Digital workers:
5 best practices for a
people-first approach
to adoption

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Digital worker best practices to help businesses realize return on investment through greater productivity and better business outcomes.

The growth of the U.S. labor force is slowing. Over the current decade, growth is projected to fall by almost 50%. The news is already full of stories of industries and businesses struggling with attrition, skills gaps and stagnant productivity

In a tightening skilled-labor market, adopting digital worker technology can yield significant productivity gains by automating line-of-business functions. When implemented thoughtfully, digital workers can also improve job satisfaction and, thus, the retention of your most important resource: people.

The new digital workers

Digital workers, also known as digital employees, are non-human team members trained to use intelligent automation technologies to perform multiple tasks in a set of sequences and meet a complete business need from beginning to end — in contrast to the narrower automation capabilities of bots and chatbots. An example might be processing invoices through an organization's system — moving them from sales to finance to procurement for execution and delivery.

Just like human employees, digital workers have a persona in the organization — a level of authority, peers and someone to whom they report. Like people, they have certain credentials — systems they can access, people they can interact with and a level of security clearance. And like human hires, they come with job-specific skills and the ability to build new ones as the job requires.

Digital workers today are helping HR staff craft job descriptions, generate lists of candidates and contact them. They're helping customer support teams approve exceptions and schedule follow-up meetings. They're working across departments to process customer address changes for procurement. And they're helping insurance companies evaluate complaints, gather approvals and notify customers.

The more advanced digital worker software can act across multiple processes and systems, converse dynamically and gather inputs from humans, and remember and draw from previous interactions to improve workflows.
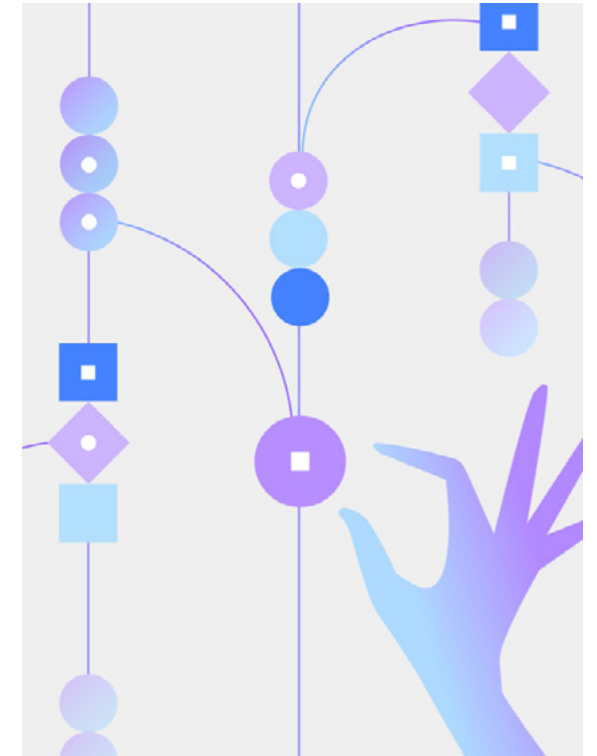
"One of the challenges with digital worker technology is you don't quite understand how good it can be until you see it."

Jon Lester
Vice President HR Technology
IBM

5 best practices for digital worker adoption

01

Stating the obvious, but start small
Rachel Reinitz, IBM Fellow and Founder and CTO of IBM Garage, recommends deploying a "thin slice of workload" to prove a technology's effectiveness, start deriving value quickly and build buy-in. In short, get people comfortable and confident with digital workers without changing too much, too fast.

02

Work from the end user up — early and often
Since digital workers are designed to relieve employees of work that can and should be automated, begin with those employees' input. What are their most laborious and time-consuming tasks? What use cases will help them meet their top organizational objectives? The purpose of digital workers is to help individual human employees become even more effective at their jobs by giving them the power to assign work, improving personal efficiency and employee experience.

03

Counter fears with clear paths forward
Employees may respond to the prospect of digital workers with skepticism or fear. It may feel no different to them than being told that a human employee will be taking over part of their work. They may ask (or feel), why is this part of my job going away? Will I need to oversee this new employee?

Remind them that the goal of digital workers is to reduce the drudgery in their roles — like replacing handwashing of dishes with a dishwasher. The goal is to help them focus on their uniquely human talents, based on their experience, ability to learn and communication skills. To counter their fears, provide employees with a clear path for professional development to further those human skills.

04

Consider high-touch use cases
Repetitive manual tasks may be your first target for digital workers, but don't discount the processes that require frequent human review or interaction from end to end. Because digital worker technology integrates so well with communication channels like email, Slack and chat, it has the potential to act as a highly efficient project manager as work moves from stage to stage.

05

Assess individual impact
Though managers will need to measure the impact of digital workers at a team or departmental level through an ROI lens, it's equally important that employees can compare their own performance (and satisfaction) before and after using digital workers. Consider doing more detailed time tracking of tasks and employee satisfaction before implementing digital workers, so you have a benchmark to compare against.

Real-world adoption success: IBM's first HR digital worker

When it comes to the process of allocating fair and equitable job promotions, HR professionals can turn to digital workers to help gather employee data so they can focus on using that data to make the best promotion decisions – which is exactly what IBM's HR department did.

One day in 2021, Jon Lester, Vice President, IBM HR Technology, and his team received a new technology developed by the IBM Watson® Research Lab—a trial version of software now known as the IBM Watson 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, called HiRo, to assist real IBM HR employees with the employee promotions process, automating 12,000 hours of previously manual data-gathering and data-entry tasks in one quarter (see detail in the full case study).

Jeri Morgan, one of IBM's HR employees who helps business units develop and retain talent, faced a labor-intensive quarterly promotions process, which put serious time pressure on the team's ability to complete other job responsibilities, such as strategic workforce planning and equity.

"It was heavily reliant on collecting static data from various systems," explained Jeri. For the North American region of IBM Consulting™ alone, it involved pulling data on 15,000 – 17,000 employees, from several systems, into spreadsheets with about 75 columns of data.

HiRo now handles the information compiling and formatting tasks that used to take so much of Jeri's time. The spreadsheets are gone. The employee managers and leaders now receive an updated view of their employees' data that displays whether employees have met objective promotion criteria and what steps need to be taken—by the employees and the managers—for fulfilling baseline requirements.
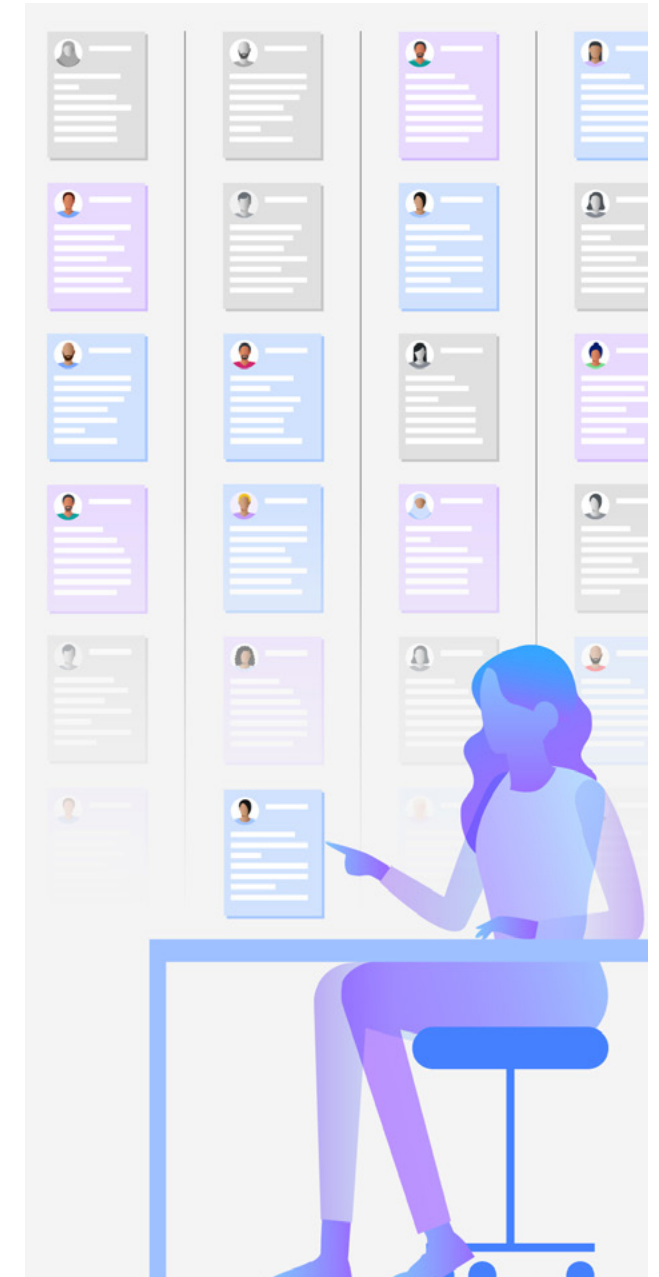
Decisions made by people for people

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.

And although HiRo doesn't include machine learning capabilities, it does adhere to the ethics underlying IBM's AI technology by ensuring data privacy and security for personal information (PI), and transparency around where the data is stored and pulled from.

The use of HiRo also shows how automation can elevate human jobs. When the team began working with IBM Watson 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, where applicable. Once the rules are set by humans, HiRo will uniformly apply them. 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 really is changing our understanding of the future of work."
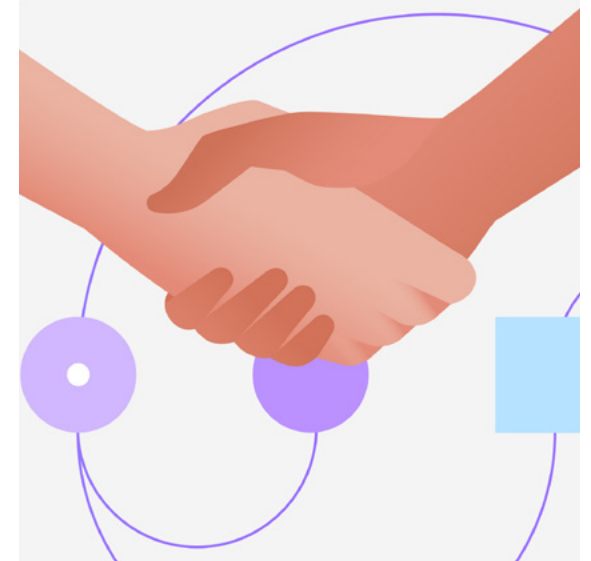
In summary

The demographics of the workforce are changing rapidly. The Baby Boomer generation is retiring in numbers that far exceed those joining the workforce. A skills gap is widening that will require a big effort to overcome. Digital workers can help businesses by automating a wide variety of tasks so employees can focus on learning and high-value activities, improving organizational productivity.

Learn more about the latest in digital worker tecnology →