34th Annual INCOSE international symposium

hybrid event

Dublin, Ireland
July 2 - 6, 2024

Preventing the labor of Sisyphus - learning about and from the RWG products made easy.

Katarzyna Kot, RWG Co-Chair

What will be discussed

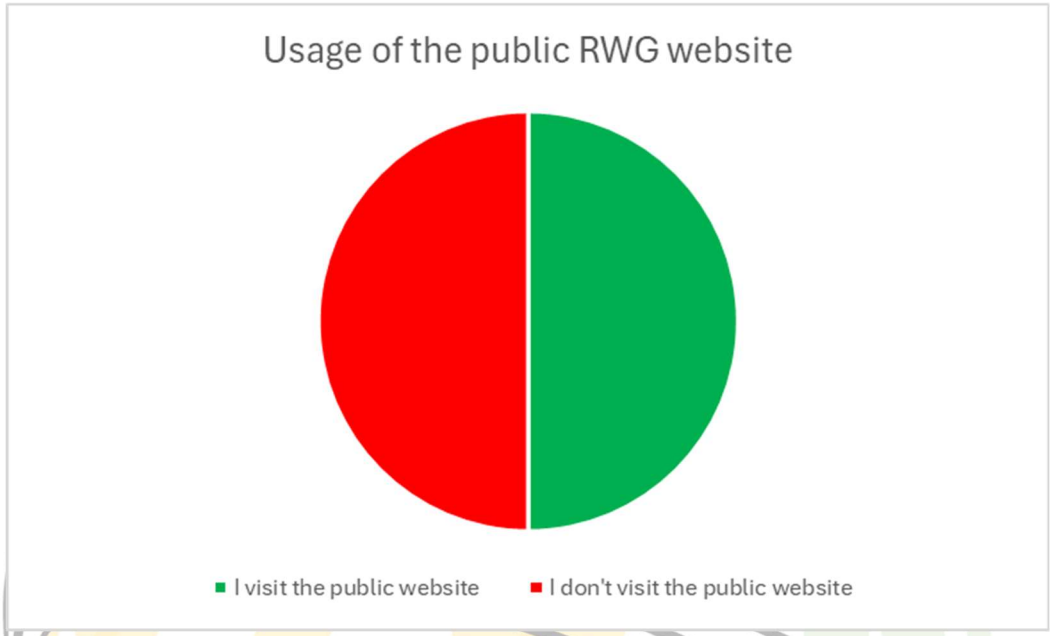
- Problem definition
- What do we want to achieve?
  - Create added value for our members.
  - Make optimal use of the existing INCOSE infrastructure.
  - Increase integration of the RWG products in the INCOSE framework.
- Next steps (from the RWG perspective)
- Questions and answers

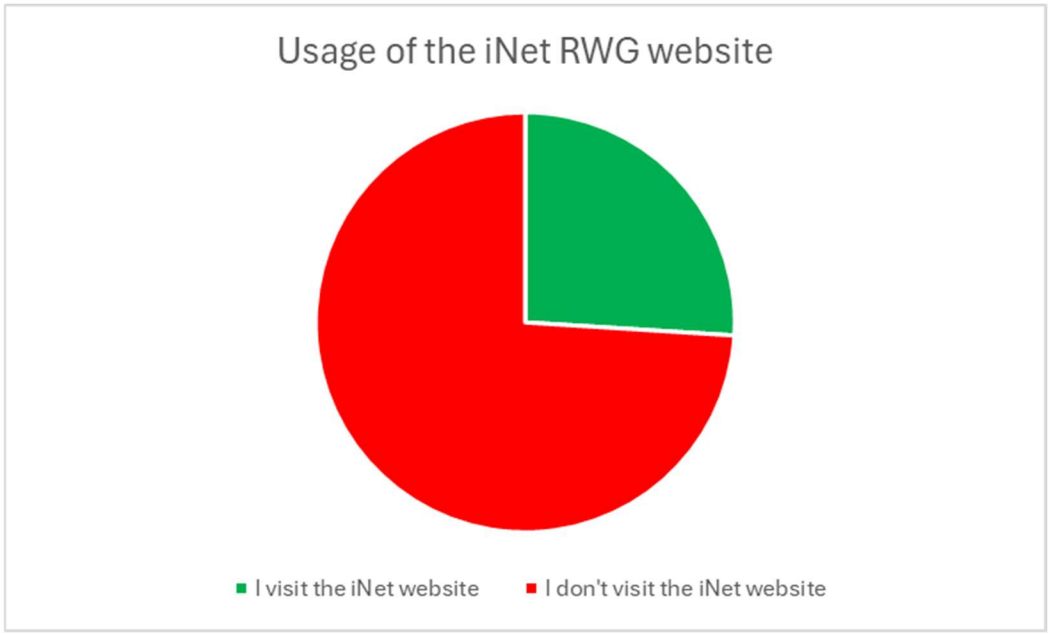
Problem statement

As a working group, we share our materials through various channels: the INCOSE iNet Website, YouTube, and Viva Engage.

- A lot of material is available.
- Material scattered around different channels.
- Material organized by events (IW/IS) and products.
- Findability and accessibility can be improved

How the members use RWG websites (based on polls in June)





Access to and findability of information

Quickest at this moment:

- Post a question on Viva Engage. Questions are answered quickly and adequately by other members or RWG leaders.
- Otherwise, browsing through available channels in search for an answer…

What we want to achieve?

Better service to the INCOSE community through:

1. Create an added value for our members.
2. Make optimal use of the existing INCOSE infrastructure.
3. Increase integration of the RWG products in the INCOSE framework.

1. Create an added value for our members

Reorganization of the website.

Decisions:

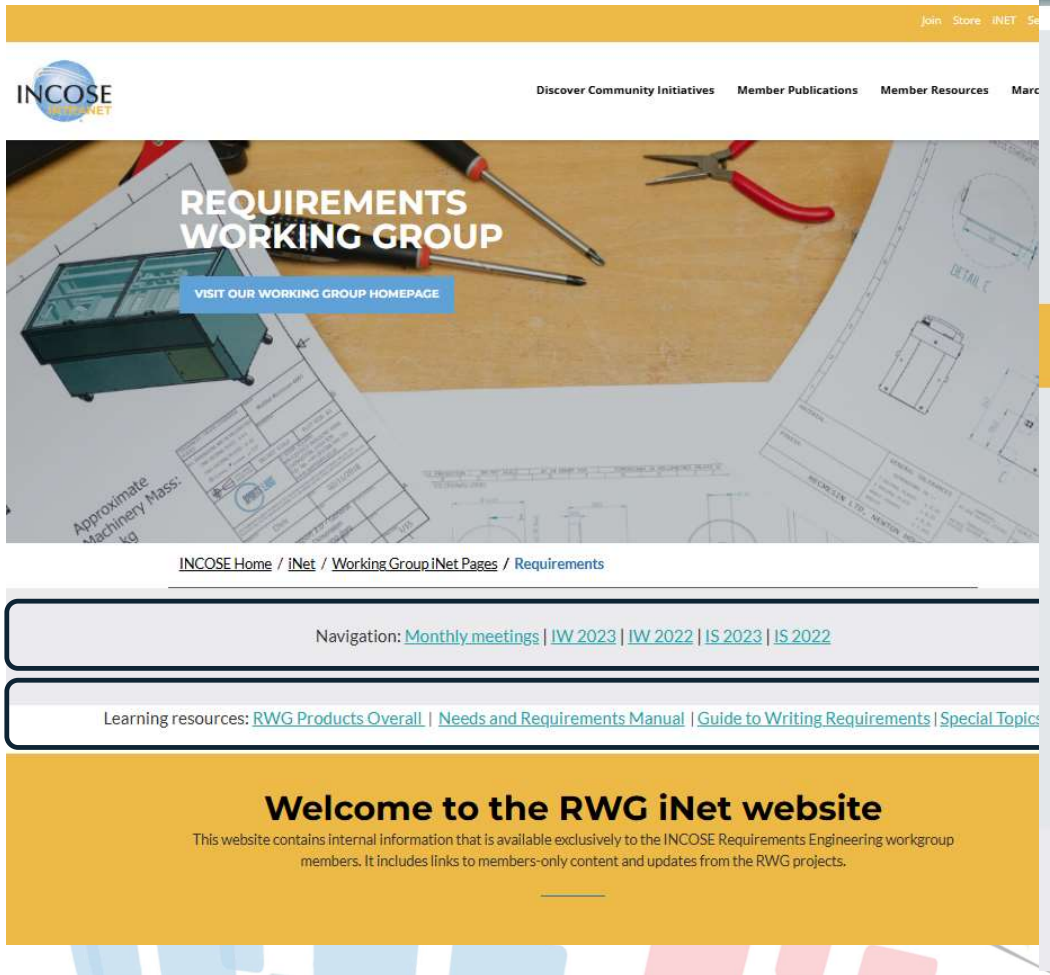
- More materials on the iNet web pages,
- Remove duplications in information,
- Only keep IS / IW information up to 2-3 years back.
- New video/recording will be added to these pages

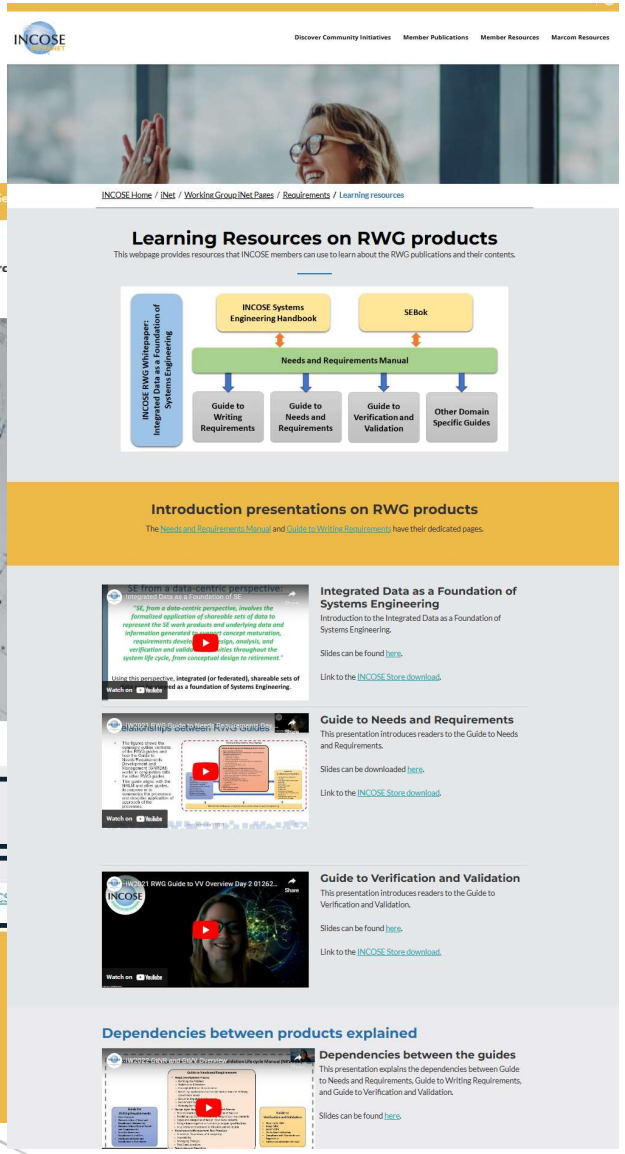
ORGANIZATION WEB PAGES

1. INet web page with members-only info.
2. IS/IW web pages
3. Introduction to RWG products *
4. Needs and Requirements Manual page *
5. Guide to Requirements Writing page *
6. Special topics web page (under construction) *

* Include videos and slides to learn

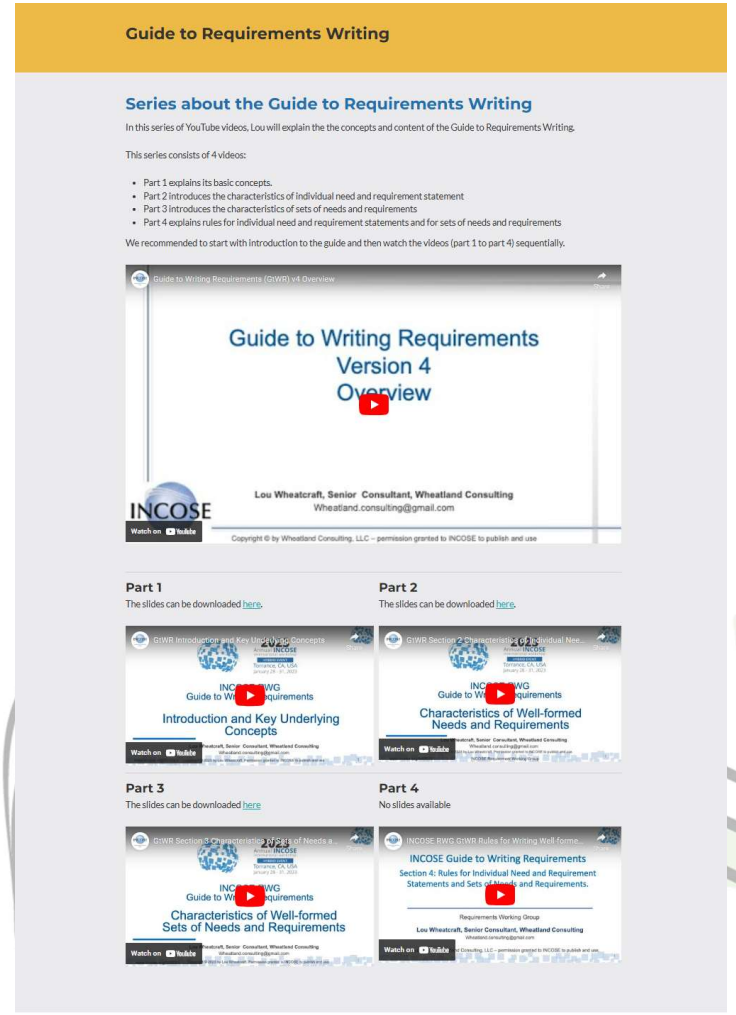
Demo


Join Store iNET
Discover Community Initiatives
Member Publications
Member Resources
REQUIREMENTS WORKING GROUP
VISIT OUR WORKING GROUP HOMEPAGE
INCOSE Home / iNet / Working Group iNet Pages / Requirements
Navigation: Monthly meetings | IW 2023 | IW 2022 | IS 2023 | IS 2022
Learning resources: RWG Products Overall | Needs and Requirements Manual | Guide to Writing Requirements | Special Topics
Welcome to the RWG iNet website
This website contains internal information that is available exclusively to the INCOSE Requirements Engineering workgroup members. It includes links to members-only content and updates from the RWG projects.


Discover Community Initiatives
Member Publications
Member Resources
Marcom Resources
INCOSE Home / iNet / Working Group iNet Pages / Requirements / Learning resources
Learning Resources on RWG products
This webpage provides resources that INCOSE members can use to learn about the RWG publications and their contents.
INCOSE RWG Whitepaper: Integrated Data as a Foundation of Systems Engineering
INCOSE Systems Engineering Handbook
SEBok
Needs and Requirements Manual
Guide to Writing Requirements
Guide to Needs and Requirements
Guide to Verification and Validation
Other Domain Specific Guides
Introduction presentations on RWG products
The Needs and Requirements Manual and Guide to Writing Requirements have their dedicated pages.
Integrated Data as a Foundation of Systems Engineering
Introduction to the Integrated Data as a Foundation of Systems Engineering.
Slides can be found here.
Link to the INCOSE Store download.
Guide to Needs and Requirements
This presentation introduces readers to the Guide to Needs and Requirements.
Slides can be downloaded here.
Link to the INCOSE Store download.
Guide to Verification and Validation
This presentation introduces readers to the Guide to Verification and Validation.
Slides can be found here.
Link to the INCOSE Store download.
Dependencies between products explained
Dependencies between the guides
This presentation explains the dependencies between Guide to Needs and Requirements, Guide to Writing Requirements, and Guide to Verification and Validation.
Slides can be found here.

RWG LEARNING RESOURCES 2
RWG Learning Resources 2
Guide to Requirements Writing
Series about the Guide to Requirements Writing
Guide to Writing Requirements Version 4 Overview
Part 1
Part 2
Part 3
Part 4
Self-learning on poorly formed requirements

2. Make use of the INCOSE infrastructure



- Store files centrally at INCOSE serves, instead YouTube.
- Faster access to the files.
- One source of truth.
- Easier integration towards the INCOSE framework.

3. Integration of the RWG products into the INCOSE framework

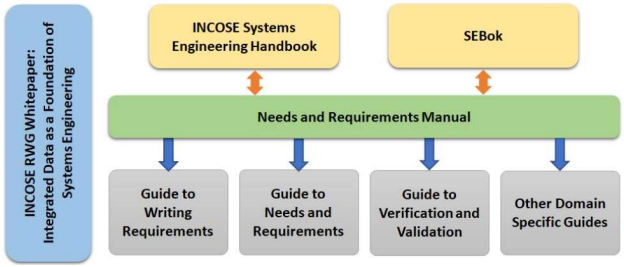
PDP

Include RWG products in learning programs

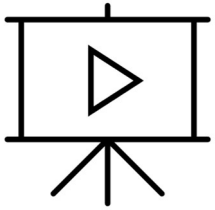
SE Labs

Try out concepts in tool

Products

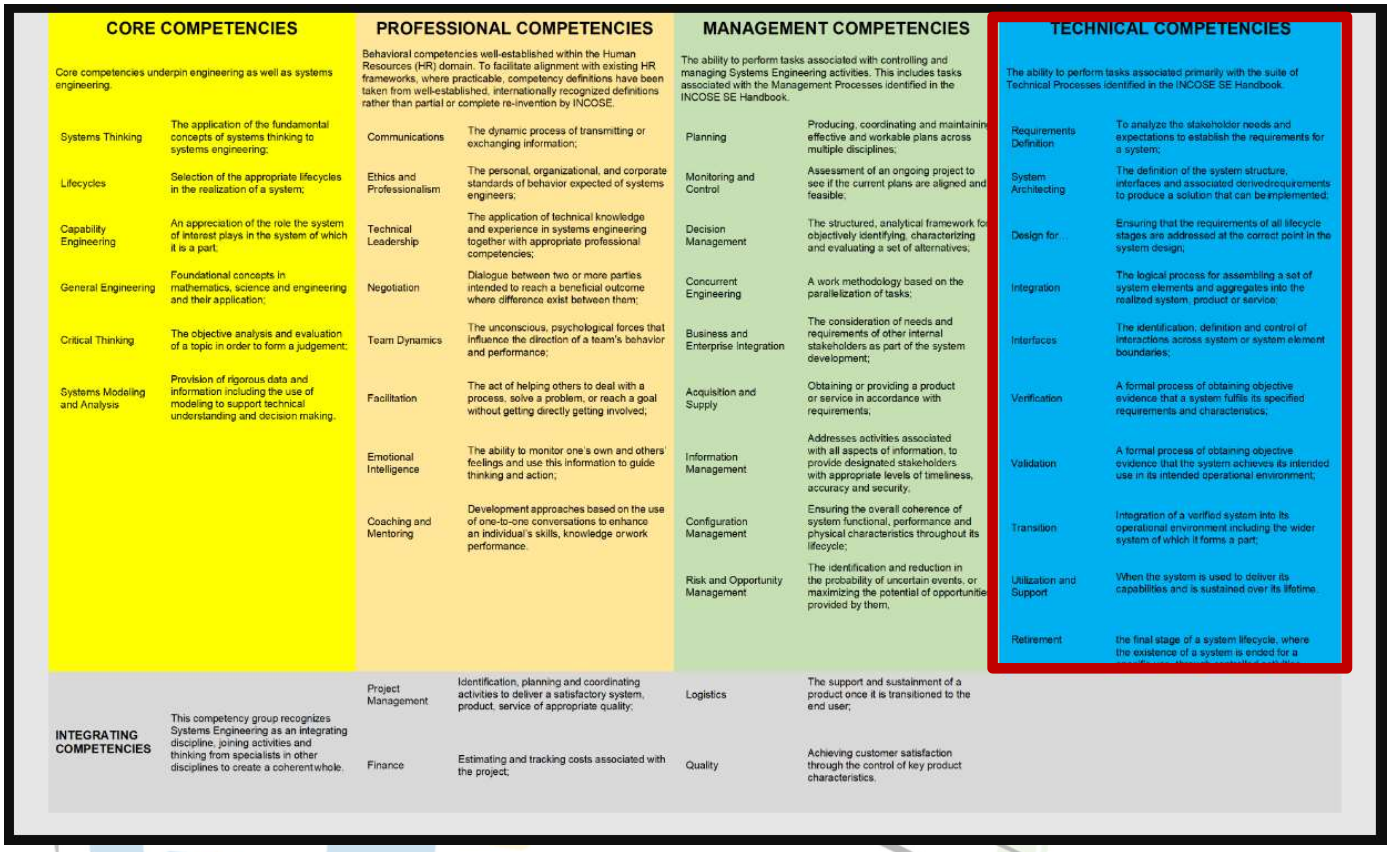


Learning materials



Requirements Working Group

Professional Development Portal



CORE COMPETENCIES

Core competencies underpin engineering as well as systems engineering.

Systems Thinking	The application of the fundamental concepts of systems thinking to systems engineering;
Lifecycles	Selection of the appropriate lifecycles in the realization of a system;
Capability Engineering	An appreciation of the role the system of interest plays in the system of which it is a part;
General Engineering	Foundational concepts in mathematics, science and engineering and their application;
Critical Thinking	The objective analysis and evaluation of a topic in order to form a judgement;
Systems Modeling and Analysis	Provision of rigorous data and information including the use of modeling to support technical understanding and decision making.

PROFESSIONAL COMPETENCIES

Behavioral competencies well-established within the Human Resources (HR) domain. To facilitate alignment with existing HR frameworks, where practicable, competency definitions have been taken from well-established, internationally recognized definitions rather than partial or complete re-invention by INCOSE.

Communications	The dynamic process of transmitting or exchanging information;
Ethics and Professionalism	The personal, organizational, and corporate standards of behavior expected of systems engineers;
Technical Leadership	The application of technical knowledge and experience in systems engineering together with appropriate professional competencies;
Negotiation	Dialogue between two or more parties intended to reach a beneficial outcome where difference exist between them;
Team Dynamics	The unconscious, psychological forces that influence the direction of a team's behavior and performance;
Facilitation	The act of helping others to deal with a process, solve a problem, or reach a goal without getting directly getting involved;
Emotional Intelligence	The ability to monitor one's own and others' feelings and use this information to guide thinking and action;
Coaching and Mentoring	Development approaches based on the use of one-to-one conversations to enhance an individual's skills, knowledge orwork performance.

MANAGEMENT COMPETENCIES

The ability to perform tasks associated with controlling and managing Systems Engineering activities. This includes tasks associated with the Management Processes identified in the INCOSE SE Handbook.

Planning	Producing, coordinating and maintaining effective and workable plans across multiple disciplines;
Monitoring and Control	Assessment of an ongoing project to see if the current plans are aligned and feasible;
Decision Management	The structured, analytical framework for objectively identifying, characterizing and evaluating a set of alternatives;
Concurrent Engineering	A work methodology based on the parallelization of tasks;
Business and Enterprise Integration	The consideration of needs and requirements of other internal stakeholders as part of the system development;
Acquisition and Supply	Obtaining or providing a product or service in accordance with requirements;
Information Management	Addresses activities associated with all aspects of information, to provide designated stakeholders with appropriate levels of timeliness, accuracy and security.
Configuration Management	Ensuring the overall coherence of system functional, performance and physical characteristics throughout its lifecycle;
Risk and Opportunity Management	The identification and reduction in the probability of uncertain events, or maximizing the potential of opportunities provided by them.
Project Management	Identification, planning and coordinating activities to deliver a satisfactory system, product, service of appropriate quality;
Finance	Estimating and tracking costs associated with the project;

TECHNICAL COMPETENCIES

The ability to perform tasks associated primarily with the suite of Technical Processes identified in the INCOSE SE Handbook.

Requirements Definition	To analyze the stakeholder needs and expectations to establish the requirements for a system;
System Architecting	The definition of the system structure, interfaces and associated derivedrequirements to produce a solution that can beimplemented;
Design for...	Ensuring that the requirements of all lifecycle stages are addressed at the correct point in the system design;
Integration	The logical process for assembling a set of system elements and aggregates into the realized system, product or service;
Interfaces	The identification, definition and control of interactions across system or system element boundaries;
Verification	A formal process of obtaining objective evidence that a system fulfils its specified requirements and characteristics;
Validation	A formal process of obtaining objective evidence that the system achieves its intended use in its intended operational environment;
Transition	Integration of a verified system into its operational environment including the wider system of which it forms a part;
Utilization and Support	When the system is used to deliver its capabilities and is sustained over its lifetime.
Retirement	the final stage of a system lifecycle, where the existence of a system is ended for a

INTEGRATING COMPETENCIES

This competency group recognizes Systems Engineering as an integrating discipline, joining activities and thinking from specialists in other disciplines to create a coherent whole.

Logistics	The support and sustainment of a product once it is transitioned to the end user;
Quality	Achieving customer satisfaction through the control of key product characteristics.

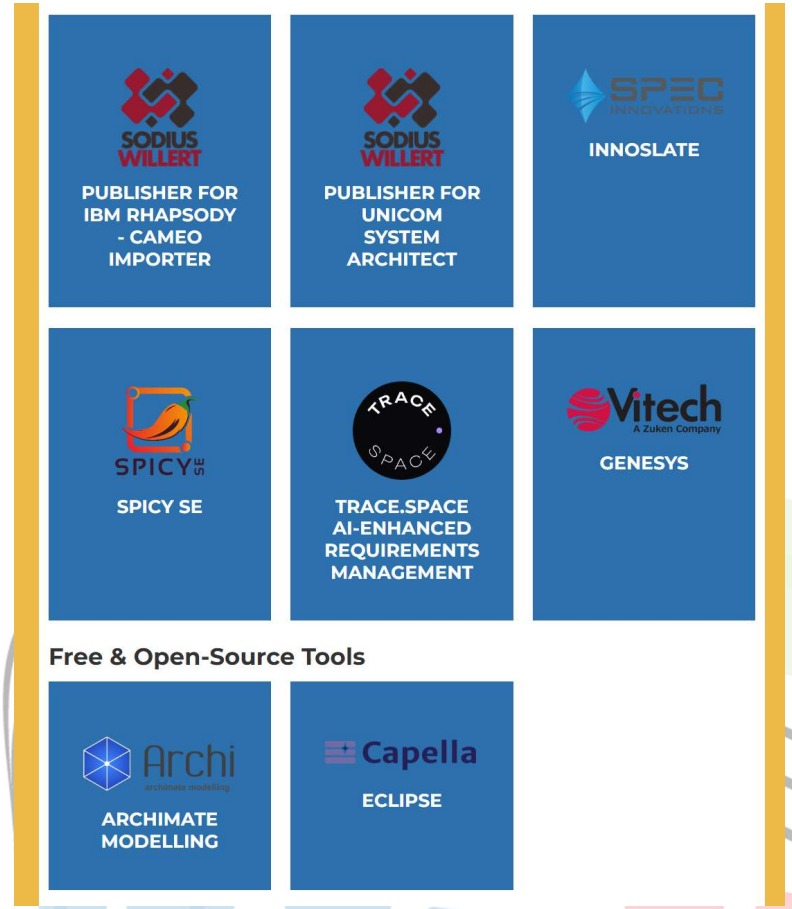
Requirements Engineering is a part of the technical competence area.

It includes:

- 24 free resources (from our RWG and other sources)
- 14 paid resources on requirements topics.

https://www.incose.org/learn/incose-pdp

SE Laboratory



[INCOSE SE Laboratory]

SE Laboratory products can be used for:

- Non-commercial purposes.
- INCOSE projects.
- Learning and experimentation.

INCOSE members interested in tools associated with needs and requirements development and management can learn about the tools available in the SE Lab.

Next steps

- Find a cost-effective and labor-effective way to create e-learnings on RWG products.
- Create decision trees that help users find the right content.
- Create customer journey maps to check the member experience with RWG products.

Discussion: What do you need to get more out of the existing materials?

Thank you!