White Paper

# Agility as a Cornerstone of Your Automation Strategy


Matt Butler

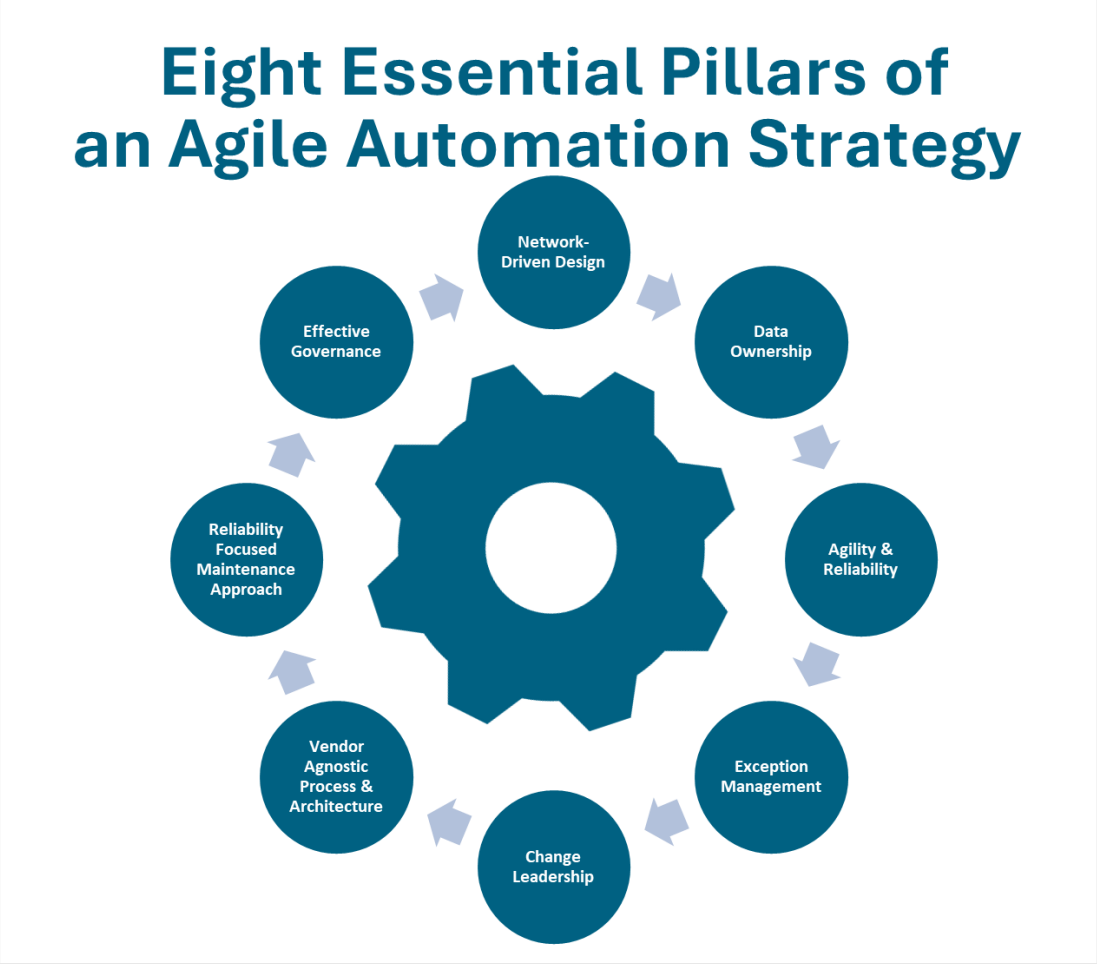
SCT Advisory

# Introduction

In today's volatile, fast-paced supply chain environment, companies must increasingly rely on automation to meet rising service expectations, mitigate labor challenges, and ensure operational efficiency. However, too often, organizations jump into automation initiatives without a foundational strategy that prioritizes agility—the ability to adapt quickly to evolving business conditions, technological advancements, and vendor dynamics.

An automation strategy rooted in agility enables companies to both fully consume the technology they invest in and future-proof their operations. Without this focus, organizations risk building rigid, single-threaded systems that are difficult to scale, reconfigure, or exit from if vendor relationships falter or market conditions shift.

This white paper explores the critical components of an agile automation strategy and offers practical guidance for leaders planning long-term automation investments.



# The Case for Agility in Automation

Automation investments are long-term, capital-intensive endeavors, and the environments in which they operate are anything but static, which introduces a high level of risk. Customer expectations, order profiles, SKUs, and labor availability are in constant flux. An agile automation strategy is essential to withstand these changes and ensure sustainable performance over time.

Key risks of inflexible automation strategies include:

- Inability to adapt to demand volatility or market expansion
- Locking-in with a single vendor, limiting future innovation or cost-saving opportunities
- Increased downtime due to a single value chain flow without alternative options to move product in the event of a piece of automation going offline
- As integration complexity grows, so does the risk of downtime
- Poor or delayed ROI from systems that cannot evolve with the business
- Ineffective change management that leads to poor adoption.

Building agility into automation allows organizations to de-risk their investments, drive faster time-to-value, and lay the groundwork for continuous improvement.
To achieve this, **organizations should incorporate eight essential pillars into their automation strategy**. These considerations ensure your automation strategy remains resilient, scalable, and aligned with both current needs and future ambitions.

## 1. Ground Your Automation in Network Design & Business Outcomes

Automation should not be implemented in isolation. It must be the output of a strategic, data-driven network design process that evaluates the full distribution landscape, growth strategies, and service level requirements.
Key activities:

- Conduct network modeling to assess optimal facility locations and flow paths
- Include scenario planning for volume increases, product changes, and M&A activity
- Determine upper confidence intervals for volume to avoid premature system obsolescence
- Conduct & engage key business stakeholders to understand their needs and enlist their support

Proper planning at the network level ensures that automation is deployed where it will have the greatest impact and can scale efficiently with business growth.

## 2. Design for Flexibility and Redundancy

Automation infrastructure must be both resilient and scalable. Designing systems with modularity, redundancy, and the ability to expand or reconfigure is critical to maintaining agility. Best practices:

- Use modular systems that allow for phased implementation and expansion
- Ensure equipment and system redundancy to minimize single points of failure
- Include physical space in designs for future equipment or process changes
- When space within a facility isn't available, design for exterior expansion abilities
- Design layouts that can adapt to SKU changes, shifting order profiles, or throughput demands

For larger-scale deployments, organizations should consider creating a Center of Excellence (CoE) focused on network simulation and continuous optimization. This CoE can simulate changes in volume, product mix, or demand behavior and recommend layout or equipment modifications in response.

## 3. Own Your Data Strategy

Data is the lifeblood of modern automation, and a core enabler of agility. Yet many companies rely too heavily on vendors for data cleansing, access, visibility, and analysis, limiting their ability to self-optimize.

Considerations for data agility:

- Ensure direct access to key operational data and system performance metrics
- Define ownership and retention policies for critical data assets
- Require open standards and interfaces in vendor contracts
- Evaluate tradeoffs between vendor-hosted vs. self-managed environments for reliability, security, and access

Additionally, middleware integration platforms offer a flexible alternative to point-to-point integrations. They enable:

- Centralized monitoring across diverse systems and vendors
- Faster onboarding of new vendors or technologies
- Improved alerting and issue resolution based on standard operating procedures

## 4. Build for Exception Management

Exception handling is a hallmark of an agile operation. Whether dealing with expedited orders, equipment failures, or unexpected demand spikes, the ability to respond quickly and efficiently is key. Agile automation environments should:

- Define standard procedures for common exception scenarios
- Include real-time alerting and prioritization capabilities
- Empower associates with visibility and authority to resolve issues

A centralized CoE can accelerate exception recognition and management across facilities, reducing downtime and preserving service levels.

## 5. Balance Maintenance Strategy and Vendor Support

Maintenance is a critical but often overlooked area of automation agility. Vendor maintenance contracts can be expensive and are not always aligned to operational needs. Organizations must develop a proactive, balanced approach. Recommendations include:

- Train internal technicians to perform routine and preventative maintenance and diagnostics
- Leverage vendor knowledge bases and training materials to build in-house expertise
- Customize maintenance schedules based on actual equipment usage and environmental stressors
- Evaluate vendor-agnostic maintenance management systems for central oversight

An internal CoE can also monitor predictive maintenance analytics and initiate corrective actions based on trends and recurring issues.

## 6. Invest in People, Training, and Change Management

Even the most advanced automation solutions will fail without the right people to support and operate them. Understanding why the organization is making the changes or moves that it is, is core to acceptance amongst individuals and teams. By bringing people along on the journey as active participants and contributors, they become the biggest cheerleaders of change and growth. Organizational readiness is a key to agility, and that readiness depends not just on training, but on effective change leadership.

Change management ensures that processes and roles adapt smoothly, but change leadership focuses on inspiring belief, building trust, and aligning the workforce with a shared vision. Change leadership transforms skepticism into engagement—and resistance into resilience.

Action items include:

- Conduct an organizational impact assessment early in the automation planning process to identify affected roles, processes, and potential barriers
- Engage front-line employees and managers as co-creators of the transformation, not just recipients of change. Empower them to identify risks, improve processes, and own the results
- Develop training programs that address not just how systems work, but why the change matters—linking new skills to broader business goals and personal growth and development paths
- Define and communicate a leadership narrative that clearly articulates the "why now," the "what's changing," and the "what success looks like" for all levels of the organization. The narrative should be consistent and have different focus areas by level
- Establish change agents and champions to model new behaviors, reinforce key messages, and support peers through the transition and be careful not to create animosity with these individuals in the organization
- Ultimately, an automation strategy is not just a technical investment, it's a cultural shift. Embedding strong change leadership practices ensures that your organization can absorb disruption, accelerate adoption, and sustain momentum well beyond go-live
- Create clear career paths to attract and retain automation-savvy talent

A strong change or transition management plan will ensure smooth adoption and support ongoing continuous technological improvement. Change management should include educating all involved associates about why you're making the changes that you are, what the expected benefit will be, and why their involvement matters and makes a difference. This will improve the willingness and excitement to be involved. Agility is not only built through flexible systems and data—it's cultivated through leadership. Organizations that pair technical innovation with strong change leadership will outperform their peers by creating adaptability, trust, and ownership at every level across people, process and technology.

## 7. Protect Yourself Through Contracting and Vendor Strategy

Strategic sourcing of automation technologies requires legal and operational protections to manage risk and ensure accountability.
Key contracting considerations:

- Define clear performance standards and SLAs in vendor agreements
- Establish remedies for failure to meet uptime, throughput, or service levels
- Include language on data ownership, integration support, and change or transition management
- Seek third-party expertise to represent your interests during contract negotiations

This protects your organization from costly underperformance and ensures alignment between your business goals and the vendor's solution.

## 8. Incorporate Effective Governance into Your Initiatives

Governance is essential for supply chain automation initiatives because it establishes a clear framework for guiding, controlling, and aligning automation efforts with the organization's strategic objectives and compliance standards. It ensures that automation is implemented consistently and responsibly, reducing risks related to security, data integrity, and regulatory adherence.

Additionally, governance provides transparency and accountability, enabling organizations to monitor performance, make informed decisions, and respond quickly to changing market conditions. By defining roles, policies, and standards, governance supports flexibility and innovation in automation while maintaining control, ultimately driving operational efficiency and resilience in the supply chain. Key reasons business process governance supports agility in supply chain automation include:

- Ensures Alignment with Business Objectives: Governance provides a framework to ensure automation strategies are aligned with overall business goals, enabling rapid adaptability to market changes.
- Maintains Compliance and Risk Management: Proper governance helps manage regulatory requirements and mitigate risks, allowing supply chain processes to remain agile without compromising adherence or security.
- Enhances Flexibility and Scalability: By establishing clear policies and standards, governance facilitates scalable automation solutions that can quickly adapt to evolving supply chain demands.
- Promotes Standardization and Continuous Improvement: Governance encourages consistent process standards, making it easier to identify improvement opportunities and implement changes swiftly.
- Supports Decision-Making and Transparency: Clear governance structures improve visibility into supply chain processes, enabling timely decision-making crucial for agility.
- Fosters Collaboration and Stakeholder Engagement: Effective governance ensures stakeholder involvement and clear communication channels, enhancing responsiveness and innovation in automation initiatives.

## Conclusion: Future-Proofing Through Agility

Agility is not a buzzword—it is a strategic imperative. **Embedding agility into your automation strategy allows you to unlock performance gains today while preserving the flexibility to respond to tomorrow's challenges.**

By grounding automation in network design, emphasizing data access and integration, building for scalability and exception handling, and developing internal expertise, companies can maximize ROI and maintain long-term operational resilience.

At **SCT Advisory**, we help organizations create and implement automation strategies that are resilient, scalable, and aligned with business growth. Our blend of operational leadership and technical depth enables our clients to avoid the common pitfalls of rigid automation and establish programs that deliver long-term value. We guide you, your organization, and your people through the process and steps necessary to a successful transformation to grow and evolve your supply chain to compete in a world that is changing at an exponential pace.
Let us help you design an automation future that moves at the speed of your business.