IoT Alliance Australia

8 December 2020

Australian 5G Innovation Initiative
Department of Infrastructure, Transport, Regional Development and Communications
GPO Box 594
Canberra ACT 2601

Dear Sir or Madam,

Re: Consultation on the design of the Australian 5G Innovation Initiative Round One

I am writing on behalf of the Internet of Things Alliance Australia (IoTAA) to input on the design of the first round of the Australian 5G Innovation Initiative (the Initiative).

The IoTAA is the peak industry body representing the Internet of Things (IoT) in Australia, with over 500 participating organisations and 1000 individual participants spanning government departments and agencies, universities, corporates, start-ups and entrepreneurs.

We see a thriving future for Australia and the world by connecting data, devices, people, processes and things to the Internet – enabling and driving the digital economy. It helps people make better and more informed decisions to get the best possible outcomes and ultimately helps boost Australia's future success, productivity, competitiveness, jobs, and the economy.

Now more than ever, as Australia recovers from the COVID-19 pandemic, we have the opportunity to unlock the value enabled by IoT and turbo charge the digital economy.

We applaud the objectives of the Initiative, "to support 5G testbeds and trials that will undertake rigorous, commercial, and replicable testing of technologies that make use of 5G. The program aims to create a pipeline of trials demonstrating different 5G applications (including Internet of Things applications) which will help build Australia's 5G ecosystem."

Our recommendation

Whilst we recognise that the 5G testbeds and trials are designed to demonstrate different 5G applications, the IoTAA strongly believes that the **Key Program Principles should address the standards for interoperability and their application to ensure the broadest impact of 5G technology investment**. The provisioning of funding for this critical aspect as part of the grant program should be included in setting criteria for assessment. Interoperability is most relevant in Questions, 2, 6 for supporting joint applications, 9, 10 and 11.

Interoperability will help unlock the real value in the 5G Initiative

Key to unlocking the economic value is to ensure IoT systems associated with the 5G testbeds and trials can easily collect and exchange data and make broad use of that information – this requires interoperability. For example, the low latency of 5G will enable autonomous vehicles to drive at fast speeds in close proximity to other vehicles, and make it safe to do so. However, this will only be possible if the data being produced by the car, is able to exchange its data in real time with other critical road and traffic infrastructure such as traffic lights, road markers, signposts and traffic management operations systems. This

requires interoperability between the associated applications and their data which are often produced and managed by various third parties.

According to McKinsey & Company[1], if policy makers and business get it right, linking the physical and digital world's together will be worth USD11 trillion a year by 2025. It will be one of the biggest disruptors of our generation. This economic impact could deliver huge value to Australia.

However, of the total potential economic value the IoT enables, McKinsey also estimate that interoperability is required for 40 percent on average and for nearly 60 percent in some settings, representing some USD$5 Trillion of the total potential USD$11 trillion. *Conversely, without interoperability, these IoT systems will be designed as vertical 'silos', which will limit innovation, lead to expensive vendor lock in, and halve the economic dividend.*

How could grant money be used to help solve the issue of interoperability?

An industry organisation such as the IoTAA would put such grant funding to use in the following ways:

- Leverage the end-to-end IoT collaborative partners and tools in the IoTAA's 'Interoperability' workstream to focus on collaborative solving for this challenge
- Assess the current state of initiatives in Australia and internationally that are seeking to develop and enable the 5G IoT eco-system. For example, IOTAA IoT Reference Framework[2], British Standards Institute (BSI) PAS212[3] and W3C Web of Things[4], and AS ISO/IEC 21823.1:2020[5]
- Engage with industry (devices and apps vendors) to establish an open ecosystem to develop collaboration framework for 5G interoperability
- Identify and address interoperability barriers
- Embed those protocols and or standards for interoperability as part of the 5G testbed and trials Initiative
- Measure the economic impact derived from interoperability of 5G testbed

Summary

Without addressing the interoperability challenges the full potential to unlock the true economic value of the Australian 5G Innovation Initiative for the benefit of the Australian digital economy, will be lost.

We strongly recommend that the grant program enables bodies such as the IoTAA to apply for funding to solve for the interoperability challenge, and to put it into practice as part of the 5G Initiative.

Should you like to discuss this further, please contact me on the details below.

Yours sincerely,

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IoT Alliance Australia Ltd

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[1] https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-internet-of-things-the-value-of-digitizing-the-physical-world
[2] https://www.iot.org.au/wp/wp-content/uploads/2016/12/IoT-Reference-Framework-Application-Guide-v1.0.pdf
[3] https://www.bsigroup.com/en-GB/about-bsi/media-centre/press-releases/2016/july/Internet-of-Things-interoperability-specification-is-published/
[4] https://www.w3.org/2020/04/pressrelease-wot-rec.html.en
[5] https://infostore.saiglobal.com/STORE/Portal.aspx?publisher=AS