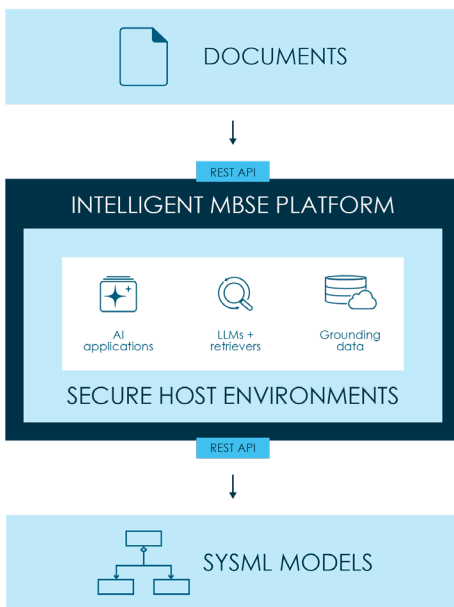


# INTELLIGENT MBSE™

Artificial intelligence for MBSE and digital engineering



MBSE is key to overcoming the resource-intensive and time-consuming challenges associated with traditional systems engineering. Transitioning to the digital domain enables organizations to model, test, and refine critical designs and workflows more quickly, accurately, and cost-effectively.

## CHALLENGES WITH MBSE

While MBSE offers significant benefits, it also introduces new challenges. Engineers often struggle with complex graphical interfaces, an overwhelming volume of data, and difficulty achieving truly integrated views for decision-making. But what if you could enhance MBSE by adding speed, accuracy, and automation to make every engineering process more efficient, effective, and insightful?

## THE AI SOLUTION

Arcfield's system-focused artificial intelligence (AI) for digital engineering solution—or **Intelligent MBSE**—helps users overcome MBSE challenges with the speed and precision of AI. **Intelligent MBSE** transforms how traditional text-based information is converted into digital models and design artifacts. Our purpose-built platform empowers engineers to shift their focus from the labor-intensive tasks of document mining and model creation to design innovation and model optimization. Human-AI teaming interfaces ensure responsibility—blending the accuracy of AI with the expertise and experience of the engineer. Additionally, the solution's built-in automation capabilities streamline time-consuming modeling tasks, allowing engineers to focus on innovative system design.

## BUILT INTO EXISTING MBSE TOOLING

**Intelligent MBSE** integrates with industry standard MBSE tools including Cameo Systems Modeler and Syndea. Additionally, **Intelligent MBSE** provides a tool agnostic, SysML V2-ready web interface to leverage the power of AI within all systems engineering workflows and digital ecosystems.

## INTELLIGENTLY AUTOMATES MBSE

Arcfield's unique approach to AI-human collaboration reduces modeling time, frees engineers from repetitive tasks and sharpens decision-making. We leverage AI to generate high-quality SysML system models and then import them to MBSE tools through automation. **Intelligent MBSE** streamlines workflows, increases accuracy and efficiency, and captures digital engineering data that is ready for machine learning (ML) and future utility.

## ACCELERATES MBSE THROUGH AI

Leveraging the power of AI, our novel solution further accelerates the systems modeling process, empowering users to quickly:

- Extract semantically accurate system requirements from legacy documents
- Generate SysML architectures from legacy documents
- Trace architecture elements to requirements
- Provide SysML model understanding and analysis
- Automate artifact creations in SysML tools and digital engineering repositories

## ARCFIELD + STC

Arcfield and Strategic Technology Consulting (STC) joined forces in 2023 to create an industry-leading provider of digital engineering services. Together, we are advancing the development and adoption of digital engineering and model-based systems engineering capabilities for government and commercial customers.



## KEY PLATFORM FEATURES



### Interoperable infrastructure

Built on a proven AI platform and designed for agile development and open API access, **Intelligent MBSE** enables easy integration with all SysML versions, MBSE tools, and digital engineering environments while supporting customizations for specific customer needs and use cases.



### Secure and compliant

Cloud-agnostic, with the flexibility to be deployed on government cloud platforms or within on-premises infrastructure, **Intelligent MBSE** adheres to the NIST AI Risk Management Framework, ensuring secure and reliable AI services.



### Accurate and trustworthy

**Intelligent MBSE** leverages domain-specific large language models (LLMs) and production-grade Retrieval Augmentation Generation (RAG) to deliver precise, reliable outputs that minimize typical generative AI hallucinations.

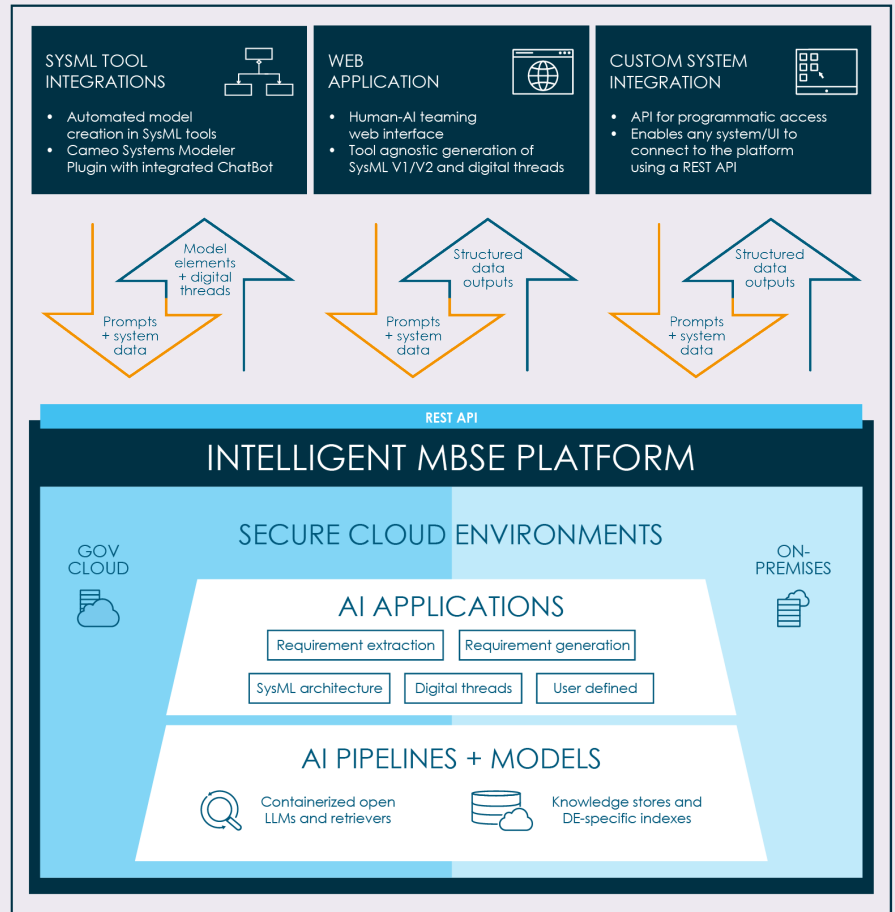


### Scalable and future-looking

A modular and dynamic architecture ensures our platform remains future-ready and scalable to the latest AI/ML innovations and techniques. Traceability, source information and evaluation metrics are also returned with all responses.

## THE INTELLIGENT MBSE DIFFERENCE

**Intelligent MBSE** automates SysML model creation, generates MBSE artifacts, analyzes SysML model data and integrates seamlessly with existing software through a structured data layer. This ensures that systems engineering processes are both efficient and future-ready.



### OPTIMIZED FOR BOTH DEFENSE AND COMMERCIAL APPLICATIONS

The **Intelligent MBSE** solution is designed for versatility and scale, serving both defense and commercial sectors. From the boardroom to the battlefield, it enables leaders to make faster, smarter decisions by leveraging the latest advancements in data, analytics and AI technologies.

## Ready to accelerate your digital modeling, testing and delivery capabilities?

Learn how STC delivers proven AI-informed MBSE solutions that save time and deliver better outcomes — whatever the mission.

**Contact us at [contactstc@arcfield.com](mailto:contactstc@arcfield.com) to get started today.**