

## Jumping into the FuSE Methodologies stream... (August 2023)

The 'too long, didn't read' summary of the below status update is that systems engineering ('digital' or not) is viewed by ourselves (INCOSE) and others (non-INCOSE) as cluttered and not adequate. I'm looking for folks and actions that help mitigate this perception via improved methodologies and the 'people' change management aspects.

I am looking and listening for input and passion regarding improvement in this general area - written and via 'in-real-life' conversations. I'm certainly open to disagreements and other perspectives! I DO need to get a regular forum going as a discussion 'slot' with folks that have expressed interest. Full disclosure - I'm not as far along as is needed on FuSE Methodologies.

### ***Below is an update I shared just prior to IS2023 as some background:***

We (FuSE Methodologies) strive to have action for this stream show up along this continuum: Discussions > Activities > Presentations > Panels > Papers > Periodicals > Products > Practices > Standards. An intentional movement from talking about ideas to producing tangible products.

Since IW2023, we have held three additional workshops to elaborate on methodology gaps, prioritize them, and then propose paths towards realizing SE Vision 2035. A wide demographic of individuals participated from around the world and across several professional organizations.

The workshops held were an online INCOSE mini-event, hybrid INCOSE EMEA WSEC 2023, and an online IEEE Systems Council Technical Committee on Systems Engineering Methods meeting. In total about 60 additional participants provided input, including a rank ordering exercise of 10 disrupters summarized from IW2023 output should be addressed immediately. Over these workshops, the top 3 disrupters were:

- 1. Get rid of the clutter, improve the intuitiveness of SE**
- 2. People (Organizational) Change Management in the context of deploying (MBSE) methodologies**
- 3. Practicable & implementable (matured) methodologies**

Most participants agreed with this prioritization, however the non-INCOSE workshop called out the following top two disrupters, which were lower in priority at the INCOSE workshops.

- 4. Close the transdisciplinary gap between mechanistic, deterministic engineering and the social domain (weirdness of people)**
- 5. Available methods are inadequate to support SE practice**

While the sample size is insufficient for a statistical conclusion, the observed discrepancy is a reminder that we should continually validate our understanding of how Systems Engineering is perceived by those outside of our society, mitigating the risk of listening to ourselves in an echo-chamber. How might we best engage with non-Systems Engineers and validate that we are (or are not) a key factor in satisfying their needs in engineering systems?

Going forward, the information gathered needs to stimulate working groups and other organizations to intentionally address these disrupters. Our goal is to shift from Discussions, Presentations, and Panels to publishing Products and updated Practices.

Cheers,

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