34th Annual INCOSE international symposium
hybrid event
Dublin, Ireland
July 2 - 6, 2024

Requirements Working Group

Needs & Requirements Fundamentals

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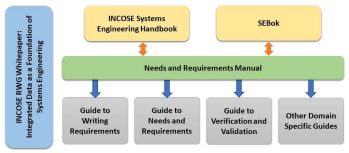
Agenda

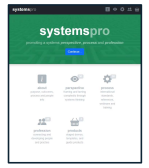
Context Reflection Inspiration Proposal Discussion

Context

- **Notice of June RWG meeting…**
  - *Topic:* "Preventing the labor of Sisyphus…RWG products made easy"
  - "…Requirements Working Group (RWG) has developed many products and materials… In 2024, we started a project to consolidate and organize the available materials into easy-to-find and easy-to-use (knowledge) nuggets… During this session, we would like to receive your feedback on what you need to either learn about the RWG products, or extend your knowledge based on their contents.
  - *Recognised that we could and should do more to help general accessibility*

- **Personal experience…**
  - CMgr FCMI, CSEP MINCOSE, CPRE IREB, APM-PMQ
  - INCOSE UKAB, North West Local Group Chair, Certification Application Reviewer
  - 20 years leading people, process, and systems improvements in UK Nuclear Decommissioning
  - Subject Matter Expert and SL-INCOSE CPD programme lead (200+ people / 9 cohorts).
  - Experience of drafting comms and educational materials related to above.



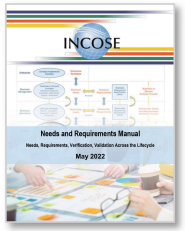


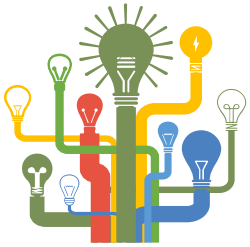
Reflection

Q) Have you read and digested the INCOSE Needs and Requirements Manual (NRM)?

Q) What key concepts and prompts could you quickly recall and communicate that would benefit others?

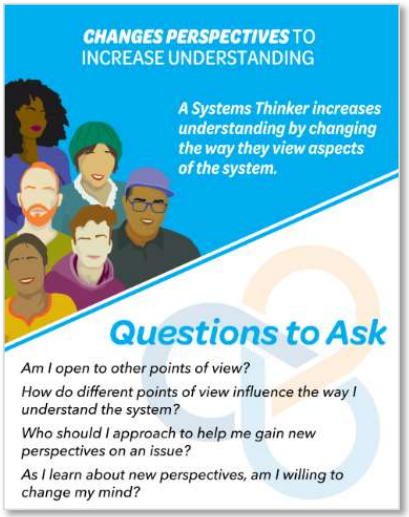
Q) Can we create a more accessible digest?

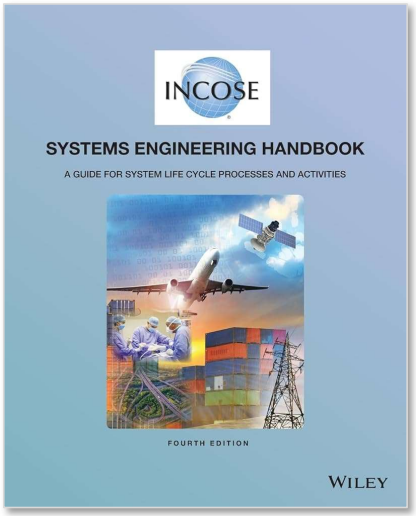




Inspiration

- See Waters Centre for Systems Thinking
- Systems Thinking Habits – as enumerated in INCOSE SEH (v4)
- Flip cards convey essential habits, associated application, and development prompts



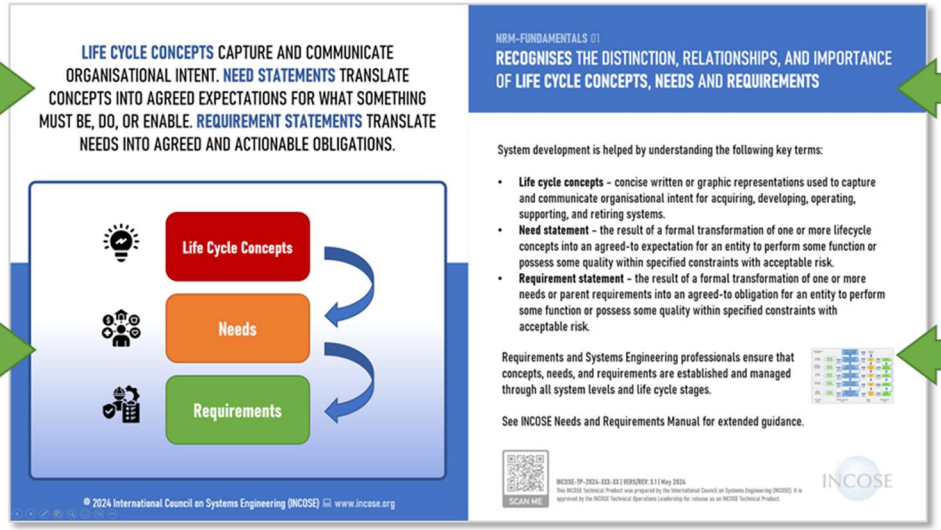


NRM Fundamentals – Proposal Overview

- Elicit key concepts and associated application prompts from RWG NRM.
- Develop and publish flip-card summaries to help general accessibility.

Concept summarised in text format

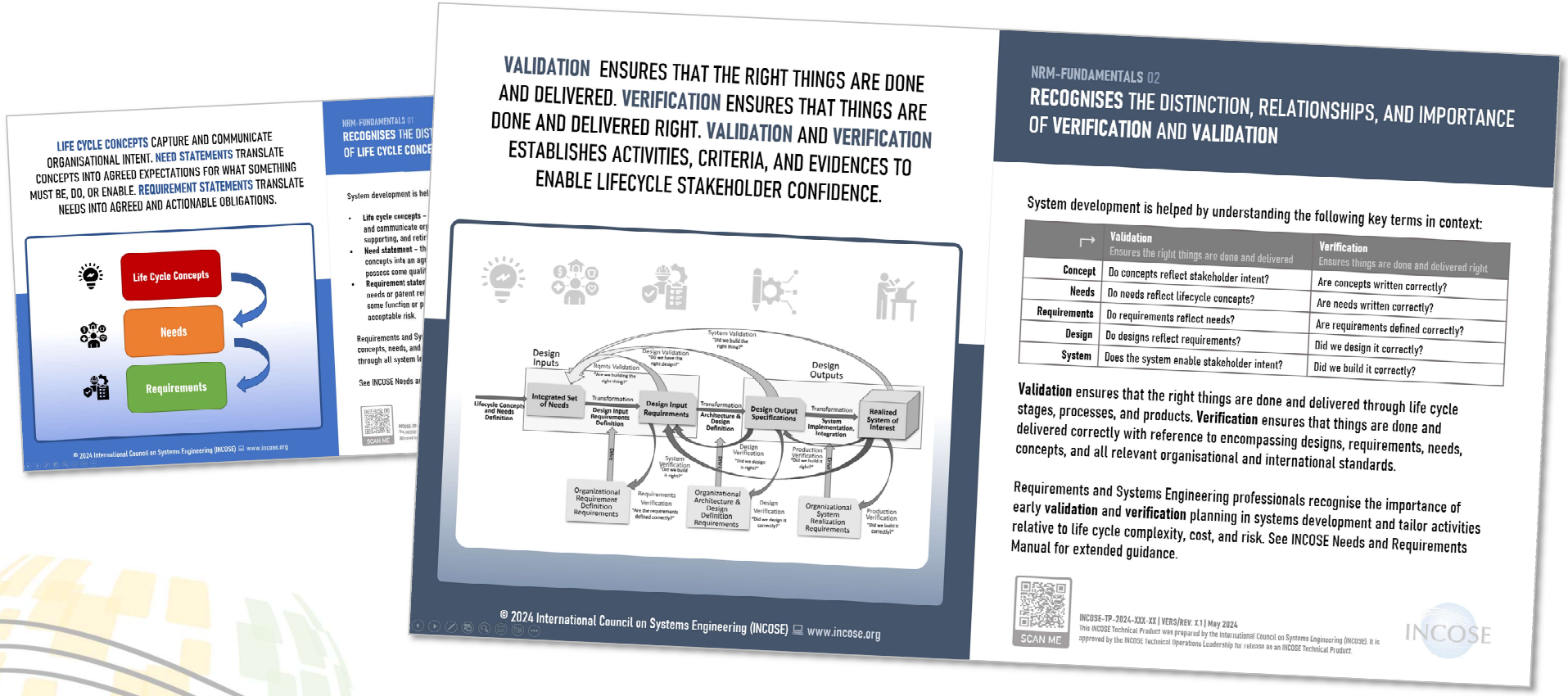
Concept summarised in a graphic



Concept summarised as a professional competency

Concept elaboration with associated application and development prompts

NRM Fundamentals – Illustrations



NRM Fundamentals – Draft List

01 - Recognises the distinction, relationships, and importance of life cycle concepts, needs and requirements *(illustrated in previous slides)*

02 - Recognises the distinction, relationships, and importance of verification and validation *(illustrated in previous slides)*

03 - Recognises the importance of, and key-enablers to, an integrated, collaborative project team

04 - Recognises the importance and key-enablers to effective communications

05 - Recognise the distinction of, and paired approaches required for, green field and brown field systems

06 - Recognises the importance of, and key-enablers for, avoiding technical debt

07 - Recognises the value of, and key enablers for, implementing an information-based needs and requirements definition and management (I-NRDM) approach

08 - Recognises the dynamic context of concepts, needs, and requirements management *(c.f. change, traceability)*

09 - Recognises the importance of, and key enablers for, identifying, engaging, and managing life cycle stakeholders

10 - Recognises the importance of defining and managing systems context and associated interfaces

11 - Recognises the importance of defining and managing risk

12 - Recognises the value and application of functional analysis *(c.f. SIPOC, fundamental system model etc)*

13 - Recognises the importance and key-enablers for effective Needs, Requirements, Verification, and Validation Management (NRVVM) planning

NRM Fundamentals – Status

- RWG Lead Team engagement ✓
- Proposed INCOSE UK NW LG collaboration spin-off (x8 volunteers)
- Wider interest and support welcome

RB-Led Team	RWG Lead Team
1. RWG Lead Team liaison • NRM Fundamentals proposal approval • Agree NRM Fundamentals scope (see draft list slide) • Provide progress updates as may be required • Submit draft product and manage any revisions / updates as directed **2. Project team build and technical mgt through development** • Identify, engage, and oversee a small team of industry colleague volunteers • Allocate NRM Fundamentals to volunteers for individual card development • Plan, track, collate, and moderate volunteer contributions through to consolidated draft product, ensuring NRM correspondence, consistent structure, format, voicing etc.	**1. Volunteer nominations** • Invite / suggest RWG Lead Team / other RWG members who may want to contribute to this project (i.e. assignment to pick up 1+ NRM Fundamental for card dev as directed) **2. Technical moderation and approvals** • Approve outline NRM Fundamentals proposal • Agree NRM Fundamentals scope (see draft list slide) • Draft product review and direction on any required revisions • End-product approval **3. Comms leadership** • Plan and support publication (e.g. executive foreword, digital hosting, printed cards, graphic design review / media support etc) • Plan, develop, and schedule launch comms • Consider and lead on allied ideas (e.g. paired YouTube "shorts" to present each NRM fundamental with a voiced perspective on it's significance)

Discussion & Next Steps

- **NRM Fundamentals will communicate key concepts and application prompts via accessible summary references helping to drive awareness and practice improvements across industry.**
- Proposed July / August kick-off meeting with project volunteers to communicate expectations and arrangements.
- RB-RWG Lead Team liaison to continue through Technical Product Proposal (TPP) and product development.

- **Q)** What do you think?
- **Q)** Would you like to help?

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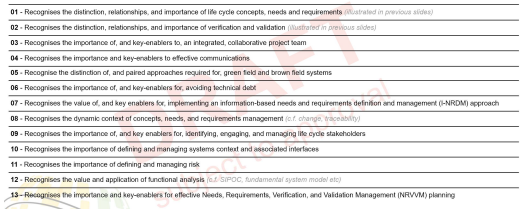

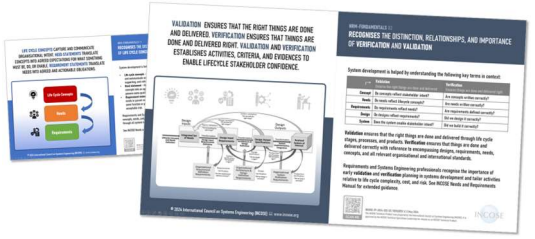

Thanks!

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