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Five management strategies for getting the most from AI

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By Jacques Bughin and Eric Hazan

A survey by the McKinsey Global Institute of 3,000 C-level executives across 10 countries and 14 sectors identified five fundamental strategies for how to get the most out of AI's potential, write Jacques Bughin and Eric Hazan in *MIT Sloan Management Review*.

Fueled by the buzz around powerful applications of artificial intelligence (AI), many business leaders are contemplating whether to introduce AI into their organizations. While practitioners and academics have outlined some of the strategic challenges of implementing AI, many executives are still seeking good models for how to generate competitive advantage from its application.

To find out more about what contributes to successful AI adoption, we helped lead a survey by the McKinsey Global Institute of 3,000 C-level executives across 10 countries and 14 sectors. From that research, we identified five fundamental strategies for how to get the most out of AI's potential.

1. Plan to grow, not just cut

Executives should approach AI as an instrument to expand their businesses — creating new products or services, increasing productivity, or winning more market share — as much as a tool to cut costs. Companies with less experience in AI tend to focus on its ability to help cut costs, but the more that companies use and become familiar with AI, the more potential for growth they see in it.

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This same subset of retailers, the early AI adopters, reported that insight-based selling — using AI to review shoppers' habits and suggest personalized promotions and tailored displays — increased sales by 1% to 5% in traditional stores. And they reported that personalization and AI-enabled dynamic pricing lifted online sales as much as 30%.

2. Invest in both technical and managerial talent capabilities

In our survey, executives gave several reasons for not adopting AI. The largest share (30%) said they were uncertain of its business case. Another 21% cited the scarcity of AI-related human capabilities — and these same executives were 50% more likely to also say that AI presented an uncertain business case, suggesting that human capabilities are critically important to capture the returns from AI in new organizations.

The talent question is challenging for many organizations on two grounds. First is the need for new talent: When debating how AI may affect labor markets by automating parts of old jobs, companies have paid less attention to how AI is likely to require new technical job categories such as "DevOps Engineers" and "Next-Gen Machine-Learning Engineers." Second is the need for managerial attention: Good return on AI will be captured only when the technology is embedded in business and workflow processes — a job that typically is complex and requires management from the highest-level leaders.

Regarding technical jobs, AI promises to be a great source of employment — but also of headaches. Filling new technical positions is expensive and time-consuming because we have not been turning out enough skilled professionals to keep up with the demand. In the United States, for instance, there were approximately 150 million workers in 2016, but only 235,000 data scientists. To circumvent the issue, companies should be using multiple paths for talent acquisition. Organizations that have been best at adopting AI are better at anticipating needs, starting with a few hires during pilots and then scaling their recruitment process just before they move from piloting to full-scale development.

The management of AI technology also involves new leadership skills, including those required to implement modern processes embedded with AI. Companies that are successfully embracing AI are committed to transformation programs, with top management embracing the change and cross- functional management teams ready to redefine their processes and activities.

3. Be open to revising your strategic goals

In the age of digital disruption, incumbent organizations often "play defense" and protect existing business lines by cutting costs, boosting automation, or improving customer service. Often, though, they would be better off playing offense by pioneering new products and business models. We saw this with the Schibsted Media Group of Oslo, Norway, which moved its entire newspaper classified business to a free online marketplace, opening up a new revenue stream that now generates more than 80% of the group's earnings.

Similarly, companies committed to adopting AI need to make sure their strategies are transformational and should make AI central to revising their corporate strategies. There can be a clear strategic payoff in fully embracing the use of AI: In our data, we found that for 12 of the 15 sectors studied, companies that use AI at scale and go on the offensive report profit margins of 5 points higher than others — 18% versus 13%.

4. Rely on a solid digital foundation

AI works best when it has real-time access to large amounts of high-quality data and is integrated into automated work processes. Thus, AI is not a shortcut to creating digital foundations, but a powerful extension of them instead.

Our analyses back this up. At the McKinsey Global Institute, we built a comprehensive measure of the status of digitization intensity in an enterprise. The measure looks at digital assets, including an organization's computers, robots, digitally connected systems, and other information communication and technology (ICT) assets. It also looks at how digital assets are used, such as for digital payments, digital marketing, back-office operations, and customer relations, and at the human resources devoted to using digital.

We found that companies that are able to show a statistically significant impact from AI not only have a strong digital intensity but also have a strong AI intensity. Overall, AI intensity is relatively uncommon: Less than 5% of companies report that they are using AI as an enterprise-wide solution. Most of these are digital-native companies. But those that score high on both AI and digital dimensions report a much larger and statistically significant impact of AI on their profit development than companies with high scores in AI alone. Our conclusion: Leapfrogging digitization to adopt AI does not seem a good idea.

5. Help nurture the creation of AI ecosystems

Leveraging network effects, which were so important to building global digital centers like Silicon Valley, appear to be just as important to budding AI hubs. A critical mass of researchers, developers, financiers, and customers can create a fertile, self-sustaining ecosystem in which innovation and entrepreneurialism can thrive.

Business leaders can nurture the development of AI ecosystems in their communities by encouraging supportive government policies. Thoughtful incentives to attract investment and talent are helpful — for example, tax breaks for AI entrepreneur immigrants and special tech visa quotas. Funding for leading-edge science programs is also important, including grants to universities, the creation of government laboratories, and joint research initiatives with the private sector. Our global review finds that AI investment is concentrated geographically: In 2016, the United States absorbed around 66% of external investment (defined as venture capital, private equity, and merger and acquisition activity). China was second, at 17%, but growing fast. In Europe, London was the leading city.

Governments have other important tools to foster AI ecosystems. They can act as lead customers, ensuring that regulations are AI-friendly. And they can make more data available, both by opening up their own data and by establishing standards that make data readily available, while still protecting individuals' privacy.

These AI ecosystems not only create high-skill, high-paying jobs but also, critically, produce knowledge and innovation spillovers. Indeed, our survey suggests that leaders in AI innovation — the United States and China — also lead in AI adoption. Employees become entrepreneurs, AI-savvy workers move from company to company, and innovative products can be developed for and deployed in local markets.

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