



STRENGTHENING MANUFACTURING THROUGH SECURITY AND INNOVATION

For manufacturers, the future is just around the corner: **93% of industrial leaders believe we are on the brink of the next industrial revolution.**¹ This new era will be defined by connected systems, AI-powered workflows, data-driven decision-making, and rising expectations for speed and reliability. But while modernization can strengthen efficiency and uptime, without the right guardrails, it can also magnify existing vulnerabilities across devices, data, documents, and the workforce.

With adoption of physical AI technologies expected to more than double over the next two years,² manufacturers are rapidly shifting toward automated and data-centric production environments. But the shift requires more than just adding more technology and hoping for the

best. It will require manufacturers to build an operational foundation that is secure, automated, and integrated enough to support what's coming next. It will also require technology that works with people, as 81% of manufacturing task hours are expected to remain human-driven even as automation accelerates.²

This means that modernization must strengthen both systems and people, ensuring that technology amplifies human capability instead of trying to replace it. This requires a modernization strategy that leverages five key pillars—**security, automation, efficiency, integration, and scalable support**—to help reduce complexity, increase transparency, and embed reliability into every layer of their operations.

1. Security: Building an Integrated Protection Framework

As manufacturers adopt more connected equipment and AI-driven processes, their attack surface is expanding across devices, documents, and user access points. All it takes is an unsecured printer, an improperly shared document, or an over-privileged account to give attackers the foothold they need to gain access to the larger network, disrupt production, and steal intellectual property.

A modern security framework spans:

- **Device security** that locks down printers, scanners, multifunction devices, and other overlooked endpoints.
- **Document and data security** that enforces access controls, ensures document integrity, and protects IP throughout its lifecycle.
- **Workflow and identity governance** that reduces privilege misuse and limits exposure through role-based access and authentication.
- **Continuous monitoring** that catches anomalies early to prevent downtime and limits the impact of attacks.





2. Automation: Reducing Manual Work While Improving Consistency

As production environments grow more complex, any manual process will only introduce delays and inconsistencies that ripple across scheduling, quality, and compliance. Automation helps stabilize operations by reducing repetitive tasks, standardizing data capture, and enabling faster, more accurate decision-making.

- **Intelligent data capture** that can extract information from invoices, forms, and production documents without manual entry.
- **Automated workflows** that intelligently route documents, trigger inspections, and initiate approvals based on real-time conditions.
- **AI-assisted quality controls** that help detect anomalies earlier and more reliably than manual checks.

Modern automation can strengthen consistency through:

3. Efficiency: Streamlining Operations for Speed and Scale

In today's data-driven environments, efficiency isn't just about optimizing the production line. It comes from eliminating manual bottlenecks, improving data accessibility, and ensuring that every workflow moves smoothly across the value chain. With 73% of industrial leaders believing that any company that fails to modernize will become irrelevant within a decade,¹ operational efficiency is now essential to competitiveness and survival.

Modern efficiency requires:

- **Real-time visibility** that unifies data to help teams make faster, more informed decisions.
- **Digital workflows** that help reduce the lag and inconsistency of paper-based or manual processes.
- **Orchestrated information flows** to ensure documents, approvals, and updates move quickly to the right people.
- **Improved resource utilization** so teams can focus on valuable work instead of repetitive administrative tasks.

4. Integration: Connecting Systems, Data, and Workflows

While modern manufacturing environments rely on dozens of systems, they often operate in silos that lead to fragmented data, stalled processes, and a lack of visibility across the supply chain. By prioritizing integration, manufacturers can gain the visibility, consistency, and responsiveness needed to operate with confidence in an increasingly complex digital environment.

Effective integration can help:

- **Unified data environments** that enable a single source of truth across production, quality, maintenance, and supply chain.
- **Connected workflows** to ensure documents, inspections, and approvals move seamlessly across teams and systems.
- **Cross-platform governance** that ensures consistent security, access control, and data retention rules regardless of application or device.
- **Interoperability** to reduce manual handoffs and eliminate redundant or conflicting data entries.



5. Support: Scaling Expertise Across the Facility

As manufacturing systems become more digital and data-intensive, the need for reliable, scalable support has never been greater. Manufacturers can supplement internal teams with managed security services, IT support, print and device management, workflow automation services, or hybrid partnerships to help expand their capabilities without overextending staff.

Modern support can span across a manufacturer's facility to include:

- **Ongoing device and endpoint management** that ensures printers, scanners, and multifunction devices remain secure, updated, and reliable.
- **Managed security services** that provide continuous monitoring, vulnerability scanning, and incident response capabilities that many manufacturers cannot staff in-house.

- **IT and workflow support** to optimize digital workflows, manage integrations, and troubleshoot issues.
- **Training and change management** to help teams adopt new technologies confidently and consistently.
- **Flexible, scalable partnerships** that enable manufacturers to increase or reduce support as operations shift, new lines come online, or automation expands.

As technologies like AI and automation continue to accelerate, manufacturers will need operations that are secure by design, efficient at scale, and flexible enough to grow with new capabilities. By focusing on integrated security frameworks, unified data environments, automated processes, and scalable support models, manufacturers can achieve new levels of stability and performance that will allow them to thrive in the next era of industrial innovation.

Learn More about Canon's [Managed Security Services](#) and [Digital Transformation Consulting Services](#).

SOURCES:

¹ PwC, "[The future of energy and manufacturing](#)," September 2025.

² Deloitte, "[2026 Manufacturing Industry Outlook](#)," November 2025.



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