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Automation-driven transformation

How to increase the scale and business value of automation in financial services

Robotics and cognitive automation (R&CA) is transforming how financial services firms operate, and over the next few years widespread adoption is expected across the industry. Today, however, many firms are still in the early stages of incorporating R&CA into their businesses and are unclear on how to achieve the scale necessary to produce substantial business value.

This article examines the most common challenges FSI firms encounter when pursuing R&CA strategies, and offers practical advice to help you maximize value and benefits from your R&CA investments.

What is R&CA?

The term "robotics & cognitive automation" refers to a broad continuum of technological capabilities, ranging from **robotics** that mimic human action to **cognitive automation** and **artificial intelligence** that mimic human intelligence and judgment. (Figure 1).

Robotic Process Automation (RPA). Early on some referred to RPA as 'spreadsheet macros on steroids.' But the power of RPA has evolved significantly and is increasingly being used for rules-based, high-volume tasks and business processes that do not require human judgment. Examples include accounts payable, finance processes, elements of client onboarding processes, and elements of mortgage loan origination processes. Processes that are prime candidates for RPA should have a well-defined set of rules and instructions to train the automation, just as a new employee should be trained. The more complex the rule set, the harder it can be to make RPA work.

Cognitive Automation. Moving up the continuum, we are seeing increased adoption of cognitive technologies that go beyond rule-based systems, with significant movement towards parameter-based systems that can learn and adjust over time. For example, chatbots are now being used by banks and insurance companies to handle customer inquiries; machine learning is helping with anti-money laundering alerts and fraud detection; and internal helpdesk chatbots are being used to handle financial queries.

Artificial Intelligence (AI). AI is making major strides in many process areas outside of FSI, including highly complex activities such as autonomous driving. But within financial services, AI is still largely in the experimental stage. For example, some asset managers are exploring the potential of AI to generate higher alpha by using asymmetrical data (such as unstructured data sets and sentiment analysis) to drive better investment decisions.

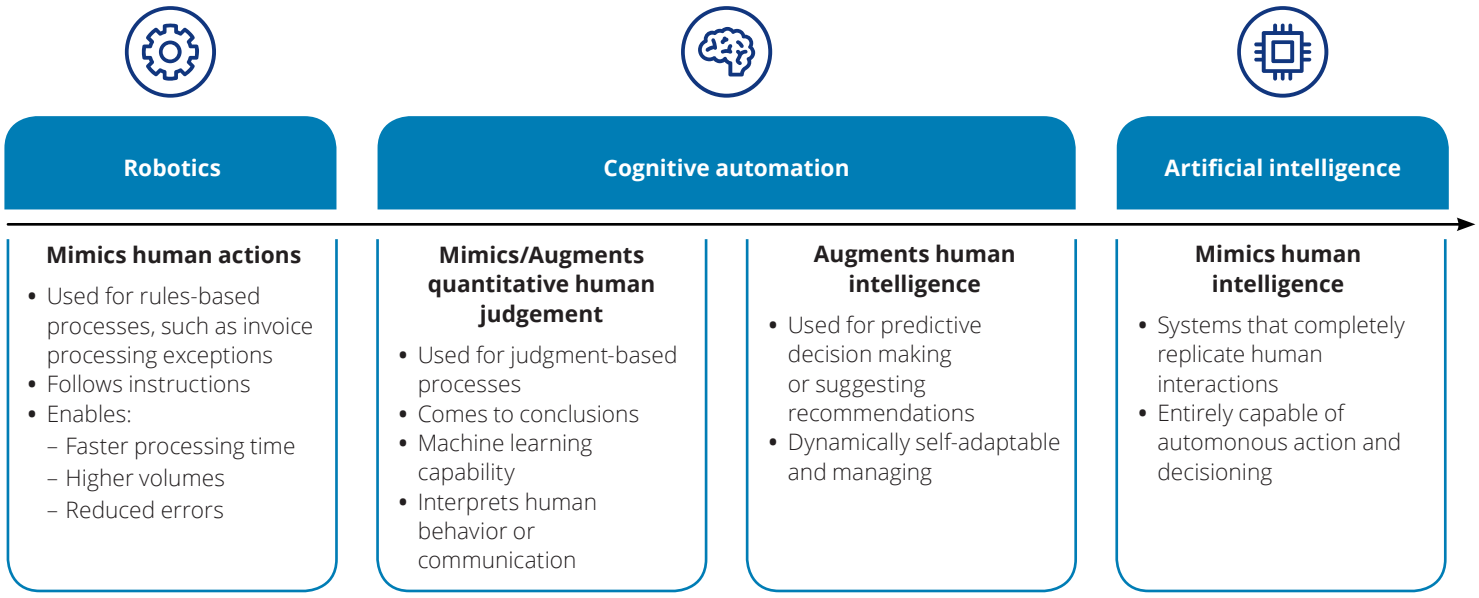
The essential journey to scale

According to Deloitte's *2017 State of Cognitive survey* [1], 76% of companies across a wide range of industries believe cognitive technologies such as R&CA will "substantially transform" their companies within three years. However, the survey also shows that scale is essential to capturing the potential benefits. Specifically, 49% of respondents with 11 or more R&CA deployments reported "substantial benefit" from their programs, compared to only 21% of respondents with two or fewer deployments.

Without sufficient scale, it is difficult for the benefits from R&CA to justify the effort and investment. Yet all too often firms find themselves stuck in small-scale experimental mode—held back by limited or poorly articulated vision and ambition, or overwhelmed by the complexity of R&CA technologies and processes.

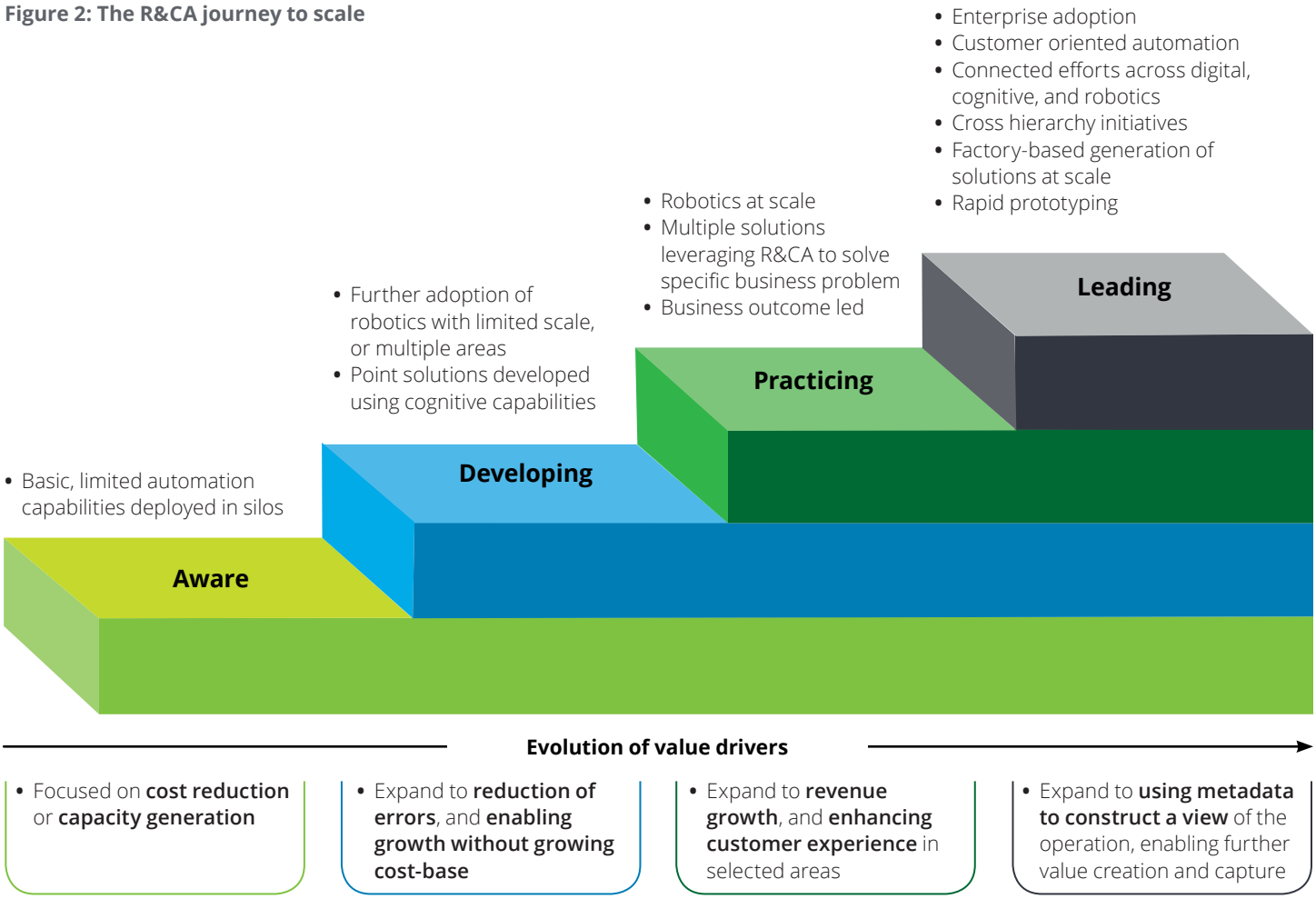
There are four major stages on the journey to scale. (Figure 2).

Figure 1: The R&CA continuum



1. Deloitte State of Cognitive Survey, 2017

Figure 2: The R&CA journey to scale



Stage 1: Aware. This is the starting point for most FSIs: an early stage of exploration that aims to prove the value of automation tools in a fairly limited scope before committing to a broader implementation. Typical activities include doing a proof-of-concept and experimenting with limited basic automations, such as automating part of a single finance process.

Stage 2: Developing. This is where much of the industry is today. Firms are looking beyond cost reduction, but face significant challenges in achieving the full value and potential benefits. Although they are reducing or eliminating tasks by deploying R&CA solutions, their focus tends to be on creating greater capacity—a benefit that doesn't necessarily translate into clear value for stakeholders.

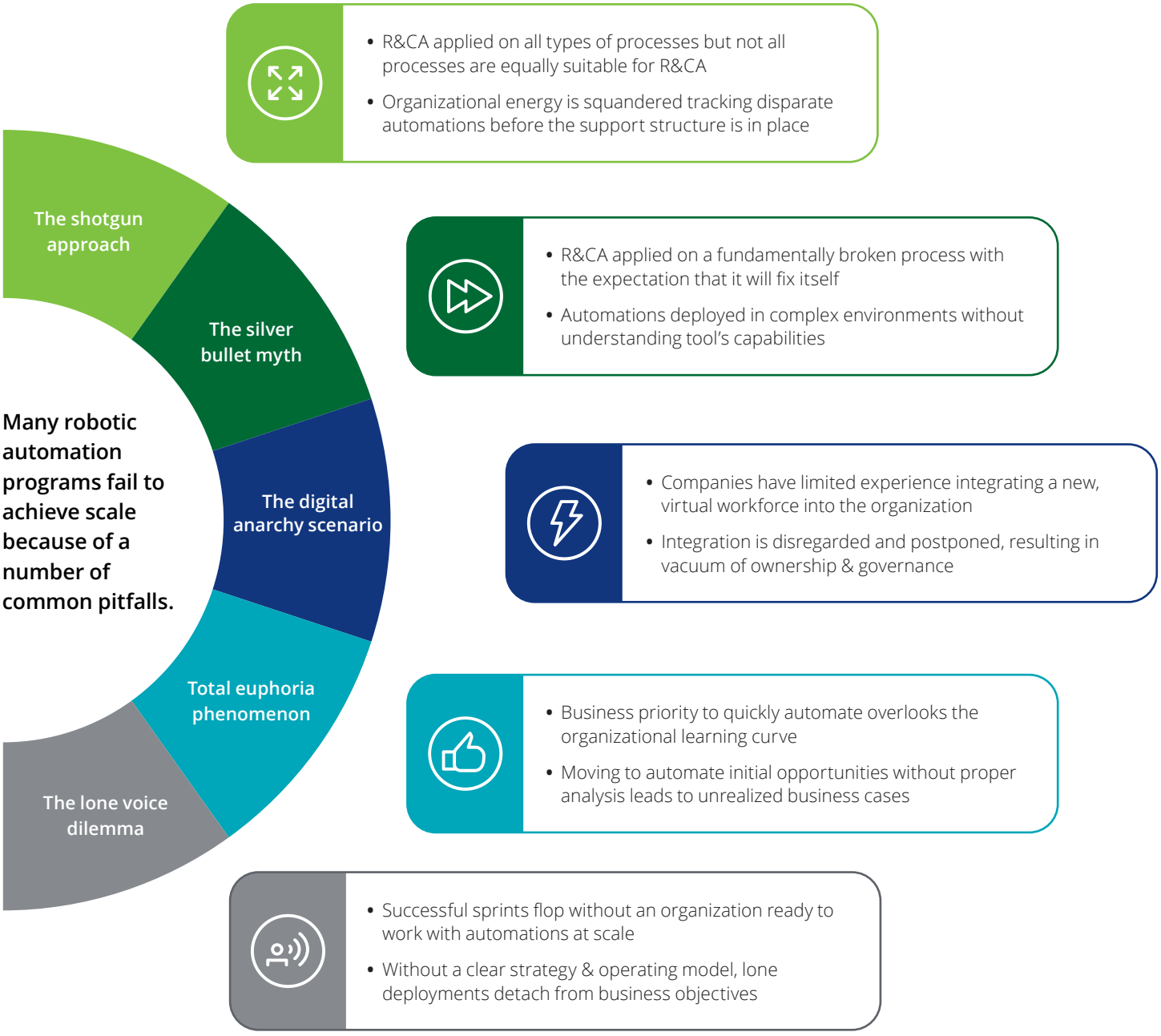
Stage 3: Practicing. Turning the corner from developing to practicing essentially involves achieving the promise of the technologies, which means creating more realistic business cases that explicitly link the value drivers you are pursuing to identifiable and measurable operational metrics. This stage is about getting to scale, not just experimenting. A useful rule of thumb here is if your automation breaks down and it is not a big deal, you are not really practicing automation. That said, the focus in this stage is less on implementing shiny new technology, and more on pursuing specific business outcomes (e.g., reducing middle office operations cost as a percentage of front office revenue, and leveraging automation to reduce the costs of reporting). Firms in this stage typically have a full-fledged R&CA program, including goals for leaders; a structured Center of Excellence (CoE) in place; titles associated with R&CA; and a robust set of tools and templates.

Stage 4: Leading. This stage generally involves a well-established automation program with an internal CoE that is fully leveraging R&CA technologies, as well as a focus on transformation to improve end-to-end processes across the organization—including in the front, middle, and back offices. Typical results include value creation through cost reduction, reduced errors and exception rates, and enhanced revenues. More recently, however, some FSI firms have also been using metadata about operational problems to view them more holistically and identify root causes such as inadequate training and other personnel issues. Organizations at this leading stage of R&CA build and operate at scale, often deploying several hundred bots in a scalable, on-demand factory model. Very few organizations are at this level today.

R&CA Journey in Action

One client we worked with has experienced a typical implementation evolution from AWARE into DEVELOPING. They started with enthusiasm at the highest levels of the organization and a deliberate focus to develop the automation capability in a few very targeted functions. There were a lot of learnings during the implementation of RPA in these focused areas, resulting in good but not dramatic initial results. Positive incremental work continues and enthusiasm remains high, but the client is now experiencing a different set of challenges, to expand the application and impact of RPA more widely across the enterprise. That type of expansion would require different capabilities, performance measures and incentives. This is a typical scaling challenge that many organizations wrestle with as they try to determine if it's worth pursuing automation at greater scale.

Figure 3: Common pitfalls



Common pitfalls

There are five common pitfalls on the journey to scale. The good news is these are all avoidable with appropriate preparation and diligence—and if the right expectations are set.

The shotgun approach. This involves applying R&CA to all types of processes even though all processes are not equally suitable for R&CA. Organizational energy is squandered by tracking disparate automations before an effective support structure is in place. This haphazard approach can affect an organization in several ways, but imagine your firm has started automation initiatives in several different parts of the organization, and you are now deploying them into production. Now you have a complex set of automations that touch multiple process areas and rely on several different technology applications, all of which should be monitored for automation health, business process effectiveness, etc. If you succumb to the temptation of going broad too quickly without first building a strong base from which to branch out, you risk losing momentum and leaving a broad group of business and technical stakeholders with a bad first impression of R&CA.

Fixing the Foundation

We were engaged by a global Capital Markets firm to apply robotic automation to their Accounts Payable processes. Before we started the coding work, we reviewed outputs and documentation and interviewed several process managers. We found the documented processes were out of sync with how employees actually did the work, and spent several weeks updating the process documentation before we could start automation efforts.

The silver bullet myth. This involves applying R&CA to a fundamentally broken process with the expectation that automation will magically fix things. It also involves deploying automation in complex environments without fully understanding the technology's capabilities and limitations. The silver bullet myth reminds us that broken processes are just that and should be fixed before you move forward because R&CA isn't going to fix what's broken. Robotics tools in particular rely on rules-based logic, so if your process isn't logical, or if the logic is too complex because "that's how it's always been done," you should fix the process first. Do not apply R&CA to your most complex processes, especially in the early stages.

The digital anarchy scenario. In this situation, companies do not have enough experience integrating a new, virtual workforce into the organization. Integration issues are ignored or postponed, resulting in a vacuum of ownership and governance. When deploying R&CA at scale, FSI firms often treat bots as a digital workforce. In fact, some organizations even give their bots names, logins, and passwords, just like human employees. Firms that do not invest in effective change management and communications programs and fail to adopt a comprehensive plan to integrate human labor with digital labor can encounter significant culture shock.

The total euphoria phenomenon. Enthusiasm and a desire to move forward quickly without considering the organizational learning curve can lead to unrealistic expectations and unrealized business cases. In this situation, FSI firms see R&CA as a quick fix, without giving it the appropriate analysis and due diligence—in particular, a robust business case that considers both quantitative and qualitative measures, along with a robust governance process to review and approve activities. Conversely, some organizations go to the other extreme, rejecting any bot initiatives that cannot promise positive ROI within a year.

The lone ranger dilemma. Particularly in federated organizations, enthusiastic leaders may take matters into their own hands if they do not feel they are getting adequate support from a CoE or the IT department. This can lead to proliferation of inconsistencies in process assessments, licensing agreements, support models, automation development, and management of reusable components.

Challenges Getting to Scale

A client with a decentralized organization took a similar approach to R&CA. They applied a grassroots effort centered on opportunity, which allowed for pockets of capability to emerge across the organization. That approach allowed for significant initial learnings and basic capability development, but to implement more than incremental change, they are exploring combining efforts, standardizing where it makes sense, and targeting greater complexity and financial impact. The performance metrics that these teams aim to meet make it challenging to align individual incentives to the broader impact of R&CA at scale.

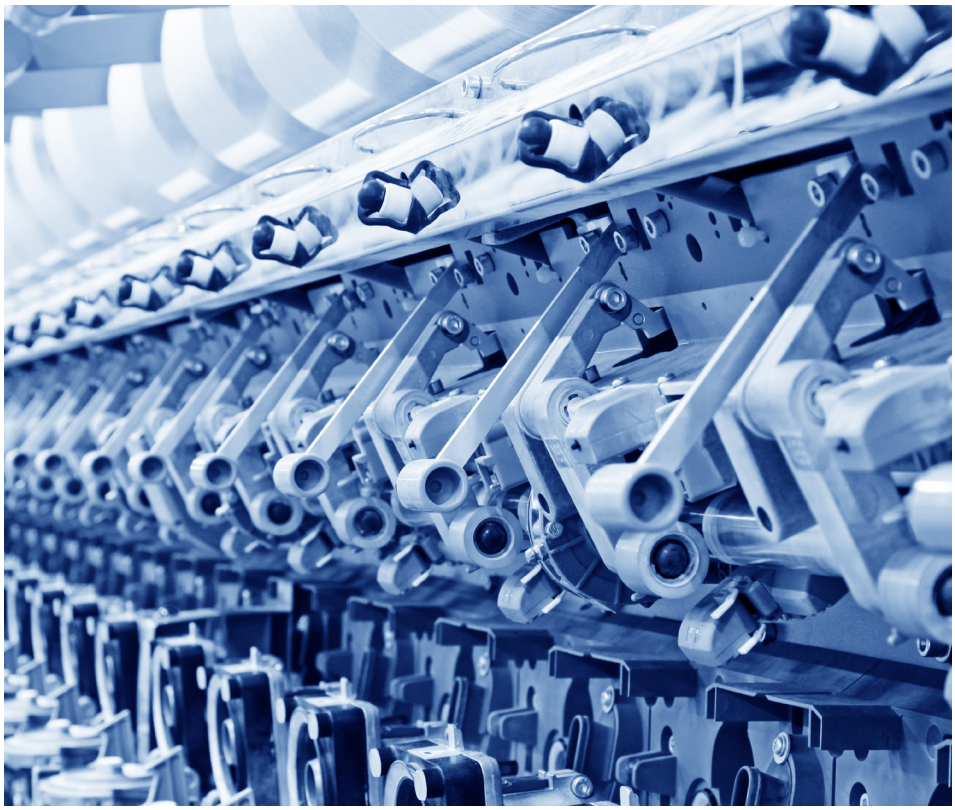
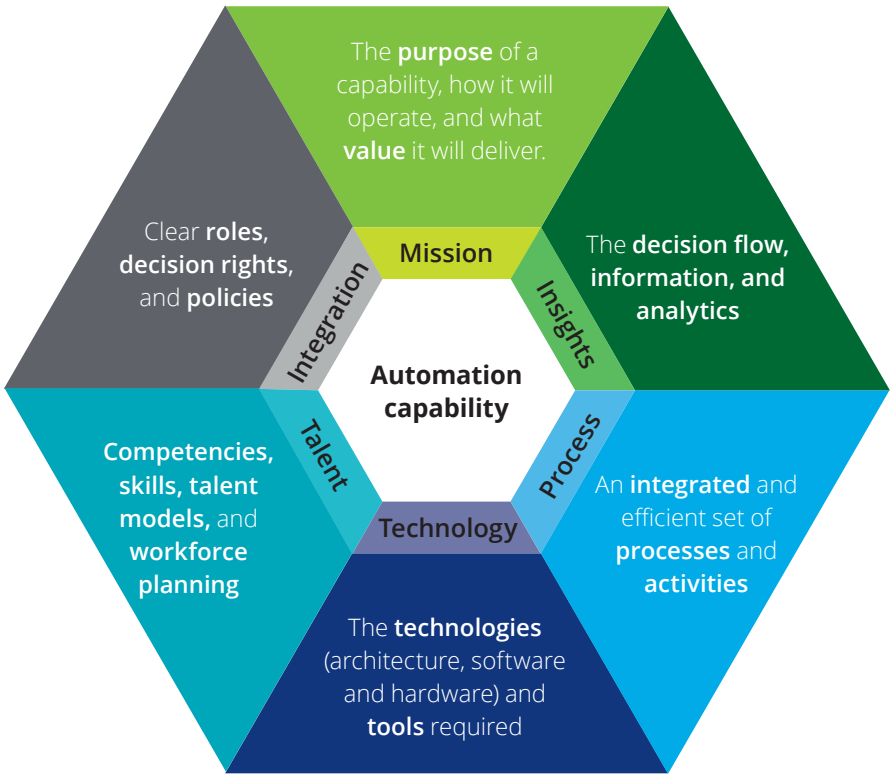


Figure 4: Deloitte's R&CA Capability Hexagon Framework



Building a foundation for successful scaling

A holistic view of automation capabilities can help organize and galvanize a team to avoid the common R&CA pitfalls and ultimately achieve scale. (Figure 4).

Here are some ways to achieve results with each element of the R&CA Capability Hexagon:

Mission

Articulate the R&CA mission based on key value drivers. When developing automation capabilities, the first step is to identify and articulate the purpose of the capabilities, how they will operate, and what value they will deliver. For many firms, cost reduction is initially the main driver (along with a desire to experiment and learn first-hand about this important innovation). However, as a firm's automation capabilities evolve and mature, other drivers typically come into play, including: improved quality and reduced error rates; increased production capacity; greater employee satisfaction; faster execution; an improved customer experience; and increased revenue.

Establish a clear and compelling business case. Develop and socialize a compelling business case by explicitly linking operational metrics to key value drivers, which may include a wide variety of metrics (e.g., cost, efficiency, quality, speed, responsiveness, revenue, etc.)

Create a broad R&CA vision and roadmap. Define a clear vision and roadmap for how R&CA can be used with broader process improvement and transformation efforts. As you scale up, find ways to expand the aperture of your automation efforts to address additional value drivers. Look for opportunities for total process transformation as opposed to incremental improvement. Many automation efforts fizzle out because they are too narrowly focused, limiting their value and impact. Target improvement opportunities that cut across organizational and process boundaries (for example, front, middle, and back office) because hand-off points and boundaries are often where the greatest inefficiencies can be found.

Integration

Establish robust, right-sized governance. A well-defined governance framework that supports a structured approach across the R&CA lifecycle is critical to achieve the expected results. However, rightsizing is important. Governance should be an enabler, not a bureaucratic roadblock.

Select and evolve an appropriate operating model. Establish clear roles and responsibilities and set expectations for the business, robotics CoE, IT, and other supporting functions. Centralized operating models that create a critical mass of expertise, focus, and investment often make the most sense in the early stages of R&CA (and for smaller organizations that lack the scale to decentralize). However, larger organizations that are scaling up might find it worthwhile to decentralize some or all of their R&CA activities so they are more in tune with the needs of the business. Most large organizations will likely evolve toward a hybrid model featuring a centralized CoE along with decentralized activities and resources within individual functions and business units.

Collaborate across boundaries. A coordinated approach to automation across functional groups is helpful to avoid proliferation of ad hoc processes, multiple conflicting automation tools, methods, and standards.

Talent
Gain access to the necessary specialized skills and talent. Like other types of transformation and technology development, R&CA implementation requires specialized roles, including automation champions, automation architects, and bot developers. RPA-fluent business process experts are particularly important to bridge the gap between business and technology—helping business experts understand what the technology can do, and helping technology experts develop solutions that make sense for the business.

Technology
Establish the architecture elements necessary to support scale. Architecture components such as disaster recovery/redundancy and cybersecurity are critically important as R&CA becomes an integral part of your operating processes. One way to know you have successfully achieved scale is when your automation becomes too important to fail and you have appropriate risk mitigation in place. Equally important in scaling is an appropriately modular design with a clear plan to efficiently update automations to mirror broader system interface changes.

Process
Select the right processes. Choosing the right processes is essential to short-and long-term success. Targeted processes should be evaluated based on two main criteria: (1) potential value to the organization, and (2) level of complexity. The best areas to target offer high value that aligns with the organization's priorities and value drivers, while also featuring a low level of complexity that simplifies the effort, reducing the cost, time, and risk associated with the implementation, while also driving towards benefits realization more quickly.

Insights
Collect and analyze data with purpose. Recognize that you now may be able to capture a wealth of new information about your processes—information that can support root cause analysis, value attribution, and other strategic objectives. Approach data collection and analytics with hypotheses in mind so that you can focus your efforts on the metrics that matter. Highlight the wins and value the new data provides.

Driving R&CA scale and business value in FSI

Achieving the desired results with robotics and cognitive automation requires scale. Until FSI firms achieve sufficient scale, it is virtually impossible to generate benefits that truly justify the effort and investment. However, scale isn't just a function of how many bots you have in operation. Ultimately, it is more about the extent to which R&CA is improving process quality and the customer experience—and the impact R&CA is having on your balance sheet and P&L.

Although R&CA hinges on technology, the primary focus should be on business outcomes. Technology is simply an enabler.

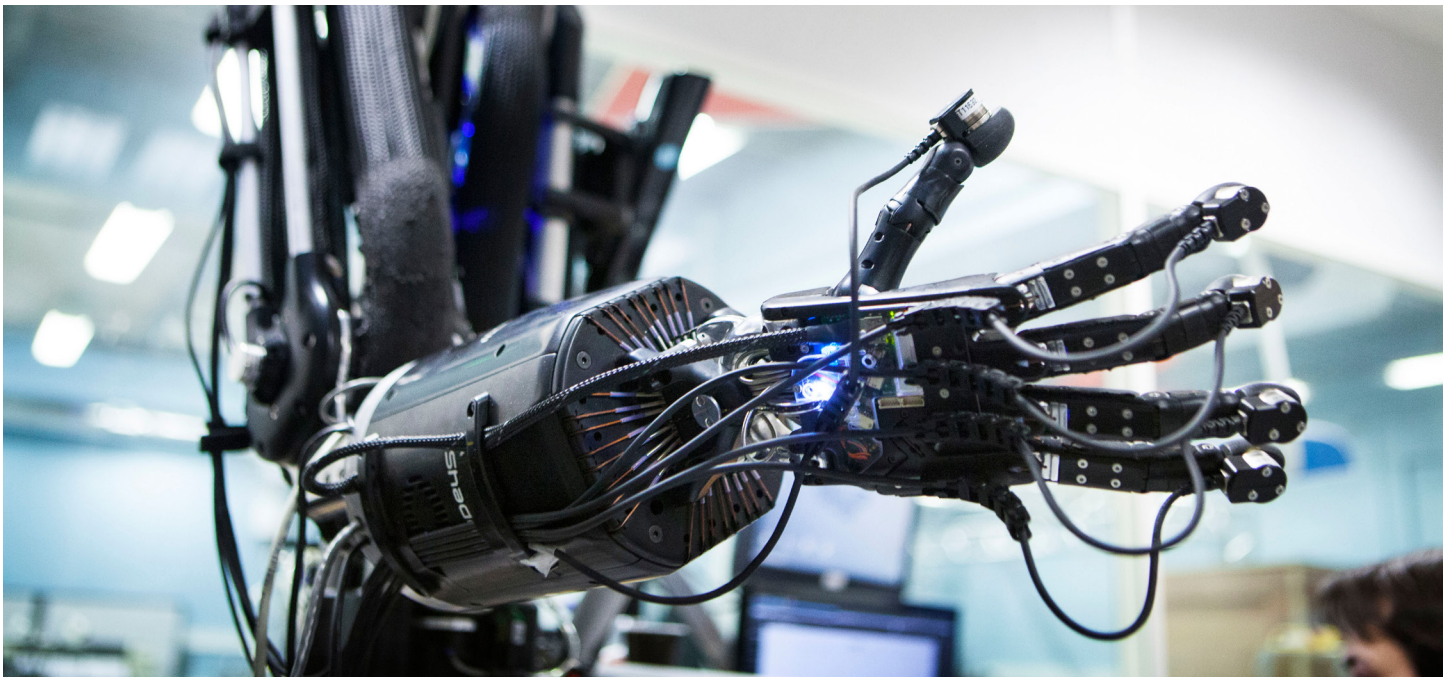
The most successful organizations are laser-focused on what they are trying to achieve with R&CA, and they have success measures that are explicit and transparent. This clarity makes it easier to align people, resources, and initiatives across the enterprise to achieve the expected benefits.

Focus on outcomes with Deloitte's R&CA solutions

Financial institutions often need to review hundreds of thousands of invoices and contracts with different terms, rates, formats and languages to identify inconsistencies and perform billing reconciliation activities. By leveraging natural language processing and OCR technologies, an automated billing solution could more efficiently extract information from contract and invoice documents and effectively execute the reconciliation. The Cognitive Billing and Reconciliation solution reduces revenue leakage by 3-5% on average and achieves approximately 96% accuracy by automating processes that are labor intensive, time consuming, and prone to human error.

Retail banks and payments institutions are also feeling pressure from steep growth in global non-cash payment transactions. Their payment operations involve a high degree of repairs and screening volume activities, requiring manual effort to fix payment errors and identifying false-positive alerts. The Cognitive Payments solution could help reduce the manual efforts—with an estimated 50-60% saving—by accurately identifying non-STP payment errors and false-positive alerts.

Learn more about our solutions:
www.deloitte.com/us/fsi-robotics



Authors

James M. Baker
Principal
Deloitte Consulting LLP

Ajay Bolina
Principal
Deloitte Consulting LLP

Sridhar Rajan
Principal
Deloitte Consulting LLP

Michael S. Schaffer
Senior Manager
Deloitte Consulting LLP

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