MEDIA RELEASE

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$3MILLION FUNDING INVESTMENT FOR CANBERRA COLLABORATION TO PROTECT OUR FUTURE BIODIVERSITY AND BIOSECURITY

After the devastating effects of Australia's Black Summer, some species of our native plants and animals came close to extinction. Now, thanks to a ground-breaking collaboration between Diversity Arrays Technology (DArT), the University of Canberra (UC) and The Australian National University (ANU), an integrated big data platform powered by transformative genomics and populated with thousands of species of flora and fauna will be accessible to users the world over to track the impact of events like bushfires and assist with the management of our natural ecosystems.

A Canberra-based company, DArT will invest $3 million to develop the platform, $1.2 million of which will come from the ACT Government's Priority Investment Program to support the cross-university collaboration.

Assistant Minister for Economic Development Tara Cheyne said the ACT Government's Priority Investment Program invests in projects that connect industry, research and the tertiary education sector to attract investment and grow established and emerging priority areas of Canberra's economy.

"This platform that has been built by local Canberra company DArT will turbo-charge the research capabilities of people working in plant and animal biodiversity conservation, natural resource management, agri-technology and biosecurity.

"This means researchers and scientists will be better able to understand the impacts of events like bushfires and climate change on plants and animals by accessing data from around the world that would otherwise be lost.

"The project will create up to 10 new jobs and is a wonderful example of local collaboration between our tertiary education sectors and local industry," said Minister Cheyne.

Building on the success of its past 20 years, DArT, based at the University of Canberra, has accumulated a hundred years' worth of genetic data in plants and animals and has teamed up with UC and the ANU to establish the big data analysis platform, which government agencies, the resources industry and researchers can access to better manage our environment valuable ecology.

"Genomic data from plants and animals can be powerful when it comes to managing our environments, however if we can combine it with other environmental data and apply the latest advances in big data analytics, then the understanding we can generate is significantly magnified," said DArT Director, Dr Andrzej Kilian.

"DNA itself is only one piece of the puzzle. IoT and other sources of environmental data are also extremely valuable and, when combined with DNA data, provide a rich variety of information to enable to us assess the alarming decreases in biodiversity and biosecurity."

The big data platform will enable the tracking of changes in biodiversity to facilitate better management of environmental and other impacts on ecosystems. A significant part of the project is already underway, focusing on the impact of the Black Summer bushfires in 2019-20. Researchers had previously collected data before the bushfires hit and have returned to the impacted areas to collect further data. The platform will help identify what plant and animal species died and what has recovered. The technology will also help large resource companies to map the ecology of the areas they are working in, assisting them to meet their environmental obligations.

Development of the platform in Canberra and its subsequent international commercialisation will produce high-value, knowledge based jobs for the local economy, making Canberra a leader in the development of this technology world-wide. This is the power of combining the knowledge and expertise that exists in our universities with the innovation and agility of our high-tech local companies.

Acting University of Canberra Vice-Chancellor, Professor Geoff Crisp said UC's contribution to this important project derives from a long-standing collaboration with DArT.

"Imagine the significance of this platform in helping to save our ecosystems," he said. "The University of Canberra is excited to further strengthen our relationship with a local company that is doing ground-breaking research, both in Australia and internationally.

"We are excited to help implement the big data analysis platform so the research and development community can collectively better manage biodiversity and biosecurity."

Vice-Chancellor of The Australian National University, Professor Brian Schmidt said we must innovate and collaborate to protect Australia's incredible biodiversity from catastrophic events, such as Black Summer bushfires, as they become more frequent and destructive.

"As the national university, ANU is committed to projects that build Australia's resilience and capabilities for the future. We're proud to contribute our established expertise in biology data sciences and our brightest students to this initiative.

"I want to thank the ACT Government for investing in this vital work to grow data science capability in Canberra, which will help save species from extinction across the globe.

"We are excited to work with UC and the ACT Government on this important project."

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