

Why SMART?

SMART Infrastructure Facility brings together leading academics, industry experts and professional staff from fields such as transport, water, energy, economics and modelling and simulation to address the infrastructure challenges of the future.

WHAT'S THE VISION?

To be internationally recognised as a leading provider of research and learning for smart infrastructure solutions.

- Developing digital innovations for people-centric and sustainable infrastructure solutions.
- Contributing to cost-effective design and management of resilient infrastructure assets and networks.
- Informing the integrated planning of urban and regional infrastructure for more productive and adaptive development.
- Educating the next generation of infrastructure leaders, engineers and practitioners to foster innovation and progress.

In this time of unprecedented change, universities have an obligation to lead and contribute to society.



For more information, please contact:

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SMART Infrastructure Facility
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Digital Living Lab
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Welcome to the world of SMART Infrastructure Facility

An international leader in applied infrastructure research.

smart
infrastructure facility



What's the impact?



190+
publications



20+
global partners



90+
major projects



125+
seminars



15+
government submissions



65+
national partners



12+
awards



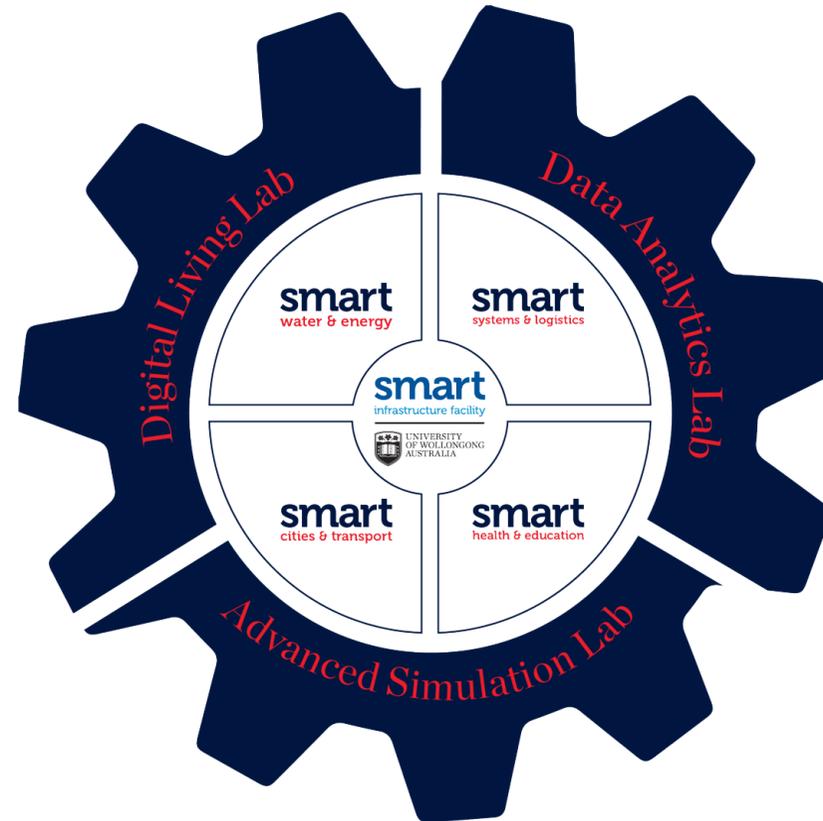
11M+
external funding



20+
major events hosted

Research Areas

The SMART Infrastructure Facility contributes to infrastructure planning in Australia through truly independent research coupled with deep academic rigour to ensure policy-makers and industry receives high quality and timely advice on major projects. SMART's research is spread across four key research themes each featuring two focused research groups with our Enabling Platforms supporting each of these themes. SMART's research significantly contributes to our academic and commercial impact.



“SMART holds an important place within the Faculty of Engineering and Information Sciences, as a facility where researchers from across the University can work together to make a real difference in the world. It's the practical approach that these multi-disciplinary teams bring which makes SMART such an exciting place.”

Professor Valerie Linton | Executive Dean, Engineering and Information Sciences | University of Wollongong

How is it achieved?



The Data Analytics Lab develops novel approaches for decision-making problems, based on machine learning and optimisation methods. It also applies advanced analytics and optimisation to infrastructure systems, logistics and supply chains, healthcare, and emergency response management.



The Advanced Simulation Lab aims to improve processes, methods and tools for decision making in complex and uncertain domains where stakeholders have differing perspectives, or no optimal solution is available.



The Digital Living Lab is a technology-agnostic innovation hub providing a testbed for a wide range of end-to-end Internet of Things projects.

Smart Outcomes



LIVERPOOL CITY COUNCIL SMART PEDESTRIAN PROJECT

The Liverpool City Council Smart Pedestrian Project is a research collaboration with Liverpool City Council and industry partners, supported by the Federal Smart Cities and Suburbs Program. The project is part of the Digital Living Lab. There was no data on pedestrian movements or behaviour to provide a baseline to design the future management of movement within Liverpool. This project uses technology to monitor pedestrian and vehicle movement without any compromise to the privacy of the people of Liverpool, which will improve the efficiency, effectiveness and ease of access to a range of state and local government services and facilities.



SMART WATER MANAGEMENT

The Illawarra-Shoalhaven Smart Water Management will deliver a network of data sensors that can provide real time flood risk information during extreme weather. Over the past 50 years the Illawarra-Shoalhaven region has experienced 30 floods classified as serious, severe or very severe and three classified as extreme, so it is hoped that technology could transform the ability to predict and mitigated increasing flooding.



SMARTER SCHOOLS FOR A SMART PLANET

The Smarter Schools project aims to improve regional high school students understanding of Internet of Things technologies, and their use in real-world applications, along with improved understanding of STEM-related issues (e.g. flood/storm behaviour, water quality) through analysis of data sourced from the Smart Water Management project.