

The Optus logo, consisting of the word "OPTUS" in a bold, teal, sans-serif font.

Submission to Senate Standing
Committee on Environment and
Communications

Optus Network Outage

November 2023

INTRODUCTION

1. Optus is deeply apologetic for the impact caused to our customers on Wednesday 8 November 2023. We recognise the importance of our role in providing connectivity services to our consumers, small business and enterprise customers, and we understand the disappointment, frustration, and anger that our network outage caused. We pride ourselves on delivering our customers outstanding service, engaging experiences, and a safe and resilient network. An incident of this scale and magnitude has not happened before in Optus' history. For this reason, we are also disappointed.
2. We welcome the opportunity to provide input into the Senate's investigation into ensuring reliable communications for Australia and support the Government's announced investigation into this outage, and other historical outages experienced on telecommunications networks, so as to ensure industry and community-wide lessons are learnt and relevant changes implemented.

OVERVIEW OF OPTUS AND OUR ROLE IN AUSTRALIA

3. Optus is the second largest provider of fully integrated telecommunications services in Australia, delivering more than 10 million services across a comprehensive range of telecommunications products and services including:
 - (a) Mobile and fixed line telephony;
 - (b) Broadband and internet services;
 - (c) Multimedia entertainment and technology services;
 - (d) Satellite services; and
 - (e) Converged business telecommunications applications and solutions.
4. The Optus network currently provides mobile coverage which is available to more than 98.5% of the Australian population. We provide our customers with competitively priced mobile and fixed offerings, with customers paying \$49 per month for 30GB data on our lowest priced Choice Plus postpaid plan, and Prepaid customers paying \$35 per month for 40GB data across 28 days of service on our Flex Plus plan. From a small business perspective, we provide competitively priced mobile and fixed offerings in addition to small business care and support teams to work with businesses to design a suite of products and plans that best suit their business needs.
5. Optus was granted a carrier licence in 1992 with the purpose of providing Australians with competition and choice for their telecommunications, ending an era of Government-owned telecommunications infrastructure. We were born as an alternative, a disruptor to incumbency and a challenger: a spirit we retain to this day. The introduction of competition with a strong telecommunications carrier alternative has transformed Australia's communications market for the benefit of all Australians. Competition encourages investment and innovation, and consumers benefit from improved prices, functionality and service. It is important for Australia's future economic prosperity that the sector continues to have sustainable competition and investment.
6. Optus has invested over \$45 billion in Australia since its inception in 1992. Annual investment is around \$1.5 billion which represents approximately 20% of Optus' revenue. This puts Optus at the high-end of the range when it comes to international

benchmarks for network investment. Whilst this investment benefits Optus' customers directly through increased coverage, faster speed, and access to new and innovative features and services, it also has a multiplier effect on the economy. Analysis undertaken by Venture Insights indicates that the investment of \$1.2 billion annually into Optus' mobile network generates \$18 billion in GDP annually.

7. We seek to provide our customers with exceptional value, service and connectivity. Our vision is to be Australia's most loved everyday brand, with lasting customer relationships. A vision that is underpinned by being trusted and relied upon everyday as its most fundamental tenet. We recognise and value the critical contributions we make for our economy and communities.
8. Optus is acutely aware of the importance of ensuring reliable connectivity for all of our customers and the people and businesses that interact with them. Our networks are designed in conjunction with leading global vendors and are built with multiple layers of resiliency so that there is back-up if one part of the network fails. Unfortunately, outages are an inherent risk of all networks and can result from a variety of causes.
9. Despite the role our industry plays in society, telecommunications has not been designated as an 'essential service'. Mobile telecommunications are provided on a commercial basis, with no regulated guaranteed return on investments nor regulated retail pricing. In contrast, 'essential' utilities like water and electricity have prices regulated at a level that allows guaranteed returns on their investment. In these industries, the cost of regulated obligations is fully recoverable. While telecommunications does not have an equivalent overarching scheme, obligations to connect and provide services fall upon NBN Co and Telstra. NBN Co has been designated the statutory infrastructure provider and is required to offer fixed line connections to all households;¹ Telstra is the universal service provider, with obligations to supply voice services to all households. Telstra receives around \$230 million each year to compensate for these obligations, \$100 million from Government and the rest from the telecommunications industry.

OVERVIEW OF THE OPTUS NETWORK

10. Optus' network comprises a mobile access network (i.e. base stations) supplying 3G, 4G and 5G services, a fixed access network providing broadband and voice services, and an enterprise access network providing enterprise-grade services for large businesses.
11. We operate a 24/7 Networks Operation Centre, working closely with our global vendors to deliver coverage, service and network stability. Our average daily mobile network availability is 99%, which includes all planned and unplanned outages and maintenance. The network has consistently been at this level year-on-year.² Whilst Optus has experienced smaller scale localised outages, the 8 November outage was the first of its kind in our history. Indeed, through our focus on enhancing our network resiliency, we have witnessed a 60% reduction in critical network incidents from 2021 to 2023. This financial year we are investing more than \$1.5 billion in capital expenditure; \$1 billion of which is on our network. Of this, \$138 million is dedicated to network resiliency and

¹ NBN Co receives protections from market competition; has permitted regulated returns; permitted regulated annual price increases by the greater of CPI or 5%; receives Government funding for its regional network; and Government underwrites its debts.

² Excluding natural disaster events such as bushfires and floods.

security measures across our mobile, core and transport networks. In addition to the \$1.5 billion capital investment, we are spending \$510 million in network operating costs. Our resiliency investment has doubled over the last two years and includes the investments made in hardening our mobile base stations. Each of these resiliency and hardening measures are in addition to the investments we make to deploy new infrastructure across the country each year. In total, Optus operates at over 9,300 sites across the country, including 3G, 4G and 5G sites. Since April 2021, Optus has delivered 976 new greenfield mobile sites and upgraded a further 2,179 mobile sites. The network is highly resilient and has multiple layers of redundancy and protection: the mobile, fixed, voice and data core have main and backup routers providing connectivity at every exchange. On all mobile voice, mobile data, and fixed voice core services, there is also geographical redundancy that allows traffic to be seamlessly carried by other exchanges. This architecture is consistent with telecommunication industry practice.

12. Connecting the various networks we operate, referred to above, is the Internet Protocol (IP) Core network that contains a range of IP routers that direct traffic into each of the networks that manage individual services provided to customers. The issue being discussed by this Committee relates to the Optus IP Core network. We focus on this in more detail below.
13. The Optus IP Core network connects to other external IP networks through a range of domestic peers and international internet exchanges. As the Committee is aware, modern telecommunications networks are a system of connected nodes that send packets of data across the globe based on routing information. At the heart of the system of interconnected nodes are devices called routers – which in effect are the road maps and traffic signals that direct and send data packets to the locations they need to go.
14. Optus uses two distinct IP network domains to support our customers: Mobile/fixed customers connect through the Consumer IP domain and our enterprise customers connect through the Enterprise IP domain. Each separate IP domain uses separate, fully resilient and physically redundant internet gateway routers to connect to Singtel internet exchanges, located in North America and Asia.
15. There are certain network elements in each IP network domain called Route Reflectors that act as the control centre for exchange of routing information within and between network domains. These Route Reflectors are connected in a mesh architecture to provide high levels of resilience and protection against failures. IP route information comes into the Optus network through Internet Gateway Routers (IGR), through the Route Reflectors, and onto the Provider Edge (PE) Routers.
16. The Optus consumer network has dedicated PE Routers for mobile data and voice services (mobile network); dedicated PE Routers for fixed broadband services (fixed network); and dedicated routers for operational support services and the Optus Domain Name System (DNS). It is important to note that these PE Routers are designed with resiliency, and that the mobile data, mobile voice and fixed services nodes are similarly designed with redundancy. The Optus enterprise network has dedicated PE routers for the Evolve enterprise service (enterprise network). In total, Optus has around 200 PE Routers nationally, provided by several global leading vendors, to direct IP traffic to Optus services and customers.

OPTUS NETWORK OUTAGE

Summary of Post Incident Analysis

17. From our post-incident analysis, we now know that at around 4.05am on 8 November, our Network Operations Centre observed a loss of connectivity affecting our consumer IP network. This resulted in a loss of consumer fixed and mobile services, and some enterprise services. Enterprise broadband services were not impacted as these operate on a different domain.
18. In the initial stages of the outage, Optus prioritised the restoration of services as soon as possible. This required re-establishing connectivity to key elements of the network. The following information and detail regarding the sequence of events was collated subsequent to restoration.
19. It is now understood that the outage occurred due to approximately 90 PE routers automatically self-isolating in order to protect themselves from an overload of IP routing information. These self-protection limits are default settings provided by the relevant global equipment vendor (Cisco).
20. This unexpected overload of IP routing information occurred after a software upgrade at one of the Singtel internet exchanges (known as STiX) in North America, one of Optus' international networks. During the upgrade, the Optus network received changes in routing information from an alternate Singtel peering router. These routing changes were propagated through multiple layers of our IP Core network. As a result, at around 4:05am (AEDT), the pre-set safety limits on a significant number of Optus network routers were exceeded. Although the software upgrade resulted in the change in routing information, it was not the cause of the incident.
21. Restoration required a large-scale effort across more than 100 devices in 14 sites nationwide to facilitate the recovery (site by site). This recovery was performed remotely and also required physical access to several sites.

Optus' Understanding on the Day of the Outage

22. At the time of the outage, the behaviour of the network that led to the impact on services was unclear. Several hypotheses and paths to restoration were explored over the period up to 10.30am.
23. From the commencement of the incident to 10.05am, Optus engineers simultaneously examined a range of possible causes, including:
 - (a) Analysing whether network changes made during the early hours of Wednesday morning impacted the event. This included rolling back network changes made to confirm there was no impact.
 - (b) Investigating DNS servers, as they were offline.
 - (c) Investigating whether Optus was subject to any DDoS attack.
 - (d) Examining whether the issue related to network authentication.
 - (e) Examining equipment logs and alerts, which showed multiple Border Gateway Protocol (BGP) IPv6 prefixes exceeding threshold alerts.
 - (f) Investigating links to potential sources of the high number of IPv6 prefixes including Akamai, to confirm that the route flooding was not ongoing.

24. The IPv6 line of enquiry became our leading hypothesis for network restoration. Through this process, we identified that resetting routing connectivity addressed the loss of network services. This occurred at 10:21am and we then commenced:
 - (a) Resetting and clearing routing connectivity on network elements which had disconnected themselves from the network.
 - (b) Physically rebooting and reconnecting some network elements to restore connectivity.
 - (c) Carefully and methodically re-introducing traffic onto the mobile data and voice core to avoid a signalling surge on the network.
25. These steps that resolved the incident were actioned across multiple (more than 100) network elements and various geographic locations nationally.
26. Simultaneously, over the course of the morning, it was also important for Optus to investigate and rule out any indication the outage was caused by malicious actors.
27. Optus consumer internet services and DNS information started to come back online from 10.38am. Optus technicians continued to progressively restore the impacted routers, including routers used for mobile services over the following hours:
 - (a) By 11.00am, 29% of Radio Access Network (RAN) sites were restored.
 - (b) By 12.00pm, 56% of RAN sites were restored.
 - (c) By 1.00pm, 83% of RAN sites were restored.
 - (d) By 1:30pm, 88% of RAN sites were restored.
 - (e) By 2:00pm, 98% of RAN sites were restored.
 - (f) By 2:30pm, 98.75% of RAN sites were restored.
 - (g) By 3:00pm, 99% of RAN sites were restored.
 - (h) By 3.30pm, 99.72% of RAN sites were restored.
28. Approximately 150 engineers, technicians and field technicians were in the core group of personnel working on resolution. That core group was augmented by 250 additional personnel, providing further support and monitoring. We also worked with five leading international vendors who assisted us with resolution and advice.
29. Although 98% of RAN sites were restored by 2.00pm, we declared the network outage closed at 4.00pm. However, there were some intermittent connectivity issues for approximately 9,000 NBN customers through the night, with teams working overnight to restore services.
30. The restoration of the network to provide connectivity for our customers was at all times our priority.
31. Following the resolution of the outage at 4.00pm on Wednesday 8 November 2023, the team closely monitored the performance of the network and continued to review the circumstances regarding the outage to make any necessary changes to further increase the resiliency of the network. This work continued throughout the remainder of the week,

through the weekend, and until the afternoon of Monday 13 November 2023. We confirm this work has been completed.

32. We are committed to learning from this event and continue to invest heavily, working with our international vendors and partners, to increase the resilience of our network. We will also support and will fully cooperate with the reviews being undertaken by the Government and the Senate.

COMMUNICATIONS

33. We appreciate there was considerable impact on Wednesday to our customers and that our communication approach has been questioned.
34. Optus' communication strategy at all times, and particularly in times of crisis, strives to prioritise our customers. In what was a dynamic and evolving situation, our priority was restoring services to our customers as quickly as possible and ensuring they were informed of the evolving situation through the channels available to us.
35. In light of these circumstances, and given our customers were unable to access our services, the quickest and most effective way to communicate with our customers was through the media. As per our crisis communication protocols, we took to media enquiries from 4.27am. This was followed by the release of a media statement at 6.33am, notifying customers of the outage and informing them that we were working to restore services as soon as possible. We also posted on our social media channels at 6.47am. These media statements, social media posts and messages through Optus channels (including our website and via frontline communication systems to our retail stores) were regularly updated over the course of the day, as shown in **Appendix A**. Given the impact to our Enterprise customers, each account manager was also in regular contact over the course of the day, including direct calls to CEOs by the Optus CEO and MD of Enterprise and Business.
36. While we did not have any indication the outage was connected to a cyberattack, as noted above we believed it was important we first took steps to confirm this to a level of comfort before communicating more fully about the outage.
37. We were aware that the outage had also been extensively reported across all forms of media from early on Wednesday morning, with the media playing an important role in keeping our customers and the community updated. In total, Optus had engagement with over 200 media outlets and journalists on the day of the outage.
38. The Optus CEO also conducted 11 media interviews across radio, print and tv media, commencing with radio interviews from 10.40am. The CEO also conducted several interviews the following day alongside the MD of Customer Solutions and the MD of Enterprise and Business.

OPTUS' COMMUNICATION WITH GOVERNMENT

39. Optus was in direct and regular contact with key members of the Government, their Departments and relevant regulators from early Wednesday morning, spanning approximately 60 interactions over the course of the day. This included communications with:
- (a) The Office of the Minister for Communications

- (b) The Minister for Communications
 - (c) The Office of the Prime Minister
 - (d) The Deputy Prime Minister
 - (e) The Office of the Minister for Home Affairs
 - (f) The Minister for Home Affairs
 - (g) The Office of the Attorney General
 - (h) Officials from the Departments of Home Affairs,
 - (i) Officials from the Department of Communications
 - (j) Each of the offices of the State Premiers, Chief Ministers, and various State Government Departmental officials
 - (k) The Chair of the ACMA.
40. In addition to these individual interactions, the Government initiated the National Coordination Mechanism to help update all of government on the status of the outage and to explore opportunities for support. The National Coordination Mechanism organised a meeting at 2.00pm which Optus attended to help provide an update across key Federal and State Government Departments and Agencies.
41. Optus appreciates the support and engagement it has received from the Government and officials during and following the outage.

CUSTOMER OFFER

42. Immediately in response to the network outage, Optus' product and marketing teams turned their attention to directly engaging with customers. We wanted to apologise for the experience they had, acknowledge the impact the outage had and offer a goodwill gesture to thank them for their understanding and patience while our network was down. Our approach to this was at all times grounded by our customer-centred focus. Clearly, the outage had let our customers down and we wanted to address that in a way that would be meaningful to them. We considered our obligations under our terms and conditions, and the fact they do not guarantee there will never be outages but wanted to do something beyond this. We also assessed crediting our customers for the amount of time the network was unavailable to them, which would have amounted to around \$1-2 per day.³ We did not feel this would be meaningful to most customers.
43. As a result, we determined that we should create offers that would provide more of our network services for customers, that would enable them to get 'more of the network'. We also needed to provide offers that were rapidly actionable (i.e. that we could implement across our millions of customers), so we could follow up with our customers as quickly as possible. This resulted in the following offers being made available to customers from Thursday 9 November 2023:

³ Based on average monthly spend per customer across post-paid and pre-paid services.

- (a) For our postpaid mobile customers (including small business), 200GB of additional free data to use over two months: i.e. For a day's network outage, customers receive two months of additional usage.
 - (b) For our prepaid mobile customers, unlimited data over the weekend for the remainder of the year from 18 November: i.e. For a day's network outage, customers receive 14 days of additional usage.
 - (c) For our home internet customers, a speed increase on their NBN lines or 4G/5G home connections: i.e. For a day's outage our customers can get more of the network in the form of a faster connection for the next six weeks.
44. For our business customers, we have our account management and service teams available to support these customers through a case-by-case process.
45. We believe the approach that we have taken is commensurate with the network outage experienced and exceeds approaches taken previously in Australia, including Telstra's approach in its outages in 2016 and 2023 when it provided free data on a Sunday following their outages.
46. Since Thursday 9 November 2023, we have also communicated directly to almost all of the affected customers through our direct customer base communications process, typically through an email, an SMS or via our app. In doing that we have apologised to each of our customers for the experience that they have had and made the offer of the additional data or speed. In addition, we've also supported thousands of customers to address their specific concerns and needs through our call centres, shops, and digital channels. We have also put in place a specialist team to address the needs of our most impacted customers, and another team to work with small business customers directly. In doing that, we're coordinating with the TIO to address customer issues that come directly to them. We will continue to serve our customers both with the offers available and with direct support as needed.

NETWORK OUTAGE OCCURRENCES IN AUSTRALIA AND GLOBALLY

47. Without wishing to detract from the impact of this outage, it is important for the Committee to appreciate that all communications networks (like any other physical utility networks) suffer from infrequent disruptions to service. There are a variety of causes for disruption, including physical damage, human error, routing errors, software and hardware failures and natural disasters.
48. Each of the Australian telecommunications networks have had outages in the past, some lasting weeks,⁴ some lasting hours. The below outages are not a comprehensive list and provided by way of example only:

⁴ Telstra's 2012 Warrnambool exchange fire impacted services for over a week.

<https://www.news.com.au/national/victoria/warrnambool-telephone-exchange-wreaks-havoc-after-thousands-cant-access-landlines-eftpos-and-internet/news-story/10bc4d5fe8a65ad6545babd6411b52c4>

- (a) 2014: Optus experienced an outage in 2014 as a result of a system error that caused some mobile customer services to be blocked and as a result, some customers were unable to use voice and data services.
 - (b) 2016: Telstra experienced multiple outages to its mobile and fixed network in two months during 2016,⁵ and further outages across its fixed, voice, broadband and enterprise networks throughout 2016.⁶ One outage in March 2016 impacted up to eight million services for up to 12 hours, which was due to incorrect routing information from a peering partner of Telstra.⁷
 - (c) 2018: Telstra experienced Triple Zero emergency service disruptions in 2018, which led to updates to the regulatory regime around emergency call services, including the introduction of significant network outage notifications and welfare checks.
 - (d) 2021: Vodafone experienced an 8-hour national outage across 4G mobile in 2021.⁸ Vodafone also experienced internet router problems in 2016 that left some customers without mobile service for hours.⁹
 - (e) 2023: Telstra experienced an 11-hour outage across NSW and Queensland in May 2023, impacting mobile voice calls.¹⁰
49. There are also several international examples of major outages, including:
- (a) 2018: O2 (UK) which resulted in 32 million services being without mobile voice and data services for around 23 hours, with 3G restored in 18 hours. The case was attributed to a software failure due to an expired certificate.
 - (b) 2022: KDDI (Japan) which resulted in disruption to over 30 million mobile services and fixed services for an 86 hour period, with major recovery occurring within 61 hours.
 - (c) 2022: Rogers (Canada) which resulted in over 10 million mobile and fixed services for a 19-hour duration due to a maintenance update failure.
50. European data on communications outages shows the same trend. The European Union Agency for Cyber Security (ENISA) reports annually on telecommunications security incidents.¹¹ The most recent published annual report for 2021 shows 168 incidents on networks across Europe, with system failures being the most common incidents, representing 59% of reports.¹² The annual report showed that the most common detailed cause was hardware failures followed by faulty software changes/updates and software bugs.¹³

⁵ 9 Feb – fixed, 3G and 4G services nationally for three hours; 17 March – 2G, 3G and 4G services nationally; 22 March – impacting around 500,000 VIC and TAS mobile services for around two hours.

⁶ <https://www.crn.com.au/news/telstra-outage-hits-75000-broadband-customers-420705>

⁷ <https://www.news.com.au/technology/gadgets/mobile-phones/telstra-customers-complain-over-another-service-outage/news-story/8caff53905d8be1e7a52bb6f7ce713d5>

⁸ <https://7news.com.au/technology/internet/vodafone-outages-prevent-calls-wifi-use-c-2551623>

⁹ <https://www.arnnet.com.au/article/607466/vodafone-blames-router-issues-network-outage/>

¹⁰ <https://www.theaustralian.com.au/business/technology/telstra-hit-with-national-outage/news-story/4631d7a11ab9987c3cb2daf52d95bfff3>

¹¹ ENISA, 2022, Telecom Security Incidents 2021, Annual Report.

¹² Ibid., pp.3-4

¹³ Ibid., p.13

51. While every communications network provider wants to avoid such outcomes, it is an unfortunate reality in our reliant digital age that no communications network can completely protect against, nor prevent, these types of occurrences from ever happening – despite the investments made or resiliency efforts undertaken.
52. Reflecting this, communications services are not provided with a guarantee of continuous service. Consumer and small business consumers are aware that all networks experience outages at some time, and with varying size, severity and time to restoration. This observation applies to every type of network (fixed and mobile), and indeed to other essential services.
53. Given continuity of service is not guaranteed, consumers are not given an automatic right of compensation whenever an outage occurs. For example, the Customer Service Guarantee (CSG)¹⁴, which applies to landline services, does not provide for any compensation to be paid to residential or business customers when a service fault is fixed within the day, as occurred in this incident. Similarly, the automatic compensation scheme established by Ofcom in the UK for interruptions to broadband and landline services only provides for compensation where the service is not fixed for two full working days.¹⁵
54. Rather than pay a nominal amount to reimburse customers for the period of time their service was disrupted, Optus has aimed to give customers more than any previous Australian telco that experienced an outage has offered before.¹⁶
55. We understand there are calls by some for Optus to go further, including providing compensation for consequential impacts for business customers. However, there is no precedent for compensation being paid by telecommunications providers to all business customers who suffer a loss of business as a result of an outage of the kind that occurred on 8 November, either here or overseas. For example, NBN Co's terms with telecommunications providers such as Optus make it clear that there is no compensation for business interruption; liability is limited to a refund of fees for the period of any outage. Statutory or regulatory compensation schemes like the CSG or the Ofcom scheme in the UK do not provide for compensation for loss of business. Similarly, there is no precedent for essential services such as electricity providers to pay compensation for business losses when there is an outage. For example, electricity networks do not compensate business customers for consequential losses such as wages, productivity or trade.¹⁷ Ausgrid, a NSW-based electricity provider, states that:
- "There is no compensation granted for consequential loss such as wages, productivity or trade."*
56. On the question of extending financial compensation for consequential losses, we understand that this would create a new precedent that would extend far beyond Optus and apply to all other telecommunications providers, as well as other providers of essential services, critical infrastructure and public services. This makes it a much broader policy question for government that would have far reaching implications across many sectors of the economy and the cost of these services for Australian consumers.

¹⁴ Contained in the Telecommunications (Customer Service Guarantee) Standard 2011.

¹⁵ <https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/costs-and-billing/automatic-compensation-need-know>

¹⁶ Previous outages experienced by Vodafone in 2014, and Telstra in 2016, resulted in these telcos providing free data weekends or free data days. We note that Telstra did not provide free data for their four outages across four months in 2016.

¹⁷ <https://www.ausgrid.com.au/Contact-Us/Make-a-claim-Step-1>

If government were minded to examine this issue further, then Optus would certainly be willing to be part of that conversation.


NEXT STEPS

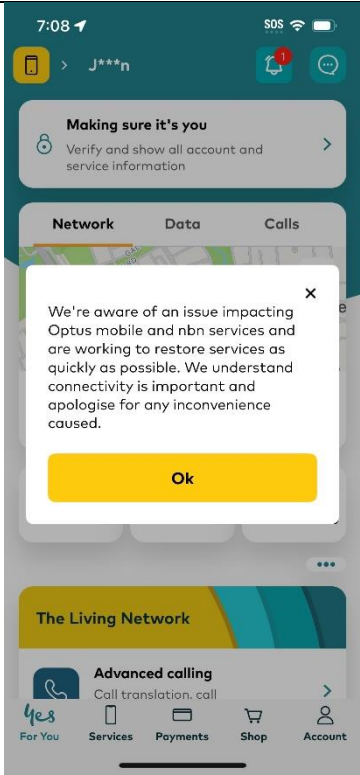
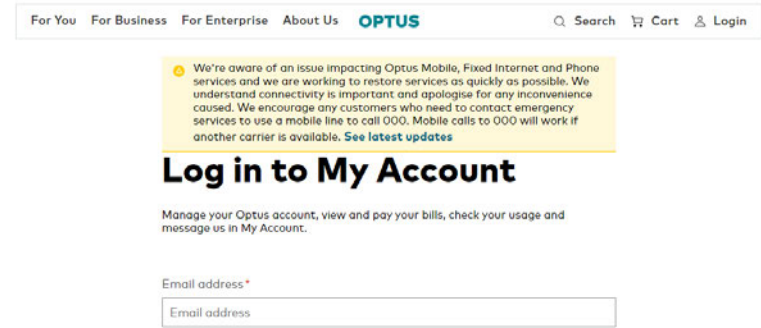
57. Optus' priority is to maintain a reliable, resilient and robust network that meets our customers' connectivity needs. We are confident that we provide this, and we believe our response time was analogous to historical outage restoration timeframes within the telecommunications sector.
58. We will learn from last week, as a company and as an industry. We will work with the Department and assist fully with their announced review. It is critical that all Australians have access to the emergency call capability and every call is important – we also welcome and will cooperate fully with the ACMA's investigation.
59. We thank the Committee for the opportunity to outline details of the outage and our response.

[ENDS]


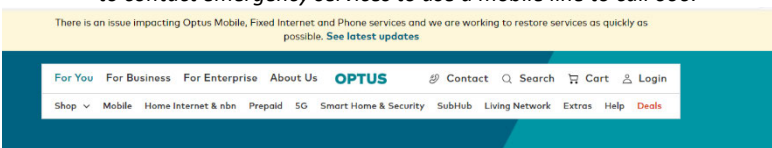
Optus Network Outage: Communications Timeline


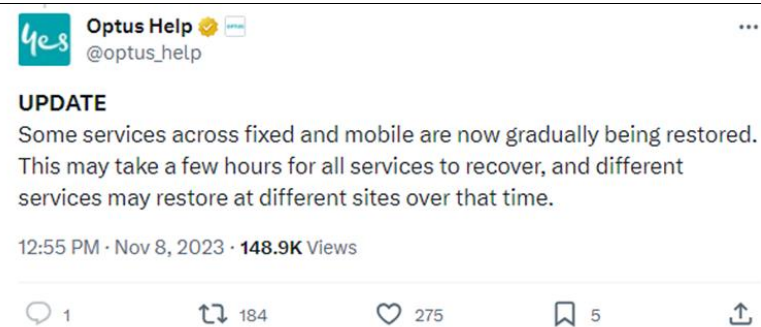
Wednesday 8 November 2023


| | <u>Communications</u> | <u>Statement</u> |
|----------------------------|--|---|
| 4.27am - 6.33am | Media queries taken by Optus media team | |
| 4.38am | Alert to nationwide frontline teams advising of an issue affecting Mobile and NBN service | |
| Between 6.00am – 7.00am | <ul style="list-style-type: none"> 6.33am: outage communication statement issued. 6.47am: Optus Social Media post (Facebook and Twitter) | <p><i>An Optus spokesperson said:</i></p> <ul style="list-style-type: none"> <i>Optus is aware of an issue that may be impacting some of our mobile and internet customers.</i> <i>We are currently working to identify the cause and apologise for any inconvenience.</i> <i>In case of an emergency, customers can still call 000.</i>  |
| 7.00am - 8.00am | <ul style="list-style-type: none"> 7.45am: My Optus App banner advising of outage My account log in page also showing in-page banner | |


| | | |
|-----------------|--|---|
| | |   |
| 8.00am – 9.00am | <ul style="list-style-type: none"> 8.16am: Media update issued. 8.31am: Optus Social Media post (Facebook and Twitter) | <p>An Optus spokesperson said:</p> <ul style="list-style-type: none"> We are aware of an outage impacting our customers. Our teams are working to restore services as soon as possible. |

Optus Network Outage Submission 1

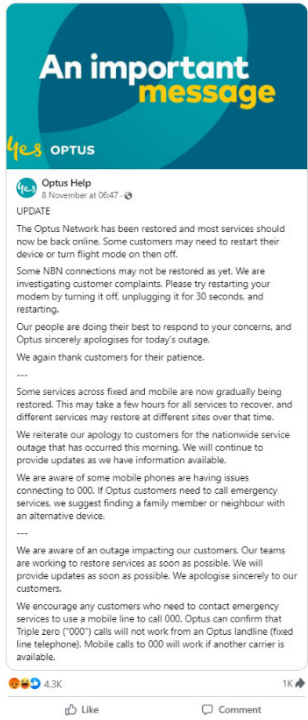
| | | |
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| | <ul style="list-style-type: none"> 8.27am: My Hub banner alert provided to all frontline staff (via their standard communications portal) | <ul style="list-style-type: none"> We will provide an update as soon as we are able. Optus apologises sincerely to customers.  |
| 9.00am -10.00am | <ul style="list-style-type: none"> 9.33am: Media update issued. From 9.30am: Optus.com.au Home and Business banner alerting of outage and latest status; Ongoing updates to MyHub (Frontline Communications portal) with information for frontline to access over the course of the day; regular standups, briefings and discussions held over the course of the day with frontline teams to provide information and support. | <p>An Optus spokesperson said:</p> <ul style="list-style-type: none"> We are aware of an outage impacting our customers. Our teams are working to restore services as soon as possible. We will provide an update as soon as we are able. Optus apologises sincerely to customers. Optus can confirm that triple zero ("000") calls will not work from an Optus landline (fixed line telephone). Mobile calls to 000 will work if another carrier is available. We encourage any customers who need to contact emergency services to use a mobile line to call 000.  |
| 10.00am – 11.00am | <ul style="list-style-type: none"> 10:09am: Media update issued. 10:14am: Media update issued. 10.17am: Optus Social Media post (Facebook and Twitter) 10.40am: CEO radio interview: ABC Mornings Revised Interactive voice response (IVR) welcome message to provide information to customers calling Optus. Created specific outage incident response for customers engaging with Optus via Chat and Messenger channels to help provide customers with outage related questions and information. | <p>At 10.09am an Optus spokesperson said:</p> <p>We encourage any customers who need to contact emergency services to use a mobile line to call 000. Optus can confirm that triple zero ("000") calls will not work from an Optus landline (fixed line telephone). Mobile calls to 000 will work if another carrier is available.</p> <p>At 10.14am an Optus spokesperson said:</p> <ul style="list-style-type: none"> We are aware of an outage impacting our customers. Our teams are working to restore services as soon as possible. We will provide an update as soon as we are able. Optus apologises sincerely to customers. |

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| | | <ul style="list-style-type: none"> We encourage any customers who need to contact emergency services to use a mobile line to call 000. Optus can confirm that triple zero ("000") calls will not work from an Optus landline (fixed line telephone). Mobile calls to 000 will work if another carrier is available.  |
| 11.00am – 12.00pm | <ul style="list-style-type: none"> 11.33am: Audio grabs from ABC Mornings interview sent to 20 media outlets | |
| 12.00pm – 1.00pm | <ul style="list-style-type: none"> 12.11pm: CEO radio interview with 3AW 12.24pm: CEO radio interview with 2GB 3x Optus Social Media post 12.55-12.56pm (Facebook and Twitter) |  |

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| 1.00pm – 2.00pm | <ul style="list-style-type: none"> • 1.05pm: Media update issued. • Optus.com.au newly created outage information page housing all updates throughout the day incl FAQs • MOA update on restoration of services | <p><i>An Optus spokesperson said:</i></p> <ul style="list-style-type: none"> • <i>We reiterate our apology to customers for the nationwide service outage that has occurred this morning.</i> • <i>Some services across fixed and mobile are now gradually being restored.</i> • <i>This may take a few hours for all services to recover and different services may restore at different sites over that time.</i> • <i>We are aware of some mobile phones having issues connecting to 000. If Optus customers need to call emergency services, we suggest trying to find an alternative device.</i> |


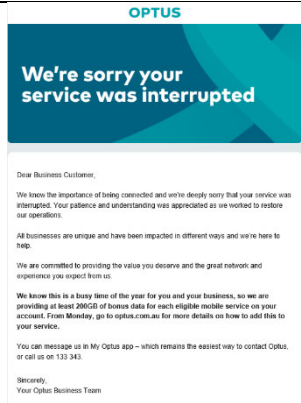
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| 2.00pm – 3.00pm | <ul style="list-style-type: none"> Ongoing media contact 2.00pm: Issued reactive statement to outlets which had specific cyber queries 2.11pm: Internal Communications Update to Optus employees | <p><i>An Optus spokesperson said:</i></p> <ul style="list-style-type: none"> <i>We have no indication that the outage is cyber related.</i> |
| 3.00pm – 4.00pm | <ul style="list-style-type: none"> Ongoing media contact | |
| 4.00pm – 5.00pm | <ul style="list-style-type: none"> 4.00pm - 5.15pm: CEO completes successive TV media interviews (Seven, Ten, Nine, ABC) confirming restoration of services | <p><i>An Optus spokesperson said:</i></p> <ul style="list-style-type: none"> We reiterate our apology to customers for the nationwide service outage that has occurred this morning. Some services across fixed and mobile are now gradually being restored. This may take a few hours for all services to recover and different services may restore at different sites over that time. We are aware of some mobile phones having issues connecting to 000. If Optus customers need to call emergency services, we suggest trying to find an alternative device. |
| 5.00pm – 6.00pm | <ul style="list-style-type: none"> 5.20pm - 5.50pm: CEO completes successive interviews with print journalists (AFR, SMH, The Australian, Daily Telegraph) 5.15pm: MOA Update on service restoration 5.28pm: Updated media statement issued | <p><i>An Optus spokesperson said:</i></p> <ul style="list-style-type: none"> Optus sincerely apologises to customers for today's outage. We know that customers rely on our services, which is why the whole team at Optus has been working hard to fix this. |

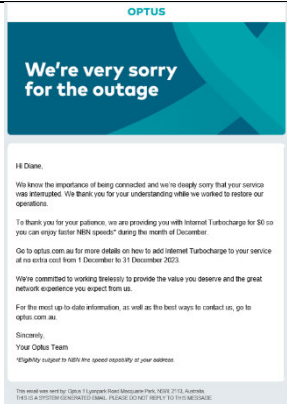
Optus Network Outage Submission 1

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| | | <ul style="list-style-type: none"> Services have now been restored, and customers should now be able to be back online. We again thank customers for their patience. |
| 6.00pm - 7.00pm | <ul style="list-style-type: none"> Optus Social Media Posts (Facebook and Twitter) |  <p>The screenshot shows a Facebook post from 'Optus Help' dated 8 November at 06:47. The post has a blue header with the text 'An important message' and the 'yes OPTUS' logo. The main text of the post reads: 'UPDATE The Optus Network has been restored and most services should now be back online. Some customers may need to restart their device or turn flight mode on then off. Some NBN connections may not be restored as yet. We are investigating customer complaints. Please try restarting your modem by turning it off, unplugging it for 30 seconds, and restarting. Our people are doing their best to respond to your concerns, and Optus sincerely apologises for today's outage. We again thank customers for their patience. ... Some services across fixed and mobile are now gradually being restored. This may take a few hours for all services to recover, and different services may restore at different times over that time. We reiterate our apology to customers for the nationwide service outage that has occurred this morning. We will continue to provide updates as we have information available. We are aware of some mobile phones are having issues connecting to 000. If Optus customers need to call emergency services, we suggest finding a family member or neighbour with an alternative device. ... We are aware of an outage impacting our customers. Our teams are working to restore services as soon as possible. We apologise sincerely to our customers. We encourage any customers who need to contact emergency services to use a mobile line to call 000. Optus can confirm that Triple zero ('000') calls will not work from an Optus landline (fixed line telephone). Mobile calls to 000 will work if another carrier is available.' The post shows 4.3K reactions and 1K shares, with 'Like' and 'Comment' buttons at the bottom.</p> |

Thursday 9 November 2023

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| | <u>Communications</u> | |
| 7.00am - 8.00am | <ul style="list-style-type: none"> Media Statement distributed to all media outlets at 7.05am | <p><i>Andrew Sheridan, Optus Vice President of Regulatory and Public Affairs, said:</i></p> <ul style="list-style-type: none"> <i>Optus looks forward to fully cooperating with the proposed reviews by both the Department of Communications and the ACMA into yesterday's network outage.</i> <i>As a critical infrastructure provider, we understand how important it is to ensure continuity of service and any lessons learnt are likely to be helpful for both Optus and others in our industry.</i> <i>We value our customers' loyalty, and are looking at ways to say 'thank you'.</i> |

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| | | <p>• <i>Optus once again apologises to our customers and others that were impacted by the outage.</i></p> |
| All day | <ul style="list-style-type: none"> Media team responded to numerous media inquiries, providing the statement and backgrounding journalists. <p><u>Customer Response</u></p> <ul style="list-style-type: none"> Retail store Eye-lights Messaging Optus Website Homepage & Business page banner, My Account log in page, Information Page Revised IVR Welcome message Social media posts Regular frontline briefings, articles and updates |   |
| 4.15pm - 5.30pm | <ul style="list-style-type: none"> CEO, MD Customer Solutions, MD Enterprise and Business conduct interviews with AAP, News.com.au, SMH/The Age, The Australian and ABC 5.00pm: Media Statement distributed to all media outlets | <p>Network Outage Update</p> <p><i>Kelly Bayer Rosmarin, Optus CEO, said, "We're deeply sorry for yesterday's outage. We know how important connectivity is to all our customers, and that we let you down.</i></p> <p><i>"We truly appreciate our customers' patience and understanding as we worked to restore our operations yesterday.</i></p> <p><i>"We know that there is nothing we can do to make up for yesterday and what customers want most is for our network to work all the time – which is our number one priority – but we also want to acknowledge their patience and loyalty by giving them additional data to help during the holidays, when so many people consume more data with friends and family."</i></p> <p><i>From Monday, 13 November, eligible postpaid customers, both small businesses and consumers, will be able to access 200GB of extra data, and customers have until the end of the year to activate. Eligible prepaid customers will be able to access unlimited data on weekends until the end of the year.</i></p> <p><i>From Monday, customers can go to optus.com.au for more details on how to add the offer to their plans.</i></p> |

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| | | <p><i>We understand some businesses were uniquely impacted and encourage any with concerns to contact their Optus Business Centre or Business Care on 133 343.</i></p> <p><u><i>Outage Explanation</i></u></p> <p><i>In common with major global telecommunication networks, the Optus network is designed with multiple layers of fall back and redundancy. At the heart of this is a modern intelligent router network developed with the world's leading vendors.</i></p> <p><i>Despite this, a network event yesterday triggered a cascading failure which resulted in the shutdown of services to our customers.</i></p> <p><i>Our engineers are investigating thoroughly and we will learn from this outage and continue to improve. We welcome, and intend to cooperate fully with, the Government investigations.</i></p> |
| 6.00pm | <ul style="list-style-type: none"> Communications to customers commenced by SMS and email |  |

[ENDS]