

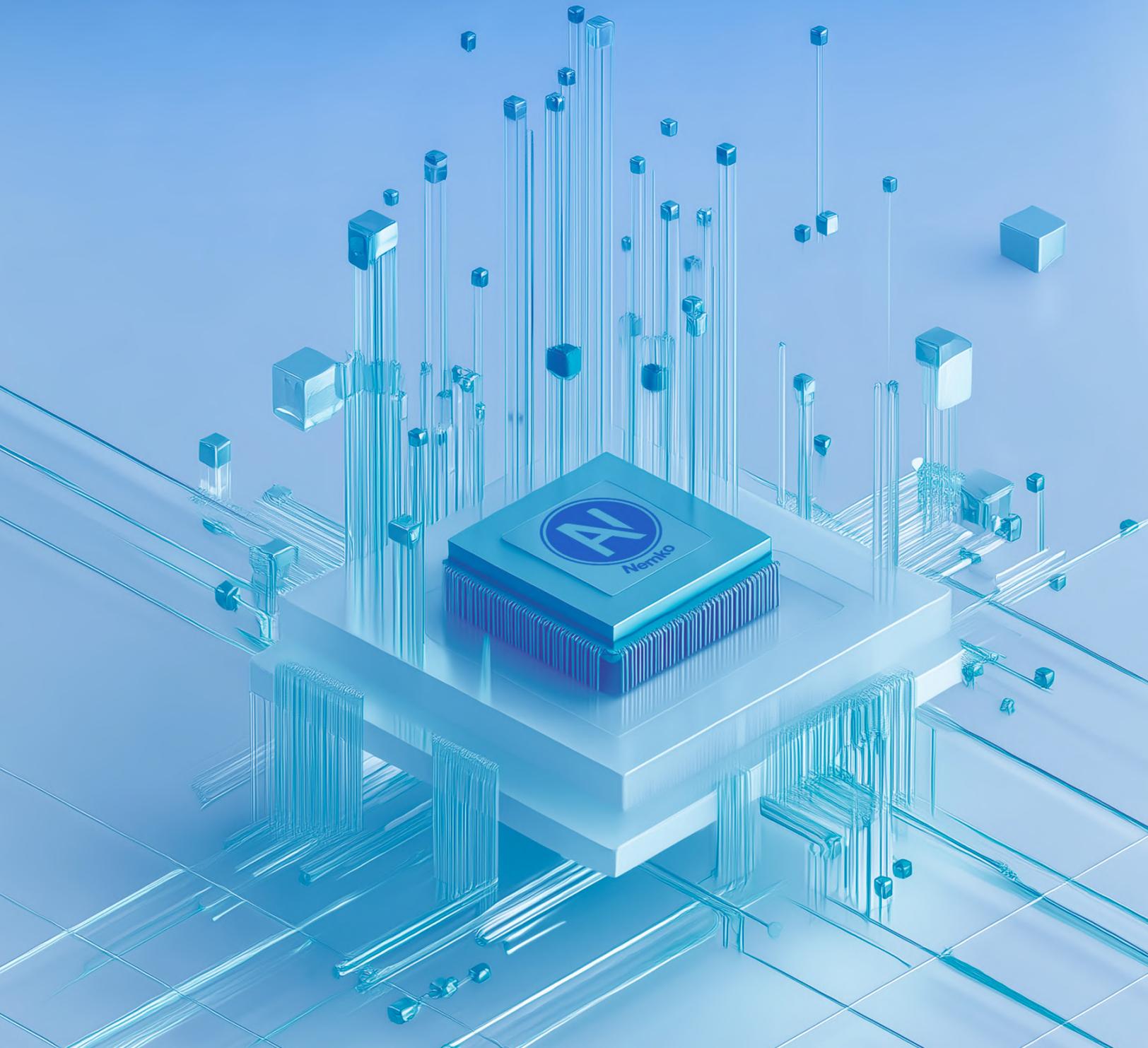


CASE STUDY

AI Trust Mark

How Samsung Is Shaping the Future of Trusted Connected Products

SAMSUNG



Executive summary

As AI-enabled features become integral to connected products, demonstrating trustworthy and well-governed AI is rapidly shifting from a differentiator to a requirement for market access. As early adopters such as **Samsung Electronics** explore similar approaches, Trust Mark certification is emerging as a practical mechanism to operationalize trustworthy AI at scale. This case study shows how a global appliance manufacturer proactively addressed emerging regulatory expectations, including alignment with the EU AI Act, by obtaining **Nemko's AI Trust Mark certification for its remote support platform**.

Through an independent assessment conducted by **Nemko Digital and the Korean Standards Association (KSA)**, the organization established a structured governance framework covering risk management, data practices, human oversight, and lifecycle monitoring.

This enabled the company to demonstrate transparent and responsible operation of its AI-enabled service while preparing for future regulatory scrutiny.

Beyond certification, **the initiative created a scalable foundation for deploying AI across a broader connected product portfolio, reducing future compliance friction and strengthening trust with customers, partners, and regulators**. The result is not only increased confidence in a single system, but a repeatable model for governing AI-driven services at scale in a rapidly evolving regulatory landscape.

As regulatory expectations and customer awareness continue to increase, the ability to demonstrate trustworthy AI is expected to shift from optional differentiation to a baseline requirement for market participation.



1. Situation

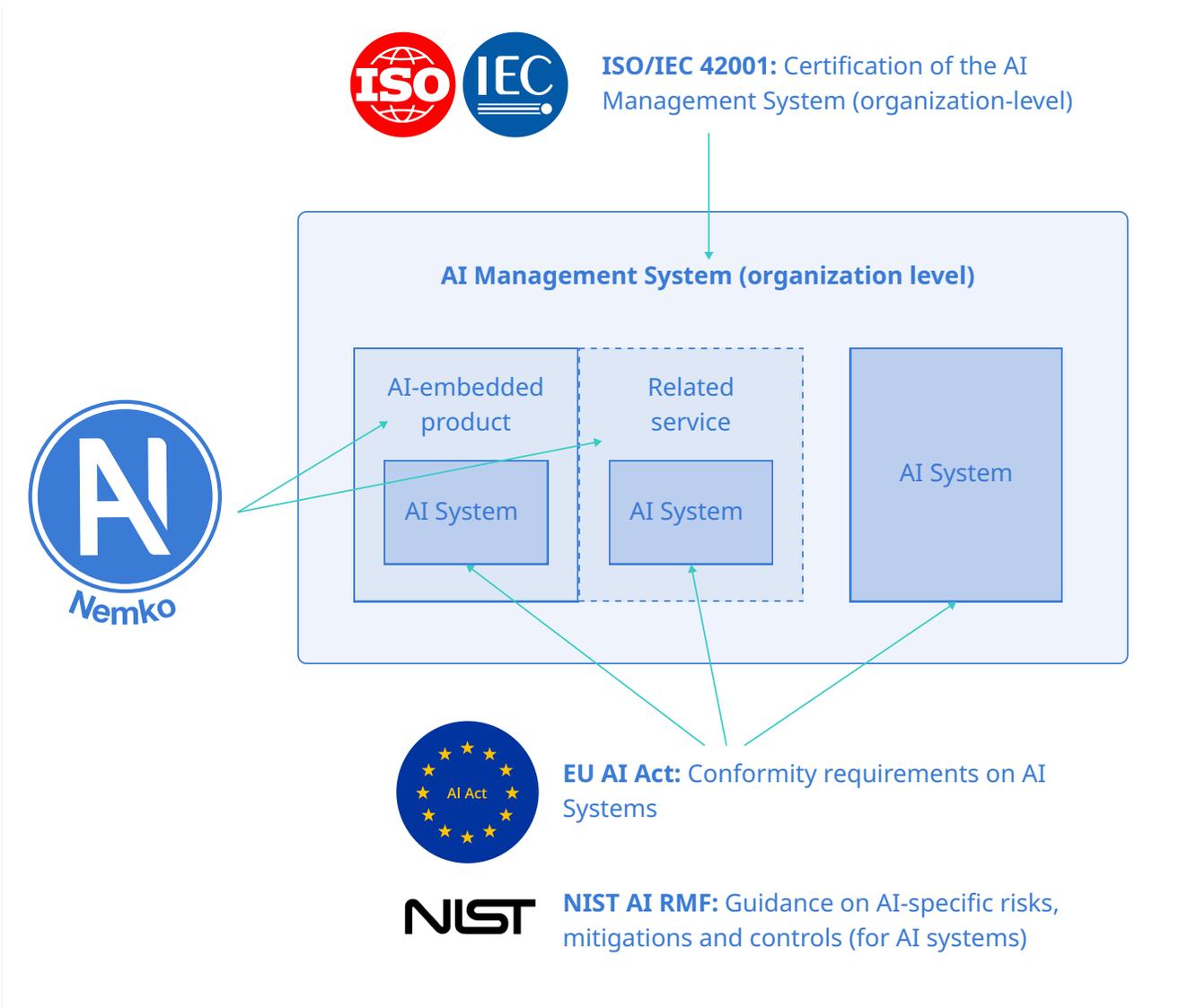
Samsung Electronics, the global leading manufacturer of consumer electronics and home appliances, was developing **an advanced remote support system for connected home appliances**. The system enables authorized technicians to remotely diagnose, troubleshoot, and resolve issues, significantly improving service efficiency while reducing the need for on-site interventions.

The AI-enabled service monitors appliance performance and provides diagnostics and service insights for customers in more than 120 countries. **By analysing operational data, the system can detect potential issues early**, including equipment malfunctions, abnormal usage patterns, and maintenance needs.

By enabling remote diagnostics and software adjustments, the system delivers faster resolution times, lower operational costs, and improved customer experience. At the same time, **remote access to household appliances introduces new requirements** for security, human oversight, transparency, and accountable AI governance.

With regulatory frameworks such as the EU AI Act emerging, **Samsung Electronics recognized that demonstrating trustworthy and well-governed AI is becoming a prerequisite for scalable deployment and continued market access**. This positions trustworthy AI not only as a compliance requirement, but as a key enabler of sustained digital service growth. To proactively address these requirements and strengthen trust with customers, partners, and regulators, Samsung Electronics pursued Trust Mark certification.

To achieve this, the company partnered with Nemko Digital and the Korean Standards Association (KSA) to conduct an independent assessment and guide the system through the certification process. **The Nemko AI Trust Mark evaluates alignment with internationally recognized frameworks for trustworthy AI, including emerging regulatory expectations and standards such as ISO/IEC 42001.**



The AI Trust Mark is aligned with the EU AI Act and built on the ISO/IEC 42001 framework. It goes beyond governance documentation by validating how these processes are applied to the specific AI product and how the system functions within the real service context.

2. Challenges

While the remote support platform offered clear operational benefits, demonstrating trust in such systems remains complex in a market where standards, certification schemes, and regulatory expectations are still evolving.

1 Demonstrating trust before standards are fully defined

European standardization efforts related to trustworthy AI and connected product services are still developing, and many practical standards are not yet finalized. **Waiting for the full regulatory and standards landscape to mature would delay innovation.** The organization therefore faced the challenge of demonstrating trustworthiness proactively, using available frameworks while anticipating future regulatory expectations.

2 Operating in a shifting regulatory environment

The regulatory landscape for AI-enabled systems and connected products is evolving rapidly, with new initiatives such as the EU AI Act and supporting standards under development. **Organizations must make design and governance decisions today while the final compliance frameworks are still being defined.** Ensuring that the remote support system remains aligned with evolving requirements was therefore a key challenge. This required **building governance capabilities** that remain robust under future regulatory scrutiny.

3 Demonstrating trust before standards are fully defined

Independent verification mechanisms for trustworthy AI are still emerging globally. Many stakeholders are unfamiliar with how trust marks signal responsible AI operation and governance. **Samsung Electronics therefore needed a certification approach capable of demonstrating credible and internationally relevant assurance,** particularly for regulators and global partners.

4 Preparing for independent verification

Achieving Trust Mark certification required translating existing technical practices into structured documentation and evidence that could be independently assessed. This meant **aligning engineering, security, governance, and operational teams** around a shared understanding of the Trust Mark requirements.

“Trust will be the defining factor in the global adoption of AI,” said Bas Overtoom, Managing Director of Nemko Digital. **“Samsung’s achievement demonstrates how leading technology companies can combine innovation with responsible governance.”**

3. Our approach & solution

Nemko Digital supported Samsung Electronics throughout the full AI Trust Mark certification journey, in collaboration with KSA.

The process began with structured risk categorization to determine the applicable requirements. **The AI Trust Mark defines three categories: R1, R2, and R3 (low, medium, and high risk).** These levels are aligned with the categories defined in the EU AI Act. For R3 (high-risk), the requirements also cover the full set of EU AI Act obligations for high-risk AI systems. For R1 and R2, the AI Trust Mark requirements in several areas go beyond those defined in the EU AI Act, providing additional assurance and value for consumers and partners.

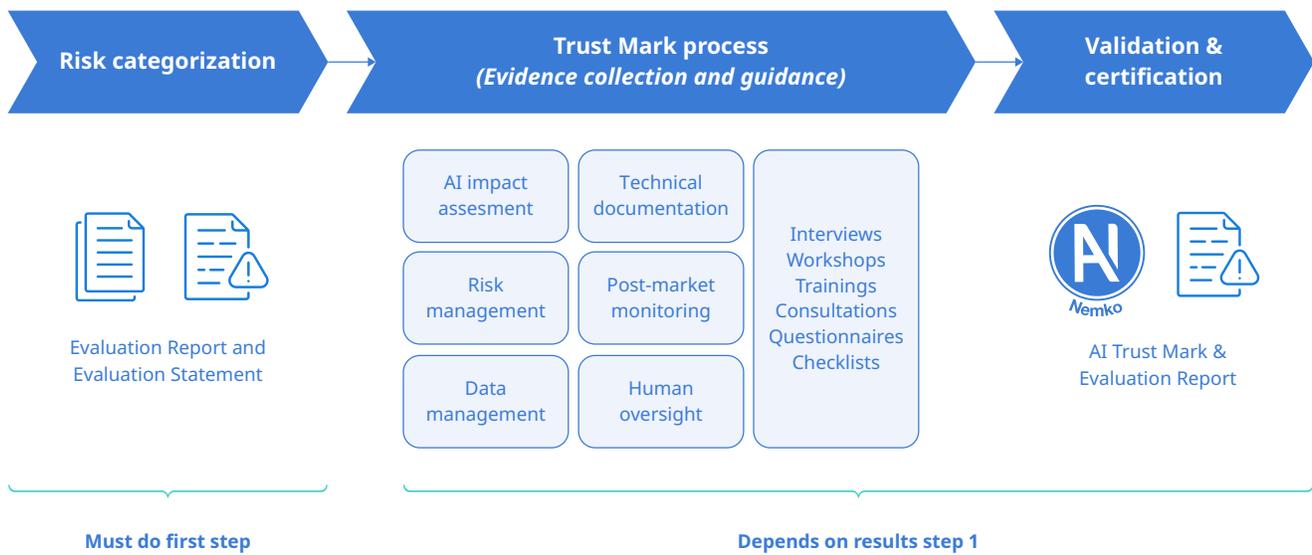
As part of the risk categorization, **Nemko Digital analysed the system’s purpose, AI methods, level of autonomy, safety implications, and data sensitivity.** Based on this analysis, Nemko Digital issued an independent evaluation to determine the appropriate risk classification, enabling the organization to proceed with the correct AI Trust Mark certification level. This ensured that the certification pathway was aligned with both current system characteristics and anticipated regulatory expectations. While it is possible to pursue certification at a higher level, certification cannot be obtained below the assessed risk category.

The system was then assessed against **the AI Trust Mark criteria, covering areas such as product definition, risk management, data governance, human oversight, transparency, and post-market monitoring.** KSA conducted on-site interviews and documentation reviews to validate implementation and supporting evidence.

Through iterative collaboration across engineering, compliance, and governance teams, **the organization established a clear and repeatable governance framework** demonstrating how the system meets Trust Mark requirements. This **framework is designed to be reusable** across future AI-enabled products and services.

Following successful validation, Nemko Digital issued the AI Trust Mark certification. **The system remains subject to periodic surveillance** to ensure continued alignment as the service evolves, supporting lifecycle governance and long-term compliance readiness.

“As AI becomes increasingly embedded in everyday consumer technologies, ensuring trust, transparency and reliability is essential,” said Jeong Seung, Moon / Corporate EVP - Executive Vice President - Samsung Electronics. “Receiving the Nemko AI Trust Mark reinforces Samsung’s commitment to developing AI-powered services that customers can rely on while supporting responsible innovation and global standards for trustworthy AI.”



Our roadmap to compliance process follows three key steps, ensuring your company is ready for certification.

4. Value delivered

The Trust Mark certification provided both immediate governance clarity and long-term strategic business value, positioning the organization for scalable AI deployment under emerging regulatory requirements. Concretely, experience with comparable certification schemes indicates that **well-communicated trust marks can contribute to a 10–15% increase in sales performance** when positioned effectively toward customers and partners.

Independent validation of system trustworthiness



Achieving the AI Trust Mark demonstrated that the remote support system meets internationally recognized expectations for responsible AI governance, transparency, and security. **This independent validation strengthens confidence** among customers, partners, and regulators.

Increased consumer trust and transparency



By formally demonstrating how remote access and support functions are controlled and governed, **Samsung Electronics reinforced user trust** in connected home appliances and remote service capabilities.

Regulatory readiness for emerging AI frameworks



The certification helps prepare the organization for evolving global regulatory requirements, including alignment with emerging frameworks such as the EU AI Act and related governance standards. This **reduces future compliance friction, audit complexity, and time to market.**

A structured trust framework for future products



The certification process **helped the organization establish and validate internal processes and governance structures** that can now be applied to future connected product services, accelerating the development of trustworthy digital features at scale.

Improved internal alignment



The project brought together engineering, security, and governance teams around a shared framework for trust and compliance. **This alignment improves collaboration and reduces uncertainty when deploying new digital capabilities.**

Market differentiation through trusted technology



With Trust Mark certification in place, Samsung Electronics can demonstrate its commitment to responsible innovation and trusted connected products, strengthening its competitive position in the rapidly evolving smart appliance market. **This positions the organization not only as compliant, but as a leader in trusted AI-enabled services.**

