



# AI in Manufacturing



AI in manufacturing is not about replacing skilled engineers. It's about removing friction from operations and giving teams faster access to information, insights, and decisions. AI can reduce downtime, improve quality, and help manufacturing teams operate more efficiently with the resources they already have.

## Common Challenges

- ▶ **Shift Handovers**  
Operational details lost between shifts.
- ▶ **Engineering Search Time**  
Engineers spend time searching manuals and maintenance documentation.
- ▶ **Quality & CAPA Reporting**  
Quality investigations and compliance documentation are time-consuming.
- ▶ **Production Visibility**  
Production data is often manual, delayed or inconsistent.
- ▶ **Supplier Quote Analysis**  
Procurement teams manually compare supplier quotes.
- ▶ **Equipment Downtime**  
Maintenance issues are often identified after failure.
- ▶ **Knowledge Loss**  
Critical engineering knowledge sits with a few experienced staff.

## AI Assistants

**Embedded inside everyday tools like Teams, Outlook and Excel.**

- ▶ Shift handover summaries
- ▶ Production meeting summaries
- ▶ Quality report drafting
- ▶ Supplier quote comparisons

### Outcome

**Faster communication, reduced admin, and clearer operational visibility.**

## Automation

**Removes repetitive operational processes.**

- ▶ Automated production reporting
- ▶ Automated CAPA documentation
- ▶ Supplier document processing
- ▶ Maintenance scheduling workflows

### Outcome

**Reduced manual administration and faster operational reporting.**

## AI Agents

**AI agents interact with systems and support operational decisions.**

- ▶ Engineering knowledge agent (manuals + troubleshooting)
- ▶ Predictive maintenance agent
- ▶ Production optimisation agent
- ▶ Operational reporting agent

### Outcome

**Reduced downtime, faster troubleshooting and improved production efficiency.**

## Real World Example



**Rolls-Royce Intelligent Factory Programme** — Using AI and advanced analytics to optimise production and reduce downtime across manufacturing operations.

### Results include:

- ▶ 30% improvement in machine utilisation
- ▶ Predictive maintenance reducing unplanned downtime
- ▶ Optimised scheduling across production lines — AI helps manufacturers unlock more value from existing equipment and engineering expertise.

A Simple ROI Example

- 1 Number of Employees**  
30 employees across the business
- 2 Time Spent on Repetitive Tasks**  
Significant time lost weekly to manual processes and admin
- 3 Time Recovered With AI**  
AI assistants, automation and agents typically recover 10–12 hours per employee per week

EXAMPLE BUSINESS IMPACT

- ▶ **Time Saved:** 10 hours per employee per week
- ▶ **Organisation:** 30 × 10 hrs = 300 hours/week
- ▶ **Annual Hours:** 300 × 52 = 15,600 hours recovered
- ▶ **Value:** At £25/hr = **£390,000** capacity unlocked

15,600

Hours of Productivity Every Year

£390k

Equivalent Operational Capacity

AI ROI is not about replacing people. It's about empowering teams to spend less time on repetitive work and focus on higher-value activities.

Assess Your AI Readiness

⚠ The Risk of Getting AI Wrong

Deploying AI without the right foundations is like **building a skyscraper on a swamp**. Shadow AI creates serious data, security and compliance risks.

AI adoption involves **data, security, governance, compliance and operational change**. This is why organisations turn to MSPs like Jera IT to guide their AI journey safely.

Our AI Readiness Assessment ensures the right foundations are firmly in place before deployment.



**Business, Strategy & People Readiness**

Strategic alignment and cultural preparedness for AI adoption.



**M365 Technical & Infrastructure Readiness**

Is your Microsoft 365 environment ready for AI to work reliably?



**Data, Security & Governance Readiness**

Will data be surfaced safely, securely and compliantly?



**Adoption, Change & Operating Model Readiness**

Who will own AI and will adoption truly stick?

[Book Your AI Readiness Assessment →](#)

AI & Automation Discovery Workshop

The real challenge isn't knowing *if* AI can help — it's knowing *where it delivers the greatest impact first*. Our workshop identifies your highest-value opportunities and builds a clear adoption roadmap.

- 1 Uncover Repetitive Work Tasks**  
Identify manual processes that can be automated, freeing up valuable employee time.
- 2 Spot AI Agent Opportunities**  
Pinpoint where agents can retrieve information, support decisions and automate tasks.
- 3 Remove Information Bottlenecks**  
Identify where employees lose time searching for documents, data or knowledge.
- 4 Prioritise High-Impact Use Cases**  
Focus on AI opportunities most likely to deliver fast ROI and measurable gains.

Typical Workshop Outcome:

- ▶ A clear list of AI opportunities across your organisation
- ▶ Prioritised use cases based on business impact
- ▶ A practical AI adoption roadmap for the next 12–24 months
- ▶ Guidance on governance, security and responsible AI deployment

[Request an AI Discovery Workshop →](#)

Why Scottish Businesses Choose Jera IT for AI

- 1 Scotland's Only MSP with a Dedicated AI Adoption Programme**  
The Jera AI Readiness Programme is the only structured AI adoption service built specifically for Scottish businesses — covering readiness, governance, deployment, and measurable outcomes. No other Scottish MSP offers this end-to-end.
- 2 Microsoft Solutions Partner with Deep Security Expertise**  
Microsoft Solutions Partner and Cyber Essentials Plus certified. We achieve an average Microsoft Secure Score of 74% for our clients, against an industry average of 31% — your AI deployment is built on a properly secured foundation.
- 3 AI Governance Isn't an Add-On. It's How We Start.**  
We map your data, establish access controls, identify shadow AI exposure, and deploy Copilot within your own Microsoft 365 tenant — so your client data, your IP, and commercially sensitive information never enters a public AI model.
- 4 We Measure What AI is Worth Using OI Scoring**  
Our Operational Intelligence Scoring system measures time saved by department across your business — giving you a clear, auditable return on your AI investment that you can present to your board, not just believe in.
- 5 Three Scottish Offices. Onsite When You Need Us.**  
Edinburgh. Aberdeen. Glasgow. When AI deployment needs hands-on support — training your team, configuring your environment, embedding tools into how people actually work — we're already here, not a remote team who visits quarterly.
- 6 Training Scotland's Next AI Professionals**  
Through the Jera IT Academy, we're investing in Scotland's AI and cyber security talent pipeline. Our knowledge of what's coming in AI is current, deep, and built from the ground up — not sourced from vendor briefing notes.