WORKSHOP SESSION

MAPPING SUCCESS IN COLLABORATIVE ENGINEERING

Overview
Successful collaborative engineering practices have demonstrated significant benefits to industry: improving efficiency; eliminating rework due to information inconsistencies; managing complexity and automating parts of the collaborative design process. Despite these benefits, collaborative endeavours fail due to obstacles such as: sharing knowledge through ineffective communication methods; co-ordinating stakeholders with divergent objectives; managing teams with cultural and leadership differences; and configuring collaborative networks towards a long term and strategic vision. Changing innovation landscapes have the potential to radically advance collaborative practices to develop more user-centred, innovative and customised products in a timelier manner.

The Collaborative Design SIG have been working to define the characteristics of successful collaborative practices through previous workshops exploring the changing innovation landscape. These characteristics present complex challenges to conventional industrial practice and confounds the benefits gained from wide-spread implementation. These challenges could for example relate to the complexities of extending knowledge management practices beyond the boundaries of the organisation and the subsequent manipulation of this knowledge; the operation of formal and informal collaborative networks that manages ambiguity, equivocality, and conflicting constraints; the adaptation of organisational structures to become more flexible, agile and open; and the ownership of the product development process.

This workshop will bring together collaborative design and innovation researchers with the aim of creating a coherent, integrated, and more holistic understanding and definition of collaborative engineering enablers and inhibitors. The workshop will bring together the domains of industry and academia to facilitate networking and knowledge exchange benefiting all participants.

Workshop format:
The workshop will last for two hours and will be formatted as follows:

Participants will engage in a discussion on the benefits and challenges of successful collaborative engineering.

Groups will work together to define and model the key elements of successful collaborative engineering and how enablers and inhibitors influence the success.

Groups will use this new knowledge to identify how the changing innovation landscape could influence the future of successful collaborative engineering practice and how industry and academia might meet these challenges.

This workshop will aim to answer the questions:

- What are the factors which contribute towards and constrain successful collaborative engineering?
- Can the factors be modelled in relation to each other towards a definition of successful collaborative engineering?
- What are the future collaborative engineering challenges to meet the changing innovation landscape?

This workshop will organised by the Collaborative Design SIG and will take place at the 15th international design conference, May 21st-24th, 2018, Dubrovnik, Croatia. The workshop will be chaired and co-chaired by Dr Ian Whitfield and Mr Ross Brisco.