WESTERN SYDNEY
UNIVERSITY

SCHOOL OF
COMPUTER, DATA AND MATHEMATICAL SCIENCES

Indigenous Strategy

2021-2025

ACKNOWLEDGEMENT OF COUNTRY

With respect for Aboriginal cultural protocol and out of recognition that its campuses occupy their traditional lands, Western Sydney University acknowledges the Darug, Eora, Dharawal (also referred to as Tharawal) and Wiradjuri peoples and thanks them for their support of its work in their lands (Greater Western Sydney and beyond).

INTRODUCTION

We are delighted to introduce the School of Computer, Data and Mathematical Sciences' Indigenous Strategy 2021-2025. The Strategy supports Western Sydney University's Indigenous Strategy 2020-2025, with specific focus on the Indigenous education and research in information and communications technology (ICT) and mathematics related areas of STEM (Science, Technology, Engineering, Mathematics) education and research. On the one hand, these areas are core of STEM-skilled education, "recognised as critically important for our current and future productivity, as well as for informed personal decision making and effective community, national and global citizenship[1]." On the other hand, there are "very few Indigenous Australians working in IT … . There are even fewer working at the CEO or managing director level in the Australian public service and the private sector. In fact, Indigenous Australian participation across the STEM fields is very low[2]."

The School of Computer, Data and Mathematical Sciences (SCDMS) is focused on closing these gaps and recognises that it is a two-way multifaceted process. The School encompasses major disciplines that drive contemporary innovation, analytics, and technological entrepreneurship – areas, which are intrinsic facets of the state and national priorities. The School is committed to improve the engagement of Indigenous Australians in research and education across these areas. The School is committed to support student and staff leadership in professional bodies and broader community engagement. The School will utilise its international standing to promote Indigenous Australian engagement in successful international partnerships and overall international success.

Committed to Sustainability education, the School will connect its disciplinary curriculum and research to the holistic approach of the Australian Indigenous knowledge systems. The School will focus on inspiring the ability of students to integrate Australian Indigenous knowledge in technology research and development lifecycle.

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[1] Australian Curriculum (2019) https://www.dese.gov.au/australian-curriculum/support-science-technology-engineering-and-mathematics-stem

[2] Dion Devow (2019), Closing the information technology gap for Indigenous Australians, https://www.aspistrategist.org.au/closing-the-information-technology-gap-for-Indigenous-australians/.

The outlined Strategy is closely aligned with the University's Indigenous Strategy 2020-2025 and the future direction and priorities outlined in University's Sustaining Success 2021-2026 strategic plan. It recognises the challenge that most Indigenous Australians lean more towards careers in health care, social assistance, or public administration and safety[3]. As a result, the Strategy addresses the need to encourage potential Australian Indigenous students to pursue IT, data science and analytics, and mathematics related careers and the need to provide extensive exposure of Indigenous students to professionals and leaders in these fields.

Many targets are deliberately ambitious - we praise the School for devising and implementing this strategy. We acknowledge the extensive contribution of Dr. Anupama Ginige, Associate Dean Engagement, Dr. Rodrigo Calheiros, Associate Dean Research, Professor Alana Maurushat, Associate Dean International and Dr. Tomas Trescak, Director Undergraduate ICT.

Professor Simeon Simoff, Dean
Dr. Anton Bogdanovych, Indigenous Education Champion
School of Computer, Data and Mathematical Sciences

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Dean, School of Computer, Data and
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[3] Indigenous employment (2019), Australian Institute of Health and Welfare,

https://www.aihw.gov.au/reports/australias-welfare/Indigenous-employment

INDIGENOUS STUDENTS

Provide opportunities for Indigenous Australian students to learn and succeed in an environment that promotes Indigenous excellence.

STRATEGIC SCHOOL ACTIONS

1 Actively engage with High Schools to promote STEM careers for Indigenous students in order to increase the proportion of Australian Indigenous domestic students, towards population parity in STEM area[4].

2 Utilise opportunities in combination of areas of Computing with Arts, Social Sciences and Psychology to attract Australian Indigenous students.

3 Develop a set of strategies to ensure that domestic Indigenous students have the same retention outcomes as non-Indigenous students.

4 Together with the International Office develop attractive signature mobility initiatives for Indigenous students.

5 Attract Indigenous IT

professionals, who are leaders in industry, as professional role models, mentors and/or internship providers.

6 Establish School's Indigenous Student Network and connect it with respective student associations and professional societies.

KEY SUCCESS MEASURES

2% of all enrolled domestic students are Indigenous by 2025.

Indigenous students in School's areas graduate at the same rate as non-Indigenous students by 2025.

5% of students involved in overseas initiatives are Indigenous.

School's Indigenous Student Network integrated with other Indigenous Student Networks in the University.

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[4] "Aboriginal and Torres Strait Islander peoples are under-represented in STEM, particularly at the university level, where 0.5% of the Aboriginal and Torres Strait Islander population had a STEM qualification, compared to 5% of the non-Indigenous population." (Office of the Chief Scientist (Australia), *Australia's STEM workforce: science, technology, engineering and mathematics*, 21 Jul 2020, Government of Australia, https://apo.org.au/node/307014

INDIGENOUS EMPLOYMENT

Position Western Sydney University as a place of choice for Indigenous Australians to work in an environment that supports and nurtures their careers.

STRATEGIC SCHOOL ACTIONS

1 Focus School effort on Australian Indigenous staff appointment, including joint appointments with other Schools.

2 Appoint at least one Australian Indigenous senior academic, possibly a hybrid position with industry.

3 Establish early career positions targeting Australian Indigenous academics with clear, supported and reliable long-term career pathways.

4 Provide mentorship, professional development opportunities and other support for Indigenous staff.

5 Provide opportunities for Indigenous internships in the School.

KEY SUCCESS MEASURES

2% of Indigenous staff within the School by 2025.

Level D/E Australian Indigenous academic by 2025.

Two level A/B positions within the School by 2025.

INDIGENOUS RESEARCH

Develop the breadth and depth of Indigenous Research with a vision to promote research that empowers Indigenous Australians.

STRATEGIC SCHOOL ACTIONS

1 Include Indigenous themes and topics related to the research and development in the School expertise areas in STEM.

2 Establish an Indigenous Protocol and Artificial Intelligence Workgroup and connect it to the respective international network.

3 Establish an Indigenous Research Award in the School Research Awards.

4 Increase the number of Indigenous HDR students and establish a system of dedicated support.

5 Increase external funding supporting Indigenous related research by the School expertise areas.

6 Engage with Indigenous leaders and companies to assist through research and development in the digital transformation.

KEY SUCCESS MEASURES

Increased number of Indigenous research and development projects in the School expertise areas – at least three per semester by 2025.

Established School Indigenous research award by 2022

Submit at least one competitive research grant with an Indigenous research focus, in partnership with other areas of the University by 2025.

INDIGENOUS LEARNING AND TEACHING

Ensure all students develop understanding and knowledge about Indigenous Australians through the Graduate Attribute.

STRATEGIC SCHOOL ACTIONS

1 Ensure every academic program has implemented the Indigenous Graduate Attribute and relates it to addressing UN SDGs[5].

2 Establish School Annual Workshop on curriculum and capacity related to Indigenous Learning and Teaching.

3 Establish School Indigenous Learning and Teaching Award.

4 Connect with high schools to encourage and assist with attractive pathways to STEM courses for Indigenous students.

KEY SUCCESS MEASURES

Students across the School will engage and enrich their learning from Indigenous Knowledges in the context of their programs.

Academics develop their understanding of Indigenous Knowledges and fuse it into their teaching practice.

School Indigenous Learning and Teaching Award established.

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[5] United Nations Sustainable Development Goals (https://sdgs.un.org/goals)

COMMUNITY ENGAGEMENT

Promote Western Sydney University as a place that works with and for the Indigenous Australian community

STRATEGIC SCHOOL ACTIONS

1 Establish a network of Indigenous IT professionals who are leaders in the industry and are role models.

2 Reflect and address the needs of the local Indigenous community in the School's learning and teaching plans, and research priorities.

3 Support and participate Indigenous initiatives and events across the University and broader community.

4 Reach out to Indigenous groups in the community to assist with improving high end digital skills.

5 Establish strategic partnerships with ICT companies, which support Indigenous education.

KEY SUCCESS MEASURES

Established and functioning community of Indigenous IT professionals, connected with School students and staff.

Indigenous community engagement activities are included firmly in School engagement.

Established two key strategic partnership with industry supporting Indigenous education.

INDIGENOUS LEADERSHIP

Provide leadership opportunities for Indigenous Australians across staff, students and community throughout Western Sydney University.

STRATEGIC SCHOOL ACTIONS

1   Establish School Indigenous Advisory Committee to create and coordinate Indigenous strategic initiatives in coordination with the University Indigenous Advisory Committee.

2   Include Indigenous representation in School governance.

3   Provide opportunities for Indigenous staff to undertake leadership roles.

4   Provide opportunities for Indigenous students to undertake leadership roles.

KEY SUCCESS MEASURES

Indigenous Advisory Committee regularly meets and monitors progress of Indigenous strategic initiatives.

Indigenous representation in School governance committees by 2025.

Indigenous students engaged in leadership roles.

CULTURAL VIABILITY AND KNOWLEDGE

Build Indigenous viability and knowledge across Western Sydney University.

STRATEGIC SCHOOL ACTIONS

1. Ensure Acknowledgement of Country is performed at the start of each formal meeting and gathering within the School, as well as any external event hosted by the School.

2. Incorporate visual Acknowledgement of Country identifiers within School areas across the University.

3. Ensure Acknowledgement of Country is performed in each unit at the start of each session.

KEY SUCCESS MEASURES

Acknowledgement of Country performed at the beginning of formal meetings, gatherings, and each teaching session.

Indigenous Country is acknowledged and represented across all School areas on all campuses.