



INFRASTRUCTURE



Smart Cities
Initiative



2024
Annual **INCOSE**
international workshop
HYBRID EVENT
Torrance, CA, USA
January 27 – 30, 2024



INCOSE UK Chapter
Rail Interest Group



Infrastructure Domain Related Working Groups

Multi-Working Group Summit

Sponsored by TWG, IWG and SCI

Multi-Working Group Summit – IW2024



Transportation, Infrastructure and Smart Cities Initiative invite you to a Multi-WG Summit!

INCOSE Application Domains + Initiative having affinity with Ground-Based Infrastructure Projects

- Transportation WG + Infrastructure WG
- Critical Infrastructure Protection & Recovery WG
- Information Communications Technology WG
- Power and Energy Systems WG
- Automotive WG
- Smart Cities Initiative

Affinity Rationale:

The application domains (above) are present on every major infrastructure and transportation project. As ITS and autonomous vehicles enter the picture, the automotive manufacturers will also have interfaces with infrastructure.

The Smart Cities Initiative has significant interfaces and shared interests with all the application domains cited above.

Why It Matters:

Infrastructure has an enormous impact on fostering civilization and presents a multi-trillion-dollar global opportunity to better deploy Systems Engineering and mitigate the many "normalized failures" seen throughout the infrastructure domains. It is an opportunity for INCOSE groups to collaborate internally, share business cases for SE and support each other.

Discussion Starters:

Opportunity to coordinate outreach (i.e., organizations such as the Institution of Civil Engineers (ICE-UK), The American Institute of Architects (AIA-US), The American Public Transportation Association (APTA), etc.)

Cross-promote webinars and meeting events, improve collaboration on papers, webinars, coordinated IS tracks

Leverage precious active volunteer time available by sharing tasks/roles such as; social media moderators, common Webmaster, common U-Tube channel admin. WG collaborations can mitigate the stress placed on individual volunteers in many areas.

NOTE: Not limited to the WGs listed above! Collaboration between WGs is a key success factor for INCOSE.

All Symposium attendees and WGs are cordially invited to provide their input!!

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Also interested in collaborating:

Systems of Systems WG



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Summary Meeting Goals:

- ✓ Validate our anecdotal observations
- ✓ Looking for feedback and ideas
- ✓ How can we help ourselves collectively
- ✓ How can INCOSE TechOps (or staff) help us

Meeting Mission:
improve collaboration
and leverage scarce
volunteer resources.



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Jan 27, 2024

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Our Observations Summary:

- Decreasing Number of Active Volunteers
- Multiple viewpoints improves the discussion
- Share WG resources where practical
- There is common cause to pursue multi-WG ideas

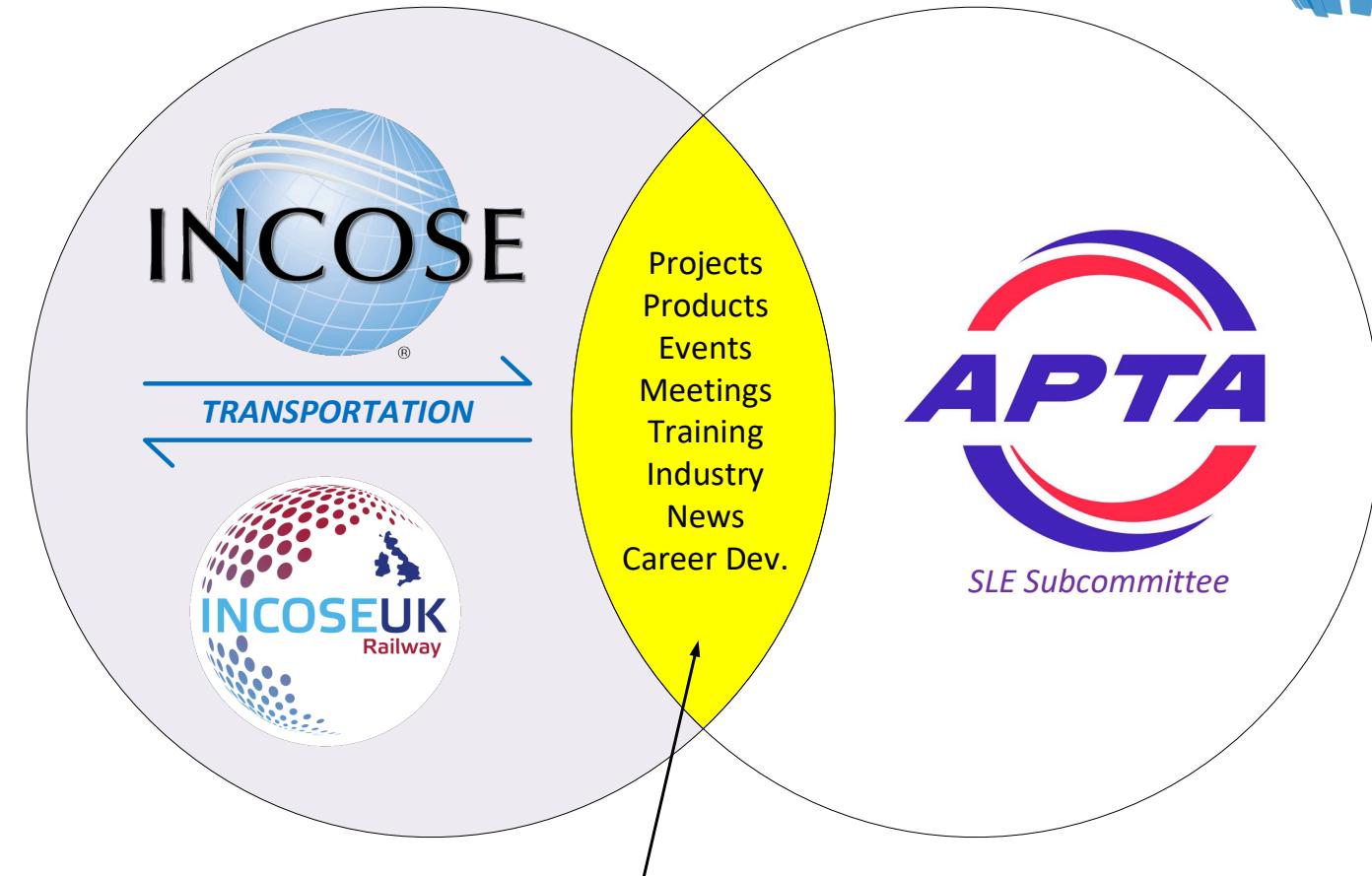


Example of collaboration that is working...

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- INCOSE brings SE global practitioner expertise
- APTA brings legislative advocacy capabilities
- APTA represents all agency stakeholders (i.e., procurement, legal, operations & maintenance)



Areas of Strong Professional Collaboration

Initial practical collaboration: New APTA Systems Lifecycle Engineering Standard

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TWG Approach = Outreach and Education



**American
Public Transportation
Association**

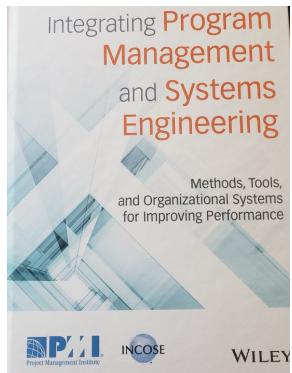
Systems Lifecycle Engineering Subcommittee

- Providing Training to APTA Members
- Promoting awareness of and prep for ASEP or CSEP
- Collaborating on APTA process standards



**Project
Management
Institute.**

Extracting Shared knowledge and training for improved project design and stakeholder engagement



**Smart Cities
Initiative**

Collaboration on presentations and technical products

**Infrastructure
Working Group**



Systems Lifecycle Engineering Subcommittee



Decreasing numbers of Active Volunteers observed

True



Not True

- Causes?
- Worse since the pandemic?
- Data Available? (TechOps survey?)



Multiple viewpoints from active volunteers in adjacent working groups is very valuable

True



Not True

Variety of topics and speakers

Cross WG speakers and topics (rotate)



Leverage precious volunteer time across multiple working groups

Practical



Not Practical

- Common or shared social media moderator
- Common Webmaster
- Common YouTube channel administrator
- Shared MarCom functions (Flyers, blasts, external outreach)
- Membership Operations and Analysis (surveys, exit interviews)
- Collaboration on papers, webinars, monthly workshops
- Better Coordinated IS tracks and IW meetings



Explore new areas where INCOSE / TechOps could provide centralized support

Rationale:

Minimize the use of engineering volunteers to perform tedious administrative functions (i.e., they have to do this stuff in their day job, but not when volunteering)



There exists common cause and standing to approach these problems (Opportunities) collaboratively

True 

Not True

Adoption of SE is driven by...



Are there more observations? – is problem space well enough defined?

True 

Not True

Gaps, additional opportunities to improve?

True

Not True 



Next Steps...



Backup Slides



Director - Products
Open
Position

Director - Events
Michael Morua
Capgemini, UK

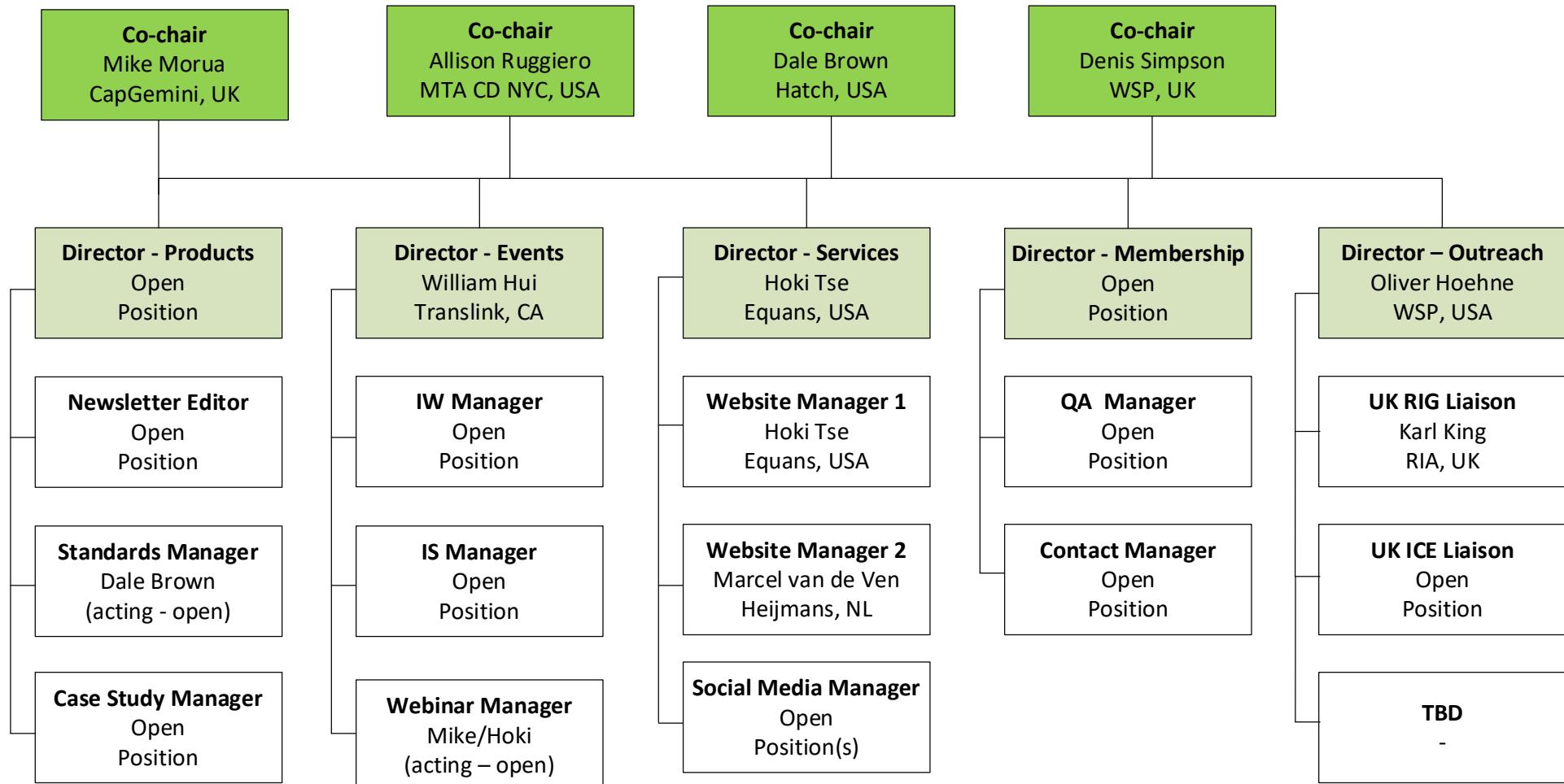
Director - Services
Allison Ruggiero
MTA NYCT, USA

Director - Membership
Open
Position

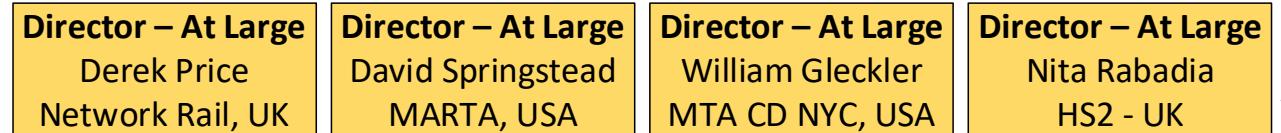
Director – WG Comms
Oliver Hoehne
WSP, USA

Five Key Functions of Transportation Working Group

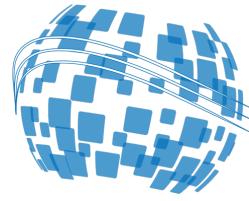
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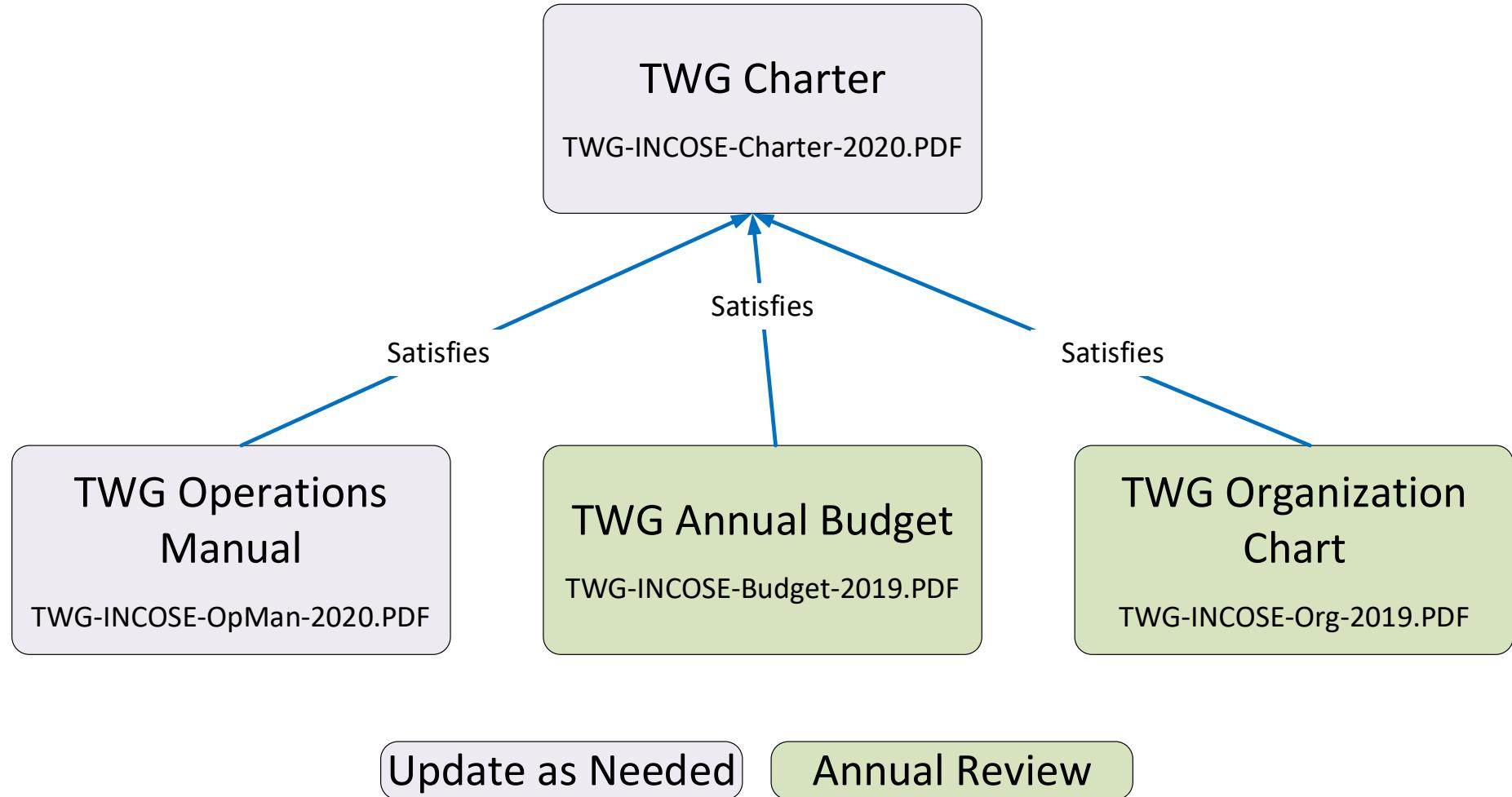
This is a bit fluid.....



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