

STUDENT RESOURCE

On the road

Career story:

This career story features an engineer who is passionate about her engineering work. She has worked on exciting projects ranging from a runway in remote Australia through to rail infrastructure.

Kate, however, didn't start out in engineering.

When you read Kate's story, think about why she chose her original discipline, why she chose engineering, and how each of these decisions was influenced by the things that matter to her.

Kate's story

Chartered Professional Engineer Kate McIntosh says she didn't take the usual path to becoming an engineer.

'I wanted a job that was based in the city but would allow me to get outside, so I decided to study geology at university. However, after graduating with a bachelor degree in geology, I realised that I was not interested in mining. (And most geology-based jobs are associated with mining.) At that point I changed my career direction and studied engineering.'

Kate enrolled in a Master of Geotechnical Engineering at the University of New South Wales (UNSW). She completed it part time over three years while she kept working full time.

Kate now has over 18 years of rich experience in engineering consulting. She works as a pavement and geotechnical engineer in Hobart.

In her role as Technical Director - Pavement and Geotechnical Engineering, Kate designs pavements for a range of uses. These include aircraft runways, roads, industrial 'hardstands' (paved areas for parking heavy vehicles) and rail infrastructure. She also provides design advice and supervises construction on a range of projects around Australia.

Developing employABILITY Career story - On the road

'On a day-to-day basis, I'm responsible for making sure that designs are constructed according to the specifications. I am also in charge of overseeing the quality of construction on a range of civil design projects.'

Kate says engineering has its challenges, as it requires a range of skills. These skills include being a good communicator, taking pride in your work and showing attention to detail. She believes that meeting challenges helps young engineers to learn and grow as professionals.

'Engineers should pursue challenges and grab new opportunities. But they should not be afraid to ask for help from mentors or senior colleagues.'

Having gained a wide range of experiences over more than 18 years, Kate is enthusiastic about her career. A project she remembers very well was designing an aircraft runway in a remote part of Western Australia, because she had to learn about different types of aircraft and their effects on the pavement structure.

With project experience in Victoria, Tasmania, New South Wales, Western Australia and the Philippines, Kate also counts the travel she has been able to do as a career highlight.

'Working as an engineer, I have been able to visit some remote and beautiful places in Australia that I may not have had the opportunity to see if I wasn't an engineer.'

At school, Kate didn't know much about what engineers actually do. She thinks that engineering needs to be better promoted in schools – not only in secondary schools, but also in primary schools. Kate says that if students learnt from an early age how broad a career in engineering can be, it would do a lot to promote the profession. 'Engineering is a great career path, not only for boys, but also for girls. Students should be provided with a better understanding about engineering.'

'A career in engineering can take you many places, from city-shaping, through the fields of traffic engineering and aviation infrastructure, to buildings and architecture, biomedical engineering or robotics and technology.'



Image of Kate McIntosh. Text and image of Kate © Engineers Australia.

Learning from biographies and career stories

What do you see when you meet a professional?

Most of the time, we see only the role someone holds now. It is likely, however, that the person has experienced a career with lots of twists and turns.

Get the most out of reading career stories or biographies by asking yourself some of the questions to the right. **1**. What do you expect you will have to learn during your career?

2. What might you need to do in order to keep learning?

3. What differences, common issues, and links can you make to your own career journey?

4. Identify and reflect on key decision points in your personal and professional development, and then consider:

a. Who played a significant role at these times?

b. To whom did you go to for advice?

c. What can you put in place for the next time you face a major decision?

5. Biographical accounts raise a number of challenges and opportunities. These include innovative collaborations, work within other sectors, diverse locations, and different modes of work. Look for examples of these in your discipline and reflect on what might be of interest to you:

a. What interests you, and what can you do to make this a reality?

b. What challenges do you forsee, and how will you prepare for these?

6. Biographical accounts often tell us something about the interests, passions, and motivations of the people involved. Can you think of ways to combine your interests and your future work?

7. What would you like to achieve as a professional?

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