



Research in Engineering Education Symposium & Australasian Association for Engineering Education Conference

5 – 8 December, 2021 - Perth, WA



WORKSHOP

What is the ideal engineer and how do we get there?

Conrad Drake, Stuart Payne, and Shawn Fernando
EA CLM (WA), EA CLM (WA), EA CLM (WA)
Corresponding Facilitator's Email: conrad.drake@ieee.org

WORKSHOP MODE

In-person in Perth

OVERVIEW OF WORKSHOP

Recent work, by both industry and academia, has highlighted the lack of understanding of the characteristics of a “good experienced engineer”, particularly in linking work decisions to value, in the broadest sense. While the mechanics of engineering practice has been studied, how engineers can visualise, communicate and achieve “best value” outcomes for their stakeholders is recognised as a gap in our knowledge.

This is reflected in the paucity of education (beyond MBA or PhD) and criteria (between CPEng and EngExec) targeting the mid-career engineer.

This workshop extends an informed discussion on what the ideal mid-career engineer might look like; what development options there might be; and what challenges or contradictions can be seen.

ACTIVITIES

The activity will be in a “world café” format: an introduction outlining the problem and process; then group discussions on each of the three questions in sequence, with groups reporting back on their discussions between each one.

TARGET AUDIENCE

The target audience (participant types) are practicing engineers; engineering educators; engineering regulators; and the consumers of engineering services.

OUTCOMES

The primary outcome will be broader awareness of this problem in the target audiences. Specifically, it will help EA progress the definition of a mid-career engineer role and associated development path options.

REFERENCES

Trevelyan, J. (2019). *The making of an expert engineer*. Crc Press.

Waller, S.T. et al. (2021). Why we need engineers who study ethics as much as maths, *The Conversation*

<https://theconversation.com/why-we-need-engineers-who-study-ethics-as-much-as-maths-161356>

KEYWORDS

Engineering Value Sustainability

PRESENTERS' BACKGROUNDS

The three presenters are members of WA committee of the College of Leadership and Management of Engineers Australia (EA CLM (WA)). The current topic is a result of cooperation on sustainable engineering between the EA CLM (WA) and UWA's Public Policy Institute (PPI) last year. Each of the presenters is a senior engineer currently practicing in Western Australia.