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We are in the throes of the 4th Industrial revolution and the pace of change and innovation can feel staggering at best, overwhelming at worst. Numerous articles on the future of technical professions predict that the skills needed tomorrow will be very different to the skills needed today.

For instance, 70% of young Australians are starting their first job in roles that will either look different or simply won’t exist in the next 10-15 years. The World Economic Forum has identified 16 ‘crucial proficiencies in the 21st century’; 10 of these are non-technical. Two thirds of jobs will be soft skill intensive by 2030 (engineering, for example, is classified as one of these soft-skill intensive professions).

But what does this mean for us now? How can we prepare for a relatively unknown future?

High schools and universities are starting to remodel curriculums to increase applicability of learning post studies. They are broadening the skill-sets students are learning to include more non-technical elements and incorporating more practical placements and ‘real-world’ exposure to complement theory.

For those already in the workforce, diversifying personal development in both technical and non-technical areas is key. The below competency areas are central to building a well-rounded professional repertoire and these skills will only become increasingly critical in the future. They are also skills needed to progress from a pure technical professional to team leader to strategic contributor to the organisation.

**Soft skills**

Technology enhancements and globalisation have intensified the need for people-centred skills. Areas to focus on developing include self-management, emotional judgement, communication skills, teamwork and leadership. Technical professionals are increasingly exposed to work environments where the success and impact of their core work relies heavily on their ability to master a fundamental set of human-related competencies.

**Enterprise skills**

Enterprise skills are business-related competencies such as commercial acumen, innovation, professional ethics, digital literacy and problem-solving skills. Like many other professions, Public Works professionals in technical roles are expected to become true business partners and active contributors to the success of their organisation. This means understanding the business environment beyond their immediate field of expertise. The development of these skills are also a pathway to perhaps seeing more technical professionals in C-suite roles.

**Collaboration**

People in engineering professions help solve people problems using their knowledge of maths and sciences. Our world is currently experiencing subtle but significant shifts in technology, society and economy, which similarly to previous industrial revolutions, create uncertainty and anxiety. Some of today’s big problems include climate change, mass urbanisation, liveability, sustainability, ageing populations in some countries whilst others have disproportionately younger populations and a suite of technological innovations: blockchain, artificial intelligence, wearable technology moving towards implantable technology.

Technical professionals of tomorrow cannot work in silos, rather they need to extend their connections and become active listeners and networkers within their communities, industry sector and the global engineering community to better understand the real problems at hand and apply their skills accordingly.