

Thinking Autonomous



How to unlock hidden value
with intelligent automation

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The Importance of Intelligent Automation

There's an incredible amount of data in the world these days—more than [2.5 quintillion bytes of data are created every day](#), and by 2020 it's estimated [that 1.7 MB of data](#) will be created every second for every person on earth.

To manage information of such magnitude, businesses need to be smart. Easily accessible computing power and storage through the cloud, combined with intelligent automation such as machine learning and AI, offer an opportunity to use all this data to benefit the business without overtaxing the IT team.

“Data that is intelligently managed is easy to process, and machine learning is one of those really cool techniques that takes the advantage of that compute power, cloud storage, and the cloud,” says Dain Hansen, vice president of product marketing at Oracle. “That lets enterprises fire up a system as needed and analyze lots of data, wherever that data lives.”

Enterprises are working to be able to leverage intelligent automation technologies across the business—from databases to security to operations and beyond. And things are moving fast.

“Right now, what we're seeing is the automation of tasks,” says Abbie Lundberg, Contributing Editor, Harvard Business Review Analytic Services. “Discrete things to improve existing processes or do jobs better. Users are being provided with better information, taking away some of the routine work.”

The [next stop](#) on the [value chain](#) is automating processes, but automating entire systems is the ultimate goal. No matter where they are along this automation maturity curve, businesses are seeking ways to take the pain out of reaching the next level.

The Path to an Automated Future

As with any adoption curve, the path to an automated future won't be smooth. "In the next three to five years, we're certainly going to see this accelerate," says Lundberg. "In terms of where it lands, that depends on a lot of factors that can slow things down. Big organizations are hard to change—it's going to require investments in training, process, and culture change."

One roadblock is a lack of advanced analytical skills within organizations. Automation facilitates innovation when using AI that is built into an application; users don't have to be AI experts. However, they do need some expertise in analytical thinking and viewing how systems run through a different lens.

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**Abbie Lundberg, Contributing Editor, Harvard Business Review
Analytic Services**

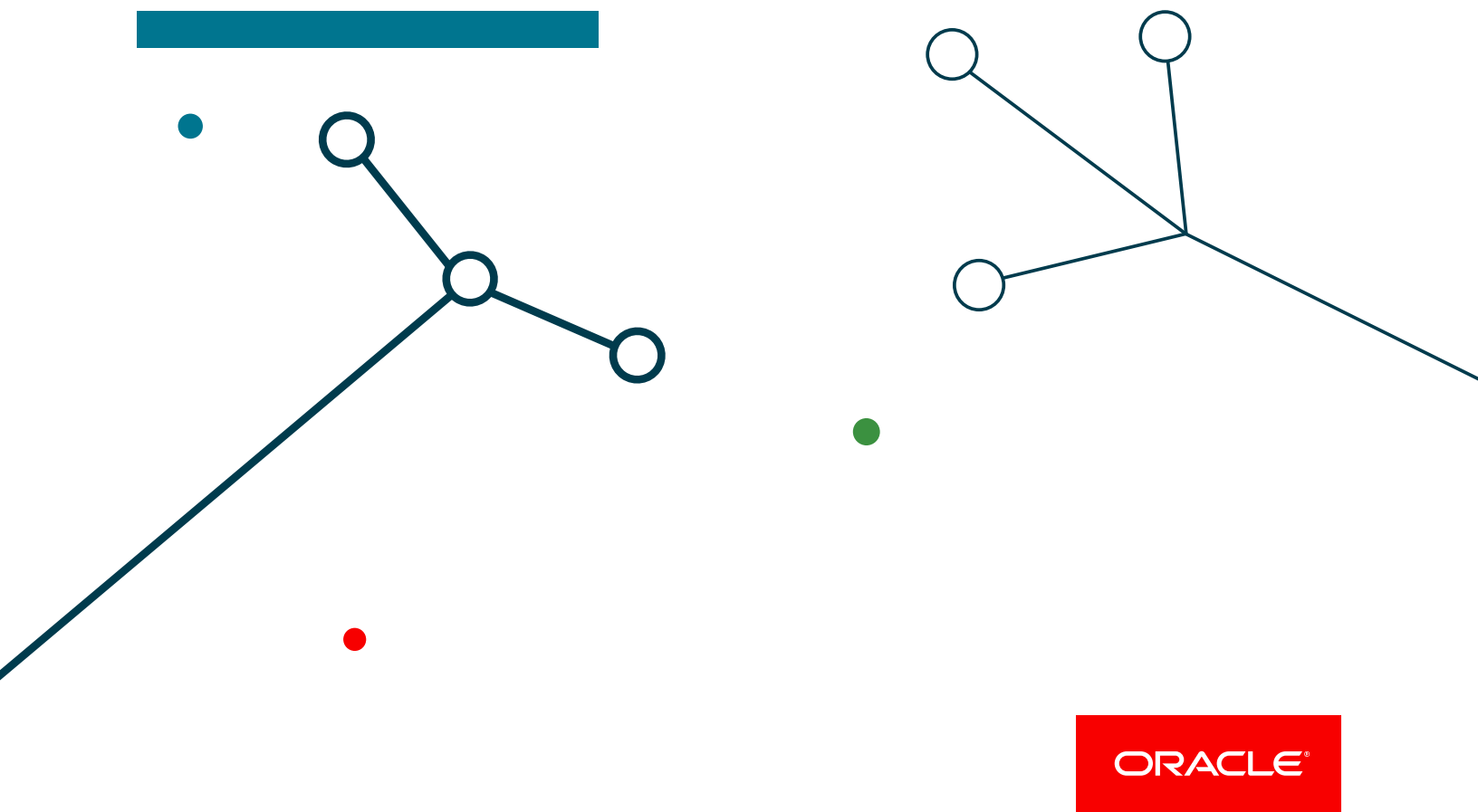
Another roadblock for some enterprises is change management. As intelligent automation changes the business landscape, it creates new jobs and changes current roles. IT departments will be more empowered but they'll also need to embrace new processes. For example, patching and securing databases will become more automated, enabling database administrators to offload mundane tasks and transition to analytical activities.

Many companies will face regulatory issues as they work to automate processes. Financial services companies, for example, will need transparency in AI transactions, such as making credit decisions, to demonstrate that each decision was made fairly and legally.

There is still a lot of uncertainty surrounding intelligent automation. "The potential is amazing," says Lundberg. "We just don't know enough yet, which might slow things down."

"The potential is amazing, we just don't know enough yet, which might slow things down ."

Abbie Lundberg, Contributing Editor, Harvard Business Review Analytic Services



Extracting Value with Intelligent Automation

Intelligent automation can benefit any industry in terms of effective data use. Right now, organizations leading the way are data-intensive companies in industries such as financial services and technology, but all companies that deal with significant amounts of data can benefit, for example, by reducing cost structures.

“Even companies generating and owning a lot of data, for the past 10 years haven’t been able to do anything with it,” says Lundberg. “They’re sitting on a goldmine of raw materials and AI makes it possible to actually use it.”

Getting value from data is still a challenge for some organizations. [IDC](#) predicts that by 2022, 75% of CIOs who fail to empower their IT product teams to enable digital innovation and disruption will fail in their roles.

Intelligent automation is the tool that enables innovation and value, improves processes and enterprise decision-making, and facilitates the monetization of data. Three key steps can move an enterprise further along the maturity curve, advancing from automating tasks to automating processes, and then to automating systems.

Ensure strong, cross-functional relationship between the CIO and other business leaders.

[Gartner](#) reports that only 23% of CIOs rate their organizations as adept at business and planning. Yet in the words of Lundberg, “Companies with strategic CIOs and mature IT organizations are better able to adapt and blend business goals with technology solutions. Artificial intelligence or automation doesn’t change that dynamic.”

Build advanced AI and analytical skills.

Intelligent automation still requires human intelligence. Users have to know what questions to ask to get the best answers from the system, and understand the responses. As Gartner analyst [Douglas Laney](#) says, “Data and analytics leaders need to assert themselves into corporate strategic planning to ensure that data and analytics competencies are incorporated within the highest-level public-facing enterprise plans.”

Embrace change.

Automation changes employees’ roles, and that can create resistance. Organizations will have to adapt quickly to how automation changes business models and the working life of personnel.

Conclusion

Intelligent automation enables true organizational transformation. Enterprises are turning to these tools to deal with the massive amount of data that underlies their businesses. Those that embrace automation will survive the current instability and go on to flourish. These companies will move along the maturity curve, advancing from automating tasks toward autonomous decision-making.

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**Dain Hansen, Vice President
of Product Marketing, Oracle**

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These are the ways in which intelligent automation is affecting businesses. However, as adoption accelerates, there will be implications for society as a whole, too. Where the responsibility lies for looking into these implications and acting on them will be a critical question. Companies’ decisions around intelligent automation could come under scrutiny, especially when they might have a broader impact on society. Businesses will need to look beyond the bottom line and shareholder return when making intelligent automation decisions, and consider critical questions. As Lundberg points out: “What is the bigger impact? Who has the broader perspective about the longer-term effects—on employees, shareholders, and society more broadly?”

Interviewees

Abbie Lundberg, Contributing Editor, Harvard Business Review
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Dain Hansen, Vice President,
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