

The Power of Model-Based Systems Engineering

What Is MBSE?

Model-Based Systems Engineering (MBSE) is the formalized application of modeling to support system requirements, design, analysis, verification, and validation, starting at conceptual design and continuing through development and lifecycle phases. By centralizing data in interconnected digital models instead of scattered documents, MBSE enables early error detection, consistent traceability, and optimized system performance.

Why MBSE Matters

- **Single Source of Truth:** Eliminate inconsistent documentation with a unified model-driven repository.
- **Early Validation:** Detect issues during modeling and simulation phases to reduce costly rework.
- **Automated Traceability:** Link requirements to design and test outcomes for full impact analysis.
- **Enhanced Collaboration:** Share and update models in real time, keeping multidisciplinary teams aligned.

The Innoslate Advantage

Innoslate® by SPEC Innovations is a cloud-native MBSE and requirements management platform. It offers LML/SysML modeling, integrated simulation, and full lifecycle management to streamline system engineering.

Why Choose SPEC Innovations?

- **Proven Heritage:** Originators of cloud-based MBSE with decades of systems engineering experience.
- **Support & Trust:** FedRAMP, DISA STIG, and ISO-certified environments for secure, enterprise-grade deployment.
- **Continuous Innovation:** Regular releases include new features to enhance system processes.

All-In-One MBSE Platform

Comprehensive Modeling & Simulation

- **System Modeling:** Built with support for SysML, LML, DoDAF, UML, and over 25 diagram types, complete with drag-and-drop ease.
- **Simulation & Analysis:** Run discrete event and Monte Carlo simulations to evaluate cost, schedule, performance, and resources with live results and Office exports.

Integrated MBSE Capabilities

- **Requirements Management:** Create, analyze, and maintain traceable requirements.
- **Verification & Validation:** Link requirements to tests and track coverage in real time.
- **Program Management:** Use built-in Gantt Charts, Kanban Boards, WBS, calendars, and task management.
- **Compliance-Ready Processes:** DoDAF modeling, e-signatures, and audit trails support regulated environments.

Key Benefits

- **Quality by Design:** Model behavior, simulate outcomes, and find issues before implementation.
- **Faster Deployment:** Automate documentation and validation to accelerate project delivery.
- **Risk Reduction:** Analyze functional behavior and failure impacts early in development.
- **Scalable Collaboration:** Work together across teams with secure, cloud-hosted platforms.

Who Uses Innoslate for MBSE?

- **Aerospace & Defense:** Design and verify mission-critical systems with compliance and simulation.
- **Government Agencies:** Standardize architectures (DoDAF), traceability, and secure deployments.
- **Commercial Engineering Teams:** Accelerate R&D and maintain traceable lifecycles.
- **Research Universities:** Teach and apply modern MBSE methodologies.
- **Complex Product Developers:** Bring transparency and rigor to automotive, energy, and infrastructure systems.