



2021
Annual **INCOSE**
international workshop
Virtual Event
January 29 - 31, 2021



Systems Modeling & Simulation WG

Inputs INCOSE SE Handbook Ed.5

Hans Peter de Koning (DEKonsult)

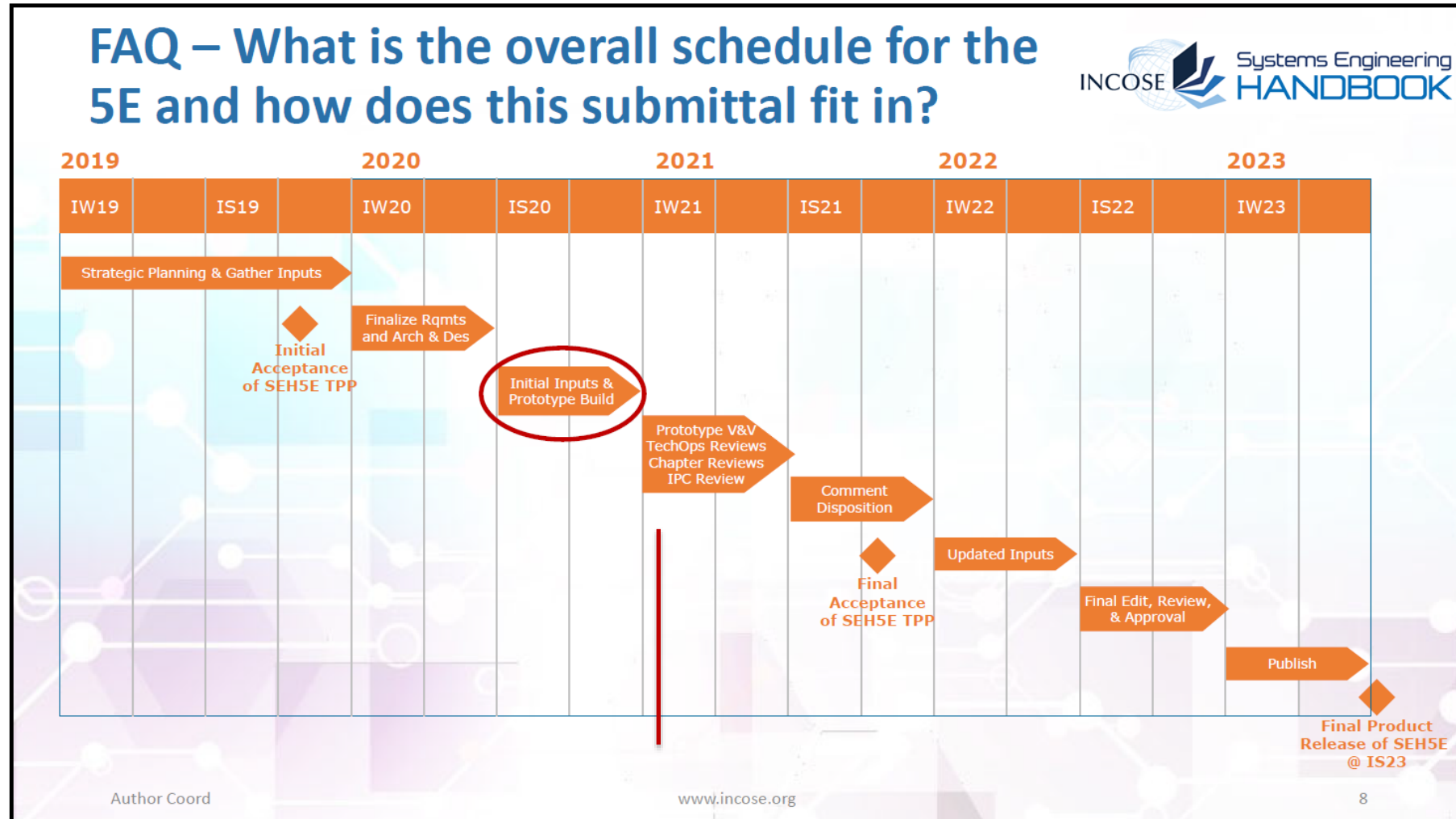
INCOSE SE Handbook Edition 5 Upgrade



- SMS WG asked to provide s4.2 Modeling & Simulation
 - Established team by end November 2020
 - Peter Coleman, Hans Peter de Koning, Alexander Karl, Maurice Theobald, Hubertus Tummescheit
 - With further inputs from Rod Dreisbach, Frank Popielas
- Existing SEH E4 content needed full rewrite
 - Major update for evolving digital engineering
 - Better narrative, more precise terms and definitions
 - More emphasis on multi-disciplinary collaboration, in particular between SMS and engineering simulation



Major overhaul SE Handbook Ed. 4 to 5





SEH E5 Outline

- Part I – Systems Engineering Foundations
- Part II - Life Cycles & Systems Engineering Dimensions
- Part III – System Life Cycle Processes
 - Follows ISO 15288 processes
- Part IV – Cross-Cutting Systems Engineering Concepts
 - s4.2 Modeling & Simulation
- Part V – Practising Systems Engineering
- Part VI – Application of Systems Engineering



SMS WG Inputs

- Adapted title: Modeling, Analysis and Simulation
- Highlights
 - Major re-write – streamlined content & narrative
 - Guided by SMS WG "What is System M&S" flyer and added proposed terms & definitions for including in SEH
 - Widened examples of use of modeling, analysis and simulation
 - Generalized subsection on standards, removed details on SysML
 - Target: reduction from E4 to E5: 7.5 pages to 4 (currently 6.5)
 - Difficult to reduce more without compromising content



Progress & Plan 2021

- Developed and submitted R1 draft by 4 Jan 2021
- Refined and submitted R2 draft by 22 Jan 2021
- Consolidation with other sections and update: 1 Feb – 15 Mar
 - s2.2.2.2 Model/Data-Centric Systems Engineering
 - s3.5.4 Architecture Definition Process
 - s3.5.5 Design Definition Process
 - s3.5.6 System Analysis Process
 - s4.5 Architecture Frameworks
 - s4.9 Digital Engineering across the Life Cycle
- Complete Draft2 release: 22 Mar
- SEH Team Review: 23 Mar – 1 Apr
- Wide INCOSE review: 15 Apr – 15 Jun