

Automation at scale: The benefits for payers

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This article is one of several papers we will be releasing in the near future on the importance of digital for payers.

Automation at scale: The benefits for payers

Process automation at scale is now feasible for most payers. When coupled with other next-generation digital tools, we estimate that it may enable many payers to reduce operational costs by up to 30 percent within five years.

Many industries have an ambitious vision for fully digital processes, including comprehensive self-service, omnichannel offers, and complete utilization of all available data. Process automation is a key element to achieve this vision. Recent developments in technologies such as robotics and machine learning have made it easier for companies to achieve process automation at scale, and this change is fundamentally transforming how the companies operate, greatly improving their efficiency and often increasing consumer satisfaction. An analysis by the McKinsey Global Institute (covering more than 800 jobs and over 2,000 work activities)¹ showed that:

- Globally, almost half the activities employees perform—which account for nearly USD 16 trillion in wages—could potentially be automated using existing proven technologies.²
- Automation will transform far more jobs than it will eliminate. Less than 5 percent of occupations could be completely automated using current technologies. However, at least 30 percent of employee activities in about 60 percent of occupations could be automated.
- Among the industries studied, the automation potential ranged from 27 to 73 percent; in healthcare, it was 36 percent.

Automation at scale could solve the following problems health insurers currently face:

Increasing cost pressures are pushing many payers to significantly improve operations.

Many claims adjudication and call center activities, such as claims reprocessing and post-call documentation, are highly repeatable and costly when handled manually, which makes them good candidates for automation.

¹ James Manyika et al., A future that works: Automation, employment, and productivity, McKinsey Global Institute report, January 2017.

² We define automation potential as the percentage of work activities that could be automated by adopting current proven technologies.

The workforce is aging and contracting.

Especially in developed societies, the workforces of many payers are shrinking as employees reach retirement age—and finding replacements is increasingly difficult. Automation can help payers effectively manage natural attrition and ensure that the remaining workforce is focused on high-value work.

Core IT systems are often hard to change.

At most payers, core systems cannot easily be modified, which makes it difficult to implement necessary operational changes. Frequently seen problems include the absence of standardization and integration, workflows that span multiple disconnected systems and often require duplicative manual data entry, a complex demand-management structure, and less-than-optimal IT service provider relationships.

Automation at scale is one lever that can address these problems. It is most effective if deployed as a key element of a payer's holistic digital process transformation. Successful approaches are usually owned by strong business leaders who are looking beyond cost reduction. By taking a holistic P&L perspective when undertaking automation efforts, the leaders ensure that freed-up employees are dedicated to new tasks with the highest business value, which often enables new consumer-facing business models.

In this paper, we discuss six topics payers should consider if they are contemplating adopting automation at scale:

1. Core automation technologies
2. The impact of automation at scale
3. Automation use cases
4. Challenges to implementing automation at scale
5. Keys to achieving sustainable impact
6. Our recommended approach to deploying automation at scale.

Core automation technologies

Five core technologies are currently propelling automation:³

Robotic process automation (RPA) is the application of technology to allow organizations to automate routine tasks (e.g., extracting and cleaning data) through existing user interfaces, mimicking human actions. Using RPA, so-called bots are created. (Bots are algorithms that execute automated, usually repetitive tasks.) Because bots utilize existing user interfaces, RPA does not require changes to the core IT systems.

Smart workflow is a process-management software tool that can be configured to merge tasks performed by groups of humans and machines so that bots can be integrated into regular workflows.

Machine learning and advanced analytics software use algorithms to identify patterns in structured and unstructured data. When algorithmic outputs exceed a certain level of confidence (often 95 percent), these technologies can be used in place of employee judgment and decision making.

Natural-language processing enables the creation of seamless interactions between humans and technology. It translates observations from data into prose and vice versa, mimicking human speech.

Cognitive agents are created by combining machine learning and natural-language processing to build completely virtual entities (so-called agents) that are capable of executing tasks, communicating, and learning from data sets. In addition, the agents can make decisions based on logic, experiential learning, and, in some cases, the detection and prediction of client behavior and emotions.

³ Federico Berruti et al., *Intelligent process automation: The engine at the core of the next-generation operating model*, McKinsey white paper, March 2017.

Many payers begin the journey to automation at scale by implementing RPA as a short-term solution. This technology allows payers to automate some processes (or parts of processes) within existing IT systems and, thus, does not require significant changes to those systems, which markedly lessens the potential for business disruptions. RPA has limitations, though. Maximum benefits are typically achieved by using it concurrently with other automation technologies, such as machine learning voice assistants, cognitive agents, and natural-language processing.

The impact of automation at scale

Automation at scale can bring numerous benefits to companies, including greater workforce efficiency, lower demand for manual activities (through improved auto-adjudication and self-service capabilities), increased revenue (by refocusing employees on new activities), and often higher consumer satisfaction. The benefits are particularly strong in data collection and processing, an advantage especially relevant to payers and other insurers, given automation's potential to improve back-office and service activities in five major ways:

Lower costs. Technology and machines can replace much of the work that is currently done by hand. In our experience, the change can lead to average cost savings of up to 30 percent within five years for many payers.

Faster service. Streamlined processes and automated routine tasks make it possible to complete in minutes activities that previously took days. The accelerated service and delivery can improve the user experience for members, providers, and internal stakeholders, as long as automation does not restrict service offerings (e.g., by limiting access to some service channels).

Increased flexibility. Technology and machines can operate 24/7 and scale up or down with demand, creating previously unavailable capacity and further increasing operational efficiency and flexibility. As the pace of change in healthcare continues to rise, it is extremely important for payers to be agile and able to adapt rapidly if they want to remain competitive and win in the marketplace.

Improved quality with lower risk. Automation can transform testing and quality control because the increased capacity it provides allows a company to move from spot checks to 100 percent quality control, which reduces the error rate to nearly zero. When machines take on formerly manual tasks, the risks of human error also decreases.

Distinctive insights. Automation—in particular machine learning and advanced analytics—can generate, capture, and analyze much larger data sets and hundreds of new factors, making it possible to predict drivers of business performance and generate important new insights.

Given these benefits, a growing number of payer IT departments are likely to adopt RPA and other automation technologies as a service for the business.

Successful approaches are usually owned by strong business leaders who are looking beyond cost reduction.

Payer case study: Germany

A few leading payers have begun the journey to automation at scale and are beginning to achieve real success, as this case study and the following one illustrate.

The company is a statutory health insurer (SHI), a public payer in Germany. It recently consolidated with a few other SHIs and wanted to increase its efficiency and lower costs. It also needed to find a way to compensate for its shrinking workforce. To achieve these goals, the SHI decided to pursue digital innovations, including automation at scale.

During the initial diagnostic, the SHI determined that its consumer onboarding function was particularly ripe for a digital process transformation, including a robotic solution. More than 90 percent of its new-member forms were paper based and processed manually. Furthermore, parts of the robotic solution required to eliminate manual processing would make it easier to automate several other back-office processes without the need for large IT efforts or expenditures later on.

To fully automate member onboarding, the SHI decided to develop a new web-based front end and to deploy RPA because this light-touch, noninvasive technology would not require it to immediately make major changes to its existing IT systems and processes. The SHI is now in the process of implementing three steps (Exhibit on page 7):

- To eliminate the need to manually log data on paper, the SHI has created a lean form that consumers can fill out via a web-based front end. The digital data then undergoes a real-time digital review. This change has reduced not only the error rate but also the need for paper and logistical requirements.
- The SHI is using a robotic solution to replace a time-intensive manual data transfer process between different IT systems with an automated data transfer process performed by a bot. This change has sped up the transfers and made them more efficient.
- Member onboarding is moving from manual checks and final processing done by employees to automated processing. This robotic solution has been developed to spot complex or problematic cases and then direct them to employees for review processing, and it can automatically process the data for most cases.

The SHI has made significant progress in these three areas and is planning to tackle new-member form supplementation next. It also has plans to make the digital member onboarding journey available through all channels. In each channel, both members and employees will have views with individualized functionalities, and live consumer support will be available to assist prospective members in real time, thus improving consumer satisfaction while maximizing conversion rates. In the background, the same bot will automatically “feed” the data into the SHI’s core IT systems. In addition, the SHI is extending its use of RPA and machine learning to a wide variety of processes in many areas of the company, including market development, consumer service, health insurance benefits, nursing insurance benefits, and products and rates.

Results to date suggest that the SHI is reaching its goals. By delivering consistent outcomes and higher responsiveness, automation is enabling it to increase its efficiency and effectiveness. In addition, the automation of routine, repetitive tasks is making it easier for the SHI to cope with the shrinking size of its workforce.

Payer case study: United States

A large national US payer had adopted digital in a few areas based on specific use cases. It then decided that it wanted digital to be a central part of its strategy and thus embarked on a more holistic, end-to-end digital transformation of its core business processes.

The payer started this effort by identifying end-to-end user journeys that were particularly important to its stakeholders, especially providers. It quickly realized that its inability to have clean provider demographic data was causing significant dissatisfaction within the provider community as well as several downstream issues. If it could improve its “help me update my data” journey for providers, it would markedly strengthen the experience it offered providers—and enable it to achieve significant administrative cost savings.

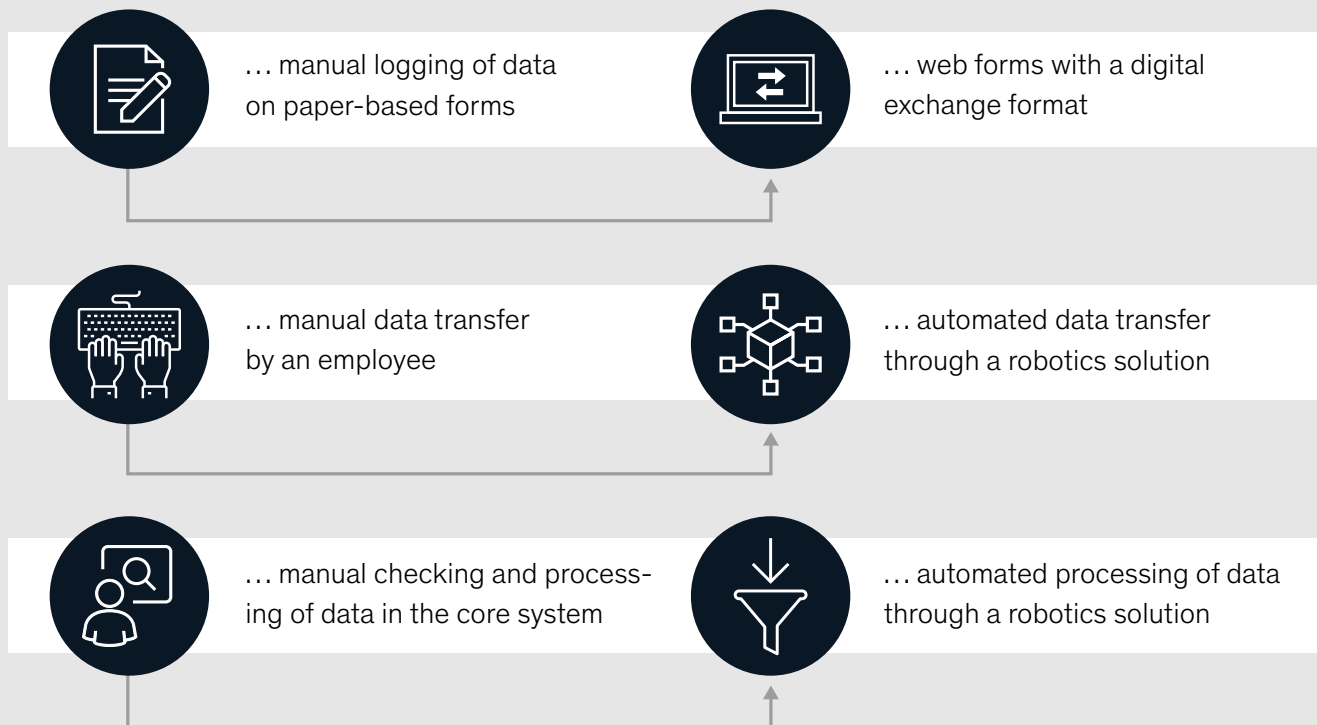
To digitize this journey, the payer:

- Created a self-service portal that providers could use to submit demographic data update requests and track progress against the requests through proactive notifications
- Established a single point of entry for roster updates that could be submitted in relatively unstructured formats
- Enabled smart workflows for cross-team routing and collaboration
- Identified rigorous metrics to track and manage process efficiency and effectiveness
- Used robotic process automation to update downstream systems based on “single source of truth” (a source system that other systems can always use to get updated information) and smart logic to solve conflicting data entries.

The redesigned journey now gives providers intuitive interfaces they can use to update their demographic data, as well as visibility into data update requests, which is minimizing the need for both follow-up calls to service desks and error corrections after claim denials. The payer is now near its goal of achieving about USD 30 million in annual administrative cost savings because it increased its digital work intake by approximately 60 percent, enabling it to decrease its manual downstream activities considerably. In addition, it has reduced adjudication problems related to provider-data-related issues by about one third. Furthermore, the payer has developed critical internal capabilities, such as user-centric design, agile execution, and robust governance. It is continuing its transformation by digitizing roughly 15 additional journeys.

Exhibit

Manual log processing can be automated in 3 steps



Automation use cases

Many opportunities for automation exist throughout the payer value chain. In our experience, the following areas have the biggest potential for automation in the next five years:

Enrollment and billing. Machine learning algorithms can help with policy selection, underwriting, and pricing. Automated or natural-language processing-driven tools can fully automate plan enrollment and answer billing questions using natural conversation, often without engagement from a customer service representative.

Claims adjudication with machine learning. We estimate that 80 to 90 percent of claims adjudication is currently done automatically. With the help of machine learning, automatic adjudication rates could likely surpass 95 percent within a few years.

Prior authorization. In the US, most prior-authorization work is done manually today; typically, only about 25 percent is automated. We expect the automation rate will likely increase to 50 to 75 percent within five years.

Medical record review. We estimate that less than 10 percent of medical record reviews are automated today, but the rate could reach up to 50 percent in the next few years.

Consumer-service call centers. Although some call centers have incorporated interactive voice response and machine learning, many still rely heavily on humans to answer consumer calls and carry out the required tasks. We expect that wider adoption of technologies such as natural-language processing and cognitive agents will accelerate call center automation in the near future.

Corporate support function operations. Among payers, automation in back-office operations has been limited to date. Automation technologies such as RPA, dynamic queuing, and smart workflows are expected to dramatically alter these functions in the near future (e.g., by automating updates to member data).

Challenges to implementing automation at scale

To generate impact, payers will need to overcome several real and perceived barriers to automation at scale. Some of the most important of these barriers are⁴:

Tool and bot proliferation has made it difficult to navigate the thousands of tools and vendors.

Because the number of tools and vendors has expanded rapidly, the complexity and time required to assess the best-fitting means for automation has increased. Even a “standard process” may involve many combinations and interrelationships, and developing the corresponding bots to cover them all can be confounding. In addition, these bots need constant maintenance that requires tight management of the change and release processes. Furthermore, bots present a number of technical challenges:

- Bots need regular maintenance, upgrades, and cybersecurity protocols, all of which involve ongoing costs and present demands for executive focus.
- Bot configuration often is not flexible enough to keep up with changes in the platforms on which the bots interact.
- Putting in place thousands of bots introduces an additional layer of architecture into the technology stack, which requires customized governance and oversight by a busy, often overburdened IT department.
- Managing bot licensing and working with platform vendors may bring complexities and special requirements that typically manifest themselves only during implementation.

As a result, CIOs have been known to put proposed automation programs on hold or have refused to allow the installation of new bots—even ones that vendors have worked on for months—until solutions have been created to scale the programs effectively.

⁴ Alex Edlich and Vik Sohoni, Burned by the bots: Why robotic automation is stumbling, McKinsey Digital Blog, May 24, 2017.

The fallacy that sustainable automation can be delivered by the IT department alone.

Sustainable automation requires the collaboration and commitment of the entire organization. It is therefore crucial that a payer maps out who and what will be affected by automation before the bots and RPA agents are installed. Identifying, keeping track of, and updating all the different linkages RPA tools will develop and rely on is a whole new set of responsibilities—one that may not be appropriate for the IT department to take on. Clarity about how automation will be managed at scale—and who will accept this responsibility—is critical before, not after, the RPA tools proliferate.

If the organization believes that automation is one of several levers to be used in a process optimization effort, then responsibility for automation must reside with the business process owners. Only in this way can the organization embed critical analytical and digital skills in the lines of business.

Pursuit of quick “small potato” wins while overlooking larger opportunities. Payers are usually under pressure to showcase the captured benefits of automation, which can cause them to focus on opportunities that are relatively unimportant but quick and easy to implement. While achieving quick wins can be worthwhile as a proof of concept, it is essential to develop an overall strategy and invest in important, longer-term opportunities to capture the value that can be generated by automating large processes.

Inability to translate activity into P&L impact, resulting in low or nonmaterial returns.

While it may be possible to automate 30 percent of tasks for most occupations, that does not neatly translate into a cost reduction of 30 percent.⁵ People do many different things on the job, and automation tools may address only some of them. Also, automation tools often treat localized pain points. Fixing one bottleneck may just move the problem elsewhere in the process—or elsewhere in the organization. What is more, automation requires investments, especially in technology and know-how. Consequently, the financial outcome of automation rarely matches the original expectations. Real, sustainable savings usually require a fundamental transformation of the organization.

A cost-myopic view that ignores the value derived from improvements in quality, speed, and flexibility. Cost reduction is a key benefit of automation at scale, but it is not the only one. Other potential benefits, such as better consumer experience and improved quality, speed, and flexibility, are important to a payer’s long-term success. Developing metrics to measure and track these benefits can make it easier to recognize and demonstrate them. Moreover, establishing strong business leaders with P&L responsibility can help scale automation towards highest business value.

Sustainable automation requires the collaboration and commitment of the entire organization.

⁵ James Manyika et al., A future that works: Automation, employment, and productivity, McKinsey Global Institute report, January 2017.

One way successful companies sustain the value created by automation at scale is by establishing a centrally located center of excellence.

Employees' fear of automation, arising from concerns about job losses. Although automation can eliminate some jobs, it also has the potential to provide new opportunities and free capacity to focus on value-added work. For example, call center employees could shift their focus to proactive service or sales, instead of manually documenting interactions at length. To gain employee buy-in, companywide communication and clear articulation of the value of automation are crucial.

Treating employees as problem solvers and enabling them to use automation tools to help solve problems can improve their work experience. Rather than running the tools from a central authority, delegating authority to employees—teaching them how the tools work and perhaps how to configure or code them—can lead to greater employee engagement and continuous improvements in the organization. Such results are in line with other initiatives, such as agile development and continuous delivery, that many companies are currently launching to empower employees. Furthermore, high performers whose jobs will be eliminated can be considered for other roles within the organization.

Too much dependence on suppliers, not enough capability building. System integrators and other vendors often bring in personnel with expertise and experience to help implement automation programs and increase staffing flexibility. However, a payer that uses only external suppliers for implementation misses the opportunity to build the internal capabilities critical for scaling and sustaining automation over the long run. Significant advantages can be gained from having employees work side by side with vendors on implementation so they can develop the capabilities needed to bring future automation work in-house. One payer's CIO emphasized this point by arguing that without these internal capabilities, business process owners would not be able to grasp the design options available to them.

Keys to achieving sustainable impact

To overcome the challenges described above, payers that want to implement automation at scale must develop an end-to-end vision of the outcome, an overarching strategy for how to get there, and a road map to guide them on the journey. In our experience, the following six factors are typically needed for success:⁶

Game-changing aspirations. To define their vision, successful payers start with an understanding of the total opportunity and value at stake. They then develop an ambitious organizationwide vision for the end state, which typically includes significant cost savings and a fundamental restructuring of their cost base to create and sustain their competitive advantage. The payers then develop a high-level implementation road map that shows the way to achieving those aspirations. For example, they may transfer routine or basic processes (the ones likely to become commodities in the future) to vendors so they can focus on automating the processes essential to their long-term competitiveness.

Strong business ownership. It is critical for business leaders with P&L responsibility to own the vision and outcome. This business ownership, in our experience, is crucial for achieving sustainable impact and expanding the effort's scope beyond mere cost reduction. Freeing up employee time and allowing them to refocus on higher-value tasks can deliver significant value but requires clear prioritization on where the extra time should be focused. If done right, automation can help build additional consumer-facing services and generate new business opportunities.

A focus on people. Significant personnel changes may result when a company implements automation at scale and realizes its full value—even if few employees lose their jobs. Thus, it is crucial for human resources (HR) to be part of the transformation from the beginning. HR can help coordinate retraining and learning new ways of working.

It can also play an essential role in creating new workforce management practices, managing the changes proactively, and using analytics to help redeploy and retrain employees. Given shifting workforce demographics, HR can use natural attrition, which can be high in such areas as call centers, and recent or planned retirements to control and minimize forced exits, making automation a way to fill holes in the workforce that are emerging naturally.

IT engagement. As discussed, responsibility for process automation must lie with the business process owners. Nevertheless, a close partnership with the IT department is essential because that department is responsible for designing the overall system's lifecycle, managing the rollout against other priorities, supporting development, and performing ongoing maintenance. If the partnership is to succeed, the IT department should be an integral part of the process—from the start and throughout implementation. The program's steering committee and governance structures can help ensure this happens.

Lasting in-house capabilities to achieve sustainability. One way successful companies sustain the value created by automation at scale is by establishing a centrally located center of excellence (COE). Its role is to govern the transformation and support the rapid deployment of automation-at-scale solutions. Among the approaches the COE can use to accomplish these goals are internal capability building, certification, standards, vendor management, and collection of reusable solutions. An automation COE can be fairly small because it can call on other COEs in the organization (e.g., those focused on lean operations or process optimization) for assistance when necessary.

Although the automation COE is responsible for putting systematic controls in place, business ownership and execution of the transformation should sit in the lines of business.

⁶ Federico Berruti et al., *The transformative power of automation in banking*, McKinsey white paper, November 2017.

Systematic value capture. As discussed, any implementation of automation at scale should combine a few quick wins with the pursuit of larger, longer-term opportunities. The road map for the transformation should take this into account. Successful companies examine every line of business to assess its degree of potential for standardization and automation, as well as the value that could theoretically be derived. Using a clean-sheet approach, they then determine what changes would be necessary to capture the value. The opportunities identified are then sequenced and built into the road map.

Our recommended approach to deploying automation at scale

To make automation successful at scale, payers should take care to build the right underlying foundation. While this usually includes the introduction of new technologies, changes in mindset and overall operating model are paramount.⁷ We commonly observe successful payers incorporating the following steps in their automation ramp-up:

Begin with an assessment. A diagnostic is the best way to identify the repeatable processes employees currently undertake manually and the value that could be created if the processes were automated. In addition, it can size the full value at stake from automation at scale.

Create a vision and make automation a strategic priority. The vision should be ambitious, covering the entire organization. It should also set an aggressive cost-savings target, such as 30 percent, and include a fundamental restructuring of the cost base.

Develop a strategy to deploy automation technologies systematically. Deciding on which processes will be automated is not sufficient. It is equally (perhaps more) important to decide on the right implementation strategy. Ideally, the switch to automation at scale should be part of a broader digital process transformation.

Formulate a road map to implement the strategy. In the early stages, a focus on robotic process automation can help ensure fast progress and results, with minimal disruption to the business. Later on, more sophisticated automation methods, such as cognitive agents and machine learning, can be added. The need for a few quick wins should not overshadow the importance of capturing larger, longer-term opportunities.

Having strong business leaders be involved from the beginning of the effort increases overall business ownership and helps steer the transformation toward maximum business value.

⁷ Alex Edlich et al., The automation imperative, McKinsey white paper, December 2018.

Build business ownership early. Having strong business leaders be involved from the beginning of the effort increases overall business ownership and helps steer the transformation toward maximum business value. Driving automation efforts from a business P&L perspective typically expands the scope beyond efficiency increases and often uncovers the potential for developing additional services or business models.

Do not depend on vendors for everything—ensure the IT function’s involvement. Often, companies rely primarily on external organizations, especially system integrators and other vendors, to design and deploy automation solutions. This approach creates strong dependence on the vendors and inhibits internal capability building.

Create an automation COE. One promising way to ensure capability building is to create an automation COE staffed with internal resources. The center will govern the transformation, ensure that the right groups are involved early on, and provide on-the-job training for employees (from external experts, if necessary).

Extend capabilities across business units and decentralize governance. Responsibility for automating business processes must cascade across business stakeholders. Employees from different business units may need education and training so they can improve their thinking about automation.

Go beyond building and testing single solutions; internalize both costs and benefits. The change effort must not focus on testing automation solutions for individual processes. To realize its full potential, the effort must also consider end-to-end processes and the target operating model.

Change mindsets and prioritize workforce management. The other factor necessary for the change effort to reach its full potential is a fundamental mindset shift throughout the entire organization. Achieving this shift requires a change-management approach tailored to the organization and its people.

Recent technological advances are enabling payers to more effectively respond to a wide range of market challenges. In coming years, next-generation technologies—not only automation at scale but also digitization, advanced analytics, and process redesign—will likely be pivotal for payers that want to improve efficiency and data quality, increase flexibility, and deliver a better experience for members, providers, and other stakeholders. Payers that do not get these technologies right will put many of their other digitization efforts at risk.

The risks in automation

Automation at scale is not without risks. Payers that are designing and deploying automation transformations should keep three risks, in particular, in mind so they can actively develop plans to mitigate them:

- **Documentation.** High-maintenance efforts such as bots and automated workflows are not always properly documented. A payer can create a central repository and unify the approach to automation to mitigate this risk.
- **Knowledge transfer.** Bots can be maintained only by specific people with RPA expertise. Thus, it is critical to make sure that knowledge is transferred early in the transformation, from the automation COE to key people in the business units and departments.
- **Business–IT alignment.** RPA is often driven by business initiatives and might sometimes be seen as a threat to traditional IT departments. As a result, some of those departments might artificially increase the complexity of RPA efforts. To avoid both the perception of danger and unnecessary complexity, it is important to involve the IT department early but employ strict guidelines for how RPA will be used in the organization.

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