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# Partnering with AI: how organizations can win over skeptical managers

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**T**he emergence of artificial intelligence (AI) promises to transform the nature of work and the relationship among human beings and machines in organizations. Managers must learn to deal with this coming upheaval because AI will significantly modify how they and those that report to them perform their work. And, their organizations will need them to help in navigating the largest transformation in the workplace since the Industrial Revolution.<sup>1</sup> Nevertheless, our research reveals that managers are not quite on the same page when it comes to AI. Their readiness and enthusiasm for AI vary extensively across organizational levels and geographies—raising serious questions about how organizations can best adopt AI and get the most business value from it.

Consequently, we believe that AI adoption requires adaptation where executives help managers adjust to new, intelligent technologies. Executives should involve managers from different levels and geographies in initial experimentation with and implementation of AI in the organization. Greater involvement will allow managers to familiarize themselves with skills and potential solutions driven by AI *and* human input. As an extension of this strategy, the quality of work performed by intelligent machines will benefit—training in context, learning from the actions and patterns of managers who will eventually work with such systems on a regular basis.

## A world of difference

Drawing on findings from Accenture’s survey of 1,770 managers in 14 countries and interviews with 37 senior executives responsible for digital transformation, we have identified patterns in managers’ attitudes toward AI, defined as computers and applications that sense, comprehend, act and learn. We found that the advent of intelligent machines in the workplace generates strong reactions—with some of our survey respondents believing in AI’s seemingly unlimited potential and others viewing it as a harbinger of doom. To that point, 84 percent of all managers in our survey said they expect AI to make their work more effective and interesting, yet 36 percent expressed fear that it will threaten their jobs.<sup>2</sup>

Moreover, enthusiasm for AI wavers the further away a manager is from the C-suite. Top managers relish the opportunity to integrate AI into work practices, but mid-level and front-line managers are less optimistic (for specifics on how we define AI and what levels of management will be involved, see box, “Definitions”).

This tension will be exacerbated as intelligent machines’ capabilities grow—advancing from the automation of administrative work to advisory roles that support problem-solving and decision making.<sup>3</sup> We see examples of this shift beginning to take place. Recently, OnCorps—a Cambridge, Massachusetts tech start-up—unveiled an analytics platform that performs real-time benchmarking of decision-making processes and outcomes and subsequently nudges users to leverage the data-based insights to make better decisions. IBM’s Watson platform enables organizations of any size to use cloud-based applications as advisors in contexts such as medical diagnosis, security analytics, drug discovery, financial advice, online concierge travel services and sales coaching.<sup>4</sup> AI’s ability to facilitate such work may make some managers uncomfortable. When asked whether they would trust the advice of intelligent systems in making business decisions in the future, 46 percent of the top managers taking part in our survey strongly agreed with the statement. But only 24 percent of middle managers and 14 percent of front-line managers demonstrated the same level of agreement (See Exhibit 1).

**Exhibit 1: Support for AI closely correlates with rank in the organization.**



*Note: Managers responding «strongly agree» to the statements*

Similarly, when asked whether they would be comfortable with AI monitoring and evaluating their work, 42 percent of the top managers in our survey strongly agreed, while only 15 percent of first-line managers shared the same sentiment. Survey results reflecting managers’ degree of willingness to accept responsibility for intelligent machines’ actions followed a similar pattern. Top managers demonstrated the greatest level of acceptance (45 percent strongly agreed), whereas front-line managers indicated the least (17 percent strongly agreed).

Digging deeper into the results, although the survey indicated a wide range in support for AI among top, middle and first-line managers—as demonstrated by Exhibit 1—when it came to outlining how such technologies could impact work, manager responses align across ranks. Respondents expect administrative coordination and control-related tasks to be most significantly impacted by the emergence of AI in the workplace over the next five years. They also anticipate problem-solving and collaborative tasks will be affected. However, when it comes to engaging with people and communities or strategy and innovation, few believe AI will make much of a difference.

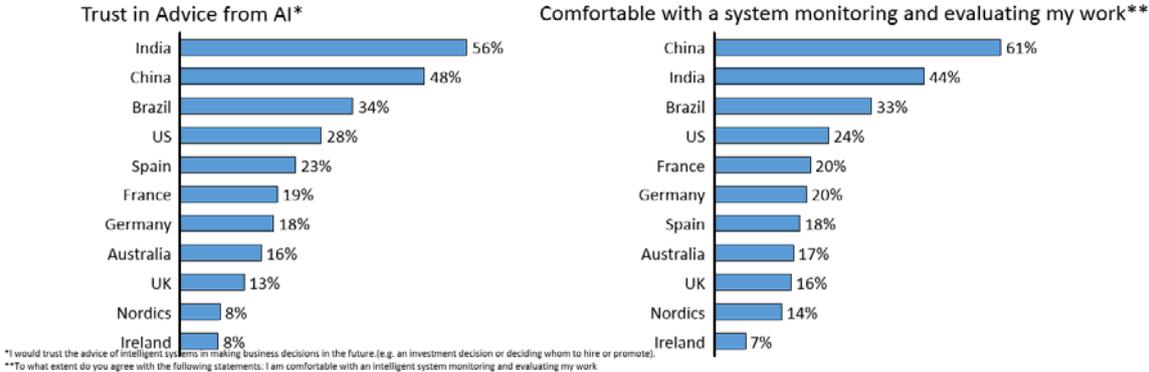
Despite relative agreement on the expected impact of intelligent systems, differences began to emerge when respondents were asked about their willingness to augment or automate certain roles. Top managers are the most eager to automate important parts of their work and identified four administrative and analytical tasks<sup>5</sup> they were willing to turn over to intelligent systems. Middle and first-line managers only targeted “monitor and report performance” for automation. In all other cases, the majority of middle managers opted to augment roles, while first-line managers selected either “augment” or “no need” for any change whatsoever.

What does all this mean? Executives cannot assume that mid- and lower-level managers will share their appreciation for AI. Moreover, any underlying concerns about artificial intelligence can spell trouble for all involved in adoption of such systems. If leaders fail to account for resistance and apprehension among managers, adoption strategies could die on the vine. And failure to embrace work practices that fully capture AI’s value—such as balancing human judgment with machine-generated advice—may hinder managers’ career prospects. As the CIO at a major insurance corporation told us, “The style of management is going to change. I think there is an expectation that managers will have a lot more information and they must be able to manage not by gut but by fact.”

Fulfilling this expectation may prove challenging. Experiences with “expert systems” in fields as diverse as medicine and procurement have shown that professionals and middle managers often question software-based recommendations. At a minimum, they complain vigorously about having to input large amounts of data for machines to analyze. Consequently, pure top-down AI implementation strategies will likely fail in the face of resistance from managers, and bottom-up efforts could sputter owing to lack of initiative among them.

There are national cultural differences in opinion about AI that should be noted too. For instance, we found that managers in emerging economies are more receptive to intelligent systems than those in developed economies. In our survey, 46 percent of managers in emerging economies strongly agreed that they would trust intelligent machines’ advice when making decisions in the future. Only 18 percent of their counterparts in developed nations said the same. Drilling down into the results, we found that Indian and Irish managers differ the most in their responses to this question, with 56 percent and 8 percent strongly agreeing, respectively. If we include respondents who answered “somewhat agree,” then 95 percent of Indian and 52 percent of Irish managers would trust the advice of AI—still a significant gap (see Exhibit 2).

Exhibit 2: Managers in emerging economies demonstrate greater trust in and comfort with AI than those in developed economies.



When we examined managers’ comfort with the notion of intelligent systems’ monitoring and evaluating their work, we saw a similar tendency. For example, 46 percent of managers in emerging economies strongly agreed that they are comfortable with this prospect, while only 18 percent of their equivalents in developed nations stated the same. Again, Irish managers proved the most skeptical—only 7 percent strongly agreed—while the rest of Europe followed suit at 16 percent. Conversely, Chinese managers seemed to be the least concerned about this aspect of AI; in fact, 61 percent of our survey respondents from China claimed to be very comfortable with the idea of AI monitoring and evaluating their work.

The reasoning for these geographical differences may lie in motivations similar to those behind the BYOD (Bring Your Own Device) movement where managers in emerging economies were keen to adopt forward-looking tools in an effort to achieve global best practice—thereby leapfrogging the competition.<sup>6</sup> By contrast, in mature and tech-savvy markets, managers may have more experience with technology integration and, as a consequence, may possess knowledge of what works and what does not—making them more skeptical about AI, but also more qualified to lead its adoption.

In the end, geographical and cultural variations concerning readiness and resistance send a strong signal: executives cannot expect to use a one-size-fits-all strategy for adoption of AI in their organization.

Given this data, what steps should executives take to resolve differences in attitudes toward AI and strengthen acceptance of such technologies in their organization? Equally important, how can they get ahead in the race to adopt intelligent systems?

**AI adoption requires adaptation**

The differences in readiness for and resistance to AI across managerial ranks and geographies indicate that companies should tailor their AI adoption strategies to local and organizational conditions. As Layne Thompson, Director of ERP Services for a United States

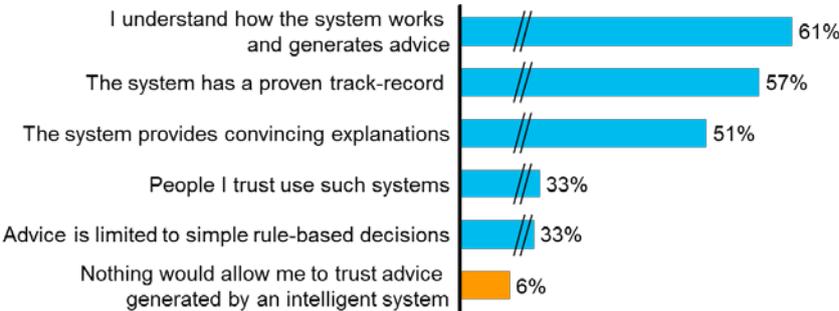
Navy IT services organization, noted, “Think of the concept ‘All politics is local.’ You might think you’re implementing a technology from a global or an enterprise perspective, but all technology is local. It’s about the employee at the desk or in the cubicle and how they use it.” With this insight in mind, executives can benefit by involving managers in AI adoption efforts, regardless of their rank, nationality or tenure.

How does such involvement work in practice? For one thing, executives can remind themselves that artificial intelligence improves with experience. The more managers and intelligent systems interact, the more they can learn from each other. In the early days of AI adoption, managers at all levels are key stakeholders in training intelligent systems so that the machines can complement managers’ knowledge and work habits. For example, automated (or semi-automated) reporting and scheduling applications are in use in contexts such as financial analysis and news reporting<sup>7</sup> already and we expect such systems to be available to managers on a broad basis in the near future. An intelligent scheduling application will be able to match personnel capacity and need from day one, but will have to learn about individual preferences and skills from managers and adapt their algorithms to improve scheduling effectiveness over time.

When managers have a say and involvement in initial training efforts, they gain a sense of ownership throughout the learning process as well as familiarity with intelligent systems. Our survey shows that willingness to trust AI-generated advice hinges on a manager’s understanding of how the system works, a proven track record and the technology’s ability to provide a convincing rationale for its advice (see Exhibit 3). In effect, familiarity fosters trust. By deepening their understanding of the “nuts and bolts” behind AI, managers can more readily see AI as something that amplifies, not eliminates, human potential.

**Exhibit 3:** Managers need to understand the “nuts and bolts” behind AI before trusting it in business decisions.

**What would allow you to trust advice generated by an intelligent system?**



*Note: Respondents could select up to three responses*

## Three steps to success

### 1. Start exploring AI now—together

Organizations are entering a landscape characterized by unprecedented collaboration among managers and intelligent machines. There are no maps available yet for navigating through this challenging and unknown terrain. Instead, executives must go exploring. They can do so by experimenting with AI, learning rapidly and applying their new insights to the next cycle of experiments.

To explore in these ways, executives should involve managers from different levels and geographies in initial experiments with AI and subsequent efforts to scale use of these technologies in the organization. MasterCard, for example, has established a program in which employees collaborate with an intelligent system to customize and improve client acquisition practices. Although the example extends beyond managerial work, the firm's efforts showcase trial and error-like experiences with humans and machines—in this case, designed to turn employees into top sellers.<sup>8</sup> As a result, with involvement in AI pilots, as highlighted by MasterCard's efforts, managers and first-line employees will be more likely to embrace AI as well as provide intelligent systems with meaningful training.

### 2. Keep track of AI use

As artificial intelligence makes its way into the workplace, organizations must define, early on, parameters for its use. In particular, they need to distinguish between proper application and potential abuse of AI. Toward that end, leaders must track sensitive information—such as sensor data capturing the location and work habits of employees—being funneled through intelligent systems—for ethical, legal and trust reasons. This is especially true in developed economies, where leaders have concerns about AI monitoring their data and using or distributing it in ways that could hurt the firm or violate data-privacy laws.

### 3. Craft new recruitment and training strategies

Despite top managers' excitement about AI, they have not yet worked out strategies for recruiting and training the talent needed to get the most value from intelligent systems. Leaders must seek out workers who are both willing and able to collaborate with smart machines. The introduction of AI will put a premium on "soft" skills such as collaboration, creativity and good judgment, which may be just as important, if not more important, than technical skills in the future.<sup>9</sup> Indeed, such qualities complement and augment the more analytical qualities offered by intelligent systems.

Regarding managers already employed in an organization, they may have a valuable understanding of the organization's history. However, it's not a given that their current skills will be sufficient in the future. In this new environment, creativity, hypothesis-testing and good judgment take on greater value as AI absorbs routine administrative work.<sup>10</sup> Leaders should therefore develop a diverse management cohort that balances organizational experience with social intelligence as well as digital shrewdness.

## The profound impact of artificial Intelligence

When it comes to AI, the “how” is just as important as the “what.” For all of its benefits, artificial intelligence—depending on how it is introduced in an organization—has the potential to either divide an enterprise or dramatically boost its efficiency and effectiveness. But because AI will play an essential role in the future of business and management, executives will have to decide whether to sit by and passively accept whatever future arises from the impact of AI—or whether they will actively shape that future. And they will need to determine whether they will “go it alone” in getting their organization to adopt AI—or mobilize managers from every corner of their company behind the effort. Our advice to executives: Engage your managers. Explore the opportunities. And embrace the promise of AI in your enterprise.

### Notes

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<sup>1</sup> Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company.

<sup>2</sup> Kolbjørnsrud, V., Thomas, R.J. and Amico, R. (2016) “The promise of artificial intelligence: Redefining management in the workforce of the future,” Accenture Institute for High Performance Research Report, May 19. <https://www.accenture.com/us-en/insight-promise-artificial-intelligence>

<sup>3</sup> Shanks, R., Sinha, S., & Thomas, R. (2016). “Judgment calls: Preparing managers to thrive in the age of intelligent machines,” Accenture Strategy.

<sup>4</sup> “10 IBM Watson-Powered Apps That Are Changing Our World,” CIO.com, Nov 6, 2014. <http://www.cio.com/article/2843710/big-data/10-ibmwatson-powered-apps-that-are-changing-our-world.html#slide1>

<sup>5</sup> Top managers identified four out of a possible eleven tasks for automation: plan and coordinate work, maintain routines and standards, monitor and report performance, analyze and share information.

<sup>6</sup> Bradley, J., Loucks, J., Macaulay, J., Medcalf, R., & Buckalew, L. (2012). “BYOD: A Global Perspective, Harnessing Employee-Led Innovation.” Cisco.

[http://www.cisco.com/c/dam/en\\_us/about/ac79/docs/re/BYOD\\_Horizons-Global.pdf](http://www.cisco.com/c/dam/en_us/about/ac79/docs/re/BYOD_Horizons-Global.pdf)

<sup>7</sup> <http://www.wsj.com/articles/robots-on-wall-street-firms-try-out-automated-analyst-reports-1436434381>

Gombolay, M. C. and Shah, J.A. (2014) “Challenges in Collaborative Scheduling of Human-Robot Teams” and “Artificial Intelligence for Human-Robot Interaction,” papers from the 2014 AAAI Fall Symposium.

<sup>8</sup> <http://www.cnbc.com/2016/03/03/mastercard-using-artificial-intelligence-to-turn-staff-into-top-sellers.html>

<sup>9</sup> <http://www.wsj.com/articles/employers-find-soft-skills-like-critical-thinking-in-short-supply-1472549400>

<sup>10</sup> Kolbjørnsrud, V., Thomas, R.J. and Amico, R. (2016) “How Artificial Intelligence Will Redefine Management,” Harvard Business Review, Nov 2. <https://hbr.org/2016/11/how-artificial-intelligence-will-redefine-management>

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## Definitions

**How we define managers** . A manager is anyone in a managerial or supervisory position at any level of an organization—from the C-suite executive to the team lead in a store or on the factory floor. We distinguish between three levels of management: 1) C-suite executive/top manager—a member of an organization’s top management group, such as the CEO or CFO. 2) Middle manager—for instance, plant manager, regional manager, divisional manager, senior administrative manager, vice president or manager of large-scale projects and programs. 3) Front-line manager—such as an office manager, shift supervisor, department manager, foreperson, crew leader, store manager, team lead, junior administrative manager or manager of smaller projects.

### How we define artificial intelligence

Artificial Intelligence (AI) refers to IT systems that sense, comprehend, act and learn. AI consists of multiple technologies that enable computers to perceive the world (such as computer vision, audio processing and sensor processing), analyze and understand the information collected (for example, natural language processing or knowledge representation), make informed decisions or recommend action (for instance, inference engines or expert systems) and learn from experience (including machine learning). Intelligent machines are computers and applications with AI embedded. Intelligent systems connect multiple machines, processes and people.

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