



ASX Release

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DUG welcomes findings of the 2021 NRI Roadmap

Highlights:

- The Exposure Draft of the 2021 National Research Infrastructure Roadmap acknowledges:
 - Demand for HPC is exceeding supply.
 - The needs of an increasingly diverse user-base are not being met.
 - Many researchers no longer have the expertise required to leverage HPC.
 - The need to maintain sovereign capability.
 - The need for sustainable solutions.
 - A more flexible system is required to address current and emerging challenges.
- DUG's business lines are well placed to capitalise on policy change that facilitates easier accessibility to both national and commercial HPC providers.

The Australian Government has recently released an [Exposure Draft of the 2021 National Research Infrastructure \(NRI\) Roadmap](#) ("**Roadmap**"). This important policy document outlines the strategic direction for investment to support research over the coming decade. DUG Technology Ltd (ASX: DUG) ("**DUG**" or the "**Company**") is very pleased to see that a number of the Roadmap's findings are well aligned with its initiatives to change public HPC funding models in Australia.

In an ever-growing, data-centric world, high-performance computing (HPC) is a fundamental resource for research and innovation. The constant and rapid advance of computing technology, combined with an increasing diversity of researcher needs, means more and more end-users either lack or cannot access the expertise required to effectively leverage HPC. For example, the Australian SKA Regional Centre 2019 Radio Astronomy Data User Community Survey Report noted that researchers faced a number of serious issues that were impeding progress, such as hardware limitations and the reliability of available HPC systems, as well as a lack of support with respect to software development, maintenance and optimisation.

To address current and emerging challenges, the Roadmap highlights the need for a more flexible, integrated computing ecosystem, where both national and commercial HPC facilities are accessible to benefit users. DUG believes that such an ecosystem can be underpinned by a relatively small change to the existing HPC funding model – by placing money or equivalent (rather than HPC time allocations) directly into the hands of end-users. This will provide much-needed flexibility to customise how HPC resources from any accredited facility are utilised. This change would not only level the playing field for HPC providers in Australia, but also empower our brightest minds by giving them access to the fit-for-purpose resources (compute and support) they need, at the pace they need them.

Globally, precedents have been set with respect to HPC funding for both national and commercial providers. The UK Met Office announced a move to the cloud with a £1.2 billion investment to capitalise on the power of commercial HPC. The US National Science Foundation founded CloudBank to equip researchers with access to public cloud resources.

The Roadmap notes that access to national facilities is limited due to strong demand. The evolving landscape in Australia is evidenced by the University of South Australia's recent tender for high performance computing as a service (HPCaaS). DUG continues to see strong demand from a diverse client base who need local, green and well-supported HPCaaS. DUG has dedicated support teams of HPC

experts to assist with code onboarding, hardware-specific optimisation, algorithm and software development, and general enablement services. These have been crucial to building working relationships with the [Harry Perkins Institute of Medical Research](#), the International Centre for Radio Astronomy Research ([ICRAR](#)), Curtin University (refer to ASX announcement 15 April 2021) and Austal (refer to ASX announcement 24 August 2021). As well as being able to deploy this specialised expertise, commercial providers also serve to maintain and enhance sovereign capabilities and manage sovereign risk, which is increasingly important with respect to a number of DUG's sales areas including military and space.

The Roadmap also notes the importance of sustainability as Australia transitions towards net-zero emissions. DUG already offers world-leading green HPC credentials with its patented immersion-cooling technology for computer hardware, which reduces power consumption by up to 51%. DUG's plans for a climate-positive HPC campus in Geraldton (refer to ASX announcement 9 July 2021) will also help Australian companies achieve their carbon-reduction goals and meet environmental, social and governance requirements.

DUG welcomes the government's acknowledgement that change is required, as this will benefit the Company's growing software and HPCaaS business lines.

Authorised for release by the Board of DUG Technology Ltd.

ENDS

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About DUG

DUG is an ASX listed technology company, headquartered in Australia, that specialises in analytical software development and reliable, green, high-performance computing (HPC). The company is built on a strong foundation of applied science and a history of converting research into practical, real-world solutions. DUG delivers innovative software products and cost-effective, cloud-based HPC as a service backed by bespoke support for technology onboarding. DUG's expertise in algorithm development and code optimisation enables clients to leverage big data and solve complex problems.

DUG is a global company with offices in Perth, London, Houston and Kuala Lumpur, supporting a diverse industrial client-base that includes radio-astronomy, biomedicine and meteorology, as well as the resource, government and education sectors. DUG designs, owns, and operates a network of some of the largest and greenest supercomputers on Earth. The company continues to invest and innovate at the forefront of software and HPC, working towards a climate-positive future.

To learn more, please visit www.dug.com.