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The Automation Advantage

Embrace the Future of Productivity and Improve
Speed, Quality, and Customer Experience Through AI

Bhaskar Ghosh, Rajendra Prasad and Gayathri Pallail • McGraw-Hill © 2021 • 288 pages

Technology / Artificial Intelligence / AI Applications

Take-Aways

- A new era of business automation is emerging.
- Automation initiatives often face institutional obstacles.
- Automation strategy should support the business strategy.
- Begin an automation program by identifying likely processes to automate.
- Map out your automation project.
- "Future-proof" your automation structure.

Recommendation

The goals of automation are shifting. In the past, automation aimed to improve efficiency by replacing human workers with machines that performed tasks faster and more cheaply. In the new era of "intelligent automation," machines use artificial intelligence (AI) to augment human decision-making, problem-solving, strategizing and creativity. Rather than focusing purely on productivity gains, today's intelligent automation supports a business's overall market strategy. This book presents a blueprint for instituting an automation system across your organization.

Summary

A new era of business automation is emerging.

Historically, businesses focused automation initiatives on replacing human labor with machine applications. Their goal was greater efficiency – machines could perform the standardized tasks of an assembly line, for example, more quickly, cheaply and safely than humans could.

> *"Workers had always used tools, but automation meant handing work over to a tool itself."*

In recent times, as the focus of the world's major economies shifted from manufacturing to service industries, automation acquired a new role in knowledge work – tasks once the exclusive domain of human beings. This "intelligent automation" does not replace human workers. It supports and extends human intellectual talents.

The Italian newspaper *Il Secolo XIX,* for example, integrated artificial-intelligence automation into the work of its journalists and editors. An AI virtual assistant aids journalists by checking grammar and spelling, seeking out potential information sources and analyzing articles for "data consistency." The *Il Secolo XIX* journalists don't regard the virtual assistant as a threat to their jobs. Instead, they say automation makes them better journalists. They save time and uncover new sources, information and angles for their stories.

> *"Smart machines offer strengths and capabilities that are different from but highly complementary to people's talents."*

The business goal for automation has shifted from boosting efficiency to supporting a quest for excellence. In service-oriented businesses, automation evolved from streamlining routine behind-the-scenes functions to aiding in human-centered endeavors such as interactions with customers. Going forward, automation will play an even greater role in cognitive work, taking part in problem-solving and other tasks requiring learning from experience.

> *"Automation increasingly is being viewed as a way to boost top-line performance as well as bottom-line savings."*

To get the most out of an automation scheme, implement a coherent automation structure that spans the enterprise and directly serves the business's strategic goals.

Automation initiatives often face institutional obstacles.

The most common barriers include:

- **Lack of relevant technological skills** – In a number of surveys, managers report difficulty finding workers with sufficient expertise in developing and running intelligent automation systems. Some organizations shy away from the expense of developing those skills in-house.
- **Cultural roadblocks** – Initiatives can founder because the corporate culture instilled attitudes and conventions that impede change. One of the most powerful of these attitudes is anxiety about job stability. Workers need to understand that leaders at most companies seek to boost worker numbers and to use automation to assist employees in better serving customers.
- **Inadequate processes** – Companies can run into problems if they attempt to integrate poorly designed automating processes.
- **Legacy technology** – Companies face difficulties integrating advanced intelligent automation with outdated technology already in place.

> *"Because strategy evolves constantly in response to changing conditions, there must be a process for periodically revisiting and refreshing an organization's intelligent automation strategy."*

Misperceptions about automation can hobble an initiative. The most prominent counterproductive myths include:

- Customers won't accept it.
- Success in automation springs from acquiring leading-edge technology.
- When a company integrates an automation solution, managers can turn their attention elsewhere.

Automation strategy should support the business strategy.

Focus on using automation to improve capabilities – such as customer service – that differentiate your company from your competitors. Problems arise when a company undertakes an automation initiative without defining its strategic goals or fails to determine how it will measure progress. Strategic goals to consider in an automation initiative should be more ambitious than, for example, cost reduction.

> *"Combined with rapid advances in technologies related to AI, this digital revolution in business is creating endless possibilities for gaining value from machines that can sense, learn and act."*

The fashion retailer Moda Operandi, for example, used automation to bolster its strategic position as a purveyor of "high-touch service." As part of the customer experience, the retailer provided customers with a stylist who offered individualized guidance and recommendations. This service may seem like an unlikely candidate for automation, but Moda Operandi used AI to enhance the stylists' role: Algorithms learn from customers' past preferences, and suggest products stylists could incorporate into customized client portfolios.

Begin an automation program by identifying likely processes to automate.

Draw up a list of candidate processes for which automation will generate the greatest strategic impact. Cast a wide net, because you will reject many candidates. Some processes may not be worth the effort to automate because you use them only sporadically. Others may turn out to be impractical, because they are too complex or involve an extensive series of small steps.

To identify good candidates, look for "friction points" – impediments in a recurring task that undermine business success. For example, the customers of one auto maker complained the company took too long to respond to customer issues. An automated solution cut response time in half, and customer complaints dropped by 20%. Data analytics can identify these friction points and automation opportunities.

> *"The best 'next project' to tackle will be one located at the intersection of an organization's priorities and its preparedness – what solutions it needs most and what solutions it is most capable of implementing."*

When you find a process automation that might suit, perform another level of scrutiny before you move ahead. Eliminate unnecessary work rather than automate it.

Other processes may be good candidates for automation, but not in their current states. Streamline poorly designed processes before automating them. Otherwise, you'll end up with a bad process that runs faster. Examine each process, seeking out bottlenecks to unclog, and identifying steps you could consolidate or run simultaneously rather than sequentially.

To determine the optimal level of a process, ask workers who use it to describe how it works, and observe them as they operate it. A disparity often emerges between the official procedure a worker recites and how he or she actually operates the process.

Once your team optimizes a process, consider:

1. **Should automation of the process be total or partial?** – AI can perform sophisticated cognitive tasks, yet some processes require human reasoning power.
2. **Should you aim for a basic or an elaborate solution?** – Opt for the simplest solution, but don't avoid complex solutions if they have a greater effect on your organization's performance.

Map out your automation project.

Draw up a road map that shows where you are now and where you plan to be at the end of your automation journey. Outline the entire array of projects you will work on. Specify what needs to be in place for the plan to succeed.

> *"Turning an intelligent automation strategy into reality requires a structured approach to ensure that business leaders, IT leaders and employees throughout the ranks travel together in that journey."*

Automation planning should address six issues:

1. **The system needs to be "adaptive"** – It should have the agility to respond quickly to a changeable environment. Enhance this flexibility with modular architecture that can absorb new technology and work within alliances and partnerships.
2. **It should include an optimal "data fabric"** – A data fabric is the platform that allows threads of different types of data to interweave and work together. Companies need a data-fabric design that can handle enormous quantities of data.
3. **AI should form the foundation of the automation architecture** – The automation should have the capacity to learn from events and to continually enhance the customer experience.
4. **The system should make use of the cloud** – Cloud services are essential for flexibility and efficiency. The cloud offers access to AI and analytics technologies and services such as storage, databases, networking and software.
5. **It must be secure** – Embed security to protect the company's intellectual property and safeguard sensitive client data. Establish rules for creating, handling and disposing of data.
6. **It should be "platform-centric"** – Today's business models increasingly stress platform-based strategies. Consider how Microsoft expanded its product line with Windows as a common platform.

> *"Pursuing a platform-centric approach in the context of automation is about building a robust foundation of technologies, standards, frameworks and workflows, and making it available to support automation projects across an entire business."*

Develop an "automation operating model." This model sits below the level of the overarching automation strategy but higher than the day-to-day, granular management of individual business functions. It provides the frame within which the workforce performs at its highest level.

The model provides a holistic view of the automation scheme, with which managers can devise solutions for common systemwide issues, rather than having each department team generate a separate response.

> *"To unleash the full potential of automation, it is important to apply automation across the organization and with an enterprise-level perspective."*

Typically, an operating model takes the form of a chart delineating the operation's configuration. It highlights connections and interactions among different components. An automation-specific operating model offers a graphic representation all the components of the scheme, such as the search for opportunities, measurement of success, technology and platforms management, and innovation initiatives.

> *"Think of the operating model as the essential link from strategic intent to execution."*

Consider letting individual business units manage the operating model. Alternatively, create an automation center of excellence. Such a center can stay up-to-date on all components of the system and track their performance. It can suggest improvements for current processes and continue to seek new automation opportunities.

"Future-proof" your automation structure.

When you implement intelligent automation, you face the challenge of sustaining its new advantages and maintaining forward momentum. Your automation road map should include plans for continuing to cultivate innovation and developing agility to adapt to changes in the marketplace.

"Part of good management is maintaining forward motion and always having a plan for preventing an organization from slipping into complacency and falling behind."

Begin cultivating the long-term health of the initiative at the start by pumping energy and enthusiasm into the planning and launch. Excite all stakeholders about the potential the initiative holds for the future.

"Mind-set is a big contributor to the success or failure of intelligent automation efforts, and it is shaped by people's expectations of how they may be affected by a change."

When your automation scheme is up and running, maintain momentum by:

- **Celebrating your wins** – Decide on metrics to measure progress. Provide your workforce with updates on the company's automation-related achievements.
- **Providing support** – Offer ongoing support to all elements (human, operational and technical) that played roles in implementation. Establish an automation center of excellence to further this process.
- **Promoting continuous innovation** – Stay technologically current by constantly seeking out new possibilities. Study emerging trends, improve customer experience, invest in or partner with innovative "growth-stage" businesses, and institute mechanisms for collecting and incubating new ideas. Remember that automation is not purely a productivity issue. Follow the example of retailers who, after initial automation-based productivity gains, subsequently applied automation to study consumer behavior and personalize consumer communications.
- **Cultivating in-house talent** – Invest in your workers' abilities. As Expedia's data science director Jack Chua points out, you may have difficulty finding an outside AI expert when you need to perform maintenance on a process. Invest in a staff of such experts.
- **Ensuring continued governance** – Governance plays a major role in any successful automation initiative. But when the system is in use, overseers might shift their focus to other concerns. Formulate a governance structure that represents the interests of all stakeholders. This governance body should meet regularly to consider tracking data for all intelligent automation initiatives as well as feedback from project teams.

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