

## Integrating Stations into the Wider Railway Application

1700H-1800H, Monday, 24 September 2007, London  
Bob Hutchison, Atkins

Systems engineering is being applied to the Public Private Partnership [PPP] delivery programme of Metronet for stations, signalling and trains. Within this wider context, Atkins has derived a Comprehensive Approach to Systems Engineering [CASE] which includes some novel interpretations of the traditional systems engineering methods to make them representative of the built environment of the railway. CASE was developed to meet a demanding delivery programme whose key drivers are station delivery dates.

Recent changes in the approach to the PPP delivery programme, where the focus upon cost and efficiency has become paramount, have led to a change in thinking: in a more competitive environment cost and efficiency must become a concern of the Systems Engineer as well as the Project Manager.

Lean systems engineering techniques are currently being developed that will allow the monitoring of the efficiency of the design processes and systems from the management of design interfaces through to the integration into the wider context of a complete railway line upgrade, where sustainability is now seen as a key deliverable of the project.

This presentation will discuss how systems engineering can be configured and implemented to meet the particular challenges of the competitive environment and the subsequent integration into the wider railway application. It will also give an overview of progress so far with CASE and its ongoing development.

*The meeting will take place at London Underground's offices at 55 Broadway, London SW1H 0BD. Non-members are welcome and there is no charge for attendance but places must be booked in advance. To book, obtain directions or for any other questions, please contact the RIG Chair, Bruce Elliott ([bruce.elliott@atkinsglobal.com](mailto:bruce.elliott@atkinsglobal.com) or +44 (0)7970 694043).*

*The International Council on Systems Engineering (INCOSE) is an international professional society for systems engineers whose mission is to foster the definition, understanding, and practice of world-class systems engineering in industry, academia, and government. INCOSE was formed in 1992 to develop, nurture, and enhance the interdisciplinary approach and means to enable the realization of successful systems. Since then, INCOSE has grown dramatically. Today there are over 5,000 member systems engineers, 50 chartered chapters worldwide, and more than 40 Corporate Advisory Board members from government, industry, and academia.*

*The INCOSE UK Rail Interest Group has been formed:*

- To provide a forum for those interested in Systems Engineering in rail to network in a less formal environment, to exchange good practice and to provide mutual support in an area which can require some sustained perseverance;*
- To promote, improve and share the practice of Systems Engineering within the rail industry;*
- To foster connections with other professional bodies within rail and thereby promote cross fertilisation of knowledge and experience across sectors and community disciplines; and*
- To promote awareness of INCOSE UK and encourage membership within the rail industry.*

*For further information, see <http://www.incose.org.uk/rig.htm>.*