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ACCC assessment of competition concerns relating to e-SIMs

The ACCC has recently conducted an assessment of potential competition issues regarding the use and support of e-SIMs in Australia.

An e-SIM is an alternative to existing physical SIM card technology. Unlike physical SIM cards, e-SIMs are embedded in the device, and can hold multiple mobile service provider profiles, which enable consumers to switch between operators without physically changing the SIM.

There are now a number of e-SIM devices available in Australia, including mobile handsets, wearables, and laptops/tablets.¹ All mobile handsets with e-SIMs currently on the market also contain a physical SIM (sometimes referred to as 'dual SIM'), meaning that the use of the e-SIM is not required to get mobile connectivity on the device. By contrast, all wearables with cellular connectivity currently on the market (and some laptops and tablets) are e-SIM only devices, which means that they do not have a physical SIM slot.

e-SIM technology has the potential to greatly increase competition and consumer choice in the mobile telecommunications market. e-SIMs can reduce barriers to switching mobile service providers by giving consumers the ability to switch on their device, rather than having to physically procure and then switch SIM cards.

In addition, e-SIM technology has the potential to improve the competitive position of network resellers (known as mobile virtual network operators, or MVNOs) – for example, by enabling them to bulk transfer their customers between host mobile network operators (MNOs) or supporting entry by alternative service providers (such as those that operate online only). e-SIMs may also enable new use cases, such as switching dynamically between two mobile service providers to take advantage of the best rates/coverage, and make it easier for consumers to procure a local SIM when travelling overseas.

Communications sector market study

The ACCC considered potential competition issues regarding the use and support of e-SIMs in Australia in our [communications sector market study](#). We observed that e-SIM support was only available in Australia through MNOs, and no Australian MVNOs offered e-SIM support (which is still the case). In this regard, we identified a concern that competition between mobile service providers in the offering and use of e-SIM devices could potentially be impeded by the need to enter commercial agreements with device manufacturers.

Our [final report](#) on the communications sector market study included the following ACCC action item in relation to e-SIMs:

We will explore concerns regarding restrictions associated with e-SIMs (and Apple SIM) adopted by device manufacturers which may restrict competition between service providers in the offering and use of e-SIM devices and how this issue develops as e-SIM based devices become more prevalent (Action 20)

¹ e-SIM mobile handsets available in Australia include iPhone XS, XS Max, XR and later models, Google Pixel 2, 3 and 4, and Samsung Galaxy Fold. e-SIM wearable devices available in Australia include Apple Watch Series 3 and later models, and Samsung Galaxy Watch. e-SIM laptops and tablets available in Australia include Microsoft Surface Pro 4G LTE, HP Spectre Folio, HP Spectre X360, iPad Pro (3rd generation), iPad Air (2019) and iPad mini (2019).

This update reports on the ACCC's recent assessment of potential competition issues associated with e-SIMs.

Assessment of competition concerns regarding e-SIMs in Australia

e-SIM devices have become more prevalent since competition concerns were first raised with the ACCC in 2016 and, in that time, we have seen developments by MNOs in offering greater support for e-SIMs in Australia.

Information obtained by the ACCC through market enquiries with mobile service providers and device manufacturers suggests that there are a number of factors bearing on the level of e-SIM support in the Australian mobile sector. Importantly, we have not found evidence of device manufacturer restrictions operating as a significant barrier to enabling MVNO access to e-SIMs. Rather, we understand from MNOs that the delay in MVNO support for e-SIMs is due to the need for investment in IT platforms for MVNO use, which MNOs and MVNOs need to work together to develop.

Lack of MVNO access to e-SIM only devices

To enable cellular connectivity on an e-SIM only device, a service provider must be able to support the use of e-SIM technology. Today, only MNOs provide support for the use of e-SIM only devices in Australia and only sell plans to use e-SIM enabled wearables as an add-on to a mobile phone plan (noting the phone number is shared between the two devices). MVNOs cannot offer their customers support for e-SIM only devices until their host MNO supports MVNO access to the e-SIM.

This creates two competition concerns:

- MVNOs are unable to sell cellular connectivity on e-SIM only devices (and in practice sell the devices themselves).
- MVNOs are unable to sell any mobile phone services (including the handsets themselves) to consumers who wish to use an e-SIM wearable device in conjunction with their mobile handset.

The first concern is largely theoretical at this stage because there are no e-SIM only devices currently on sale other than wearables and, for those devices, cellular connectivity is not available on a standalone basis. This dependency leads to the second competition concern, which arises because a consumer who wants e-SIM connectivity on their wearable device must have a mobile phone plan with an MNO – i.e. they are unable to use an MVNO plan. This inhibits an MVNO's ability to compete against MNOs in the provision of mobile services to those customers who wish to use an e-SIM enabled wearable device, thereby limiting consumer choice.

We note that there is a history of MNOs enabling functionality (such as 4G) for their own retail services prior to offering it to their MVNOs and that this may similarly be occurring here. We understand that there are likely to be some wholesale platform costs to enable MVNO support and acknowledge that wearable e-SIM only devices currently make up only a small proportion of the overall mobile market. However, e-SIM devices have now been available in Australia for over two years and we are concerned about the potential reduction in competition stemming from the continued lack of MVNO access to e-SIMs. That said, we are aware that Telstra Wholesale is now building a business case to support MVNOs rolling out e-SIM functionality. The ACCC would be concerned if broad MVNO support is not forthcoming, especially as more e-SIM only devices come to market and the mobile industry transitions to e-SIM only devices.

Previous limited MNO support of e-SIM mobile handsets

In late 2018, concerns were raised in the media that the Australian MNOs were refusing to support e-SIMs on mobile handsets, thereby limiting the resultant competitive benefits. At that time, there was limited support for e-SIM enabled mobile handsets by MNOs. By contrast, all three MNOs at the time supported the e-SIM on the Apple Watch, and Telstra and Vodafone also supported the e-SIM on the Samsung Galaxy Watch.

Since then, all three MNOs have begun supporting the use of e-SIMs in the latest iPhones and the Samsung Galaxy Fold (which is Samsung's first e-SIM enabled phone available in Australia). Vodafone has also extended e-SIM support to the Google Pixel 3a. It appears that a developing trend is for MNOs to continue to roll out e-SIM support to other e-SIM enabled mobile handsets as they become available. Given this trend, we consider it unlikely that MNOs would refuse to extend e-SIM support to newly available e-SIM devices or remove existing support offered.

Implementation of e-SIMs in a way that impacts switching

e-SIMs have the potential to greatly improve competition through increased consumer switching. As such, our expectation is that e-SIMs should make switching between service providers easier, not harder.

We note that the GSMA (a trade body that represents the interests of MNOs worldwide) has developed e-SIM specifications that include policies that may limit switching. These policies essentially allow an MNO to elect to lock devices so the consumer cannot switch to another network without the MNO unlocking the device. While the same is possible with physical SIMs today at the point of sale, the e-SIM specifications also allow for devices sold as unlocked to be locked after sale. As SIM locking is largely no longer practiced by MNOs in Australia for physical SIMs, we would not expect Australian MNOs to activate such functionality in e-SIMs.

In terms of the way consumers activate or switch services using e-SIMs, we note that Australian MNOs have currently adopted the QR code method. We understand that both Telstra and Optus require a consumer to physically procure the QR code, either from a store with Optus or via the post with Telstra. This limits the ease by which a consumer can switch mobile service providers as it is a similar procurement process to switching with physical SIMs. By contrast, we understand Vodafone allows customers to sign up to an e-SIM plan over the phone and will email a QR code to the customer (although we note that this still requires either printing the QR code or having a second device to scan it from). The app-based solutions already employed by MNOs overseas do not have these limitations as they enable consumers to switch using only their device. We understand one limiting factor for MNOs in determining the activation process is the need to authenticate customers' identity. However, we note that simple authentication processes exist by which operators could confirm a customer's identity when downloading an e-SIM profile, such as 'two-factor authentication', which would not require procuring a physical QR code. We anticipate Australian mobile service providers will move towards app-based solutions as e-SIMs become more widespread. We would be concerned if the current limitations continued or new ones were introduced in a way that reduces the ease of switching for consumers.

Conclusion of our assessment

The ACCC considers that e-SIM technology is likely to promote competition and greater choice in the mobile sector. We have not identified any evidence of anti-competitive conduct by MNOs or device manufacturers, but remain concerned about the current inability of MVNOs to support e-SIMs.

We propose to continue to keep a close watching brief on the support for, and implementation of, e-SIM technology to ensure the competitive benefits are realised and that competition is not hindered. In particular, we will monitor:

- how well MNOs engage with MVNOs to extend support for e-SIMs; and
- the extent to which any features of e-SIM implementation limit consumer switching.