

Applying systems thinking to problem solving.

Systems thinking has become the latest trend in management; however, there are few workshops on how to actually apply systems thinking to problem solving. Based on 15 years of research, this workshop provides an opportunity for delegates to learn how to apply systems thinking. The workshop is an immersion experience in which participants apply systems thinking to problem solving in teams. Starting by applying eight systems thinking perspectives to develop a big picture for the context of the problem and risks associated with the situation, the team of participants focuses on the real problem. Once the problem is identified the ninth system thinking perspective is applied to postulate solutions. The workshop incorporates active learning, in which the participant teams identify factors pertinent to their problems and draft potential solutions. The workshop covers:

- Systems thinking and analysis.
- The nine systems thinking perspectives and their attributes.
- Organising and structuring thoughts to align them with the streams of systems thinking.
- Determining potential solutions to the problem.
- Evaluation criteria for decision making.

Outcomes

At the end of this workshop, delegates should:

- Understand the difference between systems thinking, critical thinking, linear and non-linear thinking.
- Be able to apply the systems thinking perspectives to the analysis of a problem.
- Be able to identify and evaluate potential solutions.

Background

The workshop is an expanded module from the world's first immersion course in systems engineering which took eight months to develop under a grant from The Leverhulme Trust to Cranfield University.

Participants should bring a problem they are willing to share with their teams.

Facilitator Prof Joseph Kasser

Prof Kasser has been a practicing systems engineer for 35 years and an academic for about 10 years. He is the author of two published books on systems engineering and more than 50 peer-reviewed publications. He received an INCOSE International Symposium Best Presentation Award in 1996 and Best Paper Awards in 2006 and 2007. He reviews submissions for conferences and journals including the IEEE Transactions on Education and the INCOSE Journal of Systems Engineering. He is a Leverhulme Visiting Professor at Cranfield University. Prior to moving back to the UK, he was the Deputy Director and DSTO Associate Research Professor at the Systems Engineering and Evaluation Centre at the University of South Australia. He is a recipient of NASA's Manned Space Flight Awareness Award (Silver Snoopy) for quality and technical excellence for performing and directing systems engineering and other awards.