CMMI AIM: Governing AI at Scale

CMMI AIM positions the organization to scale AI responsibly, protect stakeholder trust, and remain resilient amid accelerating regulatory and market expectations for AI governance.

Executive Message

CMMI AIM (Artificial Intelligence Maturity) provides a robust and dynamic **framework** for ensuring AI innovation delivers business value **without increasing organizational risk**. Organizations can ensure their AI initiatives are built on a solid foundation of reliable data and well-defined processes, which inherently promotes ethical practices such as fairness, transparency, and accountability. It enables leadership to assess, benchmark, and improve AI maturity and performance outcomes using a proven, outcome-based model already trusted worldwide.

CMMI AIM Impacts

- **Risk**: Addresses security, data protection, responsible and ethical AI
- **Compliance:** Proactive approach to addressing evolving regulatory landscapes
- **Performance**: Links AI use directly to measurable business outcomes
- **Consistency**: Replaces fragmented AI practices with a unified model
- **Trust**: Enables transparency and accountability in AI decision-making

> "As the world navigates an AI tsunami, CMMI AIM serves as a vital framework that enables organizations to rigorously benchmark their AI practices against a robust set of proven directional guidelines—driving value creation and strengthening client confidence." – CMMI Strategic Partner KPMG

Scope and Oversight

- Applies to **AI usage, development, acquisition, and integration**
- Relates to **all enterprise functions and industries**, not just IT or data science
- Introduces an **AI maturity benchmark** approach without disrupting existing CMMI appraisals

Assurance Mechanisms

- Structured AI maturity appraisals
- Certified training and appraisal pathways
- Crosswalks to ISO AI-related standards for audit readiness

Executive Summary

CMMI® Artificial Intelligence Maturity (AIM)

The **CMMI® Artificial Intelligence Maturity (AIM)** initiative extends the globally recognized **CMMI Performance Solutions** ecosystem to address the rapidly growing use of Artificial Intelligence in organizational systems, services, and products. CMMI AIM is fundamentally focused on **achieving and confirming predictable outcomes, reduced risk, higher quality, and greater efficiency** through **organizational performance**, ensuring that AI-enabled initiatives are implemented in a **consistent, measurable, transparent, responsible, and ethical** manner. The CMMI AIM framework provides proven best practices to manage the unique challenges of AI and unlocks the full strategic potential of the organization.

Purpose and Foundation

CMMI AIM builds on CMMI's proven, outcome-based approach to performance improvement, which has long supported organizations across product engineering, service delivery, security, safety, data management, supply chain, and workforce management. CMMI AIM introduces **AI-specific contextual guidance and best practices** that enable organizations to identify gaps, assess risks, and manage AI performance across the lifecycle. The model emphasizes that AI adoption should be **purpose-driven**, aligned to defined objectives and outcomes, and supported by strong governance, infrastructure, data quality, skilled personnel, and clear success metrics.

The CMMI AIM content was developed by the **CMMI AI Working Group**, a globally representative body of more than 25 industry experts sponsored by IBM Global and KPMG. The working group included executives, practitioners, instructors, lead appraisers, and subject matter experts from a wide range of industries and geographies. Their charter focused on researching and curating industry best practices related to AI, machine learning, automation, ethics, DevSecOps, testing, threat analysis, and advanced manufacturing, and translating those practices into actionable CMMI Model content.

Value Proposition

CMMI AIM provides organizations with a **trusted, structured, and globally recognized approach** to building and appraising AI maturity. By embedding AI industry best practices across all Practice Areas and domains, CMMI AIM enables organizations to manage AI risks, realize performance benefits, support regulatory and ethical obligations, and build deeper trust with customers and stakeholders. The result is a practical, scalable pathway for sustainable AI-enabled performance improvement.

Scope and Scale of AIM Content

CMMI AIM represents a significant expansion of the CMMI Model. All **31 Practice Areas** now include AI-related content, with **126 of 276 practices** containing AI context-specific additions. In total, the effort resulted in **157 AI context-specific additions**, over **200 pages of reviewed content**, and input from approximately **100 companies** through structured community and internal reviews. This depth and breadth enables AI considerations to be embedded consistently across organizational processes rather than treated as a standalone or isolated capability.

AI Context and Usage Scenarios

CMMI AIM recognizes that AI can be used in multiple ways and introduces clear **AI usage scenarios** to help organizations determine applicability. These range from **support augmentation AI**, where people use AI to assist with activities, to **verified augmentation**, where AI performs activities with human oversight, and finally to **fully autonomous AI**, where the system performs activities independently. CMMI AIM applies both to organizations **building AI solutions** and those **acquiring or integrating AI** into systems and services.

CMMI AIM View Domains

CMMI AIM introduces an **AIM View** that spans eight integrated domains: **Development, Services, Data, Security, People, Safety, Suppliers, and Virtual**, with a key emphasis on the Development, Services, Data, and Security domains. These domains collectively ensure that AI initiatives address not only technical development and integration, but also critical enablers such as workforce readiness, data governance, security, regulatory compliance, and ethical considerations. Organizations are expected to safeguard data, protect AI-enabled systems from threats, mitigate ethical risks, and ensure accountability, transparency, fairness, and explainability in AI use.

"Our appraisal participants stated that the CMMI AIM content is so comprehensive that it will enable much deeper trust with their customers, and directly and positively impact both top and bottom lines for organizations"

Appraisals and Benchmarking

CMMI AIM introduces a **new benchmark view** and does not alter existing CMMI appraisals. Appraising AI maturity introduces unique planning and scoping considerations that are addressed through specialized training. CMMI AIM appraisals enable organizations to assess AI maturity across domains, analyze AI performance, and characterize practices using established CMMI appraisal methods tailored for AI contexts.
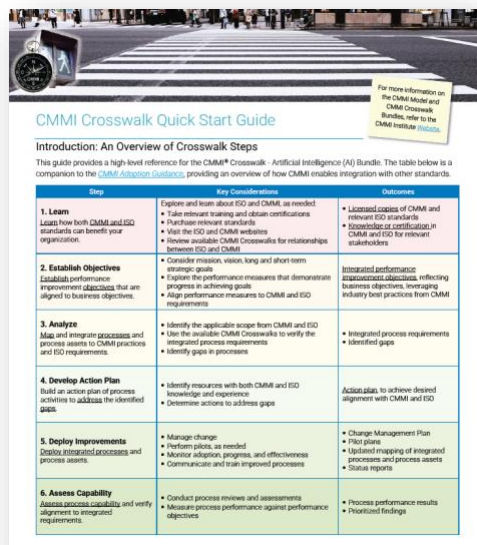
Training and Certification Pathways

To support adoption, CMMI AIM includes structured training and certification pathways aligned with existing CMMI High Maturity approaches. Key offerings include:

- **Building Artificial Intelligence Maturity (BAIM)**: A hybrid course combining precourse e-learning with instructor-led training, focused on AI concepts, data quality, responsible and ethical AI, regulations, and managing AI initiatives.
- **Appraising Artificial Intelligence Maturity (AAIM)**: An advanced course for certified CMMI Lead Appraisers, covering AI scoping, appraisal planning, performance analysis, and sustaining AI-driven improvement.

Existing CMMI certification holders are not immediately impacted unless they choose to extend their certifications to include CMMI AIM. Over time, CMMI AIM will become increasingly integral as AI continues to infiltrate organizations and industries.

CMMI AIM Assets and Crosswalks

CMMI AIM is supported by a comprehensive set of **model assets**, including the updated CMMI Model, training materials, appraisal guides, exam policies, and practitioner and lead appraiser certifications. In addition, a new suite of **CMMI Crosswalks** maps CMMI practices to multiple ISO AI-related standards (including ISO 23053, ISO 23894, ISO 31000, and ISO 42001). These crosswalks enable unified compliance, reduce duplication, support gap analysis, and provide bidirectional traceability across frameworks.