Q2 FY22 Connections Update

Q2 FY22 CONNECTIONS UPDATE

21 January 2022

CHORUS

Q2 FY22 overview

Total fibre connections increased by 24k to 918,000 (Q1 FY22: +23k)

- **Fibre uptake across the completed UFB footprint grew from 66% to 67%**
  - fibre broadband connections increased by 24k despite ongoing effects of COVID alert levels on our migration programme and Q2 typically being a softer period for demand (e.g. student holidays)
  - uptake reached 72% (+1%) in UFB1 areas and 46% (+2%) in UFB2 areas
  - the fibre rollout was recently completed in Mahurangi, Russell, Duvauchelle and Fairlie

- **Total broadband connections increased 4k to 1,187,000*** (Q1 FY22: +3k)
  - 9k connections were added in Chorus UFB areas
  - strong demand for high quality broadband saw 1Gbps uptake grow to 23% (Q1 FY22: 20%) of mass market fibre connections
  - more than half a million consumer plans were upgraded from 100Mbps to 300Mbps in December and Ookla Global Speedtest Index results show NZ has jumped from 22nd to 11th in the world with median download speeds of 122Mbps
    (note: this result was from mid-December and is expected to improve once the full effect of the upgrade is measured)

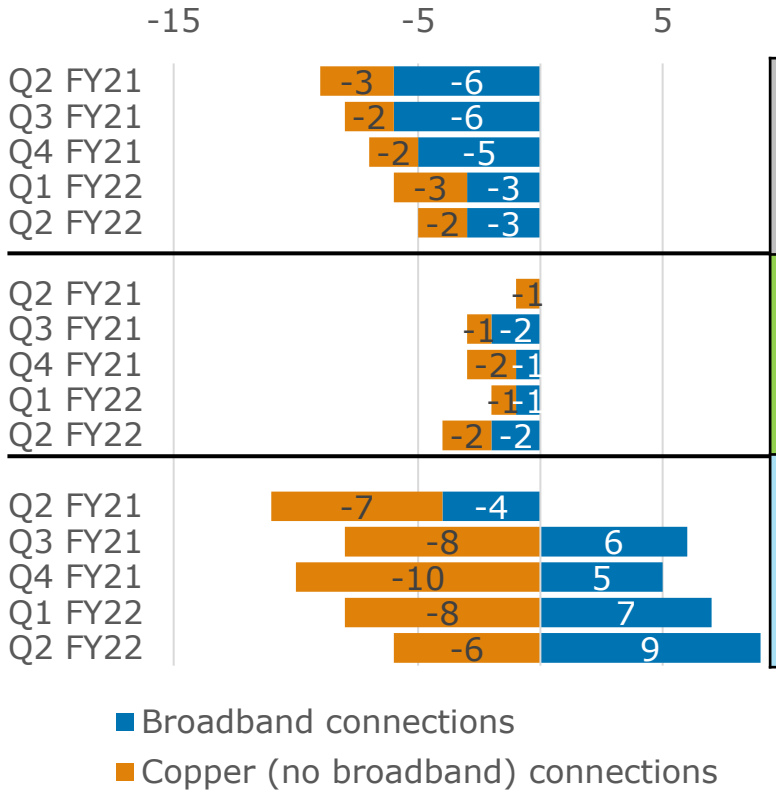
- **Copper broadband and voice connections declined by 30k** (Q1 FY22: -32k)
  - voice only disconnections slowed slightly to 10k (Q1 FY22: -12k)
  - total fixed line connections declined by 6k to 1,325,000* (Q1 FY22: -9k)

*totals exclude ~10,000 broadband connections Chorus is partly subsidising for student households

- **Average monthly data usage was 479GB in December (Sept: 539GB) reflecting the end of COVID lockdowns and the start of the summer holiday period**
  - average monthly data usage on fibre was 554GB vs 621GB in September

Connection changes by Zone (indicative as at 31 December)

Quarterly change ('000s) by zone**

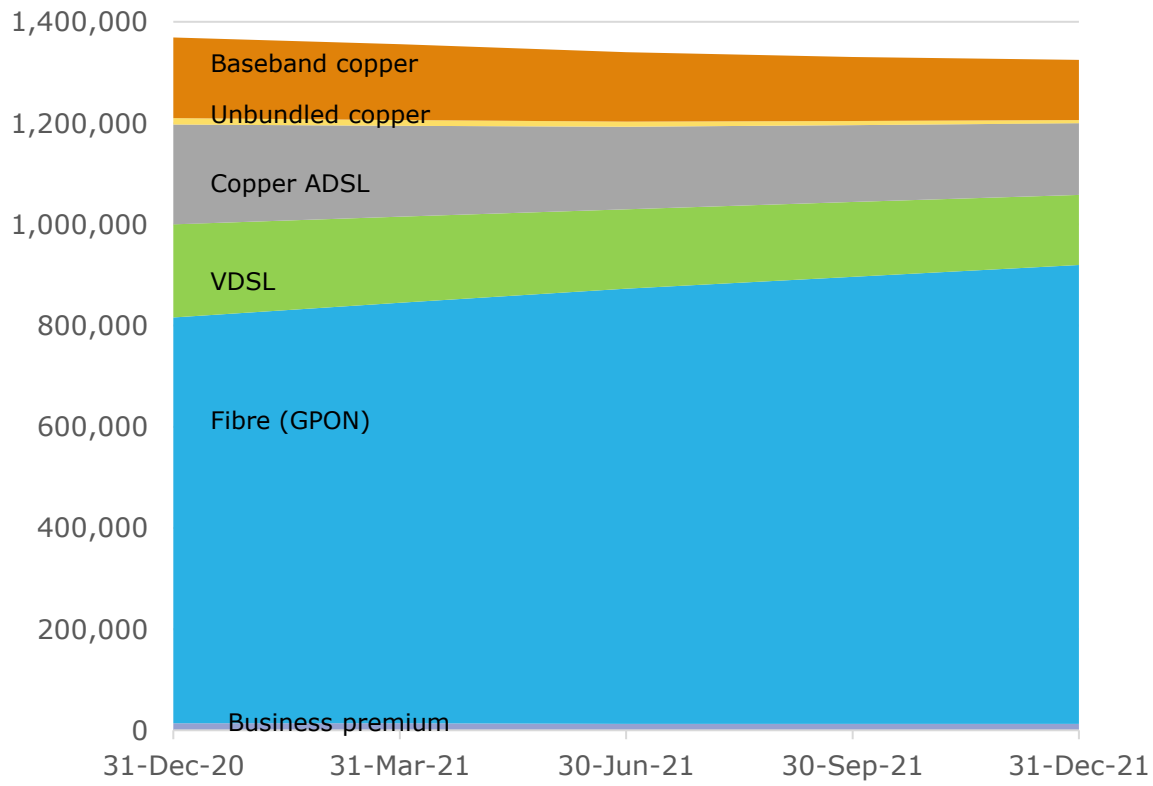


Other fibre company (LFC) zone	Broadband connections	39,000	Disconnections continue due to Local Fibre Company and fixed wireless provider activity, with some slowdown due to COVID-19 effects.
	Copper line (no broadband)	23,000	
	TOTAL	**62,000**	
Non-UFB zone	Broadband connections	147,000	Some expansion of wireless broadband footprint through Government backed programme. New housing outside of UFB zone driving fibre premises growth.
	Copper line (no broadband)	32,000	
	TOTAL	**179,000**	
Chorus UFB zone*	Broadband connections	1,001,000	Continued broadband growth driven by Chorus incentives and migration campaigns. Copper voice disconnections reflect migration to fibre and targeted fixed wireless activities.
	Copper line (no broadband)	70,000	
	TOTAL	**1,071,000**	

* Includes planned Chorus UFB1, 2 and 2+ coverage
**Excludes 10k partly subsidised education connections and 13k fibre premium and data services (copper) connections

Fibre comprises 69% of Chorus connections

	31 Dec 2020	31 March 2021	30 June 2021	30 Sept 2021	31 Dec 2021
Unbundled copper (no broadband)	13,000	11,000	10,000	8,000	6,000
Baseband copper (no broadband)	159,000	150,000	137,000	127,000	119,000
Copper ADSL (includes naked)	197,000	180,000	163,000	152,000	142,000
VDSL (includes naked)	184,000	170,000	157,000	148,000	138,000
Fibre broadband (GPON)	802,000	831,000	860,000	883,000	907,000
Data services (copper)	3,000	3,000	2,000	2,000	2,000
Fibre premium (P2P)	11,000	11,000	11,000	11,000	11,000
Total connections	1,369,000	1,356,000	1,340,000	1,331,000	1,325,000

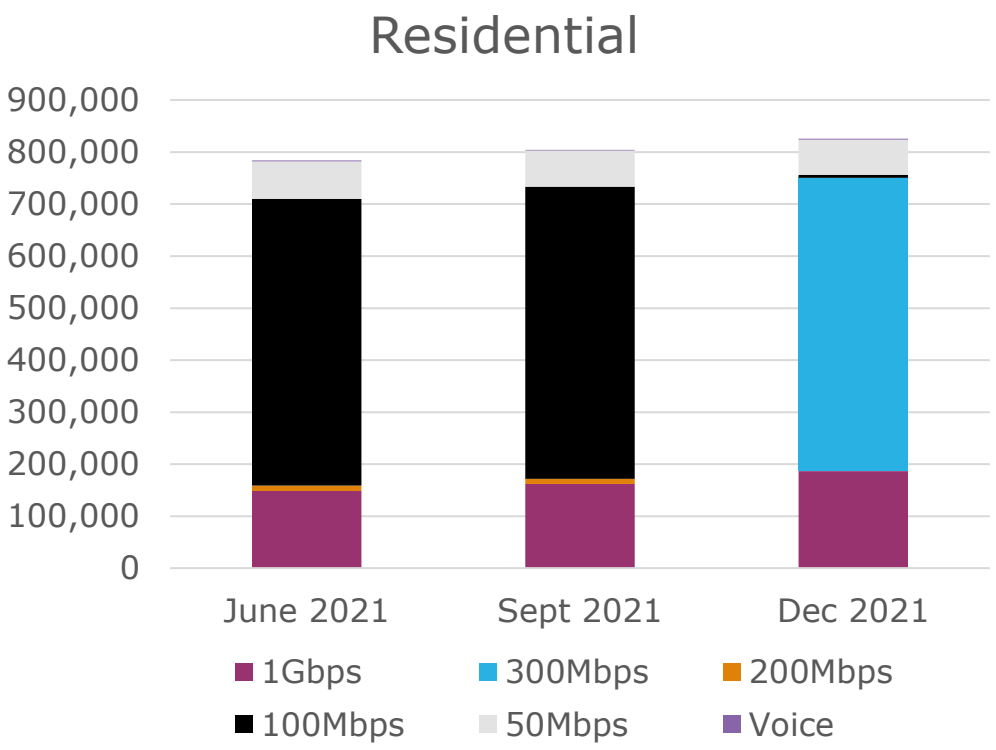


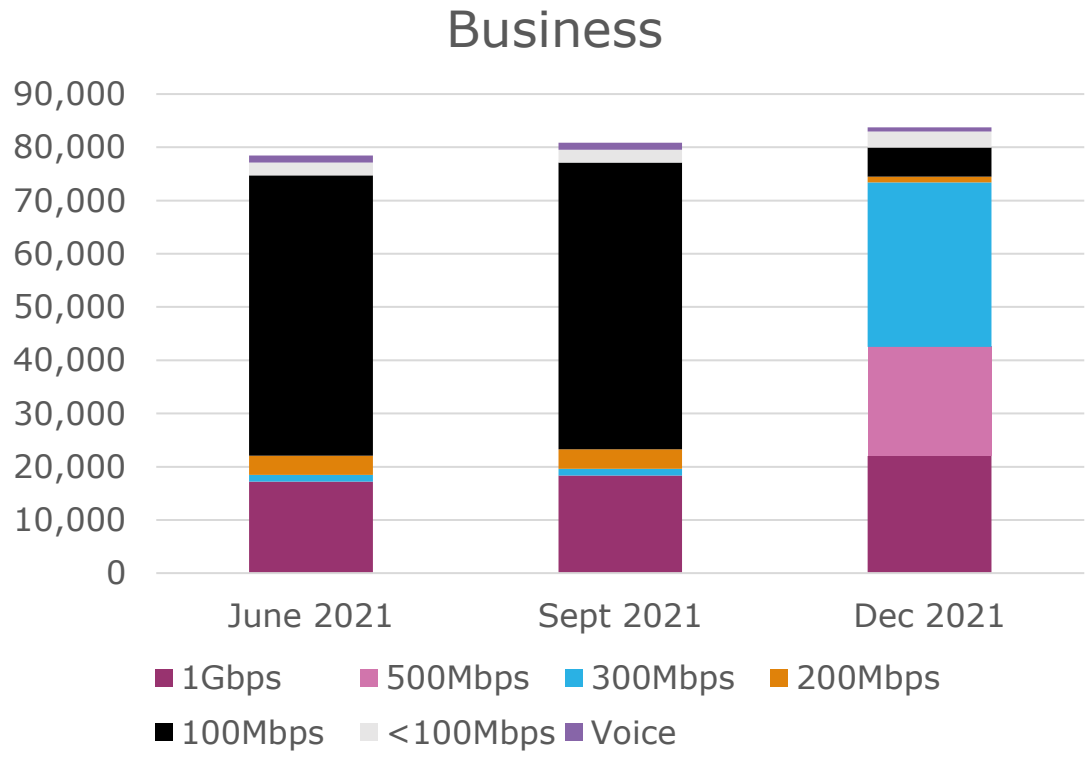
- **1,187,000 broadband connections comprises:**
  - 907,000 fibre (GPON) connections
  - 280,000 VDSL/ADSL (copper) connections

Note: 10,000 partly subsidised education connections are excluded from this data

1 Gigabit plans now 23% of mass market

More than half a million customers upgraded to 300Mbps plans in December





UFB uptake grows to 67%

> **UFB uptake increased from 66% to 67% within completed footprint in Q2***
- uptake in UFB1 areas grew from 71% to **72%**
- uptake in UFB2 areas grew from 44% to **46%**
- **881,000** connections (Q1 FY22: 858,000) now within completed footprint, including business premium connections
- **1,308,000** customers able to connect (Q1 FY22: 1,295,000)
- **1,022,000** premises passed** (Q1 FY22: 1,011,000) out of 1,054,000 target = UFB rollout 97% complete

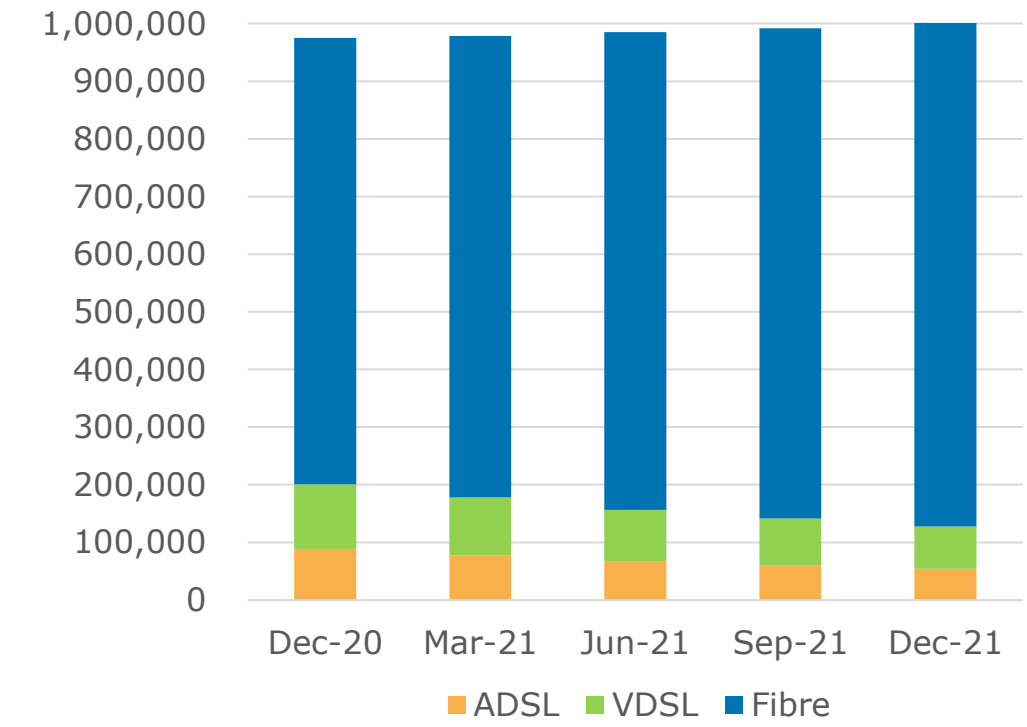
(note: data includes some UFB2 areas that have been partially built, but not yet submitted for Crown sign-off)

> **34,000 fibre installations completed in Q2 (Q1 FY22: 30k)**
- customer satisfaction remained steady at 8.3
- WIP reduced from 15k to ~13k
- field crews reduced from ~650 to ~600

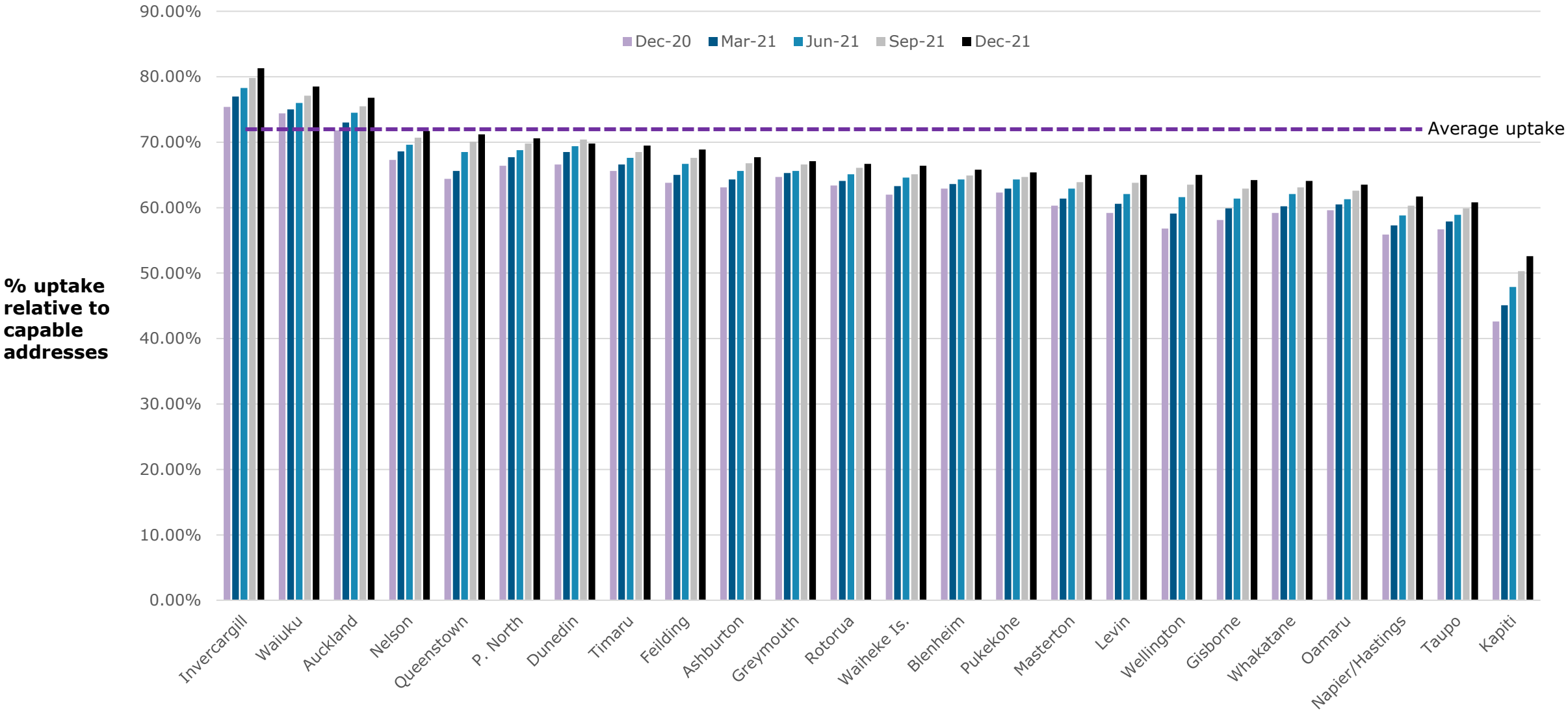
* includes ~3k partly subsidised education connections

**under the UFB contract, a multi-dwelling unit or single office block is one premises

Fibre now 87% of Chorus broadband connections in planned UFB zone



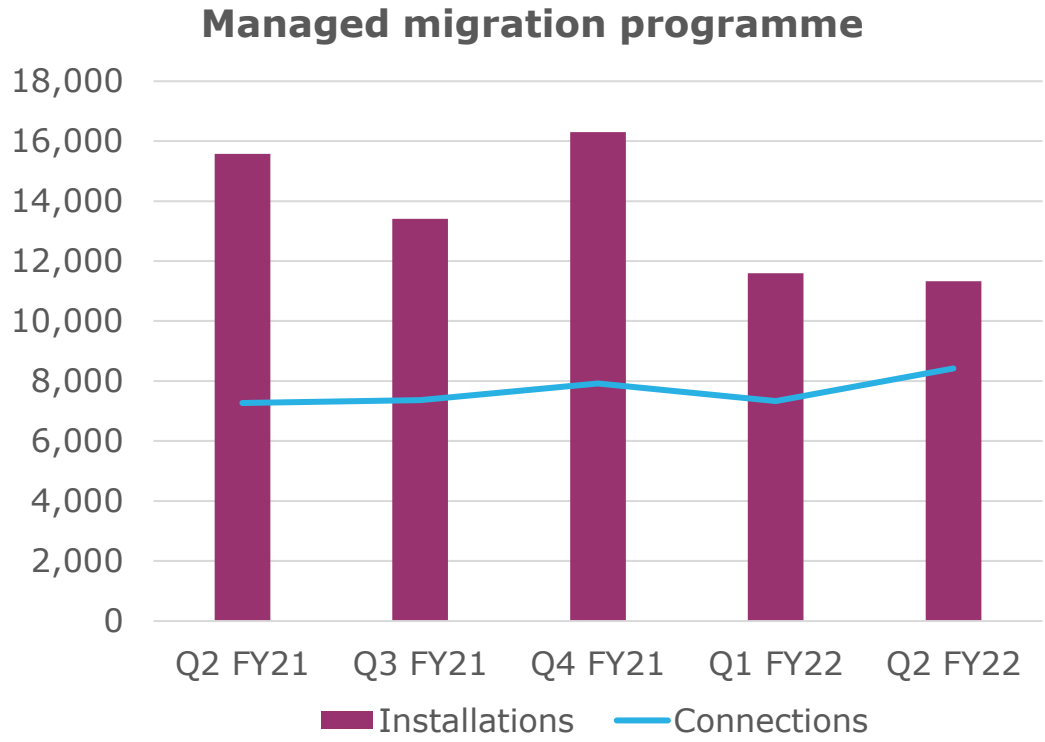
UFB1 uptake: 72%



Managed migration programme lifts uptake

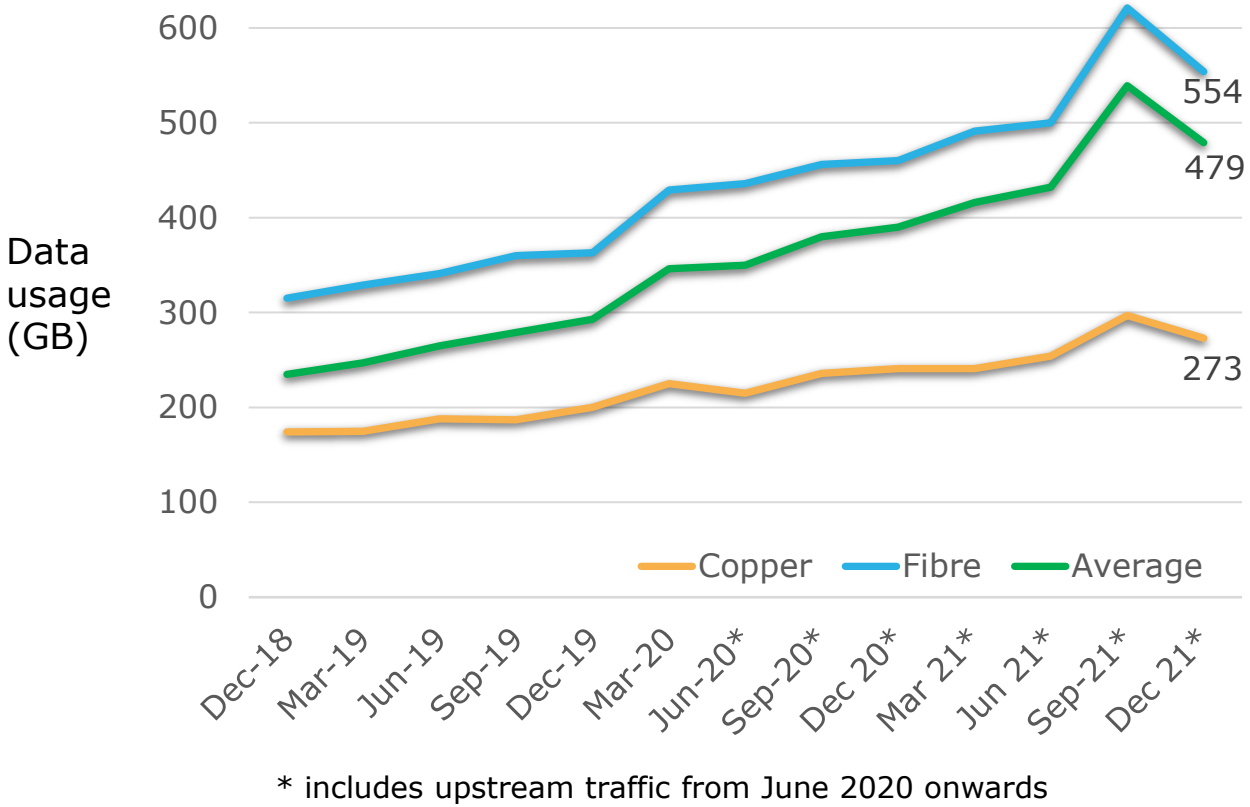
~11k managed migration installations completed in Q2 (Q1 FY22: 12k)

- Installation activity was consistent with Q1, reflecting the ongoing effect of heightened COVID alert levels on some consumer facing activity
  - activations of installed fibre sockets (ONTs) increased from ~7k in Q1 to 8k in Q2
  - ~4k activations were at offnet addresses



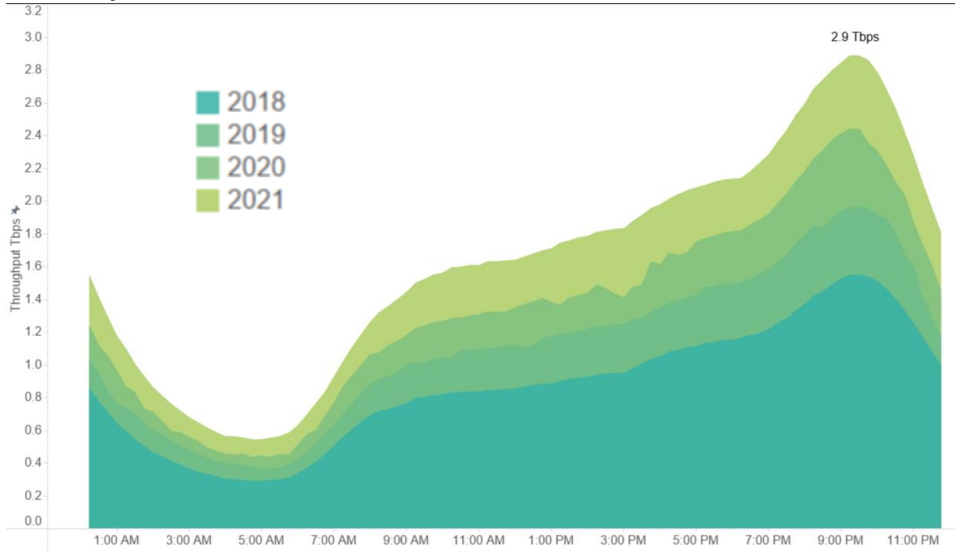
Monthly average data usage on fibre 554 gigabytes

Monthly average data usage per connection on our network*



* includes upstream traffic from June 2020 onwards

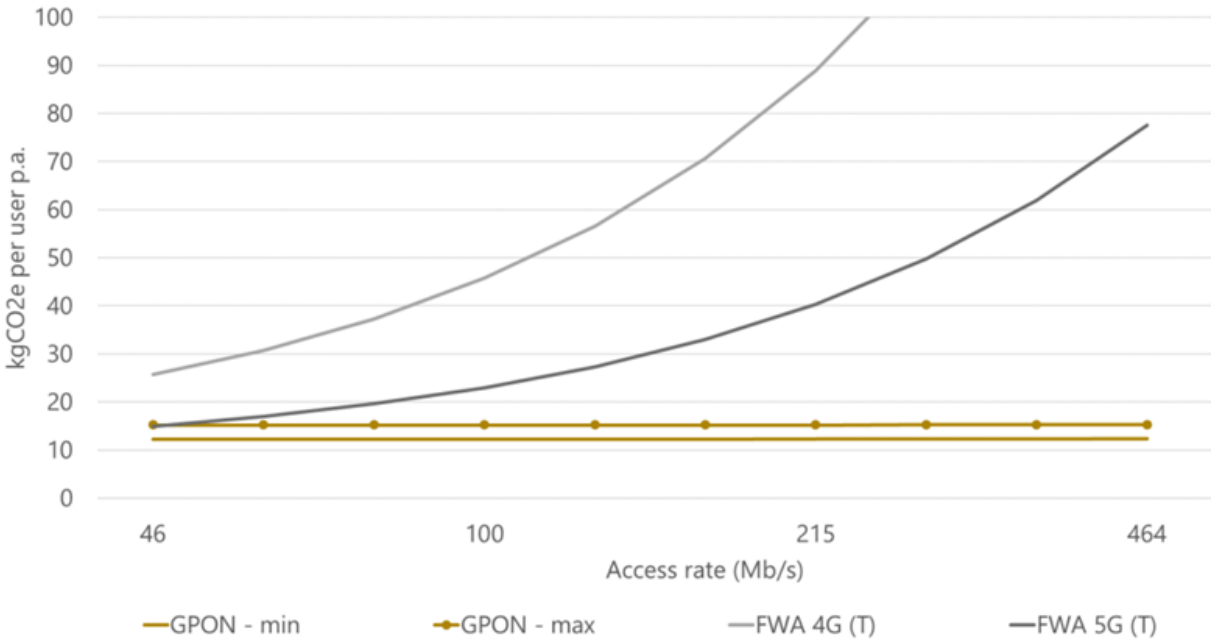
- Monthly data usage reduced with the end of COVID lockdowns and the start of the summer holiday period
  - **554GB** on fibre (Sept:621GB)
  - **273GB** on copper (Sept:297GB)
  - **479GB** average (Sept:539GB)
- Average peak throughput on our network at peak time (~9pm) was 2.9Tbps in December, down from 3.34Tbps in Sept



Report confirms fibre's low emissions benefits

Sapere Research Group finds fibre outperforms other technologies

Chart: *Emissions in Fibre (GPON) and Fixed Wireless Access (FWA) 4G/5G networks for average access rates between 50 and 500Mbps*



> The research found:

- *fibre's carbon emissions profile stays consistent as broadband speeds increase, while emissions increase for other broadband technologies*
- *at 300Mbps, per-user emissions of 5G fixed wireless are about four to five times higher than those of fibre GPON*
- *equipment in the home contributes up to 65% of fibre broadband emissions and offers an opportunity for future reductions, including through uptake of Hyperfibre services on new XGS-PON technology*

Note: the research was commissioned by New Zealand fibre network companies including Chorus. It examined the emissions during the access network use and includes the shipping and disposal of equipment, such as optical network terminals and Wi-Fi routers but not the activity in building copper, fibre, HFC or the mobile networks. Real-world network data was used to assess the emissions impact of fibre and VDSL while a mix of actual and theoretical data was used for other technologies.

Commerce Commission broadband testing report

- The Commerce Commission's *Measuring Broadband New Zealand*, Spring Report (December 2021) shows latency is a key area in which fibre outperforms other technologies. Particularly when the broadband connection is heavily utilised.

Figure 10

Average Latency Under Load to Test Servers by Plan. Lower is better.

Averages of monthly household averages

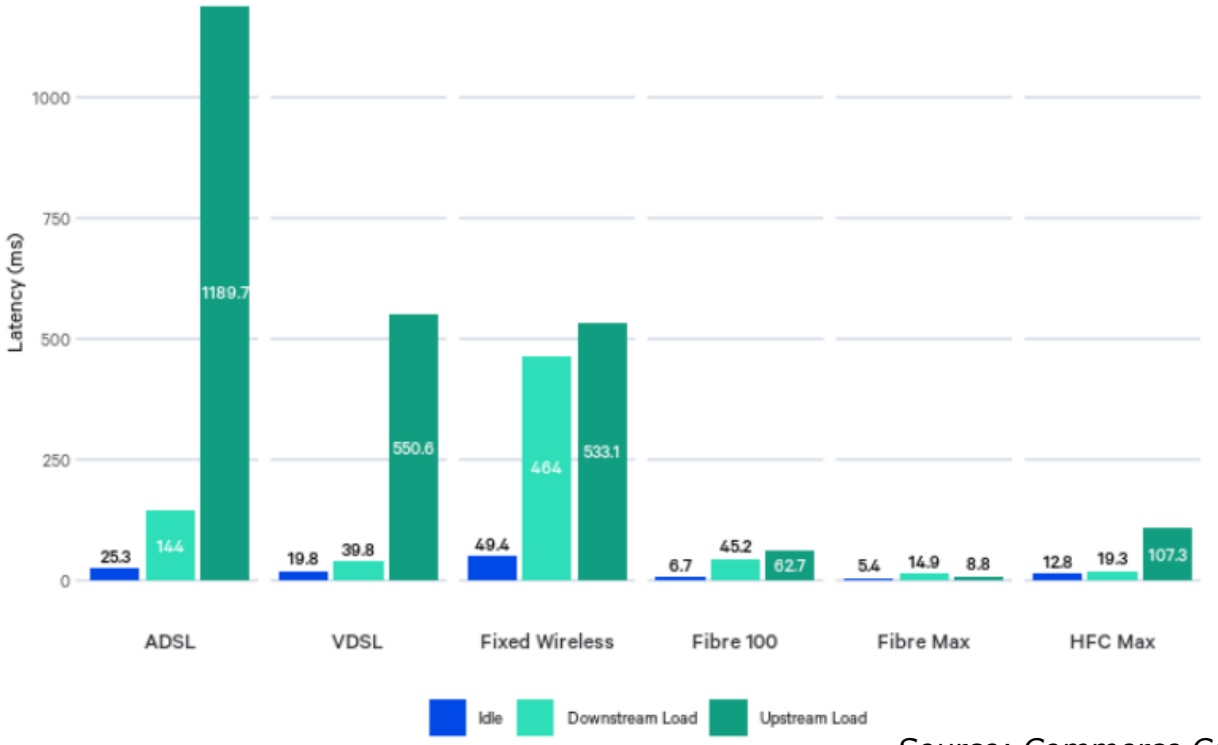
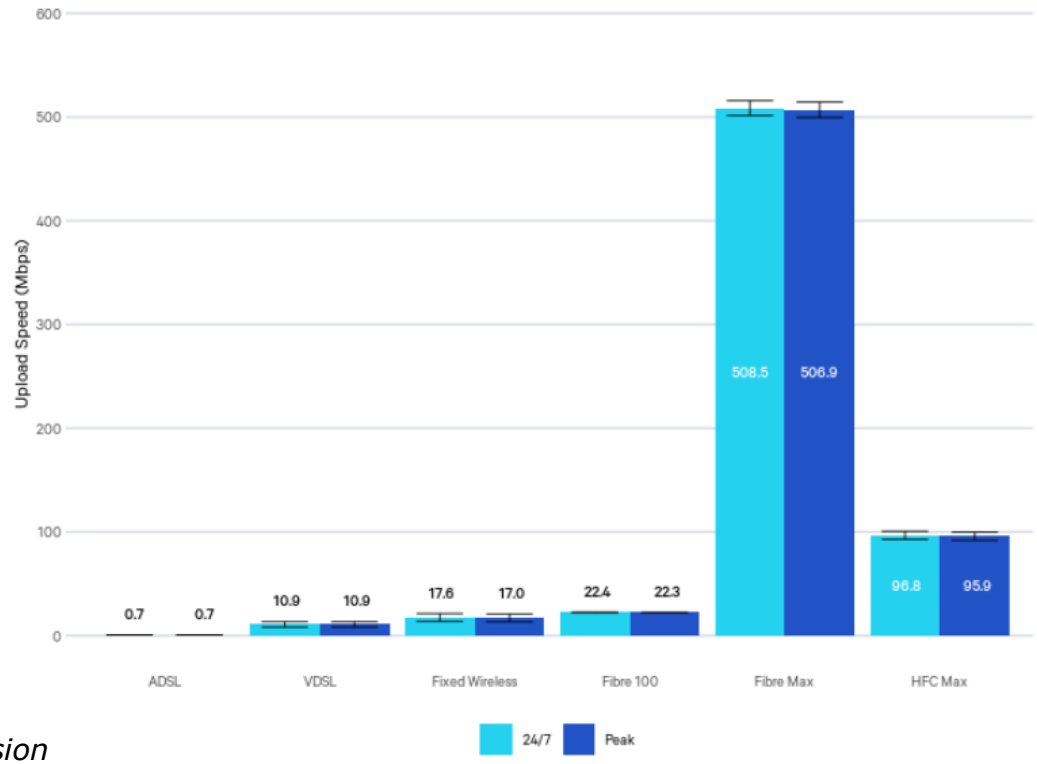


Figure 2

Average Upload Speeds by Plan

Average of monthly household averages. Peak hours are Monday - Friday, 7pm - 11pm. Error bars show 95% confidence intervals of the mean.



Source: Commerce Commission