



Creating the future of human resources

How IBM uses next-generation digital workers to transform the allocation of employee promotions

by Rob Spencer

Jon Lester was working in the future. And he didn't want to come back to the present.

Why not? Because Jon was in a future where the skills of his colleagues in IBM's HR department were being used effectively, such as on workforce planning, and not wasted on busywork, such as gathering data from multiple systems. It's a future where information for making the best personnel decisions is supplied automatically, and where ethical AI models help ensure equitable processes and promotion decisions.

We could all benefit from this future. So how did Jon get there?



In a pilot for IBM Consulting in North America, IBM saved

12,000

hours in one quarter

In the same pilot, completed work that normally took 10 weeks in

5

weeks

A technology advance in how people get work done

Jon was Director of HR Service Delivery & Transformation at IBM, managing HR operations teams in six delivery centers around the world. The role meant that he regularly received new IBM innovations in the AI and automation space — before they became available to external clients — to test their limits in real-world business scenarios.

One day in 2021, Jon and his team received a new technology developed by the IBM Watson® Research Lab — a trial version of software now known as the [IBM watsonx Orchestrate](#) solution.

They thought it was a new iteration of familiar digital assistant and conversational AI technology, until they began working with it. Soon they were creating a digital worker to assist real IBM HR employees, finding a way to save teams 50,000 hours in a year. They understood that the capabilities



of this new software were about to transform daily work not just for IBM's HR department, but potentially for businesses everywhere.

Following the success of this first digital worker project, Jon was

offered a new role within IBM HR. He was looking forward to extending the new capabilities to a new area. As Jon puts it: "I told them I want to take the future of work with me."

The first real-world use case: employee promotions

Jeri Morgan was ready to quit her job. And she knew colleagues who felt the same. Jeri is one of IBM's HR Business Partners — HR employees who help IBM business units develop and retain talent. For Jeri and her teammates, frustration was building over IBM HR's quarterly promotions process. They fully supported the *purpose* of the process, which is to distribute promotions in a fair and timely manner and to help form promotion plans for employees not selected in the current quarter. Its success is critical to developing and retaining top talent within IBM.

The problem was, the process was extremely time and labor intensive. It stretched up to 10 weeks out of every 12-week quarter, putting serious time

pressure on the HR Business Partners' other job responsibilities, such as strategic workforce planning, including organizational and skills transformation with a focus on inclusion.

"It was heavily reliant on collecting data from various systems," Jeri explains. "Assimilating that data, validating the accuracy and presenting it to the business units in a way that they could consume it and identify who was ready for promotion, who was getting close to being ready and who was not, in addition to helping them identify what's needed to get those that are not ready, ready for a future cycle."

Jeri covered one region for one IBM business unit, IBM Consulting™. But this still involved pulling data on 15,000 – 17,000 employees, from several systems, into spreadsheets with about 75 columns of data. She'd share that data with the

appropriate IBM Talent, HR and business managers and leaders — hundreds in all — then she'd collaborate with the same people to refine the data, eventually identifying the most qualified candidates for promotion and defining future promotion plans for others. The managers, for their part, also had a great deal of frustration with the process. "These are very busy people," Jeri says. But they had to find time to analyze hundreds or even thousands of spreadsheet cells in order to see who met promotion criteria and why.

Thus, the promotions process was the first place Jon and his team decided to try out IBM watsonx Orchestrate. A collaboration between the HR Service Delivery & Transformation team, IBM Watson Research, the IBM IT department and Jeri and her HR colleagues led to the creation and implementation of IBM's first digital HR worker.

How digital workers support promotions for *humans*



The digital worker's name is HiRo, and HiRo is dramatically transforming day-to-day work during the promotions process. "HiRo has a digital CV — role-specific skills and capabilities that we trained it on," Jon explains. "HiRo performs many of the repetitive, manual activities that Jeri or her

teammates used to have to do *alongside* their higher value, more strategic work."

HiRo now handles the information compiling and formatting tasks that used to take so much of Jeri's time. "At the front end of the process, it took almost two

weeks to access data and format it into something that the business could use," she says. "HiRo does that in near real time. So that two weeks is gone."

The spreadsheets are gone too. The employee managers and leaders now receive an immediate view of their employees, data showing whether the employees have met promotion criteria and what steps need to be taken — by the employees and the managers — for fulfilling requirements. Jeri estimates that this part of the process, for each manager, is reduced from two weeks to just hours.

A concern with automation, of course, is that eliminating human work may eliminate human jobs. HiRo shows how automation can *elevate* human jobs. By highlighting employees not yet ready for promotion and showing how their experience and performance to date do not align with predefined promotion

criteria, HiRo gives Jeri and the employee managers more time for coaching to help employees secure a promotion, if not in the current cycle then in the next. As Jeri puts it, “The time the HR Business Partners and the managers are saving frees us up to do all the other things that

we have to do anyway, and we don’t have to work a weekend and work 12 – 14 hours a day to keep up with what’s going on.”

Here’s the new balance that HiRo brings to the promotions cycle:

Digital worker	Human
<i>HiRo handles operational work</i>	<i>Jeri gets more time for strategic work</i>
<ul style="list-style-type: none"> • Learns criteria for promotions • Ensures all managers submit applicable candidates • Gathers supporting evidence • Suggests salary increases based on criteria provided by the compensation team • Loads data into appropriate applications, providing real-time status updates 	<ul style="list-style-type: none"> • Makes final promotion and salary-increase decisions along with managers and practice leaders • Ensures promotion criteria align with business strategy • Analyzes promotions’ impact on diversity metrics • Assesses ranking recommendations based on AI-led data insights • Helps form development recommendations for employees not selected for promotion in the current quarter

HiRo is also ethical AI. The balance of duties between HiRo, Jeri and the other stakeholders ensures that the actual workforce decisions are made by people. “Any decision that involves a pay raise or a nomination is made by the manager, the HR Business Partner and the practice lead,” Jon explains. Further, before HiRo could be put into production, the cross-functional team had to demonstrate to IBM’s internal Ethical AI governance team that HiRo complies with these five principles of ethical AI:

- **Explainability:** earning and maintaining trust by making clear how AI-led decisions are made and what determining factors were included
- **Fairness:** using proper monitoring and safeguards to mitigate bias and drift and ensure fairer, more equitable treatment for all
- **Robustness:** guarding against adversarial threats and potential incursions to keep systems healthy
- **Transparency:** sharing information with stakeholders of varying roles to reinforce trust
- **Privacy:** safeguarding data through the entire lifecycle, from training to production and governance

Blowing chatbots and RPA out of the water

What makes Watson Orchestrate different than bots?



Intelligent Orchestration:
Engages with multiple roles in natural language or via events (e.g., emails, triggers, API calls)



Business Context:
Stores rules set by humans and applies them uniformly; stores past interactions to make workflows more effective



Skills:
Out-of-the-box capabilities help create new workflows. More skills can be added easily.

Before the HiRo project, the first question Jon had about IBM watsonx Orchestrate was what makes it different than a chatbot or an RPA robot. One of his team's recent successes with new technology was creating IBM's AskHR conversational AI, which automates more than 80 common HR processes.

Ask HR has strong adoption rates, and it saves the HR department, IBM employees and managers significant amounts of time spent completing or supporting HR processes.

"Conversational AI and RPA are useful and valuable," says Jon. But there are things they

can't do that IBM watsonx Orchestrate can. "Ask HR does its tasks really well, but it can only do them one at a time. It can't link transactions across multiple processes or systems. And a chatbot lacks long-term memory. The moment you switch it off, it forgets that you exist. It has no memory of what you did before."

When the team began working with IBM watsonx Orchestrate, they quickly noticed the capabilities that set it apart. Jon explains: "It can engage with multiple people, of different roles, at the same time. It remembers what you told it yesterday and can apply that information to actions today. And it lets you build its skills: you can train it do certain tasks within one process, but you can easily have it apply those same skills to other processes. So you can build use case after use case. It blows chatbots out of the water. It really is changing our understanding of the future of work."

Not just saving time, but transforming work

By applying HiRo to one IBM business unit in one geographical region, IBM saved about 12,000 hours per year and accelerated the promotions process by 50% while reducing its workload significantly. “We went from a 10-week cycle out of a 12-week quarter to probably five weeks,” says Jeri.

Based on this success, HiRo has some growth opportunities of its own. It’s about to be rolled out to IBM Consulting’s other regions worldwide, and the projected time savings is 50,000 hours per year.

Beyond saving time, HiRo and other digital workers’ highest value may be their potential to transform jobs. We are in the midst of a global labor and talent shortage. People are expected to do more with less all the time. This technology can help. “It’s not just that the work of four people can be done by one, it’s also that that one person’s



role is totally changed,” says Jon. “They can spend a much greater portion of their time on the most important work — like workforce planning and equity, and they can use Orchestra to supply the information they need to do that important work even better.”

So what’s next? While HiRo itself will be rolled out to global teams in mid 2022, it

is about to gain several digital colleagues. The HR department is already using HiRo’s learnings from the promotions cycle to develop new digital workers for other processes, covering tens of thousands more users. The new prototypes include Onboarding Assistant, Digital Hiring Coordinator and Learning Event Manager, and approximately 10 additional roles are in the pipeline.



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Solution component

- IBM watsonx® Orchestrate

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