



SCIENCE AND
INDUSTRY
ENDOWMENT
FUND



Generation STEM Community Partnerships Program

Campbelltown local scenario

Technology

Currently less than 10 percent of the workforce work online remotely and less than 10 per cent of total retail sales are conducted online. However, these are areas that are forecast for rapid growth and there is no widely accepted estimate as when this will reach a plateau. 63.5 percent of people prefer to commute less than 20 minutes a day. With this, telecommuting is well positioned to grow as information and communication technology remove the necessity for workers to visit a physical location.

Technology can be defined as a novel process, system or device for performing a task more efficiently and effectively than via existing approaches. This could mean anything from communicating to building to monitoring to decision making. The Internet of Things (IoT) connects any electronic device to the Internet and we have apps that allow us to easily make purchases anywhere across the globe or monitor a wide range of functions. Technologies not only have the potential to impact how we work, but how we live.

As part of the Western Sydney City Deal, Campbelltown Council is moving towards greater digital connectivity and becoming a smart city. Plans include greatly improved digital infrastructure, including a 5G network, and the introduction of smart and secure technology, such as transport and utility monitoring systems, into new infrastructure.

How your Council tackles the complexity of this issue will impact you now and future generations.



Mayor of Campbelltown, Cr George Brticevic, welcomed the announcement of the Western Sydney City Deal.
(Photo courtesy Campbelltown City Council³)

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

- Telecommunications: <https://www.csiro.au/en/research/technology-space/it>
- Ngarra point to multipoint technology trial: <https://research.csiro.au/wireless/888-2/>
- Information technology: <https://www.csiro.au/en/Research/Technology>
- Wireless group: <https://research.csiro.au/wireless/>

Reports

- Campbelltown City Council report:
<https://www.campbelltown.nsw.gov.au/News/CampbelltownMayorwelcomesWesternSydneyCityDeal?BestBe tMatch=technology|3ba77b09-4cae-4136-bd37-52774df911aa|7bc3c57c-c215-45ea-96d0-8d97f6884eea|en-AU>
- Hajkovicz, Stefan 2015, *Global megatrends: seven patterns of change shaping our future*, CSIRO Publishing, Victoria, Australia

Articles

- Campbelltown Macarthur Advertiser article:
<https://www.macarthuradvertiser.com.au/story/5832891/technology-trends-to-watch-for-in-2019/>
- Campbelltown Macarthur Advertiser article:
<https://www.macarthuradvertiser.com.au/story/5435072/technology-in-your-home/>
- **Forbes article, When Your Colleague Is A Robot: How 5G Will Connect Humans And Machines In Tomorrow's Factories:**
<http://www.forbes.com/sites/huawei/2016/06/14/when-your-colleague-is-a-robot-how-5g-will-connect-humans-and-machines-in-tomorrows-factories/>
- **ABC Four Corners I Future Proof:**
<http://www.abc.net.au/4corners/stories/2016/07/04/4491818.htm>
- **Digital disruption could threaten 40 per cent of jobs, says Productivity Commission:**
<http://www.abc.net.au/news/2016-06-15/digital-disruption-could-threaten-40pc-of-jobs/7512778>
- Wired article, The Internet of Things Is Far Bigger than Anyone Realizes:
<https://www.wired.com/insights/2014/11/the-internet-of-things-bigger/>
- Forbes article, A Simple Explanation Of 'The Internet of Things':
<http://www.forbes.com/sites/jacobmorgan/2014/05/13/simple-explanation-internet-things-that-anyone-can-understand/#2a47f2726828>
- Technology Review article, Our Fear of Artificial Intelligence:
<https://www.technologyreview.com/s/534871/our-fear-of-artificial-intelligence/>