



SCIENCE AND  
INDUSTRY  
ENDOWMENT  
FUND



PENRITH  
CITY COUNCIL

# STEM Community Partnerships Program

Penrith local scenario

## Western Sydney Aerotropolis - Bradfield

The Western Sydney Airport will bring not only increased tourists to the area but will result in a 24 hour a day transport hub across Australia and around the world. The areas surrounding the airport are being developed as the aerotropolis – an economic precinct that will target industries such as defence, aerospace, advanced manufacturing, freight and logistics, agribusiness, health, education and tourism. Looking at the success of similar aerotropolises in the USA and other countries, the Western Sydney Aerotropolis is expected to be a catalyst for economic growth and new jobs in one of the fastest growing regions in Australia.

Development of new, 24 hour access transport links to and from the airport is underway as part of the Sydney Metro Greater West development which will connect the airport with St Marys. There are also plans for rapid bus connections to Penrith via the new M12 motorway and road upgrades. Without access to a direct rail link, the increased road travel is likely to result in greater congestion and longer journey times for some.

With the airport due to commence operations in 2026, a significant amount of work has been done to develop the surrounding aerotropolis. There will be an innovation hub which will include an Advanced Manufacturing Research Facility, a CSIRO facility and other facilities designed to fuel innovation. The agribusiness precinct will include the Integrated Intensive Production Hub over, 5,000 hectares with the potential to produce 96 000 tonnes of fresh food for distribution. Hitachi will be developing a facility based on their Kyoso-no-mori facility in Japan which promotes collaborative creation-style research between business, academics and Government. The University of Newcastle, University of NSW, University of Wollongong (NUW Alliance) and Western Sydney University will be participating in a new higher education institution with TAFE and a specialist science, technology, engineering and mathematics (STEM) high school being situated in close proximity. STEM will be a key focus across many of these precincts/facilities.

The wide range of skills and expertise needed for the development of this precinct and the ongoing operation provides many opportunities for the residents in the Penrith area. These include the infrastructure requirements, as well as opportunities related to energy, utilities, biosecurity, technology, research, trade agreements and market access.

Penrith City Council have the challenge to ensure that they support their community to participate and benefit in these new opportunities.



<sup>1</sup> pA Western Sydney Aerotropolis concept

## Your task

Your task is to use the information above, and resources provided below as a start to identify a local problem and design a STEM-focussed solution.

(Question, Design, Explore, Communicate)

## Resources

### CSIRO research

- NSW Digital Twin, CSIRO <https://data61.csiro.au/en/Our-Research/Our-Work/Future-Cities/NSW-Digital-Twin/NSW-Digital-Twin>
- Urban Living Lab: place based co-innovation for urban resilience, CSIRO <https://www.csiro.au/en/research/environmental-impacts/sustainability/urban-living-lab>
- An unexpected crisis that could change our cities, CSIRO, 30 July 2020 <https://ecos.csiro.au/an-unexpected-crisis-that-could-change-our-cities/>

### Reports

- NSW Spatial Digital twin <https://nsw.digitaltwin.terria.io/>
- <sup>1</sup> A Western Sydney Aerotropolis: Maximising the benefits of Badgerys Creek <https://www.nswbusinesschamber.com.au/NSWBC/media/Policy/Thinking%20Business%20Reports/A-Western-Sydney-Aerotropolis.pdf>
- NSW Government Western Sydney Aerotropolis – key actions and documents <https://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/Western-Sydney-Aerotropolis/Key-actions-and-documents>
- Australian Government Department of Infrastructure, Transport, Cities and Regional Development Accessing Western Sydney Airport <https://www.westernsydneyairport.gov.au/sites/default/files/Factsheet%20Accessing%20Western%20Sydney%20Airport.pdf>

### Articles and other resources

- Meet smart mobility experts <https://imoveaustralia.com/smart-mobility-expert/>
- List of iMove projects <https://imoveaustralia.com/projects-listing/>
- Tokyo science city inspires Western Sydney Aerotropolis, Government News, June 2019 <https://www.governmentnews.com.au/tokyo-science-city-inspires-western-sydney-aerotropolis/>

- What next for the Aerotropolis, Western Parkland City Authority – News, April 2021  
<https://wPCA.sydney/what-next-for-the-aerotropolis>
- Delivering rail for Western Sydney <https://www.westernsydneyairport.gov.au/transport-infrastructure/rail>
- American Airport Cities: Lessons for Western Sydney Airport, United States Studies Centre, May 2018 <https://www.ussc.edu.au/analysis/american-airport-cities-lessons-for-western-sydney-airport>
- Dallas-Fort Worth is the Texan model for Sydney's next airport at Badgerys Creek, Australian Financial Review, June 2017 <https://www.afr.com/companies/infrastructure/dallasfort-worth-is-the-texan-model-for-sydney-s-next-airport-at-badgerys-creek-20170629-gx14tp>
- Careers in the Western Sydney Aerotropolis - YouTube video  
<https://www.youtube.com/watch?v=wZlpKqB69GQ&feature=youtu.be>