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Chapter

Leadership, Group Leadership, Functional Leadership

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The Engineering Managers' Leadership Capability Framework (EMLCF) – Eight High-level Global Leadership Capabilities or Meta-competencies

- 1. Self-leadership and Psychological Capital**
- 2. Contextual Intelligence**
- 3. Sensemaking, Framing, and Storytelling**
- 4. Learning Agility**
- 5. Global Leadership, Global Mindset, and Cultural Intelligence**
- 6. Emotional Intelligence**
- 7. Creative Thinking and Innovative Behaviour**
- 8. Ethical Behaviour and Ethical Leadership**

This book chapter presents the Engineering Managers' Leadership Capability Framework (EMLCF) – a contemporary, global, and futuristic framework of leadership education and development for engineering managers. The EMLCF comprises the following eight high-level global leadership capabilities or meta-competencies: (1) Self-leadership; (2) Contextual Intelligence; (3) Learning Agility; (4) Sensemaking, Framing, and Storytelling; (5) Global Leadership, Global Mindset, and Cultural Intelligence; (6) Emotional Intelligence; (7) Creative Thinking and Innovative Behaviour; and (8) Ethical Behaviour and Ethical Leadership.

ABSTRACT

The impact of globalisation and digitisation has changed the world. This includes the world of engineering and engineering management, which calls for an urgency to create new capabilities for digitisation to contribute to the transition to a lower-carbon economy, the emergence of new industries, markets, paths to economic prosperity, and the leadership required to drive this vision forward. This has now become a critical imperative for advancing the engineering profession, as well as to keep it relevant and connected, in an era of heightened outsourcing and global competition. Despite the fact that this need to educate and develop 21st-century engineers with stronger leadership capability and identity has already been acknowledged, with significant efforts made to address it, no unified leadership framework for engineering managers exists to date. This chapter addresses this major gap in both the academic and practitioner literatures, as well as in the industry and the professional development of engineering managers. To this end, building on the extant leadership in engineering literature, and informed by theoretical and empirical findings in leadership research, this chapter presents the Engineering Managers' Leadership Capability Framework (EMLCF) – a contemporary, global, and futuristic framework of leadership education and development for engineering managers. The EMLCF comprises the following eight high-level capabilities or meta-competencies: (1) Self-leadership; (2) Contextual Intelligence; (3) Learning Agility; (4) Sensemaking, Framing, and Storytelling; (5) Global Leadership, Global Mindset, and Cultural Intelligence; (6) Emotional Intelligence; (7) Creative Thinking and Innovative Behaviour; and (8) Ethical Behaviour and Ethical Leadership. This chapter will be valuable for students of engineering management, and emerging and established engineering managers wishing to further develop their leadership knowledge, capability, and impact.