International Council on Systems Engineering
A better world through a systems approach

Panel:
No Organization Builds Just One: The Feature-Based Path to Product Line Success

Panel Agenda

Schedule	Topic
03:30 pm – 03:40 pm	**Introduction and Objectives:** a. Introduction of the panellists. b. Overview of the session's learning objectives
03:40 pm – 04:00 pm	**Problem Statement:** a. Presentation of the challenge: "Nobody Builds Just One, Yet Few Adopt Systematic Reuse b. Panel discussion exploring myths, challenges, and drivers behind systematic reuse, followed by audience questions.
04:00 pm – 04:20 pm	**Defining Feature-Based Product Line Engineering:** a. Presentation: "What Feature-Based Product Line Engineering IS and IS NOT." b. Panel discussion on foundational concepts, industry applications, and challenges, with follow-up audience questions.
04:20 pm – 04:40 pm	**Enabling Modern Enterprises with PLE a. Presentation:** a. "How Advances in Software-Defined Systems, AI-Assisted Development, and SysML v2 Can Establish Feature-Based Product Line Engineering as a Standard Practice." b. Panel discussion and audience engagement on future opportunities.
04:40 pm – 04:55 pm	**Q&A and Conclusion:** a. Open floor for audience questions to the panellists

Introduction and Objectives

03:30 pm – 03:40 pm

Details

a. Introduction of the panelists.

b. Overview of the session's learning objectives

Host

Marco Forlingieri

INCOSE - PLE WG Chair

PTC – Senior Director PLE

He is currently serving as Senior Director for Product Line Engineering (PLE) at PTC, has gathered over 10 years of experience in MBSE and PLE. His expertise extends across aerospace, defense, automotive, and railway industries in Europe, North America, and Asia Pacific. Marco is chair of the INCOSE PLE Working Group. He is the leading author of the book *Model-Based Product Line Engineering* published by Wiley.

Panelist

Dr. Charles Krueger

Big Lever Software – CEO & Founder

He is founder and CEO of BigLever Software, which for over 20 years has helped organizations adopt and benefit from Feature-based Product Line Engineering (PLE). With more than 30 years of experience in systems and software engineering practice, he is an acknowledged thought leader in the PLE arena. He is the lead editor for the ISO/IEC 26580 & 26581 standards on Feature-based PLE and past co-chair for the INCOSE PLE International Working Group and is a current member of the Forbes Business Council. Krueger received his PhD in computer science from Carnegie Mellon University, where he helped to pioneer the field of systems and software product lines.

Panelist

Prof. Dr. Danilo Beuche

PTC – VP ALM Strategy & Go-to-Market

He works as VP of Strategy and Go-to-Market at PTC. He is the former CEO and co-founder of pure-systems, a software company that created Pure Variants, a software developed for the implementation of product line technologies in embedded software systems. His research on tool development for feature-based software development at the University of Magdeburg ultimately led to the establishment of pure-systems in 2001. Additionally, since 2016, he is serving as an honorary professor at the Institute for Information Systems (IWI) at the University of Leipzig.

Panelist

AIRBUS

Hugo Guillermo Chalé-Gongora

Head of Product Lines & MDO

He is Head of Product Lines and Multidisciplinary Analysis and Optimization (MDAO) at Airbus. He has over twenty-five years of experience in Systems Engineering and Product Line Engineering in the Energy, Infrastructure, Automotive, Railway and Aerospace & Defence sectors, where he has worked on the tailoring and application of SE, MBSE and PLE to the development of systems and products.. Guillermo holds a PhD on Energy & Thermal Systems, a Master on Energy Conversion and Internal Combustion Engines. He is founder and former chair of the PLE International WG, former founder and chair of the Automotive WG and member of the Transportation WG and the MBSE Initiative of INCOSE. He is the co-author of the book *Model-Based Product Line Engineering* published by Wiley.

Panelist

Tim Weilkiens

oose – Executive Board Member

He is a member of the executive board of the German consulting company oose, an MBSE consultant and trainer, and an active member of the OMG and INCOSE communities. He is a co-author of the SysML v1 specification, was co-chair of the task forces responsible for the last SysML v1 versions, and is active in the ongoing work on SysML v2Tim has written many books about modeling, including “Model-Based System Architecture”, “AI Assisted MBSE with SysML”, and Variant Modeling with SysML”. Tim is also co-author of the book Model-Based Product Line Engineering, which will be published by Wiley in March 2025.

Introduction and Objectives

1. **Clarity** on how **Feature-based PLE** distinguishes from reuse and strategic reuse
2. **Show** that the **focus of SE should shift** from single SE to **System Family Engineering**
3. **Reduce skepticisms** about PLE with Reasons and Myths
4. **Explore** how PLE is coupled with **Software-Defined Systems**, **AI-assisted Development** and **SysML v2**

Problem Statement

03:40 pm – 04:00 pm

Details

a. Presentation of the challenge: “Nobody Builds Just One, Yet Few Adopt feature-based PLE

b. b. Panel discussion exploring myths, challenges, and drivers behind systematic reuse, followed by audience questions.

No organization builds just one!

No organization builds just one!

No organization builds just one!

No organization builds just one!

Problem Statement

1. **Why** does **SE** primarily **focus** on **Single SOI** if no organization builds just one? Why don´t we talk about a **System Family of Interest** instead?
2. Which **objections to PLE** have you heard in your professional life? Why are those **Myths**?

Defining Feature-Based Product Line Engineering

04:00 pm – 04:20 pm

Details

a. Presentation: “What Feature-Based Product Line Engineering IS and IS NOT.”

b. Panel discussion on foundational concepts, industry applications, and challenges, with follow-up audience questions.

Defining Feature-Based Product Line Engineering

1. What is the **difference** among **Reuse**, **PLE** and **Feature-Based PLE**? (Highlight benefits of feature-based PLE vs. other approaches)
2. **PLE** is **not** an **overnight activity**. **How** do you **adopt** Feature-based PLE?

Enabling Modern Enterprises with PLE

04:20 pm – 04:40 pm

Details

a. “How Advances in Software-Defined Systems, AI-Driven Development, and SysML v2 Can Establish Feature-Based Product Line Engineering as a Standard Practice.”

b. Panel discussion and audience engagement on future opportunities.

Enabling Modern Enterprises with PLE

1. How Advances in **Software-Defined Systems**, **AI-Assisted Development**, and **SysML v2** can help establish Feature-Based Product Line Engineering as a Standard Practice?

Q&A and Conclusion

04:40 pm – 04:55 pm

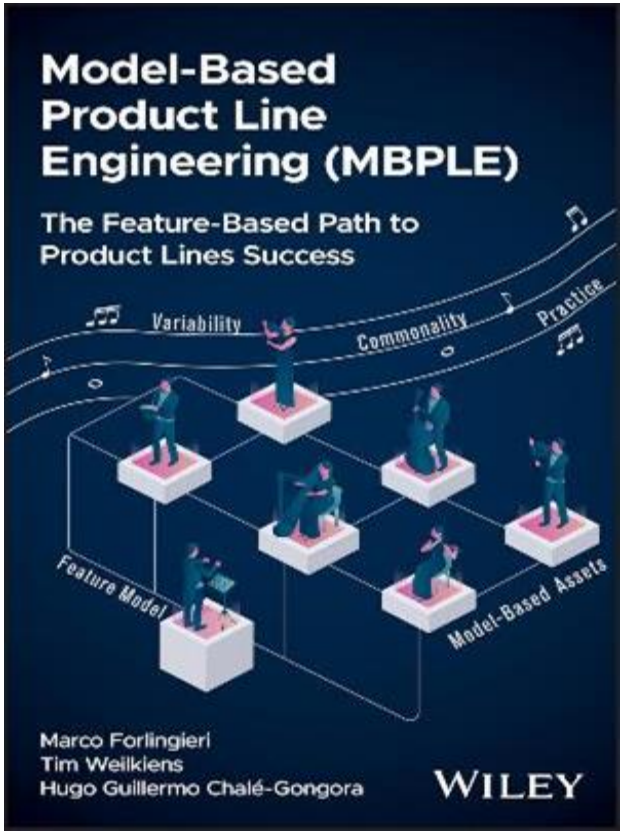
Details

a. Open floor for audience questions to the panelists

AIRBUS MBDA MISSILE SYSTEMS THALES

Raytheon An RTX Business BELIMO

Thank You
Question Time!

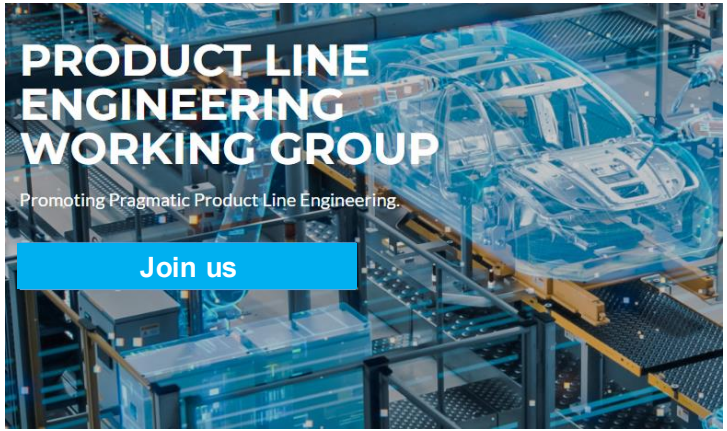


WE WILL BE PRESENTING AT THE

INCOSE INTERNATIONAL SYMPOSIUM 2025:

Meeting

Product Line Engineering (PLE) Working Group Open Meeting



Location
Ottawa, Canada
Room 211

Date
29 July 2025

Time
15:30H–18:00H

Join us and **explore how** yo can engage with the PLE Working Group

PLE WG Chair

Marco Forlingieri
PTC

Roland Darbin
GDMS

Dr. Charles Krueger
Big Lever

Find out more about the event: IS2025

#IS2025 #INCOSE #SystemsEngineering #PLE

PLE WG Dinner

LIMITED SEATS!

Tuesday 29 July

7:30 pm

1 ELGIN
RESTAURANT . BAR . TERRASSE

Location: 1 Elgin St. Ottawa, Ontario

Note: If arriving on foot, please enter the building, make your way to Level P2, and follow signage to the restaurant (750 m from the Conference venue)

For participation, please write an email to marco.forlingieri@incose.net

The dinner is self-sponsored!

35th Annual INCOSE international symposium

hybrid event

Ottawa, Canada
July 26 - 31, 2025