A Mindset Shift from SoS to IoTs and Back Again

Kerry Lunney – Abstract for Keynote for IEEE SoS Conference June 2020

When reflecting on IoTs as SoSs, we need to consider the implications and intricacies both from a technical perspective and the mindset behind such approaches.   For example, are the challenges the same? What risk profiles are acceptable? What are the expectations of our clients and do their attitudes and needs change with implementing IoT solutions? Do these change across various domains? Such questions only scratch the surface of adapting and adopting IoTs as SoSs, or part thereof.

Our world is becoming more and more connected at all levels of society across all demographics. The speed of technology change and the up take is ever increasing.   However, recognising the criticality of interoperability, interdependencies, vulnerability, ownership, deployability, safety, obsolescence, technology rate of change, and other architectural and realisation considerations, requires us to address IoTs as potential SoSs within the intended ecosystem it will be realised.

This presentation will discuss and compare the challenges of IoTs operating as SoSs or part thereof, giving consideration to the different constraints and needs across a sample of domains in defence and non-defence environments.   It will address both the technical aspects and common mindsets experienced. In concluding, a set of recommendations for handling the challenges and risks of IoTs operating as SoSs, or part thereof, will be presented leaving the audience with potential focus areas to evolve in their business and organisations.

Kerry Lunney – BIO for IEEE SoS Conference June 2020

Ms Kerry Lunney has extensive experience developing and delivering large system solutions, including design, software development, infrastructure implementation, hardware deployments, integration, sell-off, training and on-going support. She has worked in various industries including ICT, Gaming, Financial, Transport, Aerospace and Defence, in Australia, Asia and USA. The systems delivered include combat systems, mission systems, communication systems, road and rail ITSs, flight simulators, security systems, vehicle electronic systems, gaming systems and ICT foundation systems.

Kerry is Country Engineering Director and Chief Engineer in Thales Australia. In this role she provides technical leadership and governance on bids and projects, delivers technical training programs, and participates on a number of Technical Boards and Communities of Thales. Recent roles include Chief Systems Engineer, Solutions Architect and Design Authority.

Kerry is a member of IEEE, a Fellow Member of Engineers Australia with the status of Engineering Executive and Chartered Professional Engineer, and holds the Expert Systems Engineering Professional (ESEP) qualification from the International Council on Systems Engineering (INCOSE).

In addition to her "day job", Kerry is the INCOSE President. She has also been a past-INCOSE Sector Director for Asia-Oceania, a past-National President of the Systems Engineering Society of Australia (SESA), the Australian Chapter of INCOSE, and has held various roles on conference and events committees and University program advisory boards throughout her career.