

3G to 4G Transition Q3 FY23 Update to Minister Rowland

April 2023

3G coverage equivalence program



3G to 4G Site Upgrade Progress

- · 97% of all our mobile sites nationwide have been upgraded to 4G
- 310 x 3G only sites remain
- 60 of the 190 x 3G only sites planned for upgrade in FY23 have been successfully completed to date

Our aspirational build targets have been impacted by compounding supply chain issues

- Antenna and microwave radio component lead times continue to experience delays globally these are key upgrade
 dependencies, and for some sites microwave is the only viable transmission option
- Steel fabrication have increased from a typical 4-week timeframe to be 10+ weeks
- · As we are squeezing 6 months of build into a 3 month window, field resourcing in Australia has been challenging

We have implemented mitigation actions to support strong final quarter delivery, and momentum into FY24

- s47(1)(b)
- · Swapping suppliers is very complex, and requires testing to be completed before field deployment occurs
- We have reassessed sites with complex transmission upgrades to identify opportunities for installing 4G using existing transmission while still meeting end user demands. The planned transmission upgrades for these sites will be undertaken when supply chain backlogs clear.
- With partners we are onboarding field resources prior to work orders being approved, ensuring we have skilled workers ready to commence build when approvals come through
- Steelwork orders are now being completed in parallel to site approvals, reducing delays once we reach build stage
- Due to the actions above we expect a strong Q4, with total upgrades for FY23 being in the range of 160-190 sites.
 Any shortfall against our FY23 target will be commissioned in July and August 2023 (i.e. Q1 FY24).
- Looking ahead:
 - We have proactively started the design phase for all FY24 projects, and in some cases construction as well.
 - We have proactively conveyed our FY24 microwave equipment requirements to mitigate current supply delays

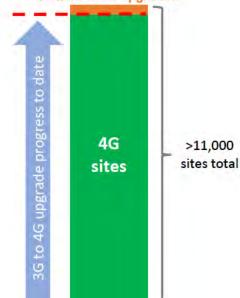
Our mitigations are proving to be effective, and we remain confident that all coverage equivalence activity will be completed on time

3G only site upgrade schedule*				
FY22	92			
FY23	190			
FY24	180			
Total	462			

*Subject to change pending finalisation of detailed Covid / disaster delay mitigation plans

3G only to 4G upgrade program ~97% complete

Just 310 x 3G only sites remain to be upgraded



Coverage equivalence checking of 3G to 4G upgrades



Coverage drive testing is undertaken on a sample of site upgrades completed each quarter, as detailed in the table below.

Site Name	State	Network data confirms equivale nce (Yes/No)	If Network data does not confirm equivalence, what is the planned remediation ?
RAGLAN R.T.	QLD	Yes	
TAYLORS BEACH TE	QLD	Yes	+
OREBODY 24 (BHPB)	WA	Yes	<u>.</u>
MILLMERRAN POWER STN	QLD	Yes	*
BARRABA NEWRY TRIG	NSW	No	The site was flagged for significant inequivalence in the drive survey. Investigation determined hardware was not meeting compliance standards. Contractor has been instructed to revisit site and achieve compliance.
JAGUAR JABIRU MINE	WA	Yes	
FAIRVIEW	QLD	No	Minor inequivalence observed. This is attributed to a 3G only JI19 repeater at the fringe of coverage of the macro site. The repeater will be upgraded as part of 3G to 4G build program.
MUNNO PARA SHOPPING CENTRE	SA	Yes	
YANCO ROCKDALE BEEF	NSW	Yes	
SECOND BEACH RT	QLD	Yes	
WISEMANS FERRY	NSW	Yes	-
AVENSTHORPE NICKEL MINE	WA	Yes	

Our Networks team data confirms coverage equivalence to 3G at 10 sites since our last quarterly report*.

Drive test equivalence confirmation, ~10% upgraded sites (Yes if done)

Yes

No

1 site has shown minor inequivalence due to JI19 3G Repeater pending 4G upgrade.

1 site has shown significant inequivalence due to site not build as per the approved HW design. Contractor has been instructed to revisit site and achieve compliance.

*Please note not all sites completed this quarter have been represented in the table above. All sites will undergo equivalence assessments and any builds completed this quarter not reflected in this report (as a result of timing) will be presented in future to the Minister's office.

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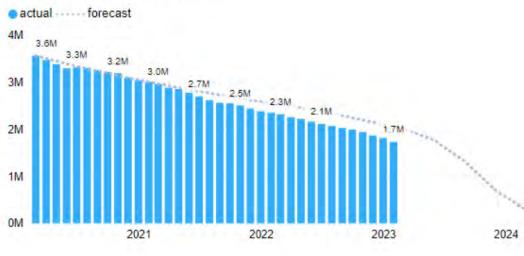
SIO trends, customer & community engagement activity



- We continue to update our Telstra.com <u>webpages</u> relating to 3G closure, including the new requirement for VoLTE (Voice over LTE) for voice calls, and how this change will impact E000 emergency calls including inbound roamers.
- We are formulating regional migration strategies, identifying communities with higher 3G usage in order to assist them in their transition to 4G, including assistance to sustainably recycle their older devices
- 3G Closure briefings have been delivered to 173 stakeholders and community groups FYTD
- A two week radio campaign targeting our top 10 regional markets with the highest 3G only utilisation commenced 29th January – daily reach of ~507k with gross impact of ~1.78M
 - QLD: Toowoomba, Bundaberg, Mackay, Cairns, the Fraser Coast, WA: Mandurah and Albany, NSW: Tamworth
 - A second phase is planned for late May 2023
- We are progressing our proactive assistance for T-Go Antenna and NextG Wireless Link (NGWL) customers, with plans for direct one-to-one communication this quarter
- Further updates will occur this quarter to communications delivering our 3G closure messaging, including:
 - Fact sheets / FAQs
 - newsletters
 - Social media content

3G service migration is tracking ahead of schedule

NON - COMPATIBLE 4G SERVICES



Number of 3G only services in 3G only areas continues to decline



- Through the combination of site upgrades to include 4G and natural attrition/device replacement, the number of 3G only devices / services in 3G only areas continues to decline.
- Declines are evident for each type of device shown in the table below, with Telstra handheld services having the greatest rate of decline.
 Many M2M devices have long economic lives, and we expect to see increased migration amongst this cohort as the date of 3G closure approaches.

3G only devices (by type) in 3G only areas

3G ONLY SITES	Jun'21	Sep'21	Dec'21	Mar'22	May'22	Aug'22	Oct'22	Jan'23
Telstra handheld services (excl M2M)	55 k	50 k	47 k	41 k	39 k	37 k	31 k	25 k
Telstra M2M services	27 k	26 k	26 k	24 k	22 k	21 k	18 k	15 k
Wholesale & Belong	6 k	5 k	5 k	4 k	4 k	4 k	3 K	2 k
Totals	88 k	82 k	77 k	70 k	65 k	62 k	52 k	43 k

Investigation and resolution of regional coverage issues



114 reports of apparent coverage degradation have been received by our Regional Australia team that we have been investigating. We found that these complaints related to 98 unique sites, and we are actively monitoring and remediating valid issues as soon as possible. For context, more than 11,000 sites are in service nationwide. We are working to improve the granularity of this data.

The status of the report received is summarised below. We will continue to add to this noting new additions in future quarterly updates.

Number of reports	Status	Comments
54	Resolved	A mix of antenna optimisations and planned site upgrades. Our Regional Australia team continue to work and validate experience with customers.
7	Fix in current FY program	New sites and RAN augmentation upgrades to alleviate congestion, uplift user experience and minimise "cell breathing" or perceptions of coverage loss.
24	Fix in future FY program	As above.
22	No issue found	Perceptions of coverage loss were not supported upon investigation.
7	Outside published coverage	Reported locations are not within our published coverage areas.
0	Under investigation	New report, further analysis being undertaken.

Community engagement and resolution of regional coverage concerns



Below are examples of customer and community concerns we have received that the team have addressed in a prompt manner, associated to 3G closure and coverage equivalency. Further examples or scenarios where we have worked with communities can be provided as requested.

Talbingo, NSW

During a community forum on connectivity in Talbingo we received feedback from attendees that excessive volumes of voice call drops were being experienced on our 4G network. The sentiment was that the reliability of the 4G network was poor when compared to 3G.

Our response

s47F 's mobile calling data was analysed for the prior month by Telstra's network advisor & found that less than 2% of calls on 4G had dropped out. The issue was found to be due to WiFi calling being enabled on an Apple iPhone device when making calls around the s47F . This finding was relayed to the attendees at the forum & 90% of them had Apple handsets with WiFi calling switched on.

The sentiment in the forum on 4G voice reliability changed instantly once the WiFi calling issue was explained. There have been no subsequent complaints or representations from the community regarding 4G call drop outs.

Bellingen, NSW

The s47F requested a formal meeting with Telstra due to ongoing outages experienced at the s47F facility. This site, provides coverage to the s47F area, operates on radio link and is 3G only.

Our response

At this meeting, we acknowledged the ongoing issues and advised Telstra would soon be completing a fibre backhaul upgrade which will improve site reliability. We also took the opportunity to advise that the site will be updated from 3G to 4G as part of our network equivalence program.

appreciated that we have a commitment to coverage equivalence prior to the 3G network closure and this session resulted in planning smaller community check ins for the shire to explain the network closure and recent telecommunications upgrades in the area.



Appendix

Our Commitment



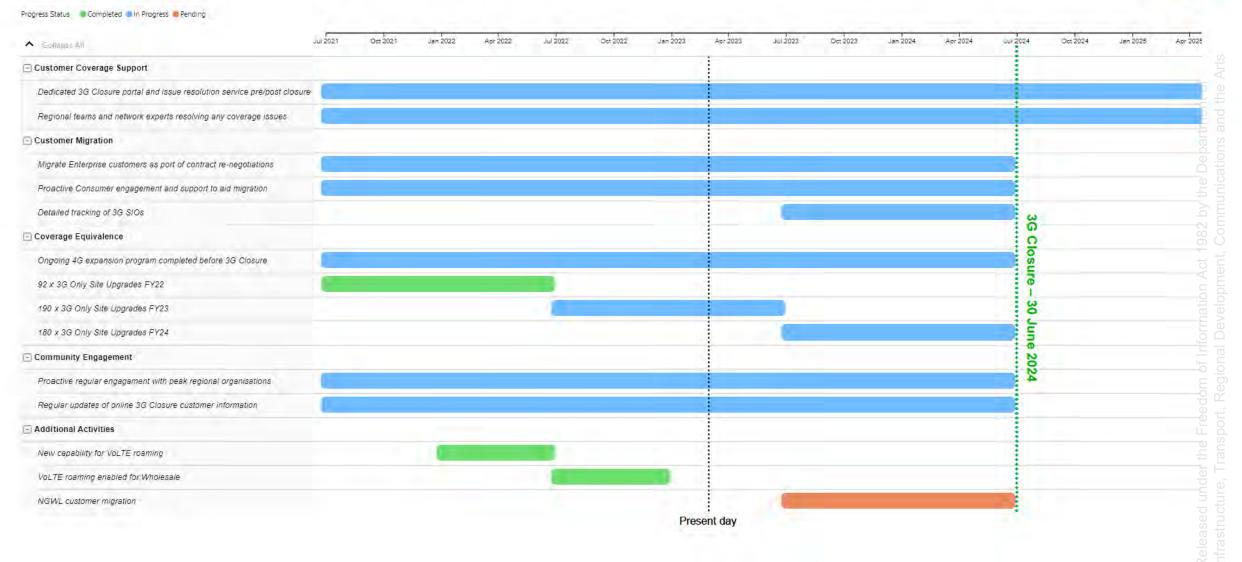
- In October 2019, we announced our 3G network would be closing on 30 June 2024. We provided early market notice so
 customers had certainty about our plans and plenty of time to upgrade their devices as required.
- We have committed to expand our 4G coverage so it is equivalent to our 3G coverage today by the time of 3G closure.
- We will be undertaking detailed coverage equivalence checks as we upgrade sites to include 4G, both internal Network checks and sample drive testing, and we have been sharing these results in our quarterly updates.
- This is not our first network closure. We've previously closed three mobile networks to introduce new technologies and meet customer demand as such we have extensive experience in managing closures while ensuring our customers retain coverage.

Our 3G closure plan has a significant focus on providing support to our customers and responding to their concerns

- We continue to update our customers on all activity related to 3G closure via regular updates to our 3G closure page.
- Continuing engagement and education activity with customers and key stakeholders, especially those in Regional and remote areas.
- Investigating and responding to all 3G coverage complaints received we commit to responding to all complaints within 1 week.
- Ongoing and proactive engagement to support our customers migration to 4G capable devices, with a particular focus on assisting vulnerable customers, including those with medical alarms. We will also introduce VoLTE for wholesale customers and update our 4G footprint offer before 3G closure.
- Ensuring there is no loss of 3G coverage before our announced shutdown date of June 30 2024

Program Timeline & Activities*





3G to 4G Transition Q4 FY23 Update to Minister Rowland

July 2023

3G coverage equivalence program – FY23 summary



106 sites out of a forecasted 190 were completed.

Our program remained very bullish as we continued to strive for results despite multiple risks and issues. The 84 site shortfall will be addressed by Q1 as part of our recovery plan. In total, **254** sites remain to be completed in FY24.

Compounding supply chain issues had a significant impact on our FY23 build program. This resulted in deployment work that usually requires 12 months for successful completion being condensed into 3 months (April – June), as necessary components were not received until this stage.

- Antenna and microwave radio component lead times continued to experience significant delays globally. All site upgrades require new antennas and 114 sites were
 impacted by microwave delays in FY23. These components are key upgrade dependencies, and for some sites microwave is the only viable transmission option (as we
 sought to explore fibre alternatives to no avail).
 - In order to alleviate microwave supply delays s47(1)(b)
 s47(1)(b)
- s47(1)(b) , further back ending our program. s47(1)(b) within the ~3 month compressed timeframes we managed to deliver 12 rings / 20 sites.
- Demand for field resources continues to outweigh supply across the telecommunications industry. This issue was compounded by underperforming contractors and the loss of established delivery agents.
 - Work orders were withdrawn from under-performing parties late 2022 and quickly reallocated to expedite acquisition and build processes. Service contracts will not be renewed with under-performing suppliers.
 - In February an established key transport company went into receivership, requiring new resources to be onboarded.
 - Integrating new resources into our working environment takes time and considerable effort to ensure our partners adhere to all standards and security measures.
- Solar power materials experienced delays, impacting 57 transmission sites and 48 mobiles sites. Solar is required for both network exchanges which support multiple mobiles sites, and the mobile sites themselves. Build of each usually requires 10 12 months.
 - Limitations in current solar arrays and power modules were also identified, and time was taken to develop new products to ensure all components were fit for purpose.
- International covid events and natural disasters (floods) were also challenging in FY23, and contributed to much of the above.

3G coverage equivalence program – FY24 outlook



The measures we put in place in late FY23 are proving effective, with our FY24 program front-loaded to complete FY23 activity and sustain that momentum as our various preparatory activities sync together.

• s47(1)(b)
been completed with s47(1)(b) equipment to date. s47(1)(b)

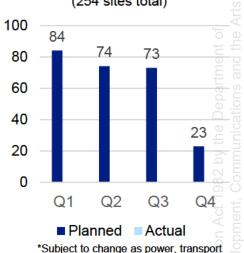
- With delivery partners we are onboarding field resources prior to work orders being approved, ensuring we have skilled workers ready to commence build when approvals come through.
- We have reassessed sites with complex transmission upgrades, identifying 20 where 4G can be installed using existing transmission while still meeting end user demand. The transmission upgrades planned for these sites will occur as supply limitations ease and resourcing becomes available. An additional 5 sites have also been revised to fibre builds, to alleviate radio delays.

We have been very proactive in our FY24 activities – All designs were commenced Q3 FY23, and planned FY24 construction has already begun as part of our mitigations and recovery planning.

- At a site level, we are meeting with all contractors daily to discuss progress and escalations. Potential impediments to critical
 path dependencies (power and transport systems) are being closely monitored to mitigate and remediate any blockers which may
 arise.
- We proactively conveyed our solar, antenna and microwave equipment requirements for FY24 to our suppliers, further mitigating the potential for logistical delays.
 - 59 mobiles sites and 58 networks sites (supporting 59 mobiles sites) in our program require solar power and materials have been ordered. Given solar sites can take 10 12 months to fully upgrade early procurement is essential.
 - All mobile (RAN) site designs have been completed, with ~30 further transport designs to be finalised by end July. Some additional solar requirements may be uncovered for these transport solutions, but in our efforts to be as proactive as possible we have provisioned for potential growth.
 - 105 sites remain that are dependent on microwave equipment, and all orders for equipment have been finalised.

We remain confident that all 3G only sites will be upgraded by the end of June 2024.

FY24 Upgrade Schedule* (254 sites total)



3G only to 4G upgrade program ~98% complete

and coverage equivalency requirements are assessed and finalised.

254 x 3G only sites remain to be upgraded

>11,000 sites

4G upgrade program

Coverage equivalence checking of 3G to 4G upgrades

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Coverage drive testing is undertaken on a sample of site upgrades completed each quarter, as detailed in the table below.

Site Name	Site Name State Network data confirms		If Network data does not confirm equivalence, what is the planned remediation?	Drive test equivalence confirmation, ~10 upgraded sites (Yes if done)		
MARY KATHLEEN RT	QLD	Yes		Y-9		
ALLAROBBA RANGE RICHARDSON TRIG	NSW	Yes	·÷	e e e e e e e e e e e e e e e e e e e		
RAINBOW	WA	Yes	1-1	Survey completed; equivalence achieved		
BLACK CAT	WA	Yes	J47	Survey completed; equivalence achieved		
MOSSGIEL	NSW	Yes		+		
GOLDEN HILL	WA	Yes	- +	Survey completed; equivalence achieved		
TASMAN RT WLL	NSW	Yes		2		
BLACK SPRINGS	SA	Yes	781	Survey completed; equivalence achieved		
NORTH PARKES	NSW	Yes	(-)	1.4		
CAMELS HUMP (BOOBOROWIE)	SA	Yes	-	*		
COONANA HILL	WA	Yes	(*)	Survey completed; equivalence achieved		
KINGOONYA	SA	Yes	4	12		
BOONDEROO	WA	Yes	~	÷		
FERGUSSON	SA	Yes	*	1÷		
ONGERUP NORTH	WA	Yes	(4)	34		
TARCOOLA	SA	Yes		-9-		
FALLS CREEK VILLAGE BOWL	VIC	Yes		12		
KITCHENER	WA	Yes	*	+		
KINGFISHER BAY	QLD	Yes	The state of the s	and the same of th		
LYONS	SA	Yes		orks team data confirms coverage		
MUNGALA	SA	Yes		ce at 32 sites since our last		
WYNBRING	SA	Yes		report*. 5 sites were also		
HAIG	WA	Yes		and found to be equivalent		
BATES	SA	Yes	(additional	al validation)		
RAWLINNA	WA	Yes	*Places no	to not all sites completed this guarter		
WOLLAR NO4 TUNNEL	NSW	Yes		te not all sites completed this quarter represented in the table above. All sites		
FLORENCE	QLD	Yes		o equivalence assessments and any		
SAINT BARBARA GWALIA MINE	WA	Yes	builds com	pleted this quarter not reflected in this		
YARDING	WA	Yes	report (as a	result of timing) will be presented in		
LOONGANA	WA	Yes	future to the	e Minister's office.		
MOUNT CHRISTIE	SA	Yes	14.			
MUNDRABILLA	WA	14 Y 65108				

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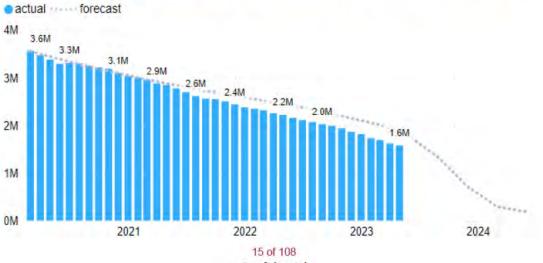
SIO trends, customer & community engagement activity



We continue to update our customers on all 3G closure activity via regular updates to our website. Ongoing, proactive and supportive engagement is our priority.

- Australian Mobile Telecommunications Association (AMTA) We have created general advice regarding the closure of 3G networks for the benefit of the wider community. Our objective is to ensure that all Australians have access to the necessary guidance and support as mobile networks evolve, both within Australia and when traveling overseas.
- Deep dive into 3G device locations We will focus on targeting areas that have a high concentration of 3G devices, with an objective to bring down the number of 3G devices in use on our network.
- Further upgrades to our Telstra.com website These upgrades aim to offer precise and up-to-date information to our customers. Through new customer resources, we seek to provide clear explanations regarding the implications of network changes on call connectivity, especially for international and emergency calls made either in Australia or when customers travel overseas.

3G service migration is tracking ahead of schedule



Focus remains on regional community engagement & support



- 3G Closure briefings have been delivered to 317 stakeholders and community groups this financial year to date. These briefings largely reflect our overall program and aim to address any concerns the communities may have.
 - The most common cause for concern expressed by communities relates to customers on the fringe of coverage. 3G appears as the primary technology on their handset, and they are concerned about coverage loss. We are well across 3G and 4G coverage differences (which are caused by legacy technology protocols) and we will continue to explain how coverage equivalence will be achieved by closure.
- A two-week radio awareness campaign was conducted in June, targeting 30 high volume 3G only device markets with below average year to date reduction rates.
- 57 regional Local Government Areas have been identified and will receive market treatment plans in FY24 Q1. These treatment plans will include a mix of local marketing (Press, Radio, Social Media), community engagement and stakeholder engagement to educate on 3G closure, capture sentiment and experience concerns, which will be addressed.
- Case studies will be prepared during FY24 H1 to feature customers who have migrated from 3G devices and received an uplifted 4G/5G experience as a result.
 These will be utilised at events, customer engagement forums and stakeholder briefings to instill confidence within our communities.
- Further updates will occur this quarter to communications delivering our 3G closure messaging, including:
 - Fact sheets / FAQs
 - <u>newsletters</u>
 - Social media content

Next Generation Wireless Link (NGWL)

Approximately 6,500 regional customers are currently connected to our USO compliant NGWL products. As part of our 3G closure program we will ensure these customers are migrated to suitable 4G fixed wireless and satellite products.

- Progress to date has largely been focused on notifying our customers that a solution will be deployed to migrate their current NGWL products
- Internally, we are ensuring all relevant systems and products are enabled prior to further customer migration.
- Pilot customer migrations will commence Q1, which will inform the bulk of our customers being transitioned in Q3 and Q4 FY24.

Community consultation and resolution of regional coverage concerns



Below are examples of customer and community concerns we have received that the team have addressed in a prompt manner, associated to 3G closure and coverage equivalency. Further examples or scenarios where we have worked with communities can be provided as requested.

Mullion Creek, NSW

A community meeting with Mullion Creek residents was held to discuss 3G closure and future mobile coverage investment in the area. The community is on the fringe of coverage from Mt Canobolas and this site achieved 4G equivalence the week prior to our visit. Most residents currently require a network extension device to get a consistent mobile experience. Feedback was given that the 3G depth of coverage had deteriorated over time & that 4G coverage was still not available where 3G could be experienced.

Our response

Telstra's network advisors worked with 3 x customers who have Cell-Fi network extension devices installed at their premises by 3rd parties, claiming they could not get 4G. It was found that in each case that the devices had not been set to an optimal state; one was manually set to 3G, and their handset devices were all utilising WiFi calling. These setup issues were addressed & the customers are now getting a consistent 4G experience in home.

These customers are extremely appreciative of the support & are advocating within the community the importance of correct device setup.

Tathra, NSW

A community meeting was held in Tathra to discuss the 3G closure and future mobile coverage investment in the area. A s47F on the northern edge of Tathra indicated that they could only receive 3G on their handsets s47F , raising concerns that they would have no coverage when 3G is switched off.

Our response

Telstra's Network Advisor investigated the issue with the s47F the following day and found two illegal 3G repeaters installed on facilities within the s47F. These repeaters were forcing devices onto the 3G network. They were turned off and it was found there is adequate 4G handheld coverage throughout s47F.

The s47F was pleased with the outcome. They had been unaware of the existence of the 3G repeaters, s47F

Number of 3G only services in 3G only areas continues to decline



- Through the combination of site upgrades to include 4G, device replacement and natural attrition, the number of 3G only devices / services in 3G only areas continues to decline.
- Declines are evident for each type of device shown in the table below, with these greatest for Telstra handheld services. Many M2M devices have long economic lives, and we expect to see increased migration amongst this cohort as the date of 3G closure approaches.

3G only devices (by type) in 3G only areas

3G ONLY SITES	Jun'21	Sep'21	Dec'21	Mar'22	May'22	Aug'22	Oct'22	Jan'23	May'23
Telstra handheld services (excl M2M)	55 k	50 k	47 k	41 k	39 k	37 k	31 k	25 k	25 k
Telstra M2M services	27 k	26 k	26 k	24 k	22 k	21 k	18 k	15 k	14 k
Wholesale & Belong	6 k	5 k	5 k	4 k	4 k	4 k	3 K	2 k	2 k
Totals	88 k	82 k	77 k	70 k	65 k	62 k	52 k	43 k	42 k

Appendix

Our Commitment



- In October 2019, we announced our 3G network would be closing on 30 June 2024. We provided early market notice so customers had certainty about our plans and plenty of time to upgrade their devices as required.
- We have committed to expand our 4G coverage so it is equivalent to our 3G coverage today by the time of 3G closure.
- We will be undertaking detailed coverage equivalence checks as we upgrade sites to include 4G, both internal Network checks and sample drive testing, and we have been sharing these results in our quarterly updates.
- This is not our first network closure. We've previously closed three mobile networks to introduce new technologies and meet customer demand, as such we have extensive experience in managing closures while ensuring our customers retain coverage.

Our 3G closure plan has a significant focus on providing support to our customers and responding to their concerns

- We continue to update our customers on all activity related to 3G closure via regular updates to our 3G closure page.
- Continuing engagement and education activity with customers and key stakeholders, especially those in Regional and remote areas.
- Investigating and responding to all 3G coverage complaints received we commit to responding to all complaints within 1 week.
- Ongoing and proactive engagement to support our customers migration to 4G capable devices, with a particular focus on assisting vulnerable customers, including those with medical alarms. We will also introduce VoLTE for wholesale customers and update our 4G footprint offer before 3G closure.
- Ensuring there is no loss of 3G coverage before our announced shutdown date of June 30 2024

Program Timeline & Activities*







3G to 4G Transition

Q1 FY24 Update to Minister Rowland

October 2023



Our Commitment



In October 2019, we announced our 3G network would be closing on 30 June 2024. We provided early market notice so customers had certainty about our plans and plenty of time to upgrade their devices as required.

The decision to close our 3G Network was made after careful consideration of several factors, including technological advancements and the need to repurpose the 3G spectrum for the expansion of our 5G coverage. This strategic move will enable us to provide enhanced 5G services to larger areas regional Australia and improve in-building metropolitan coverage, thus benefiting our valued customers.

Our 3G closure plan has a significant focus on providing support to our customers and responding to their concerns

- We have committed to expand our 4G coverage so it is equivalent to our 3G coverage today by the time of 3G closure.
- We are undertaking detailed coverage equivalence checks as we upgrade sites to include 4G, both internal Network checks and sample drive testing, and we have been sharing these results in our quarterly updates. We have also engaged a third party \$47(1)(b) to further validate our approach / completion.
- We continue to update our customers on all activity related to 3G closure via regular updates to our 3G closure page.
- Engagement and education activities have been a priority with customers and key stakeholders, especially those in Regional areas.
- Investigating and responding to all 3G coverage complaints received. We have rigorous processes in place to ensure customers concerns are heard and addressed.
- Ongoing and proactive engagement to support our customers migration to 4G capable devices, with a particular focus on assisting vulnerable customers including those with medical alarms. We also introduced VoLTE for wholesale customers and updated our 4G footprint offer before 3G closure.
- Ensuring there is no loss of 3G coverage before our announced shutdown date of 30 June 2024.

This is not our first network closure. We've previously closed three mobile networks to introduce new technologies and meet customer demand, as such we have extensive experience in managing closures while ensuring our customers retain coverage.

Program Update Summary



Build Program Customer Migration

Network Progress and Upgrades:

The 4G network build is on track, with 98.2% of 3G to 4G site upgrades completed, and we have confidence in achieving full coverage equivalence by June '24. Approvals for the remaining 1.8% of sites are progressing, aiming for on-air status by end Q3 FY24.

Supply Chain Management and Partnerships:

We have successfully navigated and mitigated previous supply chain challenges. s47(1)(b)

Coverage Validation and Customer Communication:

Third party validation \$47(1)(b) supports our 3G closure plan, reinforcing confidence in coverage equivalence. Post-site build completion, Local Government Areas (LGAs) will be signed off in stages and communicated to customers. A specialised Telstra Engineering team will address coverage concerns, with 100% of LGAs signed off before June '24.

Customer Migration Progress:

As of the end of August, approximately 1.37 million SIOs remain, primarily Enterprise IoT devices. Notably, we've achieved a month-on-month movement of 71k, with a record-breaking M2M migration of 60k. Efforts in both Consumer and Enterprise segments are accelerating, keeping us on track to meet Q1 migration targets.

Consumer Segment:

The average age of remaining customers is 74. We are addressing the unique needs our older demographic by conducting comprehensive interviews, developing tailored communication strategies, and collaborating with device and logistic partners to ensure a seamless upgrade experience with suitable devices and ample stock availability.

Enterprise Segment:

Out of 1.37 million devices awaiting upgrade, \$47(1)(b) belong to Enterprise customers. Since July '22, our migration team has engaged these customers at least five times, ensuring >90% have confirmed migration solutions.

Communications Timeline & Purpose

Consumer & Small Business

Email/SMS/Direct Mail communication tailored to customer cohorts based on underlying use cases (bluetick & feature phones, MBB, M2M, VoLTE settings, kids watch, and remote areas) coupled with 3G interviews surveying customers who upgraded their devices within the past 12 months and subsequently the remaining last 2 % of customers who are yet to take action.



Enterprise & Wholesale

Since Jul'22, we established 3G migration team currently comprised of 21 specialists proactively engaging with Enterprise customers.

Wholesale team issues letters to CEOs, monthly reminders, and sharing Telstra's Wholesale end customer device information with MVNOs.

3G to 4G Transition - Telstra

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Network Upgrade



3G coverage equivalence build program



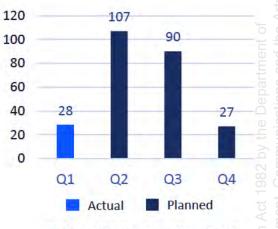
4G build is progressing strongly and we remain confident that full coverage equivalence will be achieved prior to end June '24.

- 3G to 4G site upgrades are now 98.2% complete with just 1.8% of sites remaining to upgrade.
- 28 of the 252 remaining 3G Only sites as at start-FY24 have already been upgraded.
- · A further 116 of the remainder now have all necessary approvals to build.
- Approvals for the other 108 sites are progressing with majority expected to be secured end-Q2 and on air by end Q3.

Supply chain and external risks previously highlighted are being actively managed. Our mitigation activities are proving highly effective, we are engaged with delivery partners, and we are seeing increased supply across our program.

- · Critical mobiles and backhaul materials are experiencing significant delays globally.
 - s47(1)(b)
- Field resourcing shortages are impacting the wider industry.
 - With delivery partners we are onboarding field resources prior to work orders being approved, ensuring we have skilled workers ready to commence build when approvals come through. s47(1)(b)
- · Third party power delays.
 - We have undertaken executive escalations with third party power companies to improve timeframes for AC mains upgrades, leveraging our Telstra Energy teams contacts and relationships.

FY24 Upgrade Schedule* (252 sites total)



*Subject to change as power, transport and coverage equivalency requirements are assessed and finalised.

3G only to 4G upgrade program 98.2% complete

224 x 3G only sites remain to be upgraded

>11,700 sites



Page 5

3G to 4G Transition - Telstra

Coverage equivalence checking of 3G to 4G upgrades



As we approach closure, we will be doing final network checks and drive tests in "clusters" to ensure coverage equivalency has been achieved.

Equivalence validation – \$47(1)(b) were recently engaged to validate Telstra's 3G closure plan utilising their global best practices and methodologies. Their review yielded that our equivalence testing and assessments were indeed accurate, solidifying our confidence in the approach we're taking to check 3G to 4G coverage equivalence.

Customer engagement & feedback – We have established a dedicated portal to capture any customer 3G closure concerns raised by our Front of House Telstra Shop, Regional Australia and roaming Regional Network Advisor team members. The portal ensures all complaints relating to 3G closure activities are captured, investigated and managed to resolution, many of which are shared with us via our customer engagement processes. (Refer to Slide 9)

To address complaints our team undertakes a series of investigative steps, including an analysis of network performance statistics, a review of 3G/4G coverage equivalence (desktop + site surveys) and a review of customer device and equipment setup. Potential solutions include infrastructure upgrades, optimisation of network infrastructure or device/equipment switch out. (Refer to Slide 13 & 14 for worked examples)

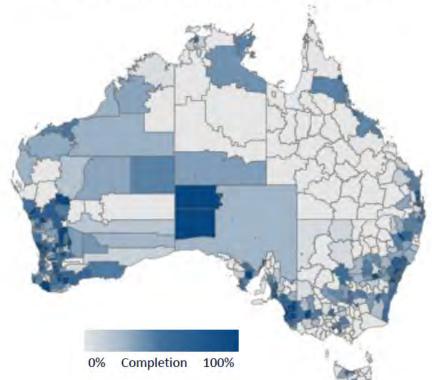
We are also in the process of establishing systems which will actively communicate to customers when an LGA has been fully 4G enabled. Customer communications will also include a way for customers to engage with us should they have coverage related concerns, as well as a reminder to check their device compatibility.

LGA equivalence sign off

3% of LGAs completed, signed off as fully equivalent.

A further 46% have had equivalency assessments commenced.

Completion forecast: 18% end-Q2, 59% end-Q3, 100% end-Q4



Coverage equivalence checking of 3G to 4G upgrades

Coverage drive testing is undertaken on a sample of site upgrades completed each quarter, as detailed in the table below.



Site Name State		Network data confirms equivalence (Yes/No)	If Network data does not confirm equivalence, what is the planned remediation ?	Drive test equivalence confirmation ~10% upgraded sites (Yes if done			
BURANDO	SA	Yes		12			
MT BOHLE	QLD	Yes	-				
MANNA HILL	SA	Yes	_				
WIRRAMINNA	WIRRAMINNA SA Yes _ DAJARRA RT QLD Yes _		_ Our Netwo	rks team data confirms coverage			
DAJARRA RT				equivalence at 26 sites since our last quarterly			
MINTARO (MOUNT RUFUS NORTH)	SA	Yes	_	report*. We also conducted drive test surveys at			
RIO TINTO BROCKMAN2	WA	Yes	2 sites who	ch further validated equivalence had			
WANARN	WA	Yes	– been achie	veu.			
MOOKA ORE CAR WORKSHOP (BHPB)	WA	Yes	– As we appr	As we approach 30 th June 2024 we are exploring opportunities to increase our network validations			
TAMBO CROSSING	VIC	Yes					
ZANTHUS	WA	Yes	through ad	ditional third part drive test surveys.			
HUGHES	SA	Yes		*Please note not all sites completed this quarter have been represented in the table above. All sites will undergo equivalence assessments and any builds completed this quarter not reflected in this report (due to timing) will be presented in future to the Minister's office.			
KUMARL R/T	WA	Yes					
COWRA RT	WA	Yes					
MOONLIGHT RT	SA	Yes					
YARRIE VILLAGE - BHPB CAMP	WA	Yes	presented in				
NIFTY MINE	WA	Yes	_				
COOK	SA	Yes					
CAPE GRIM	TAS	Yes	_	= 0			
TONEBRIDGE	WA	Yes	-	Survey completed and equivalence found			
CRANBROOK WEST	WA	Yes		Survey completed and equivalence found			
FORREST	WA	Yes					
WATSON	SA	Yes					
OOLDEA	SA	Yes	- · - · -				
DEAKIN	WA	Yes	, <u> </u>	- U.			
IMMARNA	SA	Yes	7.2				



Customer Migration



Focus remains on regional community engagement & support

4

- Our stakeholder and community communication in FY24 Q2 will have particular focus on 4G ready areas, to seek customer feedback and investigate and address any concerns raised via the processes highlighted on Slide 6.
- 3G Closure briefings have been delivered to 180 regional stakeholders and community groups this financial year to date. These briefings largely reflect our overall program and aim to address any concerns the communities may have.
 - The most common cause for concern expressed by communities relates to customers on the fringe of coverage. 3G appears as the
 primary technology on their handset, and they are concerned about coverage loss. We are well across 3G and 4G coverage differences
 (which are caused by legacy technology protocols, which we have articulated on slide #11) and we will continue to explain how coverage
 equivalence will be achieved by closure.
- Following on from a two-week radio awareness campaign conducted in June, another two-week radio awareness campaign will commence in October targeting 30 high volume 3G only device markets.
- Service calls have been made to our Top 120 SMB customers with 3G M2M devices in FY24 Q1. This cohort of customers have approx. 60k
 M2M devices, of which only approx. 30k have been used in the last 6 months. Majority of customers are aware of the 3G network closure and are acting on migration of their services.
- Telstra has had a presence at the following Regional Field Days: Sheepvention, Agquip, Henty, Dowerin, Newdegate, Yorke Peninsula, Mallee
 in FY24 with a focus at these events being to educate and assist customers with 3G devices or questions about the 3G Closure. As part of our
 community engagement program there has been an additional 45 town or community visits.
- In NSW and QLD, Telstra has partnered with the Regional Tech Hub to conduct Connectivity roadshows these have included over 20 community locations, incl Blue Mountains, New England, Shoalhaven, and Western regions in NSW and in Southern QLD.
- We are leveraging our stakeholder networks to share our educational communications materials with their constituents and members. Examples below:
 - 3G network shutdown TV segments on Channel 7, Channel 9 and ABC online
 - Fact sheets / FAQs
 - Newsletters, sent out nationally to 2,500 key stakeholders (<u>March</u> & <u>July</u>)
 - Social Media (Better Internet for Rural, Regional and Remote (BIRRR) Australia, <u>Tasmanian Farmers & Graziers Association</u>, <u>Queensland Farmers' Federation</u>)
 - Local Government & Business Chamber newsletters and magazines, Regional Tech Hub
- Other communities and events we have presented to in the past 6 months include; Independent Childrens Parent's Association (ICPA) Federal Conference, ICPA NT, WA Farmers Conference, Trucking Australia Conference, NSW Farmers, Regional Advisory Council, AgForce Innovation, CWA NSW Conference, Julia Creek Community, Victoria Farmers Federation, BIRRR and Queensland Farmers' Federation, to name a few.



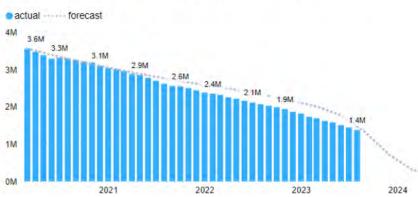
Device trends, customer & community engagement activities



We continue to update our customers on all 3G closure activity via regular updates to our website. Ongoing, proactive and supportive engagement is our priority.

- Additional personalised campaigns will be launched in November to address a targeted cohort of consumer and small business customers.
 - 288k devices including mobiles, mobile broadband devices, tablets, M2M and kid smart watches will be in scope for this campaign.
- We have stocked more low-cost handsets starting from \$79 for a compatible smart phone and \$59 for a compatible feature phone. These devices are blue tick certified – and will provide superior voice coverage in rural and regional areas.
- Communications have been developed to share with Aged Care, Health Care and Local Government stakeholders to
 educate them on 3G only or 4G limited band medical alert devices provided by third parties. Telstra device
 certification is likewise open to such third parties and assists with sharing the detailed requirements that must be
 met to become certified for use on Telstra's IoT Network.
- Further improvements to our T.com 3G closure website will be actively rolled out in October. Updates will include
 greater accessibility to pertinent information and an easier user experience, taking into consideration feedback
 provided by regional constituents.
- We have commenced migration of Next Generation Wireless Link (NGWL) customers through a pilot program, which will inform the bulk of our upgrades and customers comms throughout Q2 – Q4.
 - Approx. 6,300 regional customers are currently connected to a USO compliant NGWL products.
 - As part of our 3G closure program we will ensure these customers are migrated to suitable 4G fixed wireless
 and satellite products, both of which will be USO compliant at launch.
 - Community engagement will ramp up in Q2, whereby we will have more community presence and localised marketing campaigns to assist NGWL customer migration.
- Of the 1.37M devices remaining to be upgraded prior to closure, \$47(1)(b) are Enterprise customer devices.
 - Since July '22 a team of migration specialists have been engaging with these customers, ensuring they have the support and information required to successfully transition to 4G.
 - All customers have been engaged with at least five times, and the migration team are also accessible via our Enterprise T.com webpage.
 - >90% of all remaining devices have a confirmed migration solution, as stated by the customers.

3G service migration is tracking ahead of schedule, with 1.37M devices remaining on our network, of which are Enterprise customer's



Supporting our older customers



As we navigate the transition from 3G, we have identified a specific group within our customer base that needs special consideration. This older demographic predominantly use feature flip and "candy bar" devices with simple operating systems. These customers have unique needs and concerns, so we are working to gain a deeper understanding of their preferences and challenges during this transition so we can better service them with the right devices, communications and tools to help them feel comfortable with the upgrade.

Throughout October, we are conducting a series of comprehensive interviews to gain a deeper understanding of their needs. The insights gleaned from these interviews will serve as the cornerstone for developing tailored communication strategies and programs, ensuring a smooth transition for this specific demographic. We will provide an update on the outcomes of this research in the next quarterly report.

Simultaneously, we are collaborating closely with our device vendors and logistics partners to maintain an ample stock of devices that resonate with this customer segment. This commitment extends from the current phase through the transition's culmination and the subsequent months, guaranteeing continued accessibility to devices that align with their preferences.





Price

\$59.00



Flip 4



Price

\$149.00





Released under



Case Studies



Community consultation and resolution of regional coverage concerns



Below are examples of customer and community concerns we have received that the team have addressed in a prompt manner, associated to 3G closure and coverage equivalency. Further examples or scenarios where we have worked with communities can be provided as requested.

Wilby, VIC

A cell range software activation & 4G antenna upgrade were completed on the Tungamah site in late June to achieve 4G coverage equivalency. A constituent escalation was received via the office of the Federal Member for Nicholls, where the customer is on the fringe of coverage from the site & was still only receiving 3G coverage with the aid of a T-Go network extension device.

Our response

A Telstra network advisor went to the site & worked with the optimisation team to test & confirm that 4G coverage was equivalent to 3G. A visit was also conducted at the customer premises. It was found that the T-Go device was configured to be locked onto 3G. A firmware upgrade was completed on the device resolving this issue and allowing access to 4G service. The WAVE App was installed on the customers' mobile & they were educated on setting the device up correctly.

The customer is extremely happy & is now enjoying a much better data experience via the 4G network.

Wilbriggie, Griffith, NSW

raised a concern that a 3G telemetry device for a water pump site was only receiving 3G coverage. This was creating concerns that no options would be available once the 3G network was closed. Coverage maps indicated that the location was on the edge of handheld coverage.

Our response

A Telstra network advisor visited the site & confirmed that 4G coverage was available at the water pump. Assessments deduced that device configuration and capabilities were not set up optimally. It was found that the customer's iPhone handset was consistently connecting to the 3G network giving the perception that 4G was not available at the water pump site. Our blue tick Samsung handset performed better & picked up a consistent 4G signal. It was also identified that the customer was using a 3G only antenna to boost signal to the telemetry device.

The customer appreciated that we demonstrated 4G was available & has confidence in upgrading his equipment to 4G solutions. The customer is well connected in the community across a number of Agri farming groups where he will share his experience and learnings.

Tasmanian Berries Equivalence Assessments



In early August we reconfigured our network as part of our 3G closure program, increasing 4G coverage around the area Tasmanian Berries resides. Since doing so, a Telstra field resources visited the Tasmanian Berries property and assessments determined 4G coverage equivalence had been achieved, further supported by the customer stating they had seen an improvement in service. To further uplift coverage the technician also reconfigured an existing repeater device at the property which has improved coverage more generally.

In this case, Tasmanian Berries are seeking an uplift to their coverage, which is entirely separate to our 3G closure program. Given the terrain, locality and commercial viability of an improvement to the area future projects may be suited to Federal Co-Investment Programs (such as RCP), and we will consider this in future rounds. Likewise, Tasmanian Berries experience of seeing an improved service post our network optimisation may be a recurring theme experienced by other customers as we approach 3G closure.

In order to achieve equivalency, we are actively decommissioning software (known as IRAT) that was employed to restrict 4G coverage to suit some legacy devices. This is no longer required as we transition to 4G/5G, and is being removed nationally (see Appendix slide 11 for a simple explanation of IRAT).

Field testing determined 4G coverage (right) equivalency had been achieved, when compared to 3G coverage (left).

The below plot highlights that the farm is well within our advertised outdoor 4G coverage

4G indoor coverage is impeded by tall trees lining the nearby road and a hill obstructing the path of signal.









Appendix

eased Under the Freedom of Informational Development

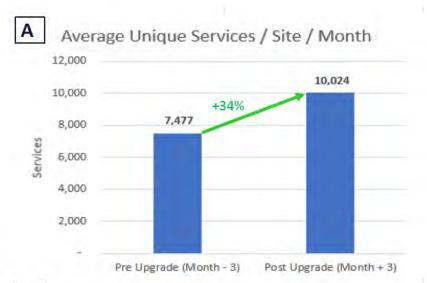
3G to 4G upgrades improve our customer's experience

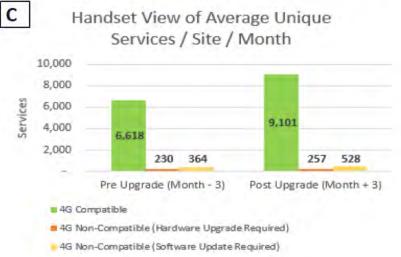


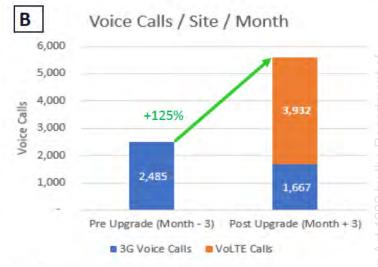
Where 3G only sites have been upgraded to include 4G* we can see an improved customer experience and an increased uptake of 4G technology.

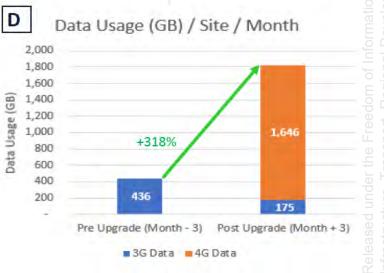
Key highlights:

- A. ~34% increase in the average unique services per site, largely due to reduced load on neighbouring 4G sites
- B. ~125% increase in voice calls per site, including a 25% reduction in 3G voice calls
- C. Majority of customer handsets are LTE compatible devices
- 73x increase in data usage per site, with a 60% reduction in 3G data usage (which would improve the performance of remaining 3G only devices)









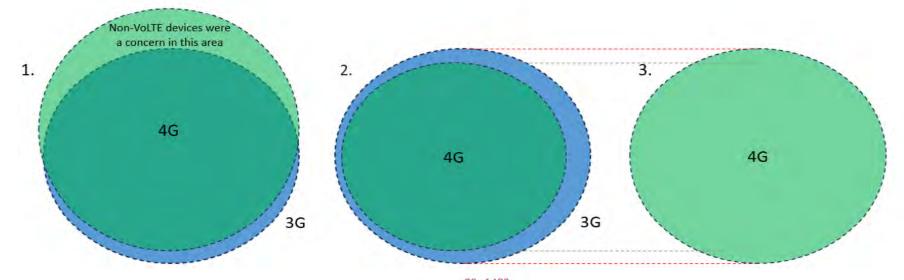
^{*169} upgraded Macro sites between Oct '20 – Dec '22 (where comparison data is available)

Inter Radio Access Technology (IRAT) explained



- 1. In some instances, our network had the potential to deliver 4G only coverage, which was an issue for some early 4G devices. These specific devices have limitations in their capabilities meaning they can only make voice calls on our 3G network, even though they have access to data via 3G & 4G. These are known as non-VoLTE devices (non-Voice over 4G). If these devices were used by customers in areas that solely consisted of 4G coverage they would be unable to make a voice call.
- 2. In order to keep all of our customers connected we needed to ensure that 3G travelled further than 4G, so we placed artificial constraints on 4G to limit its reach. By ensuring the edge of coverage was always 3G, these devices were able to hand over from 4G once at the edge of its coverage, mitigating any scenarios whereby a phone showed network connectivity (4G), but couldn't make a call. This allowed all devices to make a voice call in our stated coverage footprint.
- 3. As we approach our 3G closure we are gradually reducing this artificial constraint. The combination of a growth in 4G calling devices, plus our commitment to deliver 4G coverage equivalent to that of 3G today, means this artificial constraint will no longer be needed to keep our customers connected for longer.

To learn more about devices which are capable of 4G calling, better known as Voice over LTE (VoLTE), please follow this link: https://www.telstra.com.au/support/mobiles-devices/enable-volte-mobile-phone



Bars on Phones



Bars on phones continue to be a source of confusion for our customers, many believing that a reduction in bars correlates to a reduction in experience.

Signal bars differ between technologies and mobile devices, therefore they are not always a good indicator of coverage and performance. Almost every device is different when it comes to this as there are currently no standards uniformly shared across all manufacturers. Comparing bar readings between different devices could be like comparing apples to oranges.

Similarly, when it comes to different technologies there is no direct correlation between bars and user experience on one technology compared to another.

The picture (right) highlights where we've measured the same device in the same location – the only difference being whether it was on our 3G or 4G network. The left results show 3G receiving higher bars, but a far lesser overall experience in both download and upload speeds compared to the 4G service on the right.

Because 4G is a newer, more efficient technology it is essentially meaningless to compare signal bars between what it delivers and what 3G delivers.

See full article, published in our regional newsletter: <u>Telstra Regional Newsletter</u> <u>Bars on Phones</u>



Our Delivery of equivalent 4G coverage and rigorous program to Validate this equivalence are well progressed

Progress of 4G equivalent coverage rollout by LGAs

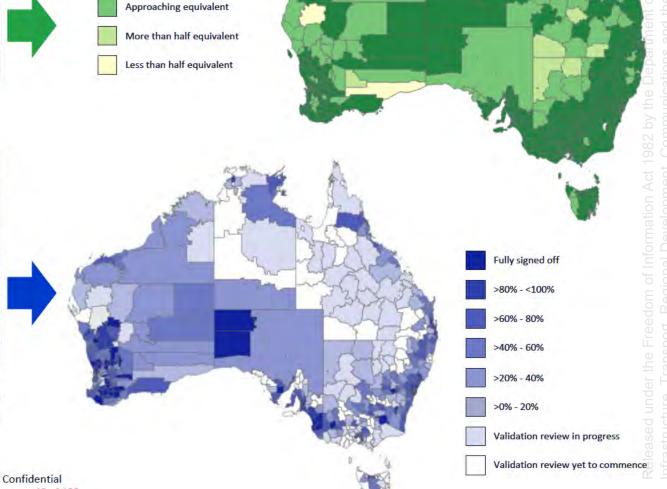
Extent of equivalence progress	4G coverage progress (% of total LGAs)
Materially equivalent or better*	85%
Approaching equivalent	12%
More than half equivalent	2%
Less than half equivalent	1%

^{*}Some unique 3G coverage may still be present, and if so be identified and addressed in equivalence validation process below.

Progress of site-by-site validation of coverage equivalence by LGAs

LGA site sign off status	% of total LGAs
All sites signed off	12%
>80% - <100%	14%
>60% - 80%	18%
>40% - 60%	12%
>20% - 40%	9%
0% - 20%	7%
Validation Review in progress	13%
Validation Review yet to commence	15%

We are now in the process of rigorously validating the equivalence of the 4G coverage we have established nationally via a detailed site-by-site review, utilising network engineering data and drive surveys (both independently and through \$47(1)(b). Validation also includes remediation of any residual unique 3G coverage discovered through our assessments.



Materially equivalent or better*



3G to 4G Transition

Q2 FY24 Update

December 2023



3G to 4G Transition - Telstra

Our Commitment



In October 2019, we announced our 3G network would be closing on 30 June 2024. We provided early market notice so customers had certainty about our plans and plenty of time to upgrade their devices as required.

The decision to close our 3G Network was made after careful consideration of several factors, including technological advancements and the need to repurpose the 3G spectrum for the expansion of our 5G coverage. This strategic move will enable us to provide enhanced 5G services to larger areas of regional Australia and improve in-building metropolitan coverage, thus benefiting our valued customers.

Our 3G closure plan has a significant focus on providing support to our customers and responding to their concerns

- We have committed to expand our 4G coverage so it is equivalent to that of our 3G coverage today, by the time of 3G closure.
- We are undertaking detailed coverage equivalence checks as we upgrade sites to include 4G, both internal Network checks and sample drive testing, and we have been sharing these results in our quarterly updates. We have also engaged a third party satisfactory alidate our approach / completion.
- We continue to update our customers on all activity related to 3G closure via regular updates to our 3G closure page.
- Engagement and education activities have been a priority with customers and key stakeholders, especially those in Regional areas.
- Investigating and responding to all 3G coverage complaints received. We have rigorous processes in place to ensure customers concerns are heard and addressed.
- Ongoing and proactive engagement to support our customers migration to 4G capable devices, with a particular focus on assisting vulnerable customers, including those with medical alarms. We also introduced VoLTE for wholesale customers and updated our 4G footprint offer before 3G closure.
- · Ensuring there is no loss of 3G coverage before our announced shutdown date of 30 June 2024.

This is not our first network closure. We've previously closed three mobile networks to introduce new technologies and meet customer demand, as such we have extensive experience in managing closures while ensuring our customers retain coverage.

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Program Update Summary



Build Program Customer Migration

Network Progress and Upgrades:

The 4G network build is on track, with 98.4% of 3G to 4G site upgrades completed, and we have confidence in achieving full coverage equivalence by June '24. Approvals for the remaining 1.6% of sites are progressing, aiming for majority on-air status by end Q3 FY24.

Supply Chain Management and Partnerships:

We have successfully navigated and mitigated previous supply chain challenges. \$47(1)(b)

Coverage Validation and Customer Communication:

Third party validation \$47(1)(b) supports our 3G closure plan, reinforcing confidence in coverage equivalence. A specialised Telstra Engineering team will address coverage concerns, with 100% of LGAs signed off before June '24. There is an open invitation to the Minister's Office to visit these areas and hear from locals.

Customer Migration Progress:

As of the end of November, approximately 1.11 million SIOs remain, primarily Enterprise IoT devices. Efforts in both Consumer and Enterprise segments are accelerating, keeping us on track to meet Q2 migration targets.

Consumer Segment:

We have conducted 3G closure briefings with 210 regional stakeholders and delivered 153 community engagement activities to address any concerns the communities may have. We will continue stakeholder and community engagement through Q3 FY24, with a focus on 4G ready areas, proactive communication regarding planned network disruptions/upgrades, and customer feedback investigation.

Enterprise Segment:

Out of 1.11 million devices awaiting upgrade, \$47(1)(b) belong to Enterprise customers. Since July '22, our migration team has engaged these customers at least five times, ensuring >90% have confirmed migration solutions.

Communications Timeline & Purpose

Consumer & Small Business

Email/SMS/Direct Mail communication tailored to customer cohorts based on underlying use cases (bluetick & feature phones, MBB, M2M, VoLTE settings, kids watch, and remote areas) coupled with 3G interviews surveying customers who upgraded their devices within the past 12 months and subsequently the remaining last 2% of customers who are yet to take action.

Enterprise & Wholesale Enterprise & Wholesale **Enterprise & Wholesale** Quarterly communication Quarterly communication Quarterly communication followed by monthly followed by monthly followed by monthly reminders reminders reminders Oct Nov Dec Jan Feb Mar Apr JUT Consumer & Business ✓ Consumer & Business Consumer & Business Final communication Preliminary communication Penultimate communication campaign to all impacted campaign to all impacted campaign to all services completed services impacted services

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Enterprise & Wholesale

Since Jul'22, we established a 3G migration team comprised of 21 specialists proactively engaging with Enterprise customers.
Wholesale team issues letters to CEOs, monthly reminders, and sharing Telstra's Wholesale end customer device information with MVNOs.

Page 3

3G to 4G Transition - Telstra



Network Upgrade

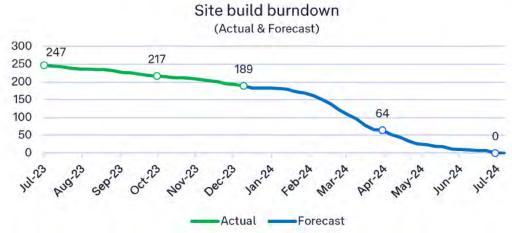


Our delivery of 4G coverage equivalence is well progressed.



We have fully mitigated the major equipment supply chain delays that were significantly impacting our program. H2 focus remains on enabling our delivery partners and securing additional field resources to finalise coverage equivalence.

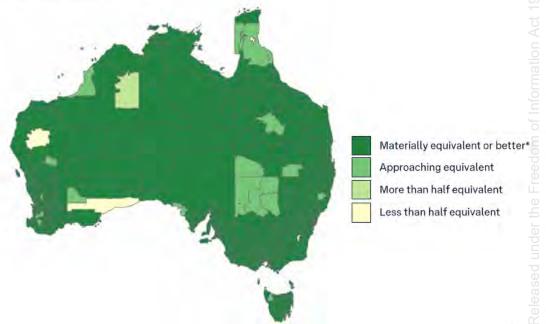
- 3G to 4G site upgrades are now 98.4% complete, with just 1.6% of all >11,700 Telstra sites remaining to be upgraded.
- 58 of the 247 x 3G only sites as at start-FY24 have been upgraded (189 remain).
- A further 142 sites have all necessary approvals to build, and the remaining 47 will be completed early-Q3.
 - This is a very time consuming yet necessary step in our program, and proactively securing approvals has enabled build for H2.
- Remaining upgrades are mostly in remote localities, so we are actively assessing sites to implement the most timely and effective execution of upgrades ("milk runs") – this is more sustainable and reduces site visits.



Our established 4G network means that we largely have 4G coverage equivalent to that of 3G today nationally. We are now in the process of finalising upgrades and validating all sites (see next slide).

Extent of equivalence progress	4G coverage progress (% of total LGAs)
Materially equivalent or better*	85%
Approaching equivalent	12%
More than half equivalent	2%
Less than half equivalent	1%

*Some unique 3G coverage may still be present, and if so, will be identified and addressed in equivalence validation processes.



Page 5

3G to 4G Transition - Telstra

We are now in the process of rigorously validating and remediating 4G coverage equivalence nationally.



Detailed coverage equivalency reviews are occurring on all of our network's sites.

- Utilising network engineering data and drive surveys (both independently and through s47(1)(b) we have signed off 18% of all LGAs to date.
- A further 78% of the total LGA reviews are progressing.
- Our validation and sign off forecast aims to have completed 60% of the program end-Q3, and 100% end-Q4 at closure.

results (see slide 18)

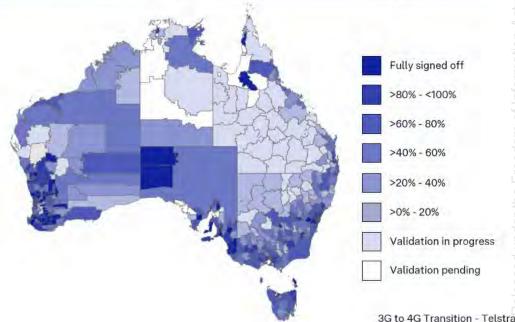
- 4 x LGA drive tests have been conducted with the assistance of s47(1)(b) to date.
- · Overall, material equivalency achieved across the 616km tested.
- Tests conducted over 3 days; more than 1,500 voice & 3,300 data samples collected.
 - · 4G coverage reached 2.4% more of the drive route.
 - 4G/5G average data speeds were 4048% higher.

As part of our validation processes any coverage that exhibits inequivalence will be remediated prior to closure, and we are addressing all customer raised 3G concerns.

- We have a dedicated portal for 3G closure customer concerns raised by our Front of House Telstra Shops, Regional Australia and Regional Network Advisors.
- All 3G closure concerns are captured, investigated and resolved. (Refer to Slide 14)
- To address complaints our team analyses network performance statistics, 3G/4G coverage equivalence (desktop + site surveys) and checks customer device setup. Potential solutions include infrastructure upgrades, optimisation of our network or device and equipment updates/upgrades. (Refer to Slide 14 16)

Progress of site-by-site validation of coverage equivalence by LGA

LGA site sign off status	% of total LGAs	
All sites signed off	18%	
>80% - <100%	16%	
>60% - 80%	22%	
>40% - 60%	14%	
>20% - 40%	10%	
0% - 20%	6%	
Validation Review in progress	10%	
Validation Review yet to commence	4%	



Coverage equivalence checking of 3G to 4G upgrades

Coverage drive testing is undertaken on a sample of site upgrades completed each quarter, as detailed in the table below.



Site	Site State Network data confirms equivalent		If Network data does not confirm equivalence what is the planned remediation?	e, Drive test equivalence confirmation, ~10 upgraded sites (Yes if done)	
LOCKHART RIVER	QLD	Yes			
HONEYMOON RT	SA	Yes	1-		
LADY LORETTA RT	QLD	Yes	-		
MT VERNON	WA	Yes	-	Yes	
MT KELLY MINE	QLD	Yes			
WALLAROO OF REGENERATOR	WA	Yes	-		
MOURA MINE ADMIN	QLD	Yes			
THULE HUT	NSW	Yes	- 6000000	The second second second second	
COOKS TANK RT	QLD	Yes	-	orks team data confirms coverage	
SALMON GUMS EXCHANGE	WA	Yes		ce at 33 sites since our last	
COGGAN CREEK	NSW	Yes		report*. We also conducted drive	
GLANWORTH	QLD	Yes	_ test surve	eys at 3 sites which further	
EUROA NORTH	VIC	Yes	_ validated	validated equivalence had been achieved.	
RACV HEALESVILLE RESORT	VIC	Yes	-		
DARRINE SIDING (ARTC)	WA	Yes	- As we app	proach 30 th June 2024 we are	
MT COOLON RT	QLD	Yes		 increasing our network validations through additional third part drive test surveys 	
KORREO	NSW	Yes			
MOULTRIE	QLD	Yes			
BUCKAMBOOL RT WLL	NSW	Yes	- Contract		
WENNA DRCS	NSW	Yes	*Please note not all sites completed		
COOINDA	NT	Yes		have been represented in the table above. All sites	
EDGEWORTH MINMI RD	NSW	Yes		o equivalence assessments and any	
BYLONG ARTC	NSW	Yes		pleted this quarter not reflected in this	
PANNAWONICA MINE	WA	Yes		to timing) will be presented in future to	
WILLIAMS RIVER	QLD	Yes	the Ministe	r's office.	
OTFORD	NSW	Yes	1-		
THUNDERBOX MINE	WA	Yes			
THE COTTAGE	NSW	Yes	12		
ROCHETTE	SA	Yes	(2)		
WHEELARRA (BHPB)	WA	Yes	1.4		
CAPE WICKHAM	TAS	Yes	72.		
JERICHO	TAS	Yes	72		
CARNAMAH WEST	WA	Yes	-	Yes	
TAMBO CROSSING	VIC	Yes		Yes (Site claimed as equivalent last report (Q1) based on note that, and was validated with drive test surveys in Q	



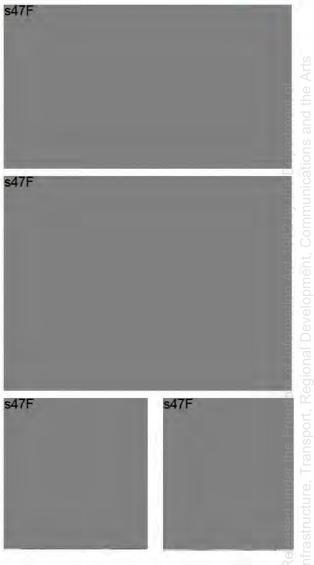
Customer Migration



Focus remains on regional community engagement & support



- Stakeholder and community engagement will continue through Q3 FY24. 4G ready areas, proactive communication regarding planned network disruptions/upgrades, and customer feedback investigation will be key areas of focus.
- 3G closure briefings have been conducted with 210 regional stakeholders, and a further 153 community engagement activities have been delivered this financial year to date. These activities aim to address any concerns the communities may have.
- Telstra had a presence at the following Regional Field Days during Q2: Elmore, Wandin Silvan, Australian National & Murrumbateman. We educated the audience on our 3G closure and assisted customers with 3G devices.
- Service calls to Top 120 small business vulnerable customers with both Handheld and M2M services have been conducted in Q2. Cohort sits in industries such as Security, Support services, Education, Health and not-for-profit. Majority of customers are aware of the 3G network closure and are acting on migration of their services.
- A social media Test & Learn campaign commenced in 4 x Local Government Areas that have been declared 4G ready to notify
 and advise communities to check device compatibility. Examples can be found here: <u>Tatiara LGA (SA)</u> <u>Horsham LGA (Vic)</u>
 <u>Narrogin LGA (WA)</u> <u>Maitland LGA (NSW)</u>
- Stakeholder communications, media releases, radio scripts, social media templates and SMS blast assets have been
 developed to communicate into 4G ready Local Government Areas & gauge feedback. These will be increasingly used into FY24
 Q3 as the declaration of 4G ready areas accelerates.
- A four week Press & Radio campaign will be conducted in Q3. Press advertising will feature in 7 regional publications, while 1,300 radio advertisements will run across 15 regional stations.
- We continue to leverage our stakeholder networks to share our educational communications materials with their constituents and members. Examples below:
 - · 3G network shutdown TV segments on Channel 7, Channel 9 and ABC online
 - Fact sheets / FAQs
 - Newsletters, sent out nationally to 2,500 key stakeholders (March, July & November)
 - Social Media (Better Internet for Rural, Regional and Remote (BIRRR) Australia, Tasmanian Farmers & Graziers Association, Queensland Farmers' Federation, Australian Trucking Association, AgForce)
 - Local Government & Business Chamber newsletters and magazines, Regional Tech Hub
- Other communities and events we have presented to in the past 6 months include; Isolated Childrens Parent's Association (ICPA) Federal Conference, ICPA NT, WA Farmers Conference, Trucking Australia Conference, NSW Farmers, Regional Advisory Council, AgForce Innovation, CWA NSW Conference, Julia Creek Community, Victoria Farmers Federation, BIRRR and Queensland Farmers' Federation, to name a few.

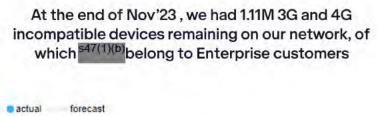


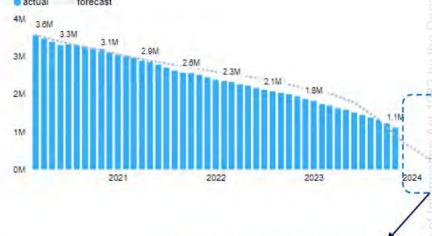
Device trends, customer & community engagement activities



We continue to update our customers on all 3G closure activity via regular updates to our website. Ongoing, proactive and supportive engagement is our priority.

- Of the 1.11M devices remaining to be upgraded prior to closure, s47(1)(b) are Enterprise, predominantly Machine-to-Machine devices.
 - After the 3G closure announcement, Telstra provided a 4-year view of 3G to 4G/5G migration volumes which has not changed since. This original forecast assumed marginal migrations in the final 3 months prior to 3G shutdown. After receiving migration plans from our top 200 Enterprise customers, we now have a more accurate view, which will be incorporated into an updated forecast and available in the next ministerial report. In the meantime, we are continuing to observe an accelerated migration within the Enterprise M2M space. Conversely, mass market migrations are marginally slowing down.
- To address mass market declines, on 27th November we have launched personalised campaigns for all
 impacted mass market services (323k devices including mobiles, mobile broadband devices, tablets,
 M2M and kid smart watches and watches without 4G low-band capability).
- Communications have been developed to share with Aged Care, Health Care and Local Government stakeholders to educate them on 3G only or 4G limited band medical alert devices provided by third parties. Telstra device certification is likewise open to such third parties and assists with sharing the detailed requirements that must be met to become certified for use on Telstra's IoT Network.
- Our T.com 3G closure website has been updated include greater accessibility to pertinent information and an easier user experience, taking into consideration feedback provided by regional constituents.
- We have commenced migration of Next Generation Wireless Link (NGWL) customers, the bulk of our upgrades and customers comms planned for H2.
 - Approx. 5,775 regional customers are currently connected to a USO compliant NGWL products.
 - As part of our 3G closure program we will ensure these customers are migrated to suitable 4G fixed wireless and satellite products, both of which will be USO compliant at launch.
- In Q2, we sent targeted communications to 1000 customers and initiated migrations for those who have responded. Additional local community engagement activities will ramp up in Q3, featuring increased community presence and localised marketing campaigns. These efforts aim to further enhance customer awareness and assist with migrations to alternate services.
- All remaining customers will be contacted through Q3 & Q4.







Supporting our older and vulnerable customers



As we navigate the transition from 3G, we have identified a specific group within our customer base that needs special consideration. This older demographic predominantly use feature flip and "candy bar" devices with simple operating systems. These customers have unique needs and concerns, so we are working to gain a deeper understanding of their preferences and challenges during this transition so we can better service them with the right devices, communications and tools to help them feel comfortable with the upgrade. Wherever possible, we're looking to match like for like form factor and operating system.

We are currently completing a series of comprehensive 3G interviews to gain a deeper understanding of customer needs who migrated to 4G/5G devices over the past 12 months. The insights gleaned from these interviews will serve as the cornerstone for developing tailored communication strategies and programs, ensuring a smooth transition for this specific demographic. We will provide an update on the outcomes of this research in the next quarterly report.

Simultaneously, we are collaborating closely with our device vendors and logistics partners to maintain ample stock of devices that resonate with this customer segment. This commitment extends from the current phase through the transition's culmination and the subsequent months, guaranteeing continued accessibility to devices that align with their preferences. Importantly, we are preparing additional options for all vulnerable customers.



Telstra Lite 3 Price



\$59.00





Flip 4 Price \$149.00



3G to 4G Transition - Telstra

Some BYOD and older VoLTE handsets require 3G to make emergency calls



4G network capabilities were introduced over several years. When Voice over LTE (VoLTE) was first introduced, systems did not have the capabilities to handle emergency calls. Consequently, many handsets released to market around 2014-2016, and even as recently as 2019, can only route emergency calls over a 3G network.

This is occurring globally and not limited to Australia.

All US operators have closed their 3G networks with impacted devices present at point of shutdown.

- Prior to closure, our understanding is some US operators actively blocked devices forcing customer action.
- Our proposal is not to block devices customer communication and device upgrade is the best solution.
 - Completely blocking means all calls will fail. The Australian operators have decided not to take this approach as some form of connectivity is better than no connectivity post closure (i.e. to contact family/friends).

We have confidence that devices sold "officially" in Australia can make emergency calls as they were tested to the Regulatory Compliance Mark (RCM).

However, two "gaps" exist.

- Bring Your Own Device (BYOD)/Grey Import devices (e.g. online marketplace purchases) are not necessarily tested to RCM standards.
 - · We believe most impacted devices will fall into this category.
- RCM tests are at a "point-in-time" and cannot accommodate network evolution.
- Thus, some devices in Australia: 1) never carried the RCM; or 2) do carry the RCM, but VoLTE emergency calls were not a requirement when issued.

Devices are not easily identified, and support from government, manufacturers and industry bodies is required to identify and communicate with customers.

- Telstra, Optus and TPG are currently working together to identify devices, to communicate with impacted customers.
- The GSMA and Mobile & Wireless Forum (M&WF) have been engaged to assist in developing a more comprehensive list.
- All MNOs have been working with handset manufacturers they have an established relationship with.
 - NB: some manufacturers no longer operate in the mobile device market, others never had an Australian distributorship.
- A subset of devices can be addressed via software/firmware upgrades over the air.
- Due to the grey market and grey imports, we are unable to categorically identify every handset impacted.
 - Some of these devices may not be used regularly, also making identification difficult.
 - ~62k devices have been identified thus far.

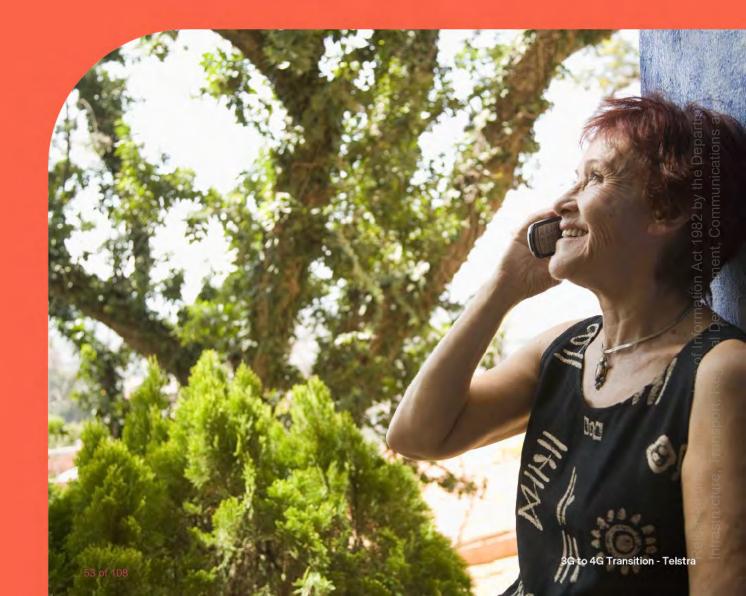
We have briefed the ACMA and will continue to engage with them to strengthen customer engagement activities.

We also invite the Telecommunications Minister and her Office to an additional briefing on this topic, similar to that provided to the ACMA.

Please let us know if this is something that would be helpful, and we will arrange a suitable time accordingly.



Case Studies



Customer complaints, community consultation and resolution of regional coverage concerns



Front of House input				Engineering Review	
Total Complaints	Awaiting Review	Complaints Triaged	3G related (confirmed)	3G related (resolved)	In signed off clusters
86	30	56	17	1	0

Customer complaint and engagement examples

Booroobin, QLD

A customer presented at the Caloundra Telstra store with concerns that they had heard recent media regarding the closure of the 3G network & they were still only experiencing 3G coverage at home. They have a T-Go device installed to improve their in-building reception.

Our response

Coverage maps indicated that 4G coverage should be available. A Telstra network advisor went to the customer premises & confirmed that outdoor 4G signal strength was equivalent to 3G. It was found that the T-Go device was configured to lock onto 3G. A firmware upgrade was completed on the device resolving this issue and allowing access to 4G service. The WAVE App was installed on the customer's mobile & they were educated on setting the device up correctly.

The customer is extremely happy & relieved to know that they will not be impacted by the 3G network closure.

Hillston, NSW

Following works to add 5G technology & complete a 4G capacity upgrade to the Hillston base station, media escalations were received with some locals claiming that the 3G coverage experience had deteriorated. Details of an agricultural customer were provided by the media. An additional customer contacted Telstra via our website portal.

Our response

Telstra network advisors visited the mobile site & both customer properties to conduct network testing & investigate the specific concerns. 4G coverage equivalence from the nearest site was established. Both customers were more than 30km from the base station, well out of predicted handheld coverage. One customer had a T-Go installed with an external Yagi antenna incorrectly setup. A good 4G experience was realised when this was addressed. The 2nd customer claimed to have handheld 3G coverage in some areas of the property prior to the upgrades. Checks confirmed this coverage to be fortuitous, with similar fortuitous 4G coverage now available in more, albeit varied, places on the property.

The customer with the T-Go is extremely happy, but notes coverage is fortuitous. The other customer, while understanding the limitations of fortuitous coverage, is frustrated at the changes post the upgrade.

Yorke Peninsula Equivalence & Community Engagement

On 30 November 2023, Telstra stakeholders, \$47F

and \$47

met at Maitland South Australia and conducted a drive survey throughout the Yorke Peninsula and visited three rural properties to engage local farmers about 4G equivalence. This area was signed off as 4G equivalent approximately a week prior to the visit. Our objective was to showcase 4G equivalence achieved in the region through the 3G EXIT program with the GPSA who had raised concerns about 4G equivalence on the fringes of coverage and along rural roads.

We met the customers in rural locations - Maitland, South Kilkerran, Wauraltee, Wallaroo. Feedback from the farmers visited on the day indicated a positive reception and appreciation for Telstra's proactive engagement. While farmers expressed valid concerns about coverage and capacity in specific sections of their properties, it is noteworthy that 4G equivalence did not surface as an identified issue. This outcome emphasizes Telstra's dedication to addressing community concerns and maintaining optimal network performance standards in regional Australia.

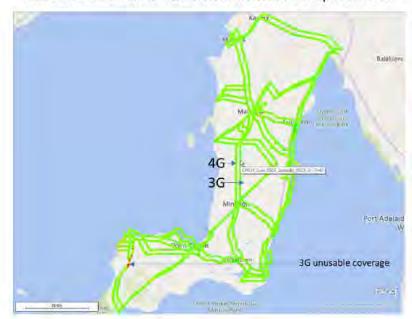
The testing between 3G & 4G covering approximately 1,200 km of roads showed that there is no risk of inequivalence.

Published coverage maps show existing blackspot areas, where 3G and 4G exhibit poor/no coverage



The team explained the concept of 3G/4G equivalence to farmers in the South Kilkerran.





Coverage Complaint

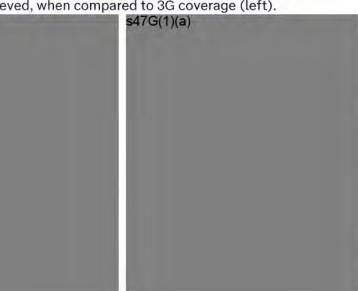


In December 2022 we upgraded our base station located in Main St, Cobram (VIC). The upgrade increased 4G coverage and introduced 5G to the area. In June 2023, we received a complaint, via our Regional Australia team, that residents of s47G(1)(a) had experienced noticeable degradation in service. Residents reported difficulties in using EFTPOS devices indoors and poor reception when making voice calls. there was a concern about being able to contact emergency services should the need arise.

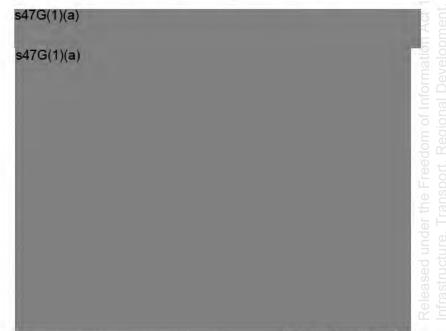
Our initial analysis indicated that standard falls within our advertised outdoor 4G coverage area and investigations showed no evidence of degradation to service post the December 2022 upgrade. To achieve equivalency, we are actively decommissioning software (known as IRAT, see slide 22) that was employed to restrict 4G coverage to suit some legacy devices. This is no longer needed as we transition to 4G/5G and is being removed nationally.

In October 2023, we visited s47G(1)(a) to undertake signal drive testing and complete onsite service checks. This testing confirmed coverage equivalence. To improve indoor coverage performance we recommended that the residents enable WiFi calling on their handsets and WiFi on the EFTPOS machines, and to consider signal boosters, such as the Gen 2 Smart WiFi Booster. We also suggested that the residents contact their EFTPOS provider to ensure their machines are fully compatible. It was noted that all s47G(1)(a) have their own NBN connection or Starlink service and can access Wi-fi calling.

Field testing determined 4G coverage (right) equivalency had been achieved, when compared to 3G coverage (left).







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s47G(1)(a)

Confidential

3G to 4G Transition - Telstra

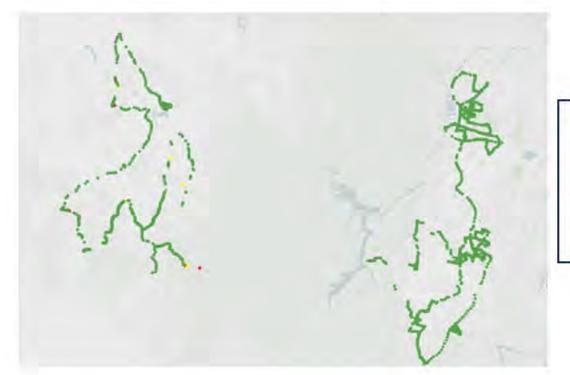


Appendix

Drive Test Results – Coverage Equivalence

LGAs validated: Wollondilly, Penrith, Oberon and Camden (NSW)

- · Overall, material equivalency achieved across the 616km tested.
- · Tests conducted over 3 days; more than 1,500 voice and 3,300 data samples collated.
- · Results highlighted that;
 - 4G coverage was measured across 513km of the route, compared to 501km of 3G coverage (+2.4%)
 - The average download speed on 4G/5G was 261.3Mbps, compared to 6.3Mbps on 3G (+4048%)



- Equivalence achieved 98.51%
 - Low equivalence risk 0.72%
 - Equivalence risk 0.30%
 - No existing coverage 0.48%

Tasmanian Berries Equivalence Assessments



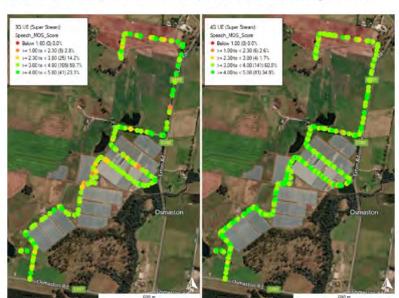
In early August we reconfigured our network as part of our 3G closure program, increasing 4G coverage around the area Tasmanian Berries resides. Since doing so, a Telstra field resources visited the Tasmanian Berries property and assessments determined 4G coverage equivalence had been achieved, further supported by the customer stating they had seen an improvement in service. To further uplift coverage the technician also reconfigured an existing repeater device at the property which has improved coverage more generally.

In this case, Tasmanian Berries are seeking an uplift to their coverage, which is entirely separate to our 3G closure program. Given the terrain, locality and commercial viability of an improvement to the area future projects may be suited to Federal Co-Investment Programs (such as RCP), and we will consider this in future rounds. Likewise, Tasmanian Berries experience of seeing an improved service post our network optimisation may be a recurring theme experienced by other customers as we approach 3G closure.

In order to achieve equivalency, we are actively decommissioning software (known as IRAT) that was employed to restrict 4G coverage to suit some legacy devices. This is no longer required as we transition to 4G/5G, and is being removed nationally (see Appendix slide 22 for a simple explanation of IRAT).

Field testing determined 4G coverage (right) equivalency had been achieved, when compared to 3G coverage (left). The below plot highlights that the farm is well within our 4G indoor coverage is impeded by tall trees lining the advertised outdoor 4G coverage

nearby road and a hill obstructing the path of signal.







3G to 4G Transition - Telstra

Horsham Equivalence Assessment - Customer Engagement



Horsham LGA was one of the first areas to be signed off by networks as 4G equivalent. Our objective was to understand how we can showcase 4G equivalence to customers and seek to understand potential unknown challenges.

On the 11th October 2023 we conducted a visit to the area to engage with a small group of customers to help us understand their lived experience using the network and if the 4G equivalence work has met the objectives. The customers are s47F in the area. Telstra attendees included Mobile network engineering team, Regional Network Advisor and Regional Australia.

We met the customers in a rural location (Laharum) and asked them to take us to the areas where they have traditionally been only able to use 3G. Approx 75km of roads were travelled ranging from dirt tracks to highways, taking us to where they could previously only use 3G. In all areas 4G was available, at times the coverage was poor however this was described as the same experience with 3G (noting some areas are known poor coverage areas).

There were a couple of very small locations where some devices (not all) where connected to the 3G network which is being investigated further. Overall, an extremely successful activity and the feedback from our customers was very positive and they thanked us for taking the time to understand their experience and show that we care about the outcome for their community.

Coverage predictions show the areas where the 3G network was previously available and the 4G was not. This was the experience of the customers in this area.

The equivalence testing between 3G W850 & 4G L700 showed that there is 100% equivalence.

The team when we made our back to the Laharum football ground and debriefed the findings.







Bars on Phones



Bars on phones continue to be a source of confusion for our customers, many believing that a reduction in bars correlates to a reduction in experience.

Signal bars differ between technologies and mobile devices, therefore they are not always a good indicator of coverage and performance. Almost every device is different when it comes to this as there are currently no standards uniformly shared across all manufacturers. Comparing bar readings between different devices could be like comparing apples to oranges.

Similarly, when it comes to different technologies there is no direct correlation between bars and user experience on one technology compared to another.

The picture (right) highlights where we've measured the same device in the same location – the only difference being whether it was on our 3G or 4G network. The left results show 3G receiving higher bars, but a far lesser overall experience in both download and upload speeds compared to the 4G service on the right.

Because 4G is a newer, more efficient technology it is essentially meaningless to compare signal bars between what it delivers and what 3G delivers.

See full article, published in our regional newsletter: <u>Telstra Regional</u> Newsletter - Bars on Phones

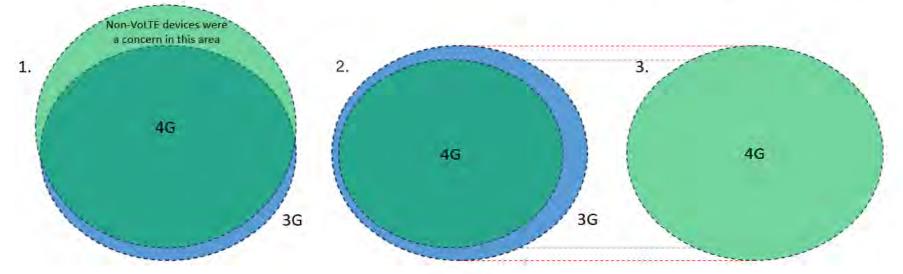


Inter Radio Access Technology (IRAT) explained



- 1. In some instances, our network had the potential to deliver 4G only coverage, which was an issue for some early 4G devices. These specific devices have limitations in their capabilities meaning they can only make voice calls on our 3G network, even though they have access to data via 3G & 4G. These are known as non-VoLTE devices (non-Voice over 4G). If these devices were used by customers in areas that solely consisted of 4G coverage they would be unable to make a voice call.
- 2. In order to keep all of our customers connected we needed to ensure that 3G travelled further than 4G, so we placed artificial constraints on 4G to limit its reach. By ensuring the edge of coverage was always 3G, these devices were able to hand over from 4G once at the edge of its coverage, mitigating any scenarios whereby a phone showed network connectivity (4G), but couldn't make a call. This allowed all devices to make a voice call in our stated coverage footprint.
- 3. As we approach our 3G closure we are gradually reducing this artificial constraint. The combination of a growth in 4G calling devices, plus our commitment to deliver 4G coverage equivalent to that of 3G today, means this artificial constraint will no longer be needed to keep our customers connected for longer.

To learn more about devices which are capable of 4G calling, better known as Voice over LTE (VoLTE), please follow this link: https://www.telstra.com.au/support/mobiles-devices/enable-volte-mobile-phone



etricture Transport Regional Development Communications and the Arts

From: a47F @optus.com.au>

Sent: Monday, 3 July 2023 11:28 AM

To: Sparreboom, Shanyn

Cc: s22(1)(a)(ii) s22(1)(a)

Subject: RE: Reporting on 3G transition [SEC=OFFICIAL]

Good morning Shanyn,

My sincere apologies for the delay in response, the last couple of weeks has simply gotten away from me.

I am just internally chasing a couple of updates (as the information that was given to me didn't make sense to me) but will have them to you by the close of this week.

Very generically the team are still in planning phases (no testing or trial switch offs at this stage) and no further customer comms other that the initial test samples have gone out, there have been no call outs from the customer facing teams of any issues beyond general questions.

I will compile this more broadly for you when the team get back to me.

Kind regards,

\$47F
\$47F

1 Lyonpark Road, Macquarie Park, NSW 2113 Australia
\$47F

@optus.com.au | \$47F



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Pages 64-65 (Document 5) and page 66 (Document 6) removed in entirety as irrelevant under section 22(1)(a)(ii) of the FOI Act.

From: \$47F @optus.com.au>

Sent: Thursday, 13 July 2023 4:46 PM

To: Sparreboom, Shanyn \$22(1)(a)(ii) @infrastructure.gov.au>

Subject: Reporting on 3G transition

Good afternoon Shanyn,

First of all I apologise for the delay in this coming through, that is completely on me.

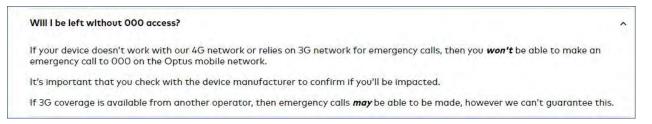
In very short summary – we do not yet have any testing or analysis from a technical standpoint – we are still in the upgrade process across some areas of our Network (as you will notice in more rural and remote areas) but I have attached the current coverage overlay of (3G/4G) that has been provided by the team.

I have also had clarified by our Networks team that September 2024 will be when we commence the transition, however we will not be switching the entire Network to 4G in one go, it will be staged – the details of this have not yet been finalised by the planning team.

1. Updated number of overall customers that are likely to be affected by the transition process;

a. s47(1)(b)

- i. These services are <u>potentially</u> impacted by refresh and may face a degraded service experience based on the capability of the device being used
- ii. For further information, major cohorts include: 3G only, CS Fallback, VoLTE support unknown, No LTE700MHz band support
- iii. Please note that we are performing some further analysis to identify the devices that are VoLTE capable but might rely on 3G for emergency calling..
- iv. Below is what we have in FAQ section re emergency call impact (<u>Important Changes to 3G | Optus</u>)



4. Issues that have arisen with the transition that may affect customers, and progress Optus has made in resolving those issues;

- a. We are early into the process of informing customers of 3G Refresh. So far, we have had no recorded complaints (internal escalations or TIO complaints) at all with the 3G refresh activity from the early test cohort that have been notified.
- Any contacts we have had included customer education on the expected impact to their device, education on the timings of any network changes and discussions about potential replacement/upgrade devices.

5. The supports Optus will be providing affected customers:

- a. Initial customer communications are attached (3G_Comms.pdf).
- b. Optus has been undertaking a large restructuring and change to our hardship policies and processes, this is not yet complete so have attached the most recent policies complex 3G shutdown matters will be handled on a case by case basis by a team of Customer Resolutions Experts who are trained in matters regarding the Shutdown.
- c. Confirming that both PERSL and ASIAL have received communications regarding possible impacts on personal alarms.
 - i) Our Regulatory Team have spoken with ASIAL and they've confirmed receipt of correspondence, and PERSL have put the contents of the correspondence to them on their website as a notification to their members.

Kind regards,

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Attachments 1 and 2 to Document 6 not included here as they are exempt in their entirety under section 47G(1)(b) of the FOI Act.

Optus Assist

Family Violence Policy

Optus is committed to assisting customers who may be affected by family violence

Our goal is to help both customers and support workers by providing a direct point of contact, that way all parties can reach a suitable outcome on matters quickly and easily.

We assess all cases on their own merit. We may request supporting documentation where necessary.

If you do have any documents which can help the assessment process, please provide these at the start of the assessment.

Solutions we can offer

The customer's **safety** is our first priority.

Keeping customers **connected** to their support network is important. Below are some solutions we may be able to offer depending on the customer's needs.

Possible outcomes				
Account holder	Non-account holder			
1. Mobile or fixed line rate plan change	1. Offer a new mobile number on a new account			
2. Cancellation of service(s)	2. Offer a new prepaid service			
3. New number (mobile or fixed line)	3. Offer a new private fixed line number on a new account			
4. Provision a private fixed line number				
5. SIM swap for mobiles				
6. Transfer post-paid mobile to prepaid				
Reactivation of a cancelled service if cancelled due to collections (if number is still available)				
8. Short or long term payment arrangements				
9. Payment matching				

The solutions listed in the table above may be provided with no additional setup fees.

The Optus Assist team strives to lead in ways we can help customers experiencing difficulties in their lives. Always looking to improve our approach, we welcome all feedback.

For other support initiatives we have in place please ask and we'll be happy to share these with you.



Released under the Freedom of Information Act 1982 by the Department of Infrastructure. Transport: Regional Development. Communications and the Arts.

10. Debt not pursued

Financial Relief Policy

Optus is committed to providing financial relief for customers who are not able to meet their financial obligations.

We understand there are times where paying outstanding balances may cause further financial difficulties.

Our goal is to help financial and support workers have a clear, quick and easy process to request financial assistance for Optus customers.

We assess all cases on their own merit. We may request supporting documentation where necessary. If you do have any documents which can help the assessment process, please provide these at the start.

Solutions we can offer

To ensure a fair and quick solution is offered, please provide the below information to **optus.assist@optus.com.au**.

Information required

- 1. What is causing the customer's financial difficulty?
- 2. Is the customer likely to receive any lump sum payments in the near future?
- 3. Is the customer's sole income an Aged, Disability or WorkCover payment?
- What are the customer's living arrangements?

 e.g. renting, living with parents, home owner, women's shelter, etc.
- 5. Is the customer likely to return to work in the near future? Or is the financial difficulty long term?
- 6. Has the customer obtained any new equipment within the last 12 months? If so, is the customer willing to return the handset?

Does the customer agree to a transfer to prepaid if they wish to keep their number?

7. Alternatively, does the customer agree to have the service(s) cancelled?
Note: Cancellation fees may not be incurred. Optus will make decision based on the information supplied.
We will be prepared to answer any questions regarding these charges by calling 1300 303 509.

Below are some solutions we may be able to offer depending on the customer's needs.

Possible outcomes

- 1. Partial Debt Relief + Reduction of Monthly Fee + Payment Arrangement
- 2. Debt not pursued (return of equipment where possible)



under the Freedom of Information Act 1982 by the Department of ure. Transport: Regional Development. Communications and the Arts.

s22(1)(a)(ii)

From: \$47F @optus.com.au>

Sent: Thursday, 5 October 2023 2:08 PM

To: Sparreboom, Shanyn \$22(1)(a)(ii) @infrastructure.gov.au>

Cc: s22(1)(a)(ii) @INFRASTRUCTURE.gov.au>; s22(1)(a)(ii) @infrastructure.gov.au>

Subject: RE: Reporting on 3G transition [SEC=OFFICIAL]

Good afternoon Shanyn,

Just providing a very small update from the 3G transition project team.

1. s47(1)(b)

- 2. This is an increase from the number reported earlier, as additional devices that rely on 3G for Emergency calling have been identified and added to the impacted base.
 - a. Please note that further analysis for Emergency call 3G fallback cohort continues.
 - b. Additionally an Inter Operator Forum, comprising of Optus, Telstra and TPG is meeting regularly with the following agenda:
 - i. Collaborate and share the learnings with each other to identify potentially E-call 3G fallback impacted devices.
 - ii. Work with vendors to identify possible solutions.
 - iii. Inform customers of the potential impact.
 - iv. All operators to gauge the volume of the impact and share the findings with relevant Departments.
- 3. Optus has informed the identified impacted Consumer postpaid and prepaid customers in Sep-23.
 - a. Tailored comms based on the impacted device cohort offering deeper insights to customers on potential impact, continue to go out periodically so to not 'spam' or annoy our customers.
- 4. There have been no recorded complaints about the 3G closure (both Internal and TIO complaints) across August and September.
- 5. For Networks no considerable changes to report at this stage. The team continues to upgrade the sites to achieve coverage parity. We will have more details with maps showcasing 3G 4G coverage for the sites in scope for our next update.

Optus an Telstra have also been attending some industry forums and presenting at webinar briefings to help assist industries understand what is occurring and when changes will need to be made – this has received positive feedback thus far.

I hope you have a great Thursday afternoon!

Kind regards,

s47F
s47F
| Regulatory and Public Affairs
1 Lyonpark Road, Macquarie Park, NSW 2113 Australia
s47F

@optus.com.au | s47F



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Pages 73-76 (Document 7) removed in entirety as irrelevant under section 22(1)(a)(ii) of the FOI Act or as duplicate content from Document 6.

released under the Freedom of Information Act 1982 by the Department of Infrastructure. Transport: Regional Development. Communications and the Ar

Pages 77-90 (Document 8) removed in entirety as exempt under section 47G(1)(b), irrelevant under section 22(1)(a)(ii) of the FOI Act or as duplicate content from Document 7.

Attachment 1 to Document 8 also not included here as is is exempt in its entirety under section 47G(1)(b) of the FOI Act.

View Online



OPTUS



Upcoming change to our 3G mobile network

Here's what you need to know

Hi s47F

We're getting in touch to let you know about an upcoming change to our 3G mobile network. It's important to us that you understand what it means for you, and that we give you plenty of notice to prepare for this change. We're here to help with any support and guidance that you need.

What's happening and why?

3G technology was first launched 20 years ago at a time when we were still listening to music on CDs, the biggest social network was MySpace, and the Blackberry was the number 1 smartphone. As we move towards newer technology, we occasionally need to say goodbye to older technology.

From September 2024, we will be repurposing our 3G technology to boost the capacity, speed, and reliability of our 4G network and rollout 5G to even more Australians. Which means 3G services will no longer be available on the Optus network.

What does this mean for you?

We believe you may be using the below device(s) that rely on our 3G network for either voice calls and/or data use, including embedded network modules. This means your device(s) may no longer be able to connect to the Optus mobile network from **September 2024.**

Account number Service		Device	Device type	
s47F		HUAWEI E5251S-2	Wireless Hotspot	
		SIERRA EM7345	Embedded Network Module	
		APPLE IPHONE XR	Mobile Phone	

How do I know if my device(s) will be affected?

The best way to confirm if your device is reliant on 3G is to check your device manual or reach out to the manufacturer, via their website or by calling them. We've provided more information on how to do this here.

If you require a new embedded network module, you may need to contact your device manufacturer to locate your nearest stockist, as Optus does not supply these devices.

An embedded network module is a type of system board normally embedded within a larger device such as a security system, automated teller machine (ATM) or vending machine all capable of communicating with mobile networks.

Note: As not all devices are made to work across all technologies, even recent device models could be affected. This includes recent device models that may have been purchased from other retailers or overseas which don't support the 4G 700Mhz spectrum band, used by Optus and some other providers for 4G coverage.

Infrastructure, Transport, Regional Development, Communications and the Arts

We're here to help

If you have any questions or concerns, then you can get in touch with one of our experts on 133 937 or message us <u>24/7</u> in <u>My Optus app</u>. We've also listed the options available to you and frequently asked questions <u>here</u>.

We understand that unexpected events and expenses can make it difficult to keep up with your regular payments. If you're experiencing financial hardship, please contact us. You can read more about our commitment to keeping you connected here.

Thanks,

Your Optus Team

Need Help?

Message us >

Personalised 24/7 support in My Optus app and online via My Account

Help & support >

Privacy

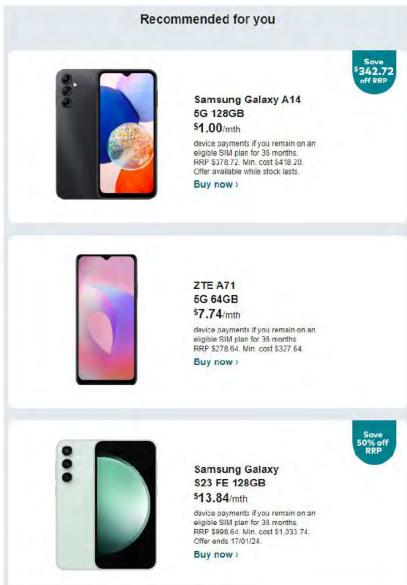


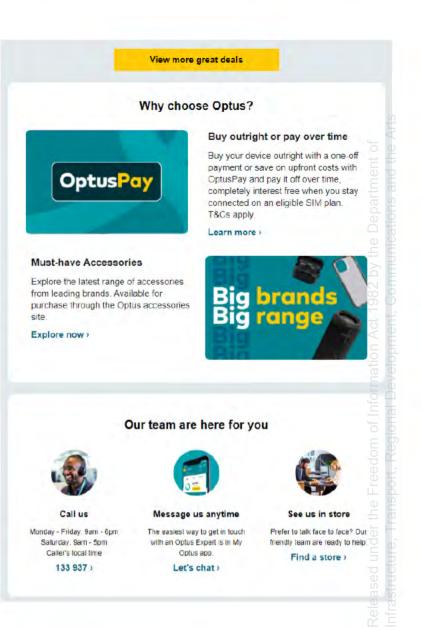
We recently reached out to let you know about your service(s) which might be impacted by our 3G network refresh from September 2024. If you'd like to upgrade to a new device now, then look no further. We'll pair you with the perfect device and a great value month-to-month SIM plan.

Hi

Choose whether you want to buy outright with a one-off payment, or pay for your device over time when you stay connected on an eligible SIM plan, interest free with OptusPay.

Best of all, when you say goodbye to 3G, you'll say hello to all the great benefits of our 4G and 5G* networks, like improved voice and video calls, and faster internet speeds.





From: a47F @optus.com.au>

Sent: Friday, 9 February 2024 3:48 PM

To: s22(1)(a)(ii)

Sparreboom, Shanyn; s22(1)(a)(ii) ; s22(1)(a)(ii) ; Silleri, Kathleen; s22(1)(a)(ii)

s22(1)(a)(ii)

Subject: RE: 3G Shutdown - Submission of Mr James Parker - VolTE [SEC=OFFICIAL]

Afternoon (a)(ii)

Our technical teams have provided me the below advice to address some of Mr Parker's concerns.

In general non-VolTE capable handsets has always been a known issue and has and continues to be a part of our communication to customers – this includes information available on our <u>website</u>.

Below is a list of the top 25 most common devices that may be affected:

Alcatel 2038

Alcatel OneTouch 2045

Apple iPhone 5

Apple iPhone 5C

Apple iPhone 5S

Aspera A42

Doro 6521

Doro PhoneEasy 623 OPTUS

Google Pixel 2 XL

Huawei E5251s-2

Huawei E5331

Huawei Y6 Prime

Nokia 301

OPPO A57 (2016)

OPPO F1s

OPPO F5 Youth

Optus X Smart

Samsung Galaxy J1 Mini

Samsung Galaxy S5

ZTE Blade A0605

iPad Air

iPad Retina

iPad mini Retina

iPad mini

iPad mini 3

- iPhones do not have cross Carrier problem.
- For more recent Android phones, e.g. those from 2019 onwards, the Australian variant typically will work well on VoLTE on all the 3 Aust Networks, as proven by our own testing and engagement with the leading brands. Older models may not work as well on a different network than that on the original network that the phone was purchased from or for, this due to the software customisation for each carrier.

- However generally these Australian phones can do VoLTE calls but may not support supplementary services properly. Such limitation was overcome starting around 2019 when the leading Brand have more sophisticated software that will readjust the phone settings if a sim from a different Carrier is inserted.
- As we have mentioned in the past the greatest unknown are overseas models, e.g. grey imports, or those brought into Australia via migrantion or travellers on overseas trips.
- These phones may not be optimised for Australian requirements, some may not even meet Australian
 mobile device standards, e.g. those defined AS S042. These phones could still connect to Australian
 networks and users can use them to make Voice and data calls, and some may work better on one network,
 and not work well at on another network.
- Again, the later models are expected to have less challenges as the manufacturers and importers has acquired more knowledge.

Kind regards,

\$47F \$47F | Regulatory and Public Affairs

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s22(1)(a)(ii)

Page 97 (Document 9) removed in entirety as irrelevant under section 22(1)(a)(ii) of the FOI Act.

3G Refresh **Department Update** 25 Mar 2024

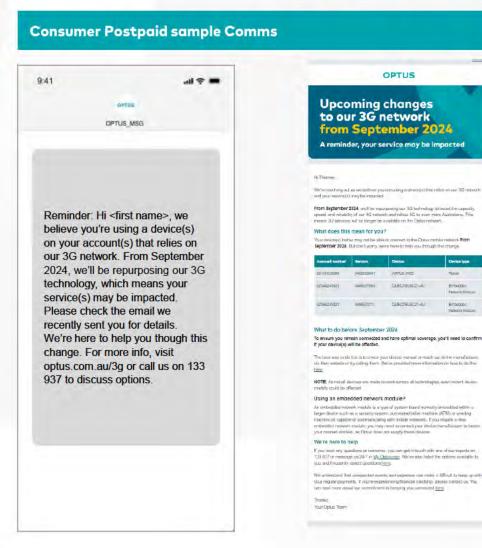
4es optus

FOI 24-352 - Document 10

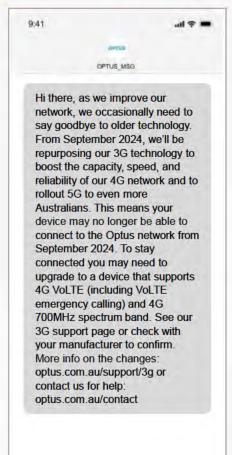
Pages 99-101 (Document 10) removed in entirety as exempt under section 47G(1)(b) of the FOI Act.

We have been reaching out to impacted customers informing them of the planned 3G network Refresh

- c. 0.75m comms sent through various channels including eDM, SMS and DM



Consumer Prepaid & amaysim sample Comms





amaysim: Hey <Name>, from September 2024, the 3G network will be shutting down. This means your 3G phone will no longer work. To avoid disruptions, it's time to upgrade your phone so your number still works on our new 4G/5G network. Check your email for your exclusive promo code. Offers end 03/03. Shop now, interest free with Zip. T&Cs apply. Contact us at Contact. Reply STOP to opt out.

Multiple reminders to all impacted Enterprise & Business Customers

Enterprise Customer sample Comms

An important message from Optus

опцелу (кате

Date Visited Cremes

AL 2 was at Cycle (Lister w), we will increase you could be to be unabled from the (equipment in part of our continued settions disclaims—and what this return by/you.

Charges to our 58 network

As you may smally be aware from Replement 2004 on an Integral in Among all 9000H0 specifies in promise a pollor 60 includes represent to wall or transport the growth of 50 includings. Druke the seminators has provided 50 increase will not colore the seminators on the Orbita politics.

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iliquas on tra you of device imaged if a modific picture of data eat integrate may recommend that one committee a silver

- W46 VALUE amostible state that a coast LTE-739MHz; or
- Dotto Alexandra Programme LTT-7189/5-by

What do not need to do not

We encourage you imped to bust with limit plus from a part it awked let of your animality impediate flavours. If majored spelliprocessed, Colum say problems you in our professed pattion regardestation(s) that can help in this processor.

If we moved to communicating with correcting also with a part opposition about forms a transport for many to left us who fineeds to as.

Bigua have dry species, plante milited the Derwin Deskin 188 for your decleased Military. You have seen made only dry our Delta Associated of Deltary Mesoper for Littles (Opinion).

The Executor and Ex

To contact please call 134 515

OPTUS An important message from Optus Enterprise

Dear First Name

As a valued Optic outlomer, we want to update you about a few changes that are happening as pert of our continued network evolution – and what this means for you.

Changes to our 3G network

We re making some changes on how we deliver services on our network in September 2004, we will begin re-farming our SOOMH2 spectrum to provide a better 69 network experience, as entil as to support the growth of 50 technology. Once we commence this process 30 services mill no longer be available on the Optia network.

This is an important action for Optus to ensure that our customers across Australia have been so the best activate coverage we can provide.

We have recently completed the re-farming of our 2100MHz spectrum, which previously supported 30 services also. We are providing plenty of notice to allow you time to upgrade devices and servidiant internations.

What this means for yo

Our records show that you may have some mobile services that are reliant on 30. These SMS may be in use in devices such as mobile voice, mobile troadband, machine to makine and/or EFFPOS terminals.

- If you have a device that can connect to the 45 Network, it should continue to keep working post refresh. However, if you mobile device does not support 45, it will not be able to access the Optics Network.
- If your mobile device does not support 4G Volce over LTE (Vol.TE) and supports
 voice calling on 3G 900MHz only, after the spectrum re-farm you'll be able to
 access data but will not be able to make a voice call.
- In some instances, the device may support VoLTE but it has been disabled by the
 user, make sure to reach out to the Optics team to assess your adulation.

Over the coming months, we encourage you to get in touch with the Optus team to explore your actions.

Based on the type of device impacted (i.e. mobile phone or data device), we may recommend that you upgrade to enhan:

- A 4G VolTE compatible phone that supports LTE 700MHz; or
- . Data device that supports LTE 700MHz

What do you need to do now

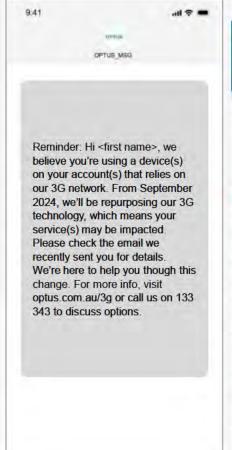
We encourage you to get in touch with the Optus feam to get a list of your impacted devices, if required, and/ or requested, Optus can introduce you to our preferred partner organisation(s) that can halp in this transition.

If we should be communicating with someone else within your organisation about these changes, please click here to tell us who it needs to be.

If you have any queries, please contact the Service Desk on 134 315 (or your dedicated 1800 number). You may also reach out to your Optus Account or Delivery Manager for further information.

Kind regards. The Enterprise and Business team. Optus

Business Customers Sample comms







Optus Wholesale is working closely with MVNOs enabling them to inform and migrate their customers

Optus Wholesale sample comms



Important changes to the Optus 3G Network

We're making some changes on how we deliver services on our mobile network.

From September 2024, we will begin re-farming our 900MHz spectrum to provide a better 4G network experience as well as to support the growth of 5G technology. This is an important action for us to take to ensure that our customers and your end users have access to the very best network experience we can provide.

Once we commence the re-farm of our 900MHz spectrum in September 2024, 3G services will no longer be available on the Optus network.

Optus 3G Refresh - Impacts relating to Emergency Calls

As communicated last year, from September 2024, we will begin re-farming our 3G 900MHz spectrum to provide a better 4G network experience as well as support the growth of 5G technology for our customers.

After the completion of the 3G 900MHz re-farming activities, customers using the types of mobile devices listed below will be impacted as follows:

Device Type	Permanent impact post re-farming Customers will not be able to use any 3G services such as call, text messaging or data on the Optus network. Customers will still be able to use 4G data on this device but will not be able to make or receive calls on the Optus network as there will be no 3G network to fallback for yoice.		
3G Only Devices			
4G Circuit Switched Fallback (CSFB)			
No LTE700MHz support	Customers with these devices may have significantly less Optus coverage.		
VoLTE Support Unknown	Unable to ascertain Vol.TE capability for various reasons including low volume of devices in the network, unknown manufacturers etc.		

How do you know which devices will be impacted?

Optus will share with you lists of affected mobile phones and data devices and the corresponding MSN - the impacted devices include:

Standardised device name	Year released
Samsung Galaxy S7 Edge	2016
Samsung Galaxy 18	2018
Samsung Galaxy A7 (2018)	2018
Samsung Galaxy A5 (2017)	2017
Samsung Galaxy J7 Prime	2016
Samsung Galaxy S7	2016
Samsung Galaxy S5	2015
Samsung Galaxy J2 Pro	2017
Samsung Galaxy J7 Prime, Samsung Galaxy On7 Prime	2016
Samsung Galaxy S6 Edge	2015
Samsung Galaxy A8 (2018)	2018

Regular bulletins and sessions with the MVNOs educating of the potential

Monthly impacted customer information / data shared with the MVNOs enabling customer comms.

Vocus: e-mails to impacted base, website updates <u>IMPORTANT CHANGES</u> TO THE OPTUS 3G NETWORK | Dodo

Southern Phone/ AGL Mobile: e-mails to the base, website updates

Important Changes to the 3G Mobile Network | Help and Support | AGL

Circles: e-mails to the base, website updates

Circles.Life | Find Out More

About Us



Page 105 (Document 10) removed in entirety as exempt under section 47G(1)(b) of the FOI Act.

Vulnerable Care - Supporting Customers in Times of Need

Where heightened support is needed, **Specialist Care** serves as a **dedicated team** for customers facing vulnerability.

The team is equipped with the necessary expertise, delegations, and resources to effectively assist those who are experiencing significant challenges in accessing and managing their communication services.

The Specialist Care Team can support

25	>~~{	2	IZ3 0
Domestic Family Abuse	Bereavement Care	Homelessness	Financial Hardship
View support page	Read How to transfer		View support page
or Call 1800 685 059	or close an account in the event of a death	Call 1800 470 291	or Call 1300 308 839
0		Λ.	
	1	7	
Disability	Accessibility	Natural Disasters	
View support page	View support page	Call 1800 507 581	
Call 1800 470 291	Call 1800 470 291	Cuii 1600 507 561	



Removing Language Barrier

If the customer doesn't have a trusted third party to act as an interpreter for them, Optus has partnered with an interpreter services vendor to provide translation services.

- Optus experts can initiate a call with an interpreter, or
- A customer can call the interpreter services vendor directly before contacting Optus

Optus

Affected devices and communications by carrier at 01 March 2024

		Telstra	Optus	TPG	MVNOs
3G shutdow announced	v n	October 2019	April 2022	September 2022	
3G shutdow	vn date	From 30 June 2024	From 1 Sept 2024	30 January 2024	
No. custome 3G-only dev			s47(1)(b)		s47(1)(b)
No. of medi	cal devices				-
No. custome non-VoLTE					
No. customo devices that compatible 700 MHz sp	are not with 4G				
No. customers with 4G	Known affected devices				
devices without Triple Zero	Unknown devices				
Total unabl Triple Zero					

	Telstra	Optus	TPG	MVNOs
Total impacted customers		s47(1)(b)		s47(1)(b)
Impacted USO premises		N/A	N/A	
Communications strategies - implemented		See attached slides		
Communications strategies - planned		See attached slides		
Other substantive risks				