



# Carnegie Mellon University Software Engineering Institute (SEI)

## Lunch and Learn Series

Session 5 of 12

Wed Sept 21, 2022

12:00 – 1:30 PM EDT

Nataliya Shevchenko

Carnegie Mellon University



# Realizing the Benefits of Integrating Requirements Engineering into Your Digital Modeling (MBSE) Environment



A FREE Virtual Event – Registration Required

**Abstract.** Model-based systems engineering (MBSE) is a formalized methodology that supports the requirements, design, analysis, verification, and validation associated with the development of complex systems. MBSE in a digital-modeling environment provides advantages that document-based systems engineering cannot. Even though these advantages make MBSE digital modeling a desirable strategy, adopting it is a challenging task.

This presentation will provide an overview of how MBSE digital modeling addresses the first of system engineering domains: requirements. The objective of bringing requirements into the MBSE digital model is to combine the benefits of a digital-modeling environment and systems engineering practices in support of requirements engineering, requirements traceability through conceptual and solution architectures, and testing. Also, the presentation will show how to model requirements for a socio-technical or process-based system, such as DevSecOps.

**Mrs. Nataliya Shevchenko** is Senior Member of Technical Staff at Carnegie Mellon University (CMU) Software Engineering Institute (SEI) CERT division. She specializes in system engineering, Model-Based System Engineering (MBSE) and Threat Modeling Methods.

Nataliya has a breadth of experience across Software Development Life Cycle for 20+ years. Prior to joining SEI, she worked in teleconferencing, rail, and banking industries. Mrs. Shevchenko holds MS degrees in Software Engineering from Carnegie Mellon University, and BS/MS degrees in Mathematics from Donetsk State University in Ukraine.



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