

# THE **5** KEYS TO IMPLEMENTING AI INTO HR INTELLIGENTLY



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Few events in history have altered the relationship between employees and employers or how people view work and complete the tasks involved like the coronavirus pandemic. Along with that has come the need for new skills, processes, business models and technology that will increase organizational agility and adaptability for the future.

Automation is expected to play a big role as a result, with a growing number of leaders believing it will pay dividends in the near future. Early on, the hype around automation and artificial intelligence (AI) was like so many other technologies that receive a lot of attention. Innovation went faster than the speed of change and while it's well reported that a significant segment of the global workforce could lose their jobs to automation, the reality hadn't quite followed suit.

When the pandemic struck, a lot of workers lost their jobs not to a machine, but to the circumstances that came with a global crisis. For businesses, the need to do more with less had never been greater and as a result, the reality began catching up to the automated hype train. A McKinsey report titled "The

Future of Work After COVID-19"<sup>1</sup> looked at jobs that simply wouldn't come back. It was estimated that 25% more workers than expected would need to switch jobs following the crisis.

There continues to be some hesitation and anxiety around what automation means for humans, but this is beginning to change. As MIT noted in its "Work of the Future" report<sup>2</sup>, many workers are seeing automation being integrated into their work with little threat to their actual jobs. It certainly isn't slowing down the speed of adoption and innovation around automation and AI in HR is one of the areas we see this playing out.

From automating talent acquisition tasks to payroll, benefits and time off requests, or self-service and chatbots, AI is proving to be an increasingly important tool for human resource professionals to be able to work with. In this report, we'll dive into the factors HR professionals have to take into account when implementing AI solutions and look at key strategies that drive success.



<sup>1</sup> <https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19>

<sup>2</sup> <https://workofthefuture.mit.edu/>

# 1 Understanding the Need for AI

With all the things AI gets touted out there as a solution for, the first thing that needs to happen before any decision is made is an examination of why AI is being considered as a solution. While these solutions are becoming more common, they still don't come cheap and require a certain amount of expertise within your workforce to implement effectively.

While AI can address a number of issues, it shouldn't be rolled out to solve everything that it can all at once either. Assessing and identifying the issues that will have the greatest impact on the business ensures not only a greater possibility of AI efforts impacting the return on investment, but also go a long way toward creating a positive perception of the technology.

You might not expect that to be an issue these days. After all, the World Economic Forum<sup>3</sup> projects that AI and automation will result in a net increase of 58 million jobs rather than causing a negative impact. But often times, AI is still approached with fear. Fear that it will replace humans in the workforce, fear that it won't be as effective as promised or come with unforeseen ramifications for the business. Wagner Denuzzo, Vice President, Head of Capabilities for Future of Work at Prudential, has seen this fear before. He's keen to emphasize that the narrative you create around AI capabilities is extremely important in getting the reaction you want from the humans involved.

"The greatest barriers in implementing any new system is the natural reaction humans have to reject anything that may place them in a vulnerable position," Denuzzo says. "The insecurity we feel when faced with a new technology sometimes can derail an implementation."

Denuzzo recalls his experience at a previous employer where his team worked on an inference of skills for various teams. Leaders rejected the results they were shown despite being given a list of 52 data sets that fueled the intelligence. Put simply, "they were not ready to accept the technology because they could not understand how the AI worked to achieve those results," Denuzzo said.

Organizational readiness is key in creating a compelling case that emotionally connects leaders to the value of AI

for their workforce. Denuzzo stresses the need to build an educational campaign that avoids shaming those who do not know about the technology being developed.

"I would say educate often, personalize the support and make everyone feel that we are learners as leaders of this new world," Denuzzo said. "Make sure any implementation and launch campaigns are well designed and include education across the organization. For senior leaders, schedule a 1:1 meeting where they can really ask all kinds of questions. It is important to educate and make sure you have a beautifully crafted narrative as to why this is an important capability for the company, their stakeholders and employees."

The education doesn't have to come entirely from within either. Your technology providers are a valuable asset in helping educate and bring new ideas or solutions to the table that can make a big impact.

"Approach it with a growth mindset as a learner," Denuzzo said. "It's critical to ask many questions, the simple ones and the most complex ones. I would say create a vendor day and talk to them about the capabilities and roadmaps for their own organizations. You can even get involved with a startup and build their capabilities as a co-creation relationship. That requires tolerance for risk, but it is amazing what happens when vendors develop their capabilities based on your needs."

The view of the technology from leadership is critical. Deloitte's 2020 Global Technology Leadership study<sup>4</sup> underlined this, noting that only "11.6% of organizations are delivering significant value through technology" and what distinguishes them is an orientation toward growth and leaders that "advocate for, prioritize and appreciate the value of technology."

<sup>3</sup><https://www.weforum.org/press/2020/10/recession-and-automation-changes-our-future-of-work-but-there-are-jobs-coming-report-says-52c5162fce/>

<sup>4</sup><https://www2.deloitte.com/us/en/insights/topics/leadership/global-technology-leadership-study.html>

Strategy is one of those words that gets thrown around a lot. Everybody wants one, leaders often struggle to agree on one and if employees don't buy into a strategy enough to execute it well, then it probably won't work. AI implementations are complex and nuanced from a technical point of view, but from a process and policy standpoint, there are frameworks which have proven to be successful across industries.

Once AI is identified as a strategic business priority, getting buy in from the necessary stakeholders should be simple enough, but after that, things can get more complex. The first step is to set up the workflows and goals systematically, using something such as Agile to manage the project through to completion. The steps that follow are a bit more intensive.

**Create a governance structure** around the technology and the process of implementing it. Research from McKinsey<sup>5</sup> shows that decentralizing the governance of AI is more effective than added layers of bureaucracy. Allowing the teams that are going to be using AI solutions to implement them ensures that their needs are met and helps gain their buy in as they become more personally invested in its success.



<sup>5</sup><https://www.mckinsey.com/~media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/Driving%20impact%20at%20scale%20from%20automation%20and%20AI/Driving-impact-at-scale-from-automation-and-AI.ashx>

"It's important to establish a robust governance program," says David Swanagon, Head of People Analytics, North America at Ericsson. "The democratization of data is important, but without strong policies around data ethics, executive decision-making and model review, the likelihood of AI adversely impacting talent segments is high. Ultimately, HR leaders cannot delegate the engineering component of AI and expect to retain their culture. Leaders must learn the techniques and actively participate in the design."

**Involve IT from the outset** as they can provide additional technical knowledge and have likely had experience automating some of their own processes. The McKinsey research shows that 75% of companies who have successfully automated processes have involved IT from the initial discussions around an AI or automation project.

"You've got to have the project management capability to implement it, because this is an IT project first and foremost," says HR Futurist and author Dave Millner. "IT will need to prioritise where the best and quickest returns can be obtained by any such implementation (core operational HR tasks appear to be adopted first)."

In 2019, research from Mercer revealed that 88% of companies globally were already using AI in some way for HR. Typical uses included:

- ✓ Chatbots to answer benefit or policy inquiries
- ✓ Screening and assessment of candidates
- ✓ Learning recommendations for employees
- ✓ Engaging candidates during recruitment
- ✓ Identifying candidates
- ✓ Suggesting career paths
- ✓ Identifying disengaged employees
- ✓ Chatbots for employee self-service
- ✓ Performance management processes

<https://www.mercer.com/newsroom/with-more-business-disruption-expected-making-organizations-future-fit-is-top-of-mind-new-study-finds.html>

## 3 The Right Skills for HR and Technical Teams

One of the pitfalls that can trouble an HR team during an AI implementation is the skills gap that exists for many HR professionals around automation. Like any other segment of the workforce, HR teams are often ill prepared to deal with the technical demands of working with AI. As talent acquisition teams look for people with these new skills to work in other business units, they'll do well to consider the skills of their HR teams like any other.

"AI provides an opportunity for HR to reinvent itself through a systems approach to building talent intelligence," Denuzzo said. "I like to think of the Talent Technology Architecture in three pillars: Systems of Record, Systems of Insight, and Systems of Engagement. So most HR leaders and professionals need to build core competencies such as workforce analytics, predictive modeling and be comfortable with complexity that's intrinsic to a sophisticated HR technology architecture."

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### Wagner Denuzzo

Vice President, Head of Capabilities for Future of Work, Prudential

When it comes to the skills of the technical staff implementing AI, there are fundamental skills talent acquisition teams need to at least be aware of as they build teams that can implement AI. For all the talk about the value of coding and the need for coders in recent years, it's not necessarily the skill that is going to drive the success of your AI efforts.

"Applied statistics is a fundamental discipline," Swanagon said. "Though important, knowing how to code a neural network is meaningless if you don't understand the underlying math. I've seen many data scientists successfully code a neural network. However, if you ask them what

letter corresponds to the sigmoid function or how ReLU treats negative values, they are lost. This is dangerous for AI applications because if the engineers don't understand the math, then it's assured the executive decision makers won't either. In this domain, technical excellence must include applied statistics."

In the end, skills to properly adopt AI have to permeate all levels of the HR function. AI simply can't be applied to people sciences without a fundamental understanding of what fuels it and what it can do from the highest levels, including the CHRO.

"The model options have outpaced the technical knowledge of HR leaders that manage them," Swanagon said. "Today, there are many CHROs with non-engineering backgrounds leading People Analytics. At times, this structure creates data subjectivity, under investment in technical resources and a lack of best practices. A major risk confronting AI in HR is how senior leaders without technical backgrounds are able to navigate this space. Delegating tasks or relying on intuition will ultimately create more harm than good."

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# 4 Measure and Improve

Measuring the effectiveness of AI isn't quite like measuring engagement or looking at employee survey data. Most organizations will use key performance indicators (KPIs) of some kind, but in many cases their use fails to help improve performance to the levels expected, particularly where change and transformation is involved, according to Millner.

Typical sticking points include things like not measuring the right things, using previous targets with 5-10% improvement because it's easy or measuring things that are easy to measure because the system provides the information already, whereas the measures that should be measured can be hard to track and find. That last hurdle can be particularly hard to overcome, because time for measurement and analysis is often limited.

"Today we have more and more data available than ever before and this is where AI/ML can perhaps help in the measurement conundrum and seek out data from emails, surveys, reports, etc. (all those places that are time consuming to extract data and trends from manually)," Milner said. "Therefore, AI can help with this measurement challenge by moving KPI's from a fixed, "static" objective to something where progress can be automatically tracked or even predicted over time."



## Other ways AI can help us measure include:

- ✓ Build KPI's in a structured way in the form of a "KPI tree". This can also help identify the drivers and relationships between different data sources within the organization.
- ✓ Make sure that KPI's are regularly updated reflecting your business goals as they evolve. Each KPI should be "traceable" to business goals, but also reflect department/functional priorities.
- ✓ Make the unmeasurable measurable - using AI to help extend the range of available KPI's. By including unstructured data you can almost double the available data on which to base assessments or metrics.
- ✓ Use historical results to build predictive models for the most critical metrics affecting business goals. This predictive capability helps the business become more responsive to the unexpected. It's a time-based approach that will also start to reveal the interdependencies and drivers that need to be measured more accurately.
- ✓ Merge all KPI and reporting infrastructures so that you can have performance metrics on-demand which represent the key drivers of your business goals and streamline people analytics efforts because the data warehouse is continuing to become aligned across different sources.

"AI/ML is not just about automation, but the power it has is to uncover trends and predictions that were not obvious," Millner said. "For me it's about augmenting the human experience at work with data and insights that can help make better decisions about retention, learning and development."

The learning piece is one that has come to the fore and provides an interesting example of knowing what to measure and how to apply it to drive improvement. Learning, training and development is integral to narrowing any skills gap, yet the key question is whether the right learning programs are being offered to employees?

Each employee has different learning requirements, career paths and goals, some of which could be unknown to the employees themselves (i.e. application of skills in new yet to be formed jobs). In gathering and processing data on employee profiles and current learning programs, AI can not only collect the capabilities being assessed and developed, but also help to analyze the value these programs have for each employee so that skill/competency-based recommendations and personalized learning opportunities can be provided to each employee. The key is careful consideration of what you're measuring.

When done right, one of the primary features of AI is its ability to make predictions based upon previous data and

activity. For HR, this can be utilized both for employees and their future learning opportunities and for the business and its future talent requirements. To do this, companies must have interpretable career and employee data to be able to formulate models and make meaningful predictions. Millner provides the example of an employee who has previous experience in data analytics, but is currently in a sales role. AI can help determine if they'd be a good match for a job in marketing and are they likely to succeed in a career switch.

While utilizing AI in HR primarily impacts employees and their learning requirements, the findings and patterns generated by algorithms can also help make decisions for the wider business whether it is driven by external benchmarking activity or networking insights. For example, if HR were to use AI to uncover real-time market trends around key skills, this knowledge can then be used to make wider decisions on how to improve that capability across the business.

"Categorizing employees' competencies and having the data in one place allows HR to better understand and make quicker decisions about which roles require internal or external recruitment.

This whole aspect needs to be underpinned by an HR function that is focusing on organizational and job design as a critical future proofing intervention."

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Author, HR Futurist and Consulting Partner at HR Curator



HR and, in truth, most industries are only beginning to scratch the surface of what AI can do for business intelligence. The possibilities are endless.

Thus far, talent acquisition and employee sentiment have led the way, but even within those, AI has room to grow as it can be better used to fuel D&I initiatives and understanding employee emotions.

“Though bias exists in screening D&I candidates, the underlying models are making progress,” Swanagon said. “In terms of employee sentiment, Natural Language Processing (NLP) is improving the way organizations capture emotions. This includes accounting for cultural norms embedded within languages, alongside generational differences. The creation of deep learning networks allows leading firms to classify non-verbal emotions by linking facial expressions in employee images to common moods.”

In order to get data that is most relevant to what employees are experiencing, Swanagon is of the opinion

that HR leaders should be looking to incorporate a vast array of data in their AI efforts. The foundation of that, however, is an analytics engine that is capable of handling all that data in a way that will fuel the development of meaningful insights.

“AI follows a Fibonacci sequence, in which the models start small and spiral outwards,” Swanagon said. “Before addressing corporate pain points, the building blocks must be established. This means creating an analytics engine that sources, scales and consumes as many relevant datasets as possible. It’s ironic, but HRMS is the most widely used and least important dataset for employee insights. Great organizations recognize that a single like on YouTube can tell you more about an employee than their entire HRMS file. Any implementation plan should start with collecting large amounts of data, then proceed to organizing data into retrievable elements and have AI models identify unsupervised insights. Once these building blocks are finished, engineers can then address use cases that executives care about.”

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**David Swanagon**

Head of People Analytics, North America at Ericsson



Whether it's processes, intelligence or interactions, AI is proving to be an incredibly valuable tool for HR, even in its infancy. At a time when HR professionals are tasked with an ever growing list of people focused duties, automating mundane tasks that were previously manual frees up the HR team to focus on what it knows best; people.

But as we've learned, those people specialists have a growing list of technical skills that need to be acquired so that they can also understand the machines and data which provide a level of insight even the most observant HR practitioners can't acquire with their eyes and conversations alone.

We've also seen that there are no shortage of pitfalls for an AI implementation, but one recurring theme is that it starts with leadership and their willingness to accept AI as a tool, even when it tells them something they don't necessarily want to hear. As you set out on an AI implementation, perhaps the most important step is to simply strip away assumptions.



"Executive bias is the leading cause of AI failures," Swanagon said. "In data analytics, there is no place for subjective opinions and this is especially true for senior leaders. During the design phase, C-levels should make every effort to champion fact based design principles. This means being willing to see output that challenges their assumptions. This is easy to say in theory, but it's common for leaders to reject sound data models simply because they don't agree with the results. Data Analytics is a science, not a branding exercise."

Leaders whose teams implement AI solutions which fail to generate the desired results shouldn't feel discouraged. AI can be complex and therefore requires high levels of buy in and trust from leadership. Millner notes that the business case has to have a significant value add to keep everyone on board and a high a level of relevance that goes beyond the latest fad.

In addition, all the right foundations have to be in place from the processes to the data collected, the skills of those managing it and capability to apply it at all levels. Perhaps most of all, it has to improve the employee experience so that HR can focus on people.

**"HR needs to have a clear purpose for AI implementations – it can't operate in a vacuum but has to underpin business processes and culture to work."**

**Dave Millner**

Author, HR Futurist and Consulting Partner at HR Curator

"HR needs to have a clear purpose for AI implementations – it can't operate in a vacuum but has to underpin business processes and culture to work," Millner said. "Remember, you're doing this to ensure that HR employees released by this implementation are then directed to focus on added value activities across the employee life cycle."



# Q&A with Oracle HCM

10

Guy Waterman, Senior Director, Product Strategy, Oracle

**When identifying goals and priorities for AI, what advice do you have for leadership teams as they look to implement an AI solution in HR?**

- Start small, think big, move fast. It is a common business philosophy that applies to HCM innovation and automation using artificial intelligence. Organizations have been too distracted by the startups out there promising unreasonable results that happen automagically – and then end up with a big implementation bill and a disenchanted group of supporters (if any are left). Instead – have a small area you can try out AI – then focus your efforts on one task and set goals and objectives around that one task and execute.
- Get ready for Data Quality all over again. The notion of Customer Data Quality and Product Data Quality are commonplace in the enterprise – but what about Employee Data Quality. As we head into automation and innovation using AI, machine learning (ML), and even natural language processing (NLP), the old saying of “Garbage In/Garbage Out” applies. These processes all involve substantial mathematic algorithms and the quality of the output is highly dependent upon the quality of the input received. In short – prepare your data – dedupe – cleanse – update – standardize – and automate it if you can.
- Measure your results – and this is critically important. Organizations are looking at AI/ML/NLP programs to improve their business processes, but compared to what? Benchmark related capabilities. Manually extrapolate where you want the new values based on where the current values exist. Then track progress toward those objectives and adjust, adjust, adjust. AI is not effective if you think you can ‘set it and forget it’. Those that do are disappointed. Those that measure – not only adjust settings to correct, they adjust to accelerate positive outcomes as well.

**With such a big need for reskilling/upskilling in the market, how do you see AI helping companies across industries make the most of the people within their organizations?**

- Simply put – the best way to manage your skills is to understand them. Which employees in your organization possess skills at what level – and how do those skills related to skills you need in the future?
- AI enables this process by analyzing your current skill and job structures and if you are fortunate enough – compares them to industry best practices and helps you rationalize duplicates, standardize the common requirements, and update the new skills needed. The update and manage part of this process is where most organizations fail.

Skills management is a huge task. Organizations invest a lot of money, time, and effort into rebasing their skills ontology – and as with most projects – at the conclusion – the team raises a banner of success as most of the resources are reassigned to the next high priority task. The ontology begins to fall apart as a result... unless you automate the care and feeding of your new model – and AI/ML/NLP engines can do just that, keep your newly formed and customized skills ontology up to date and relevant to the changing landscape your organization is facing.

**In terms of developing learning opportunities, what are some of the metrics and behaviors you see influencing the way AI recommends different paths forward for people?**

- There are two distinct parties in the learning recommendation process, the student, and the teacher. Motivate students by getting them what they want or acquiring skills they see as valuable in the growth of their career. Provide value to the teachers (the employer) by guiding skilled individuals in the direction of their areas of documented skills needs. The key is to get the best individuals trained on the skills that meet their needs while aligning with the desires of the employee. A lack of alignment leads to friction in the workplace and increased employee attrition.

Look at Employee Satisfaction scores and workforce mobility scores to determine if your Career Development programs are working. At a minimum, workers should be satisfied they are receiving the investments in their careers. The next indicator is to monitor the velocity at which employees move around or out of the organization versus the influx of new talent. Ultimately, your organization should see more workers moving around the organization than new hires. Ideally, every new hire should be filling a position vacated by an employee promoted into a new position.

### In your opinion, what is the most critical phase of implementation for AI into HR processes?

- Data quality management and measuring of the outputs of your AI processes are the two most important phases of an AI/ML/NLP program. You need your data to be right to start – and you need to continue managing your data as it 'goes stale' due to changes at a rate of 2% a month

(that is the rate typically attributed to customer data projects – assume it is the same for employee data).

- Analysis of the results is critical as the AI programs use data potentially based upon undesired (biased) behavior. Recognizing that assumptions made may have been incorrect or under/over corrected for anticipated results, enables teams to prevent larger issues.

### What areas are you most excited to see AI impact HR?

- Career development, employee mobility and identifying opportunities to collaborate between team members in the workforce.. Finding others 'like you', be it a mentor or mentee or simply a coworker on the same journey, identifying new relationships that draw the organization together will yield the most promising results from an organization's investment in AI innovation.

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