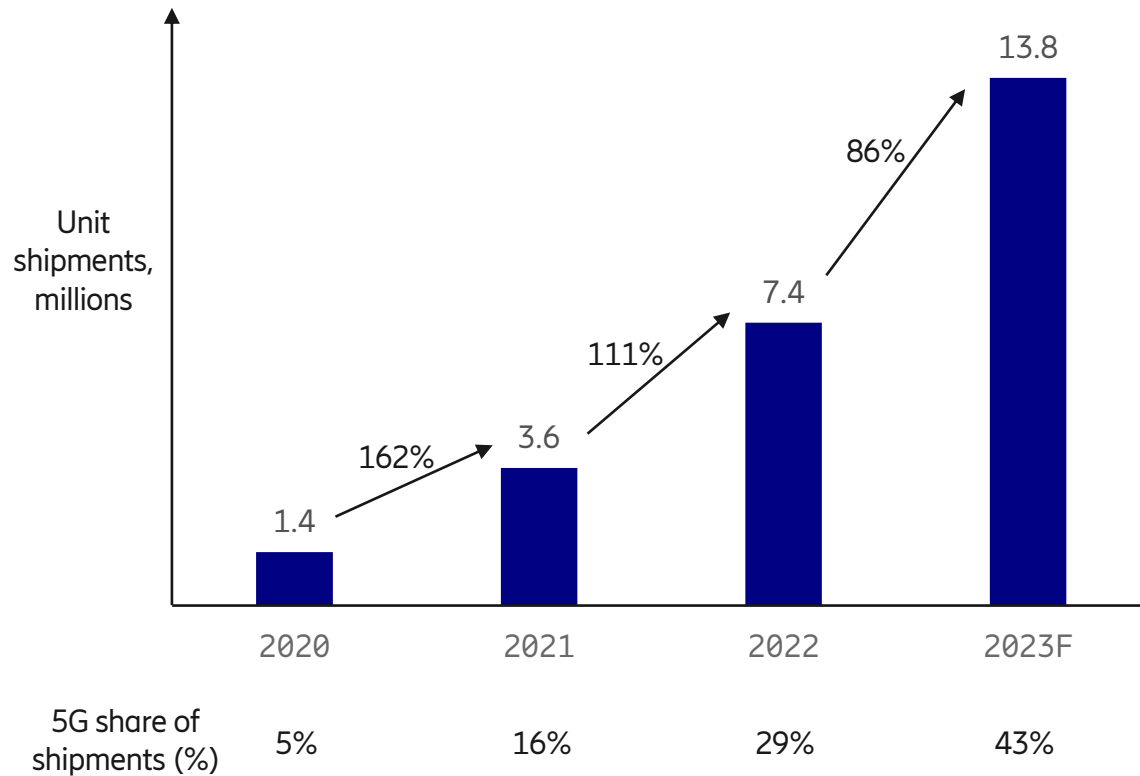
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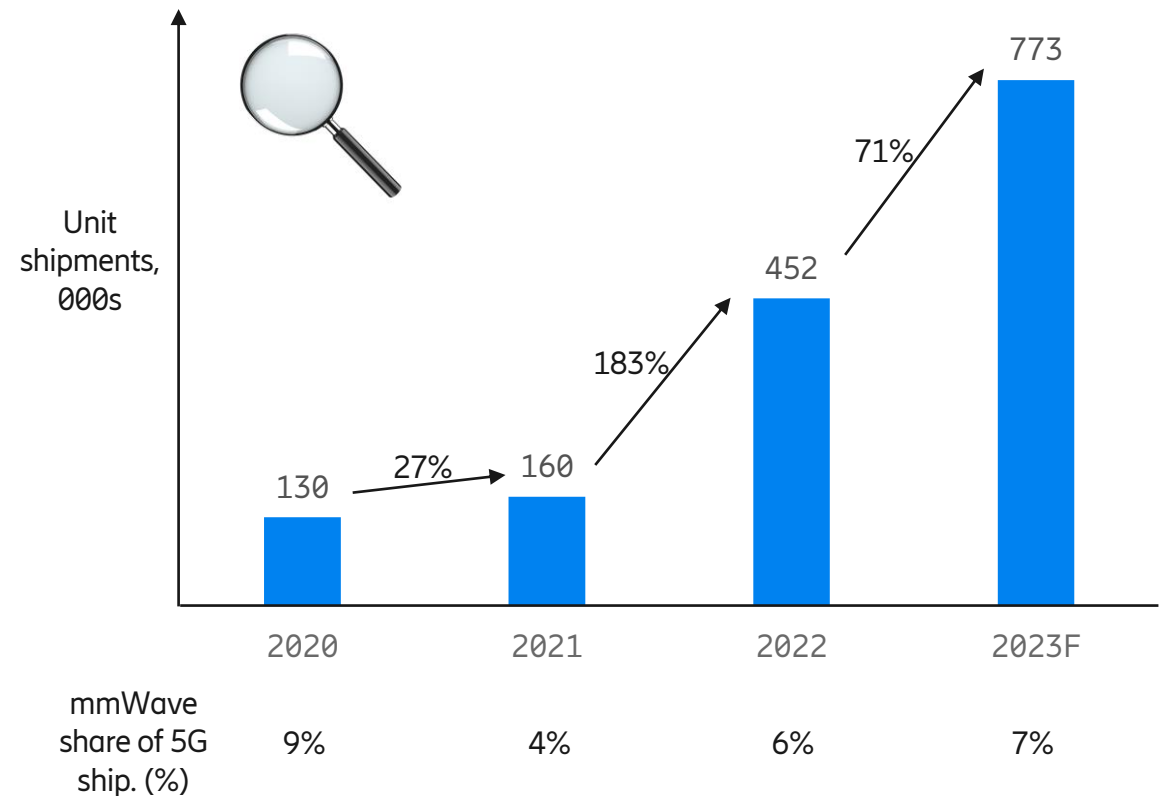
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