

The City of Melbourne's Submission to the House of Representatives Standing Committee on Communications and the Arts 5G Inquiry

Introduction and Context

Thank you for the opportunity to submit to the Standing Committee on Communications and the Arts' 5G Inquiry.

The City of Melbourne understands the importance of state-of-the-art infrastructure to support citizens and business. The rapid and priority introduction of 5G is critical to the future of the city. Our strong belief is that the carriers share this view and as such there is broad support to achieve this outcome. However, we must balance this innovation driver with city amenity and quality of experience and as such believe that the City of Melbourne must play a stronger more proactive role in driving the broader citizen base objectives. It's through this lens that we make the following recommendations to the House of Representatives Standing Committee on Communications and the Arts' 5G Inquiry.

As it currently stands, local government is largely unable to influence the deployment of mobile networks unless there are heritage implications or other special circumstances. This must change if we are to ensure the quality of experience in the city that will drive growth and success. It's vital that Melbourne retains amenity and liveability in order to continue to attract business and residents who in turn will provide the carriers with high value customers.

We know, for example that the efficacy of the 5G millimetre wave radio spectrum is adversely affected by trees and other physical assets and this adds a critical reason to collaboratively decide on cell heights and locations. We will not be willing to sacrifice trees in favour of network performance. We must find sustainable ways to advance the use of technology and we can do this only if we are an active part of the decision-making process within our city.

During 2019 we have been developing our model for a 5G testbed in a specific precinct in the city. This has brought to light several issues with the deployment of 5G infrastructure. We have run workshops with users, industry players, carriers and other stakeholders and see outstanding opportunities to leverage 5G and other next generation smart technologies but we also see some challenges. Our plans are well underway, and we anticipate that through the deployment of our testbed we will learn much more about the needs of the community, the city and service providers. We look forward to the opportunity to provide additional input as these learnings mature, specifically in all the areas detailed below.

Implications of 'Low-impact Facilities' in the 5G Context

The Telecommunications (Low-impact Facilities) Determination 2018 made under subclause 6(3) of Schedule 3 to the *Telecommunications Act 1997* details low impact deployments which form the basis of the carriers' obligations for deploying mobile base stations and antennas. Through the introduction of 5G, mobile cell sizes will shrink, resulting in the need

for more cell sites. This will be particularly evident in the most densely populated areas such as our major central business districts. Three carriers deploying more cells will add clutter and reduce amenity in the city.

The financial incentive for carriers to deploy more small cells will increase as customers use and expect higher bandwidth. 5G supports this evolution to smaller cells leveraging the higher spectrum in the millimetre frequency bands allocated for very high bandwidth services in the future. This could see cells being deployed as close as 100 metres apart.

The Low-impact Facilities determination did not foresee this density of cells - the cumulative effect of many more, smaller cells should be now considered. Very small cells concentrated into CBD areas will have a significant impact on the amenity of the city users and should be forefront of the Committee's deliberations.

The City of Melbourne proposes the following approaches to minimise the impact while delivering the best quality mobile telecommunications services for citizens and business:

- 1. Require carriers to provide details of their plans for cell deployments to local government agencies on a whole-precinct basis rather than one cell at a time to ensure the cumulative effect of low-impact deployments is considered.**
- 2. As 5G supports cell technology sharing, this should be strongly encouraged or even enforced through an amendment to the *Telecommunications Act 1997*. All three carriers could share the same radio equipment without adversely affecting their service quality while lowering the per-carrier costs, which could also lead to more coverage and faster deployment of 5G services.**
- 3. Mandate the blending of cell technology design and deployment in to the environment to lower their visual impact on the community and the urban landscape.**

The 5G Business Case Impact

The City of Melbourne understands that, over time, one of the features of the 5G Standards will be the enablement of carriers to seamlessly manage telecommunications services across both fixed and mobile networks. This will facilitate a new generation of services to both citizens and business that take advantage of both fixed network assets and mobile network assets. As a result, it will be more complex to deal with mobile cells and coverage and not practical to consider it in isolation from the fixed network.

As 5G deployment matures and carriers offer these more converged services it will become even more imperative to consider network planning and its impact on the city in a more holistic manner, addressing fixed and mobile assets together. This will require more consultation by carriers with city planners.

This adds to the argument that low-impact facility definitions may need to change to acknowledge the cumulative effect of so-called low impact network elements.

The Role of Existing Street Furniture

Telstra has a significant number of payphones across the city. Along with other street furniture, such as equipment cabinets and council assets such as lamp posts, park infrastructure and buildings in valuable locations, there is a real opportunity to leverage these existing assets for small cell deployments.

Note that we appreciate that there are strict definitions of the payphone which, according to the low-impact facilities determination cannot include advertising and other technical uses. We are of the view that this definition might be modified to allow for small cell deployments, thereby reducing the need for additional sites to be added. We do however feel strongly that these sites should remain free of commercial advertising in all circumstances.

Overall, CoM believes it is imperative that carriers are required to consult with local government to ensure the best use of existing assets while enabling the timely delivery of 5G services.