

A Roadmap For Building Indigenous Digital Excellence: LOOKING TO 2030



**INDIGENOUS
DIGITAL
EXCELLENCE**

IDX is a partnership between the
NCIE and the Telstra Foundation



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IDX acknowledges the Traditional Owners of the land on which the National Centre of Indigenous Excellence is located, the Gadigal of the Eora Nation. We honour and celebrate their Elders past, present and future.



Australia's First Peoples have been innovating for more than 40,000 years. So what happens when digital technology is embraced by the world's oldest living culture? We believe the answer is Indigenous Digital Excellence.

This roadmap brings together the wisdom and data from three years of consultation, experimentation and learning from Aboriginal and Torres Strait Islander digital makers, organisations and communities. This information has been captured and distilled by the National Centre of Indigenous Excellence (NCIE) and Telstra Foundation to form Australia's first strategy for driving Indigenous digital excellence.

This document sets out what this IDX future looks like, its key guiding principles, areas of focus, goals to be achieved and priority actions.

It is intended that this roadmap forms the basis of efforts of the NCIE and Telstra's partnership through their IDX initiative as well as the efforts of key influencers in the Australian community including the government.

PURPOSE

The IDX roadmap is sector-wide rather than organisational specific. To this end, this roadmap identifies what we – as a nation, community and ecosystem – need to focus on to increase Indigenous digital participation.

This roadmap recognises that IDX:

- Is ubiquitous – it touches almost all aspects of our lives and it has the power to extend its reach beyond our current experience.
- Applies to – and has great impact on – all areas of life including the environment, education, culture, entrepreneurship, health and social wellbeing.
- Builds on the pioneering nature of innovation that has existed within, Indigenous communities since the beginning of time.
- Harnesses Indigenous perspectives identifying innovation in the way that Indigenous Australians view, understand and engage with the world.
- Embraces new ways of thinking, doing business and achieving outcomes.
- Connects across place, ideas, people, practice, structure and organisations.

IDX is not just an abstract concept or aspiration. It is happening right here and now. The excellence we are already seeing in community is what has sparked our goal of developing a National IDX Strategy. We want to amplify what works. We want to cultivate, grow, support and nurture IDX and, through that, create new opportunities and ventures.



IDX Robotics Workshop, National Centre of Indigenous Excellence 2016

AN IDX FUTURE IS ONE WHERE...

Australia's First Peoples are world leaders in embedding our wisdom and knowledge into digital technology to improve the wellbeing of all humanity.

Indigenous Australians, families, communities and organisations are innovators, creators and participants in the digital economy.

The IDX future:		Australia's First Peoples are world leaders in embedding our wisdom and knowledge into digital technology to improve the wellbeing of all humanity. Indigenous Australians, Indigenous families, communities and organisations are innovators, creators and participants in the digital economy.			
Areas of focus:	Social + Health Outcomes	Culture + Country	Employment	Entrepreneurship	Education
Outcomes:	Close the gap on social and health outcomes as well as sustain good health through digital technology.	Continue and revitalise Aboriginal & Torres Strait Islander cultures and country.	Create pathways into digital economy jobs and close the employment gap.	Startup and grow sustainable Indigenous-led businesses.	Increase our communities' confidence in the digital economy and close the education gap.
Guiding principles:	Connectivity	Transference + sustainability	Community owned, led + designed	Application of tech	Inclusion

FIVE GUIDING PRINCIPLES

1	Connectivity	<p>Fostering, building and growing IDX:</p> <ul style="list-style-type: none"> • requires digital makers, governments, corporations and communities to connect in new ways, for new purposes • applies to all areas of life • recognises the interrelationships and interdependencies between all areas of focus.
2	Transference & sustainability	The skills, knowledge and tools for digital participation, disruption and making must be held in and owned by Indigenous communities.
3	Community owned, led & designed	Australia's First Peoples' determine what technology is important, how it will be applied and to what issues, challenges and opportunities it will be applied.
4	Application of technology	IDX is about the application of existing technology as much as it is about the creation of new technology.
5	Inclusion	IDX embraces diversity and inclusion. Age, gender, location, idea and skill level are not barriers to participation. No-one will be left behind.



IDX Robotics Workshop 2016, National Centre of Indigenous Excellence

AREAS OF FOCUS + OUTCOMES

We must focus on:				
Social Wellbeing + Health	Culture + Country	Education	Employment	Entrepreneurship
In order to:				
<i>Close the gap on social and health outcomes as well as sustain good health through digital technology.</i>	<i>Continue & revitalise Aboriginal & Torres Strait Islander cultures + country.</i>	<i>Increase our communities' confidence in the digital economy and close the education gap.</i>	<i>Create pathways into digital economy jobs and close the employment gap.</i>	<i>Startup and grow sustainable Indigenous-led businesses.</i>

PRIORITY MEASURES

SOCIAL WELLBEING + HEALTH

- Design and deploy a digital survey to understand the digital needs of communities in the social and health services space.
- Build and strengthen existing innovation hubs which improve social and health services by:
- Exploring the application of digital technologies such as applications, 3D printing, robotics and drones to improve wellbeing.
- Using big data and patient data to better understand needs, improve services and increase access.
- Training and educating communities on how to access services and use digital tools.
- Develop an online platform to capture social and health service data and obtain user feedback and reviews to hold services to account.
- Ensure service users have access to their records and patient data in a secure environment as well as applications to manage their own health.
- Raise awareness of and access to services through digital communication channels and social media.
- Capture and recognise existing innovative social wellbeing and health digital practices.

CULTURE

- Develop applications and online resources to capture language, stories and cultural protocols.
- Use digital platforms to learn from and connect with other Indigenous communities around the world.
- Use virtual reality and augmented reality technology to map sacred sites, bush medicine, manage the environment.

- Identify and promote champions in communities who are using digital technology to continue and revitalise culture.
- Embed culture in innovations in health, education, employment and social services.
- Support the digitisation of culture, language and stories through AIATSIS.
- Provide traditional owners and communities with online access to native title and cultural heritage data including maps.
- Develop a place based environmental monitoring and reporting platform to help communities and traditional owners manage country.

EDUCATION

- Provide parents, families and communities with digital tools and training how to use them.
- Invest in programs to train Indigenous community members to be the trainers in the use of digital technology.
- Provide opportunities to experiment with technology such as through Flint.
- Showcase Indigenous “geeks” through community demonstrations and the inaugural National IDX Awards.
- Connect Indigenous students, teachers and entrepreneurs with STEAM mentors to give them access to the latest research, application of research and thinking.
- Promote the maintenance of cultural safety and digital safety.
- Use technology to engage young people in education and to breakdown geographical barriers in accessing education by:
 - Building learning resources including coding boot camps, online platforms, virtual classrooms (supporting frameworks) and mainstream courses for Indigenous students.
 - Building foundational numeracy and literacy skills by stealth through gamefication, robotics, 3D printing and programs like Flint.
 - Including Indigenous perspectives in innovation and technology curriculum.

EMPLOYMENT

- Develop pathways into knowledge economy jobs by:
 - Providing national and international work experience & internships in leading technology and innovation companies in STEAM roles.
 - Mentoring and buddying Indigenous employees, interns and trainees in STEAM roles.
 - Nurturing Indigenous employees to take up leadership roles in STEAM.
 - Integrating technology into all jobs.
 - Creating local innovation jobs especially in remote communities.
 - Supporting large companies and communities to create jobs for Indigenous people through subsidies.
- Ensure large employers are applying culturally competent recruitment processes and have culturally competent workplaces.
- Identify and share successful models of employing Indigenous Australians in digital economy jobs.

ENTREPRENEURSHIP

- Startup sustainable technology focused and technology enabled businesses by:
 - Providing scholarships for entry into leading accelerators and incubators.
 - Building a one-stop digital shop where entrepreneurs can access expertise, resources and funding to startup and grow their businesses.
 - Providing access to mentors & networks.
- Grow technology focused and technology enabled businesses by large purchasing organisations (including the government) increase the procurement of goods and services supplied by Indigenous technology focused and technology enabled businesses.
- Pay particular attention to supporting microbusinesses to reach markets, access resources and funding.
- Showcase and connect Indigenous entrepreneurs who are developing new technologies and growing their businesses by enabling technology.
- Enhance the Indigenous Procurement Policy to focus on awarding more technology contracts to Indigenous suppliers.
- Strengthen connections between Indigenous entrepreneurs and the research and development industry.
- Provide Indigenous entrepreneurs with intelligence on technology trends and how technology can enable their business growth.
- Connect Indigenous entrepreneurs to opportunities like the NDIS and Indigenous Procurement Policy.

THIS ROADMAP WILL BE ENABLED BY

1	Sharing of practice	There is a dearth of knowledge on what innovation is out there and how communities and individuals are innovating. Such examples must be identified, captured and shared so that communities can learn from each other and not have to reinvent the wheel.
2	Partnerships	This group, and Indigenous communities cannot prosecute this agenda on their own. Real partnerships with companies, government and other ecosystem players are critical.
3	Access + affordability	All Indigenous Australians must have access to the internet, tools and knowledge to engage with the digital economy. This underpins all priorities and actions identified.
4	Digital governance + safety	Communities must debate and discuss digital governance issues including protection of traditional cultural knowledge, upholding lore and how to safely participate in the digital environment.
5	Knowledge economy + systems	Digital participation must include Arts and Culture in the Sciences, Technology, Engineering and Mathematics focus as well as recognise Indigenous Australians' contribution to the sciences and knowledge systems.

LEADERSHIP

The implementation of this roadmap will be overseen by a collective of twelve Indigenous innovators, universities, investors, national organisations of influence, Australian companies and the government.

This group will be coordinated by the IDX initiative – the partnership between the NCIE and the Telstra Foundation.

THE ROLE OF THE IDX INITIATIVE

The IDX initiative will assist in implementing this roadmap by:

- Showcasing the roadmap and Indigenous digital makers through the country's first national IDX awards.
- Composing and coordinating the leadership group.
- Sharing and promoting this roadmap with influencers, communities, organisations and governments.
- Capturing and sharing stories of communities, organisations and governments implementing and responding to this roadmap's areas of focus and priority actions.
- Advocating – alongside the leadership collective – that governments reform relevant policies and programs to enable Indigenous digital excellence.
- Advocating – alongside the leadership collective – for influential organisations like Career Trackers, AIME, Reconciliation Australia, NACCHO and Supply Nation to leverage their programs to increase Indigenous digital excellence.
- Reviewing and reporting on the achievements of this roadmap.



IDX 3D printing 2015, Waiben, Thursday Island Torres Strait Islands



ACKNOWLEDGEMENTS + FOUNDING PARTNERS

IDX partnership of the NCIE and the Telstra Foundation recognise the many people and organisations who contributed their wisdom, knowledge and ideas to build this roadmap. These contributors were:

- Over 100 participants in the IDEA Summit.
- Over 60 participants of the National IDX Summit.
- The many, many contributors on social media.
- Discovery interview participants.
- Test-shop participants.
- Survey respondents.

THANK-YOU FOR MAKING THIS ROADMAP POSSIBLE.



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