



## Robotics and cognitive automation in HR

### Insights for action

Virtually every HR organization we work with is considering how to incorporate robotics and cognitive automation (R&CA) technologies to supplement and augment the human talent in HR—that is, if they're not already using them.






Progressive HR teams are already applying robotic process automation (RPA) to help tasks like data management and validation; running, formatting, and distributing reports; and replacing manual and spreadsheet-based tasks. Some are also exploring more-advanced cognitive

automation technologies, like machine learning and natural language processing, to enhance a range of HR processes from talent acquisition to benefits administration and beyond.

Organizations looking to get started typically ask, "Where should I start?" or "Which vendor should I choose?" To help inform and steer these decisions, we offer the following four insights.

**What drives organizations to automate HR processes?**

Process automation is the ability to rapidly and repeatedly replicate HR products or processes, thereby reducing the resources required to create and maintain them.

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|  <p><b>Manual error reduction</b></p> <p>HR automation reduces manual input errors to improve transaction quality, accuracy, and efficiency.</p> |  <p><b>Data, data, and more data</b></p> <p>Automation creates digital records that can easily be managed, analyzed, and reported.</p> |  <p><b>Improved customer service and satisfaction</b></p> <p>Automation centralizes HR data to serve customers more efficiently &amp; effectively.</p> |  <p><b>Better use of HR professionals</b></p> <p>Automation enables HR staff to focus on value-added strategic work.</p> |  <p><b>Greater HR and organization efficiency</b></p> <p>Automation streamlines processes and activities that would otherwise require dedicated resources.</p> |
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**Insight 1: This isn't one decision about one technology or vendor.**

While robotics and cognitive automation are typically lumped together—R&CA—they are different technologies at different points of maturity. In turn, different vendors have capabilities in different aspects of R&CA, so your vendor evaluation will involve a different set of vendors based on what you want to accomplish in one of three categories:

- **Robotic Process Automation (RPA)** uses software “bots” installed on desktop computers or in the cloud that are configured to automate operational tasks—manual, rules-based, and repetitive activities for things like compensation data entry, talent acquisition license verification, and payroll data entry. Think of them as mimicking what a human can do by logging onto and entering data into existing business systems.

- **Cognitive Automation (CA)** can operate in two primary ways:
  - **Cognitive Engagement** leverages natural language processing (such as via chatbots or voice command) to interact with customers to answer questions, manage transactions, resolve inquiries, and triage requests to HR professionals when needed. So, think of an HR virtual assistant that handles things like HR policy and general inquiries, routine transactions like position changes, and leaves of absence and PTO management.
  - **Cognitive Insights** use statistical data analysis and machine learning to mine and analyze data to uncover new relationships and insights to support better decision-making and continuous improvement. So, think of talent analytics and predictive analytics.



Source: 2018 Deloitte Global Human Capital Trends Report

**Cognitive Advantage | Transform your work, decision-making, and interactions**

**Robotics & Process Automation**  
*Enable machines to replicate human actions and judgment with robotics technologies*

**Cognitive Engagement**  
*Use intelligent agents and avatars to deliver mass personalization at scale and smarter, more relevant insights to amplify end-user experience*

**Cognitive Insights**  
*Identify opportunities for growth, diversification, and efficiencies by creating large-scale organizational intelligence with pattern detection and the ability to analyze multiple data sources*

**What the Advantage Looks Like**

**Transformative change** Automate repeatable tasks to improve efficiency

**Flexibility** Unchain profits from scale constraints to increase enterprise flexibility

**New competencies** Engage existing talent to focus on higher-value tasks

**Optimized behavior patterns** Drive desired behaviors by delivering hyper-personalization at scale

**Next-gen experience** Deploy personalized digital assistants to interact with endusers

**Ubiquitous engagement** Generate personalized and contextual recommendations to endusers

**New growth** Uncover hidden patterns to identify new opportunities for innovation

**Evidence-based decisions** Apply a science-based decision-making process informed by deeper insights

**Timely action** Push real-time, contextual insights to decision-makers at relevant moments

**Use Cases**

- Compensation data entry
- Talent acquisition license verification
- Payroll data entry

- HR virtual assistants
  - HR policy and general inquiries
  - Position management transactions
  - Leave of absence and PTO management

- Talent analytics
- Predictive analytics

**Insight 2: That said, vendor capabilities across R&CA are similar and evolving quickly, so your decision will likely hinge on other factors.**

In our experience and research,<sup>1</sup> the market for R&CA solutions is evolving rapidly. There are “open source” or freely shared algorithms and often multiple solutions with similar capabilities in each of the following areas and, increasingly, combinations of these approaches to cognitive computing: RPA, data extraction/document capture, cognitive engagement, machine intelligence/machine learning, natural language processing, data management/data wrangling, and data science. Furthermore, many of these algorithms and focused solutions are being embedded into new versions of existing enterprise systems.

This means your decision to choose one technology over another today can hinge on variables other than the algorithm’s or solution’s ability to do its intended job. Given the unique need to “train” cognitive technologies and provide appropriate contextual and historical data for machine learning, vendor selection may hinge on particular applications or experience in the HR domain; integration capabilities into your existing sources of workforce data; and length of time and experience or partnerships for implementing their solutions for workforce-facing applications and supporting user adoption.

**Insight 3: Good news! Vendor and tool selection is not a make-or-break decision.**

Decisions about R&CA technology are not the same as decisions about other forms of technology, such as on-premises HCM suites or HCM in the cloud. Core platform decisions are typically much more involved and daunting because of their scope (touching multiple aspects of HR and supporting compliance), their scale (time, cost, operational impact), and their longevity (locking you onto a particular path for years to come).

In contrast, decisions about R&CA, particularly when you’re just starting to incorporate these capabilities, can be made relatively quickly and, if needed, rethought down the road. Because the capabilities of various solutions may be similar, you can make a decision and experiment, gain experience and familiarity with the technology and capabilities, and redirect toward a different vendor if you are unsatisfied or as your needs evolve.

The main thing is not to get caught up in choosing a tool, but instead focus on identifying where these technologies can be put to work in your organization and beginning to use them. You may even want to consider what solutions may already be in use in other parts of your organization outside HR, and partnering to apply them for your needs.

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**Insight 4: Think big. Start small. Scale rapidly.**

The evolution in cognitive technologies is ongoing and rapid. Right now this evolution is being driven largely by focused, fit-for-purpose, “pure play” vendor solutions targeted at specific use cases. But further disruption is afoot based on how quickly the larger providers of core cloud HCM solutions (e.g., Workday, SAP SuccessFactors, Oracle) and enabling technology providers (e.g., ServiceNow, Salesforce) embed these capabilities into their platforms. We have already seen movement in this direction, such as SAP Leonardo,<sup>2</sup> Oracle’s agreement with Chatbox,<sup>3</sup> and Infor’s Coleman AI platform.<sup>4</sup>

Our Bersin research team is actively following the market for R&CA technologies in HR domains and will be publishing analysis of early adopters and leading practices in the summer of 2018. It is also tracking the advancements of AI within the existing HR solution provider ecosystems, which promise to accelerate in the next 18 months.

However, we don’t see this merging of cloud and R&CA capabilities as a reason to delay or overthink your R&CA decisions. The important thing is to make a decision and GO! If you spend too much time assessing your options, those options could change as new features and functionality are introduced or new solutions hit the market. As a case in point, one company we worked with initially requested a six-week project for RPA vendor selection. We proposed a much simplified approach: Over a two-hour meeting, our solution architects, who are experienced with multiple vendor solutions, familiarized the company’s decision-makers

with the pros, cons, and capabilities of various solutions and helped them make a decision on the spot.

**Speed is essential**

Digital is here to stay, and in a few years, “being digital” will likely no longer be a competitive advantage for companies, but necessary for survival. With the dropping costs and rising adoption of R&CA, companies could easily be faced with applying these technologies everywhere, regardless of industry, function, or even company size.

Get started right away so your organization can begin to become more digitally mature and position itself to reap the many potential benefits automation can bring.

Once you begin to build capabilities in digital and automation, you pave the way for more advanced adoption. Our research shows that as organizations progress in their adoption of RPA, they tend to become more ambitious with cognitive technologies. More than a quarter (28 percent) of those we surveyed who are implementing and scaling RPA are also implementing cognitive automation, compared to only 6 percent of those that have not implemented RPA.<sup>5</sup> So build that momentum and keep it going!

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### Sources

<sup>1</sup> Christa Degnan Manning, Using Artificial Intelligence to Support HR Functions, Bersin by Deloitte Research Bulletin, 2017.

<sup>2</sup> <http://searchsap.techtarget.com/definition/SAP-Leonardo>

<sup>3</sup> <https://www.oracle.com/corporate/pressrelease/oo17-chatbots-partnership-with-chatbox-100217.html>

<sup>4</sup> <https://www.infor.com/company/news/pressroom/pressreleases/coleman-ai-platform/>

<sup>5</sup> The robots are ready, are you? The 3rd annual global robotics survey, Deloitte, November 2017. <https://www2.deloitte.com/uk/en/pages/consulting/articles/the-robots-are-ready-are-you.html>

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