



Workforce Reinvention **Blueprint**

Manufacturing Industry

How AI and Automation will Transform the Workforce Based on Reejig's Proprietary Work Ontology™ Intelligence

How AI is Reinventing the Manufacturing Industry

The Manufacturing Industry is a colossal force in the global economy, valued at approximately \$44.5 trillion in 2023. By 2028, it is forecasted to grow to \$55 trillion.

Top 3 Concerns Facing Manufacturing CEOs in 2025

1. AI and Automation Revolution
2. Supply Chain Reconfiguration
3. Sustainability and ESG Compliance

Focus Area 1: Workforce Shifts

Projected Workforce Shifts in 2025 and Beyond

Where AI and Automation Will Drive Operational Effectiveness

1

Robotics will Improve Efficiency in Machine Operations

Through the use of robotics and AI-driven predictive maintenance, efficiency improvements are projected with the help of AI and automation.

With robotics, **efficiency improvements of 20-30%** are anticipated by automating repetitive tasks and reducing downtime.

2

The Rise of AI in Supply Chain Management

AI can significantly boost efficiency through predictive analytics and real-time monitoring.

AI-driven systems are projected to **improve inventory management efficiency by 15-25%** through optimized decision-making.

3

Reduced Equipment Downtime

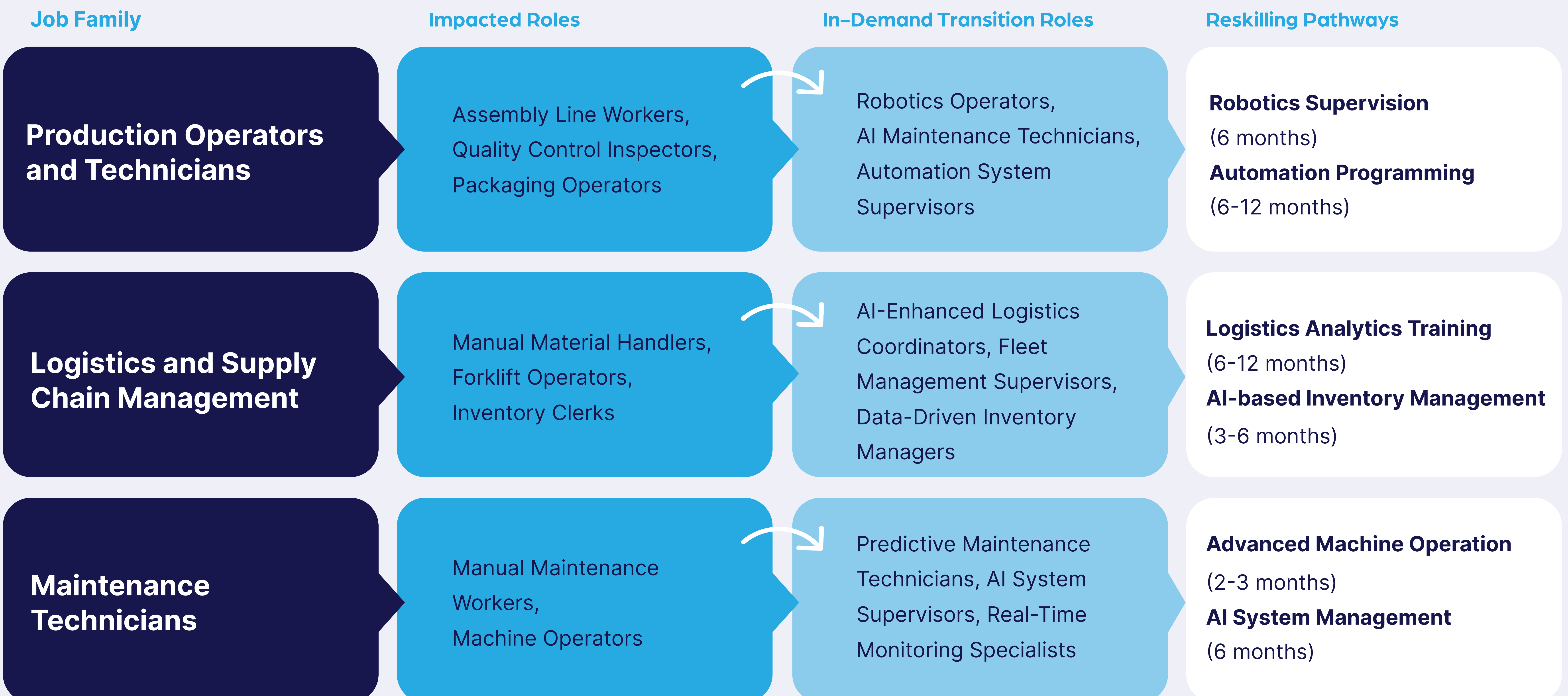
Significant operational savings are expected as AI-driven predictive maintenance reduces equipment downtime.

Predictive maintenance can **decrease downtime by 30-40%**, reducing unexpected failures and enabling proactive repairs.

Focus Area 2: Roles Impacted by AI

Key Roles Impacted and Reskilling Pathways for 2025

How Impacted Roles Can Transition to In-Demand Roles



Focus Area 3: Driving Operational Effectiveness

2025 AI Strategies to Boost Operational Effectiveness

Prioritized Roles for AI Transformation based on AI Potential Index, Operational Efficiency Index & Time to Benefit Realization

1 Predictive Maintenance Technician

This role can significantly reduce downtime and maintenance costs, with the potential to automate routine maintenance and predict equipment failures.

With an AIPI of 2.4 and an OEI of 60%, this role is a top priority for investment. The high potential for downtime reduction and cost savings makes it critical for transformation in industries where equipment uptime is essential.

⚡ AI Potential Index (AIPI) Score: 2.4

Breakdown: Potential Automation Proportion: 80%, AI Maturity/Risk Adjustment: 0.9, Current Automation Proportion: 30%

📊 Operational Efficiency Index (OEI) Score: 60%

Breakdown: Time Savings: 30%, Cost Savings: 20%, Process Improvement Factor: 1.2

🕒 Time to Benefit Realization: Short-Term (0-6 months)

Immediate improvements of 20-25% efficiency through basic AI deployment.

2 Quality Control Inspector

AI-powered machine vision systems improve inspection speed and reduce errors, essential in high-volume production environments for maintaining quality and consistency.

With an AIPI of 1.98 and an OEI of 60.5%, this role also presents a strong case for investment, especially for improvements in inspection speed and defect reduction.

⚡ AI Potential Index (AIPI) Score: 1.98

Breakdown: Potential Automation Proportion: 70%, AI Maturity/Risk Adjustment: 0.85, Current Automation Proportion: 30%

📊 Operational Efficiency Index (OEI) Score: 60.5%

Breakdown: Time Savings: 30%, Cost Savings: 25%, Process Improvement Factor: 1.1

🕒 Time to Benefit Realization: Medium-Term (18 months)

For full system integration across production lines.