

Your debrief from **AI & Smart Factory Conference 2026** · March 2026

Deploy AI with Confidence

Assurance · Governance · Security · Growth



Sleep well.

Dream big.



Building Digital Confidence. Delivering Future-Proof Value.

The **AI & Smart Factory Conference 2026** brought together industry leaders to explore how Artificial Intelligence (AI) is reshaping manufacturing - from intelligent automation and predictive maintenance to connected supply chains and data-driven quality management.

At the **4actis** booth, many of you asked the same questions: **How do we govern AI responsibly? How do we secure AI agents operating on the factory floor? How do we build a solid data foundation so our AI investments actually deliver? How can AI help us to grow?**

This document gives the highlights of our answers - a practical guide to deploying AI with confidence, illustrated with real-world use cases and actionable adoption principles, showing exactly how **4actis** can support your journey.

Once risks are identified and managed, you can **sleep well** - and your organisation is free to grow and **dream big**.

Assure	Secure	Grow
AI governance frameworks, lifecycle controls & compliance assurance	Cybersecurity & resilience across IT, OT, and AI environments	Strategic AI advisory, use-case prioritisation & business development

8 Principles for Successful AI Adoption

Deploying AI in manufacturing is an organisational transformation and not just a technology decision. Based on our experience across industries, these eight principles separate AI programmes that deliver sustainable value from those that stall or create risk.

1

Establish an AI & Data Governance Steering Committee

Create cross-functional leadership - including legal, IT, operations, and compliance - to set policy, prioritise investments, and own accountability for AI outcomes. Governance from a constraint becomes an enabler of speed and confidence.

2

Build a Structured, Expandable Data Platform as your AI Foundation

AI is only as good as its data. Invest early in a governed, high-quality data platform that integrates OT, ERP, and IoT sources - with clear ownership, lineage, and quality controls. Retrofitting data structures is far more costly than building them right from the start.

3

Prioritise AI Use Cases Based on Business Value & Feasibility

Not every AI idea deserves equal priority. Use a structured framework to score use cases on business impact, data readiness, technical feasibility, and risk. Start with high-confidence, high-value wins to build momentum and organisational trust.

4

Control AI Debt

Like technical debt, AI debt accumulates when models are deployed without proper documentation, monitoring, or refresh plans. Establish lifecycle governance as early as possible: version control, drift detection, retraining schedules, and deprecation policies.

5

Embrace and Assure Shadow AI

Employees are already using AI tools independently - from GenAI assistants to unofficial automations. Ignoring this creates risk. Instead, identify, assess, and formally govern shadow AI, bringing it into your policy framework rather than banning it.

6

Follow Responsible AI Practices (ISO 42001)

Adopt the ISO 42001 AI Management System standard as your governance backbone. It provides a structured, internationally recognised framework for responsible AI deployment - covering risk management, transparency, human oversight, and accountability.

7

Integrate EU AI Act Requirements Early

The EU AI Act introduces mandatory requirements for high-risk AI systems - particularly relevant for manufacturing safety, quality inspection, and HR applications. Early assessment of your AI portfolio against Act classifications prevents costly redesign and is a prerequisite for operating high-risk AI systems within the EU.

8

Invest in Change Management & AI Culture

Currently, the biggest obstacle to AI adoption is the people. AI should be positioned as an augmentation of people's capabilities and not just as a replacement. Keeping humans in the loop for critical decision-making and risk control is both a governance requirement and a trust-building strategy. Build AI literacy across the workforce, address concerns about job impact proactively, and create a culture where people and AI work together with confidence, clarity, and accountability.

AI Use Cases in Smart Manufacturing

Real value from AI comes from well-scoped, governed use cases that align technology capabilities with operational priorities. Below are four high-impact starting points for manufacturers - each one validated, governable, and ready for responsible deployment with the right assurance framework in place.



01

Corporate Virtual Assistant

An AI-powered virtual assistant that handles internal queries across HR, IT, compliance, and operations - reducing support load, accelerating response times, and freeing up specialist staff for higher-value work.

Key benefits

- ✓ Instant 24/7 responses to standard staff queries
- ✓ Reduced ticket volume for IT and HR helpdesks
- ✓ Consistent, policy-aligned answers across the organisation

Assurance requirements: *Data governance policy, Acceptable-use policy, Content moderation controls, EU AI Act classification review.*



02

Energy Saving in Manufacturing

AI-driven energy optimisation that analyses consumption patterns across production lines, HVAC, and utilities - identifying waste, predicting demand, and recommending or automatically applying efficiency measures.

Key benefits

- ✓ 15–30% reduction in energy costs (see IEA "Energy and AI" report Jan 2025)
- ✓ Real-time anomaly detection for energy waste
- ✓ Supports Green IT & ESG reporting requirements

Assurance requirements: *OT/sensor data quality, Model validation, Integration security audit, Ops safety review.*



03

AI-Powered Quality Reporting

Automated quality inspection and reporting using computer vision & machine learning - detecting defects at speed and scale impossible for manual inspection, with auto-generated compliance reports and traceability records.

Key benefits

- ✓ Up to 90% reduction in per-unit inspection time (see N-iX Computer Vision analysis)
- ✓ Consistent defect detection regardless of shift or operator
- ✓ Audit trail for regulatory and customer compliance

Assurance requirements: *Training data quality assessment, Bias audit, Model drift monitoring, ISO 42001 lifecycle controls.*



04

Intelligent End-User & Operator Support

AI agents that guide operators on the factory floor with contextual instructions, predictive maintenance alerts, and real-time troubleshooting - reducing downtime and knowledge dependency on scarce senior engineers.

Key benefits

- ✓ Reduced Mean Time To Repair (MTTR) on production lines
- ✓ Knowledge capture from retiring senior technicians
- ✓ Operator confidence and safety in complex environments

Assurance requirements: *Secure agent architecture, human-in-the-loop safeguards, change management & training programme.*

Good AI isn't intelligent. It's governed.

Assurance

Confidence

Growth

Secure the Present → Strengthen the Organisation → Shape the Future

How 4actis Helps You Deploy AI Confidently

Manufacturers adopting AI need more than technology - they need governance, security, trust, and operational resilience built in from the start. 4actis provides end-to-end assurance for your entire AI and digital ecosystem, so every deployment is confident, compliant, and future-proof.



AI Governance & Assurance

- ▶ Governance frameworks, roles & controls for responsible AI
- ▶ AI lifecycle management (ISO 42001, NIST AI RMF)
- ▶ AI risk & impact assessments and mitigation advisory
- ▶ Model validation, bias audits & security assessment (OWASP)
- ▶ EU AI Act compliance readiness



Secure AI Agents for Production Environments

- ▶ Design & creation of secure AI agents for factory environments
- ▶ Production monitoring, operator support & process optimisation
- ▶ Security hardening of AI agent infrastructure
- ▶ Secure integration with IT/OT/AI converged environments



Cybersecurity for IT/OT/AI

- ▶ Risk assessments across enterprise, OT & connected AI systems
- ▶ Regulatory compliance (NIS2, Cyber Resilience Act, GDPR)
- ▶ Security architecture & design review
- ▶ vCISO & GRC team-as-a-service



Data Trust & Control

- ▶ Data quality assessments & remediation
- ▶ Data traceability & lineage frameworks
- ▶ Structured data platform design as AI foundation
- ▶ Shadow AI identification & governance



Compliance & Readiness

- ▶ Alignment with ISO 42001, EU AI Act, ISO 27001
- ▶ Evidence-based assurance & audit readiness
- ▶ Integrated governance of AI, Cyber, IT & Green IT
- ▶ Customised training, awareness & change enablement



Resilience by Design

- ▶ IT/OT business continuity & disaster recovery
- ▶ IT controls testing & third-party vendor audits
- ▶ Digital sustainability & Green IT advisory
- ▶ Technology due diligence & M&A support

Ready to deploy AI with confidence?

Let's explore together how 4actis can govern, secure, and grow your AI programme.

Contact us for a complimentary discovery session.

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