Enabling and accelerating model-based decision support: Reflections on opportunities and the roadmap ahead

S. Elsawah [iD]

ª Capability Systems Centre, University of New South Wales Canberra, Australia
Email: s.elsawah@unsw.edu.au

Abstract: Most of the contemporary persistent issues that societies are grappling with (e.g. national resilience, sustainable development, national security, international conflicts, emerging technologies) are complex in terms of the scale of interdependencies among systems and drivers, elusive system boundaries, and a plurality of views of those impacting and being impacted by the problem.

To deal with these challenges effectively, we need model-based decision support capabilities to enable and accelerate decision-making in multi-domain, complex operating environments characterized by high levels of complexity, ambiguity, and often deep uncertainty. Yet, the full potential of a genuinely interdisciplinary model-based decision support capability is yet to be realized.

This plenary will focus on addressing the question: how can we enable and accelerate the use and impact of model-based decision support in complex problems?

Using a critical reflection lens and drawing on my own multiple experiences in decision support, I will attempt to address this question. I will paint a holistic roadmap of development areas which cover the four dimensions of: (1) integration (what?), implementation (how?), digital transformation (in what context?), and education and capacity building (by whom? For whom?). I will articulate the leverage points to harness the key opportunities and challenges in these areas. I will use prompts and questions to provoke conversations around the role of professional societies and community-driven initiatives in galvanizing these efforts.

Would you like to take part in the interactive discussion? join the miro board here and start adding your ideas to the collaborative holistic roadmap canvas (See Figure 1)

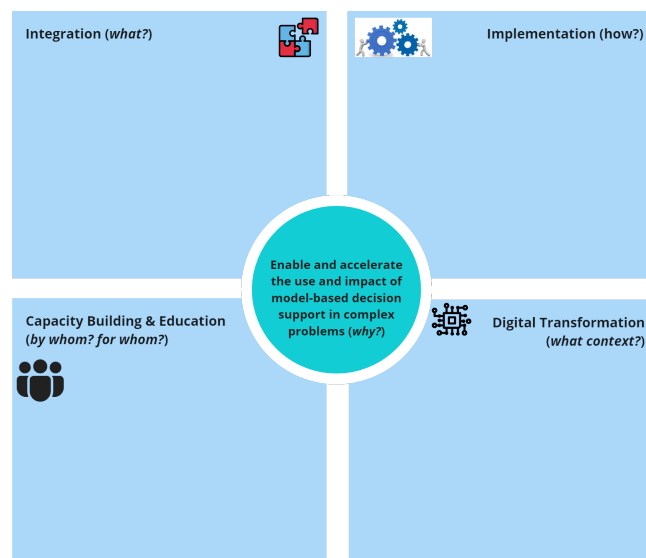**Figure 1.** A collaborative roadmap canvas to capture and collate ideas

Keywords: *Integration, decision-support, implementation, education, digital*