The Transportation Working Group invites You to the

26th annual INCOSE international symposium
Edinburgh, UK
July 18 - 21, 2016

Saturday, July 16 and Sunday, July 17

All Day
Systems Engineering Tutorials throughout weekend; topics include:
- Architecting SoS; Building SE Business Case; Integrating Agile Development;
- Systems Resilience Fundamentals; SE Trade-Off Analyses

Corporate Advisory Board Meetings (CAB representatives only)

Sunday
Join TWG members for evening drinks and networking
1600-1830 Thomson’s Bar - 182-184 Haymarket Terrace, Edinburgh EH3 8EB
For latest details, please RSVP to Sue Fursey, Sue.Fursey@hs2.org.uk

Monday, July 18

1045-1125 A framework for integrating reliability and systems engineering:
proof-of-concept experiences (Hossein Neizan Hosseini and Torgeir Welo)
1130-1210 Impact of System Integration on Reliability and Maintainability
(James Armstrong)
1330-1445 Selling Systems Engineering by Searching for the Sweet Spot
(Richard Beasley and Anne O’Neil)
1530-1655 Transportation Roundtable Part 1: Unravelling complexity: how transportation is
tackling systems issues in multi-project, multi-contract deliveries
(Meg Downing – Highways England, Derek Price – Network Rail Infrastructure Projects,
Nick Facchina – Sydney Trains, Andrew Hunter – Thales)

Tuesday, July 19

0800-0930 Keynote: Energy as a System
Prof John Loughhead, Chief Scientific Advisor, Department of Energy and Climate Change, UK
1000-1210 Transportation Panel: Verification and Validation Applications and Limitations
in Civil Infrastructure Projects - The Case of US and European High Speed Rail Projects
(Alain Kouassi, Oliver Hoehne, Nita Iebadla - HS2, Marco Ferrogalini - Bombardier and Matthew Hause)
1330-1410 Case Study: A Model Based Systems Engineering (MBSE) Framework for
Characterising Transportation Systems Over the Full Life Cycle
(William Scott, Gary Arabian - TfNSW, Richard Fullalove - TfNSW and Peter Campbell)
1415-1455 Developing and implementing systems engineering and project management
processes at CSIT - a small Canadian company in public transportation
(Claude Laporte, Nicolas Tremblay, Jamil Menaceur and Denis Poliquin)
1530-1610 UK Railway System Performance – Gaining Insight
Through Systematic Analysis and Modelling
(Bradley Hyland, Amir Toossi, Nigel Best, Amy Bradford; Network Rail)
Panel: Developing Junior SEs - a global comparison of different approaches in different sectors
or (Duncan Kemp; Clive Roberts, Charles Critchett, Meaghan O’Neil Dale Brown)
1615-1655 Infrastructure/Train Borne Measurements in
support of Railway System Performance Modelling
(Lloyd Barson, Amir Toossi, Wilson Fung: Network Rail)

Evening
Transportation Working Group Dinner - Join us for networking with colleagues over dinner.
RSVP required to Sue Fursey, Sue.Fursey@hs2.org.uk

Program subject to change - please check the symposium website (www.incose.org/symp2016) for any updates.
Wednesday, July 20

0800-0930  **Keynote: Smart Cities**  
*Julie Alexander, Director for Urban Development, Siemens*

1045-1125  The future of systems integration within civil infrastructure: A review and directions for research  
*(Jennifer Whyte)*

1330-1455  **Panel: Systems integration in civil infrastructure**  
*(Jennifer Whyte)*

1530-1730  **Transportation Roundtable Part 2: Introducing and utilizing Systems Engineering in transportation agencies and major programs**  

Evening  INCOSE Conference Banquet

**Thursday, July 21**

0800-0840  **SPOTing best approaches to enable SE in Enterprises - Enterprise Systems Engineering**  
*(Richard Beasley, Andrew Pickard, Andy Nolan and Frank Hull)*

1000-1210  **TWG Working Session**  
*Join your TWG colleagues for a working session to contribute to IS2017 preparation and advance working group objectives.*

**Friday, July 22**

INCOSE Technical tour – Forth Replacement Crossing.
The Forth Replacement Crossing is Scotland’s biggest transport infrastructure project in a generation and is on track to be completed in 2016. This major project is delivering a new modern road bridge, upgrading the road infrastructure on both sides of the Firth of Forth, and represents a true systems response to the problems posed by the deterioration of the old road bridge and greater demands for travel capacity.

*Please check the symposium website (www.incose.org/symp2016) for additional registration details: space limited.*

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**Anticipated Participating Organizations**

- Highways England
- Network Rail
- New York City Transit
- NSW Transport for NSW
- ProRail
- Transport for London
- Transport Sydney Trains

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For more information contact Transportation Working Group Co-chairs:  
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