

Automation Centers of Excellence:

The soul of a transformative
automation program



To achieve the promise of automation, business and IT leaders **need people-centric approaches** supported by dynamic operating models that embrace the Future of Work.

01

A culture of agile innovation in your automation CoE is crucial to attaining this.

Why an Automation Center of Excellence (CoE)?

Many otherwise successful organizations are struggling to establish true customer experience transformations using the optimal integration of Robotic Process Automation (RPA) and Artificial Intelligence (AI). These leading companies are facing significant challenges in co-creating the Future of Work with their employees. Automation has ushered in the fourth industrial revolution and is creating new employee and client experiences; however, the unlimited possibilities are tempered by the glacial pace of organizational transformation. To fail here is to miss a once-in-a-generation opportunity to transform your organization into a Cognitive Enterprise and create new value for your customers and employees.

At the intersection of these human and technological challenges is the Automation Center of Excellence (CoE). We are now witnessing the rise of Automation CoE 2.0, a movement focused on engaging the enterprise to embrace a hybrid workforce delivering customer value with increasingly intelligent workflows.

Automation isn't just a technology journey. It is transforming the nature of work itself.

Although the CoE has many critical functions, the most important focus in today's environment is driving workforce engagement. Organizations need a holistic, human-centric approach to kickstart and evolve their automation transformation. Scaling automation and realizing its many benefits requires a change in employee and management mindsets and talent mixes. This can be accelerated through dynamic change journeys that leverage automation itself—from analytics to chat—where the CoE can spark employees' enthusiasm, develop talent, and create new automation evangelists across the organization.

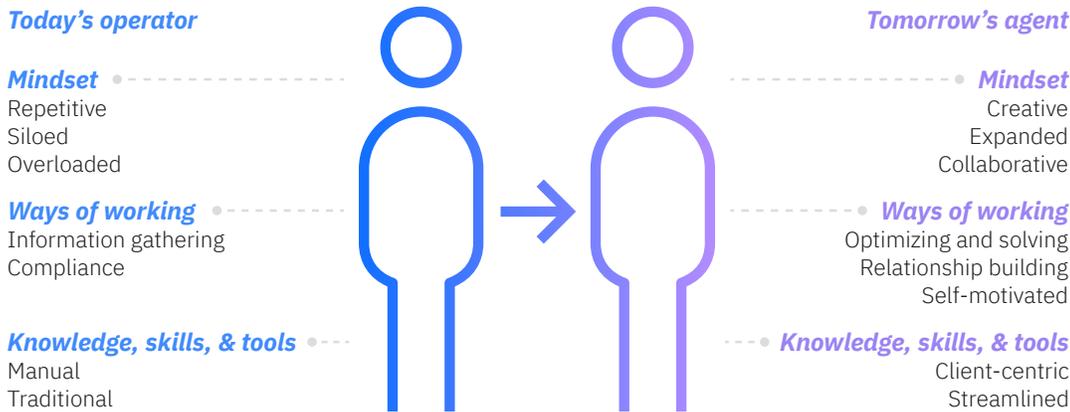


Figure 1. Engaging employees to lead innovation

This focus on our people is driven by a recognition that automation isn't just a technology journey; it is transforming the nature of work itself, and has far-reaching implications for culture, organization models, and ways of working.

This journey requires the ideation and execution of a clear strategy for automation across the enterprise. The strategy should be closely aligned with the corporate vision of digital transformation and ensure automation leads with the design and deployment of intelligent workflows that reimagine customer experiences. An effective Automation CoE helps the enterprise navigate digital reinvention by integrating automation into the fabric of transformations such as Digital, IOT, Blockchain, Analytics, and HR. Through the stewardship of the CoE, these initiatives can co-create entirely new customer and employee experiences.

The Automation CoE bridges business and IT. This pairing of process expertise and technological prowess ensures significant business value from the investment in automation. Rigorous benefits realization spanning cost reduction, quality, compliance, customer and employee experience is an important capability of the Automation CoE—one that requires deep collaboration between IT and business teams.

Automation is a world where intelligent workflows are increasingly led by technology and supported by humans.

As intelligent automation enhances a collaborative workforce where humans and their newfound digital co-workers excel together, the Automation CoE is there to drive understanding and adoption of this hybrid workforce. This fundamental shift to the Future of Work is orchestrated by the CoE as it leads the integration of technology and business owners, all the while co-designing with process leaders and team members.

As we can already begin seeing today, automation is a world where intelligent workflows are increasingly led by technology and supported by humans. The Automation CoE 2.0 ensures that the “humans in the loop” are empowered to drive long-lasting organizational success. It is the point at which strategy and operation become one, unified in the pursuit of actualizing tangible change far beyond the individual enterprise. It is the crux for managing human and technology as one. It is the Automation CoE 2.0 and it is here to usher us into the new age of automation.

Seven features of a successful Automation Center of Excellence

So far, we have focused on the human dimension of CoE capabilities, but a successful CoE tackles many other aspects covering the entirety of the automation journey. Across these dimensions, speed to value is key. This requires the ability to rapidly iterate through new technologies and business opportunities that deliver benefits at scale. Although this is a transformative journey, it need not be painfully disruptive.

Given this, our experience shows that successful Automation CoEs have seven core capabilities in common. Building and scaling these capabilities is at the foundation of our approach.

- 01 Strategy and vision** — Leading organizations connect across the business to envision the future of their automated enterprise and establish an automation vision at the nexus of technology and people. IBM uses Enterprise Design Thinking to co-create with our clients. Active sponsorship, including funding commitments from business and IT, is an important consideration here as is selecting and deploying your automation platform.
- 02 Dynamic operating model** — Different operating models (federated, hybrid, centralized) can be optimally applied at different waypoints in your automation journey. Establishing a comprehensive measurement model ensures that the CoE is adaptive, data-driven, and rapidly responds to changing business and customer needs while accelerating automation adoption.
- 03 Automation Learning Center** — To embrace the Future of Work, companies must look ahead and identify future skill gaps created by both the build and adoption of automation. For example, enabling citizen developers on low-code platforms and developing business skills in IT are just two areas to nurture talent. Co-designing new education roadmaps and talent models with your employees and HR should be a focus.
- 04 Hybrid pipeline** — Accelerating business value identification and accurately qualifying opportunities is a critical success factor for automation. Considering how both human and digital labor is optimized in a reimagined intelligent workflow helps organizations exceed in this area. This activity can be facilitated with automated process discovery, AI-driven feasibility testing, and benchmarking to establish process and data readiness for automation. This effort is often extended with Enterprise Design Thinking to address new and complex employee and customer experience journeys. As your technology platform and organization evolves, the transformational capability and complexity of managing this pipeline increases.

05 Agile delivery — An agile delivery model is essential to efficiently scale automation across the enterprise. This should include DevOps capabilities and the rapid prototyping of new technology combinations. Leading CoEs mobilize skilled resources across business and IT and leverage reusable assets in agile squads to consistently deliver a high-quality experience for the business. This is always aligned to the nature of the underlying platforms.

06 Automation operations at scale — Once deployed, performance and visibility into hybrid workforce delivery at scale is key to effectively sustaining automation gains. An effective CoE acts as a single point of contact for automation owners and users to connect to operations teams—driving smooth, timely management of automation across multiple platforms. This is best achieved by applying automation itself to the operations to visualize the data, enable predictive analytics, and implement proactive monitoring.

07 Employee engagement — As discussed at the beginning, automation will drive significant changes to employee and customer experiences. Early employee engagement can change any apprehensions of automation into enthusiasm for new ways of working.



Figure 2. The IBM Automation Capability Assessment evaluates clients against these seven capabilities, providing detailed recommendations for improvement.

All of these capabilities should be enhanced by automation itself; intelligence and digitization should be infused in all areas of CoE delivery. The creation of a Digital CoE capability provides the platform to scale the CoE while also showcasing the use of the technologies to enable rapid, quality growth. This focus on the automation underpinning the CoE extends to the technologies associated with automation itself—the platform—a topic which is greater than the scope of this white paper.

The route
to establishing
a successful CoE
follows an agile
journey centered
on three stages.

02

We have outlined some of the **critical activities** in each stage.

Design

For clients that are just beginning their automation journey, iteratively designing their Automation CoE from the ground up is critical to future success. This design starts by understanding the enterprise's current automation capabilities and establishing stakeholder commitment across the business.

We use an Automation Capability Assessment to establish the current state and future vision, which becomes the roadmap for a continuous CoE journey. Interviews and surveys with stakeholders across the enterprise build an initial understanding of data, process, people, and technology capabilities and opportunities. It is recommended to benchmark your organization across the above seven dimensions to build a full picture of the enterprise's automation readiness.

A capability development roadmap is then created to build on existing capabilities and close any gaps. This guides many key elements such as the co-design of guiding principles, teams and responsibilities, governance models, and an intelligent automation platform approach.

It is important to tailor your CoE journey based on the complexity of the task at hand. Dimensions such as whether you will be operating in a federated or centralized model, the scale and scope across your pipeline, the number of business units and technologies in scope, as well as the collaboration model within the corporate transformation ecosystem help further refine the roadmap.

It is important to iteratively build and enhance the CoE capabilities in parallel with developing and deploying automations.

Many organizations are also seeking to scale and accelerate their initial, usually IT-led, RPA-centric CoEs (“CoE 1.0”) to be able to adopt more advanced, intelligent technologies, more complex workflows, and to engage their teams in embracing these new ways of working. We are often engaged to redesign and rebrand the CoE and focus on similar basic dimensions spanning executive support, analysis, and engagement—but expanding much deeper into technology platforms, prototyping, and organizational change to bring our clients to the next tranche of automation value.

Set up

Guided by the CoE Design roadmap, the focus now turns to building out the prioritized capabilities: organizational, operational, and technical. Collaborative workshops to deliver the operating model and governance help secure buy-in. Key delivery functions of the CoE are established and exercised, including the pipeline model and agile delivery teams to build and deliver the backlog. It is important to iteratively build and enhance the CoE capabilities in parallel with developing and deploying automations. The agile nature of this relationship between actual delivery experience—be it technical, workflow, or organizational—and CoE competencies continues throughout set up and expansion.

Figure 3.
The Automation
CoE Journey

Note: This is not an exhaustive view of the critical activities.



Design

- **Kickoff** — Defines the scope for IA CoE Design, Set up and Transfer.
- **IA CoE strategy and capabilities** — Delivers a targeted roadmap based on the assessment, including client-specific vision, requirements, and guiding principles.
- **Governance and operational alignment** — Co-creates the Dynamic Operating Model, metrics communications, and the roles and responsibilities for the CoE.
- **Roadmap and processes** — Establishes the intelligent automation opportunities and business case across the enterprise. Details set up and delivery procedures. Provides the initial approach for change and skill development/reskilling using the Automation Learning Center.



Set up

- **Playbook design** — Documents the procedures spanning identification, prioritization, delivery process, and operations management.
- **CoE operating model/governance** — Establishes the functioning operating model, RACIs, business and ecosystem engagement, communication, and value-realization processes.
- **CoE change capabilities** — Formalizes training paths, education roadmaps, and employee engagement models.
- **Technical enablement and delivery infrastructure** — Establishes the technical environment for the IBM Automation Services Platform and associated skill needs.



Expand

- **Perform governance and benefits realization** — Monitors performance and tracks value generation. Expands into additional business units and functional areas.
- **Continuous organizational change and training** — Continuously evolves the operating model. Drives engagement across the enterprise and executes the change approach.
- **Expand capabilities and scope of automata** — Continuous identification and prioritization of the backlog. Builds technology scale for the automation using IBM Automation Services Platform.
- **Transition** — Continuously evolves the Automation Playbook, engages the transition to client leadership, and continues to advise the enterprise.

The optimum staffing structure depends on the needs of the client, and we have staffed CoEs in a multitude of different configurations. We often recommend a “two-in-a-box” approach for key roles; enabling client team members to build up their knowledge quickly while working with experienced consultants. There are also considerations about where delivery teams reside, what the mix of skills should be for each business unit and with each company—calibrating that mix is a key ingredient to success.

CoE
1.0

*usually IT-led and
RPA-centric.*

Expand

Scaling CoE capabilities across the enterprise and into the fabric of digital transformation is a key next step. To accelerate expansion, the CoE needs to aggressively evolve the essential ingredients—data, workflows, culture, platforms—of a long-term automation program. This can include deployments of an integrated, intelligent automation platform with a targeted training program and that engages specific business units for early federation programs. This expansion should always align to the vision for intelligence across the enterprise and enhance that journey with a focus on end-to-end automation of workflows.

The benefits of moving beyond simple automation projects to intelligent automation are numerous. However, realizing those benefits requires greater focus on the hybrid nature of the pipeline (humans and bots), data and algorithmic bias, and experiences, all of which require new metrics models. The CoE goes deep into these areas to become a team of experts that accelerates value based on data-driven decisions.

A multinational bank's Automation CoE Journey

IBM partnered with this North American retail bank to establish an Automation CoE. We began by performing automation Proofs of Concepts (POCs) to validate the best entry points and potential benefits. We provided guidance on platform selection for RPA and cognitive capabilities, aligned with the client's architectural direction and their vision for automation across the enterprise.

The CoE leveraged IBM analytics capabilities to identify optimum use cases and inform ROI models for maximum business impact. We also established a roadmap to build organizational and technical capability in order to deliver those target benefits.

The IBM team worked with the client infrastructure, security leadership, and with RPA vendors to install and configure the RPA platform. Our team also designed, built, and deployed automation, leveraging IBM's comprehensive set of reusable RPA assets. In parallel, our team introduced the first wave of machine learning enabled chatbots for employees and helpdesk agents. The CoE was central in working with the technology teams—from Architecture Review Boards to procurement—while engaging with the business lines to identify use cases.

The CoE established a client-specific set of processes, templates, and trainings to accelerate the design, build, and operation of bots in the client environment, including addressing compliance and security requirements.

From the beginning, the Automation CoE was designed to be transitioned to the bank for ownership. The CoE was co-chaired by IBM and the Bank Automation Leader, with all the leadership roles structured in a “two-in-a-box” model, and many of the technology leadership and development roles also paired. This enabled a deeper transformation of the bank organization as well as effective adoption of automation.



“Two-in-a-box” approach

Client team members build up their knowledge quickly while working with experienced consultants.

Quick wins build enthusiasm for automation

At the start of the bank's automation journey, we focused on delivering quick wins that built upon the automation POCs to show that automation can be successfully performed across the bank's environment. In addition to the significant financial impacts the automation program had, the CoE delivered some important steps forward on the transformation journey:

- **Thought leadership and transformation** — The IBM-led CoE established the automation program for the bank by continuously proving out the promise of automation across chat, RPA, runbook automation, scripts, email classification and response, and orchestration across each of the levers for an E2E solution. Our team worked closely with the client to establish not just the technology capabilities, but also the associated business and ecosystem engagement across vendors and other external providers. The bank leveraged the work done in the IT area to drive and improve its business process automation approach across the enterprise.
- **Speed** — The CoE delivered a set of IBM-built reusable assets (many from our proprietary asset library), processes, and capabilities that enabled the “automation of automation” that increased the speed and quality of the automation build—and we were able to rapidly compress RPA development cycles from eight weeks to four weeks.
- **Process redesign** — Our IBM practices underscored the need for process documentation and targeted redesign to enable automation. Working with the bank business SMEs, the IBM team quickly discovered that many of the processes were only partially documented and required detailed conversations and modeling sessions to fully document the process for conversion to an RPA or chat-enabled helpdesk flow.

IBM continues to consult with the bank on their automation journey, bringing technologies and assets, as well as on-demand skills to the client on an ongoing basis.

The rise of the Automation CoE (2.0)

As clients mature in their CoE journey, they will change operating models from centralized, to federated or hybrid, expand the number of business units involved, increase the capabilities of their platform (e.g., multiple RPAs, ERP, ECM, OCR, BPM, ML/AI), and will start integrating with other internal CoEs and change programs. The specifics will vary depending on the scope and modality of the automation program—from a pure enablement model to the ownership of end-to-end delivery to hybrid mixtures of IT and citizen developers, but a data-driven, dynamic CoE is critical to long-term viability. Most CoEs were born as RPA-only and in just one or two business units, usually with a centralized organization. As they mature, organizations are realizing that they cannot scale this model effectively across the enterprise, and that the CoE has become a bottleneck. So they have to quickly enable federation, layer in additional technologies, and establish pipeline and change capabilities distributed across the whole organization.

We call this evolution Automation CoE 2.0.

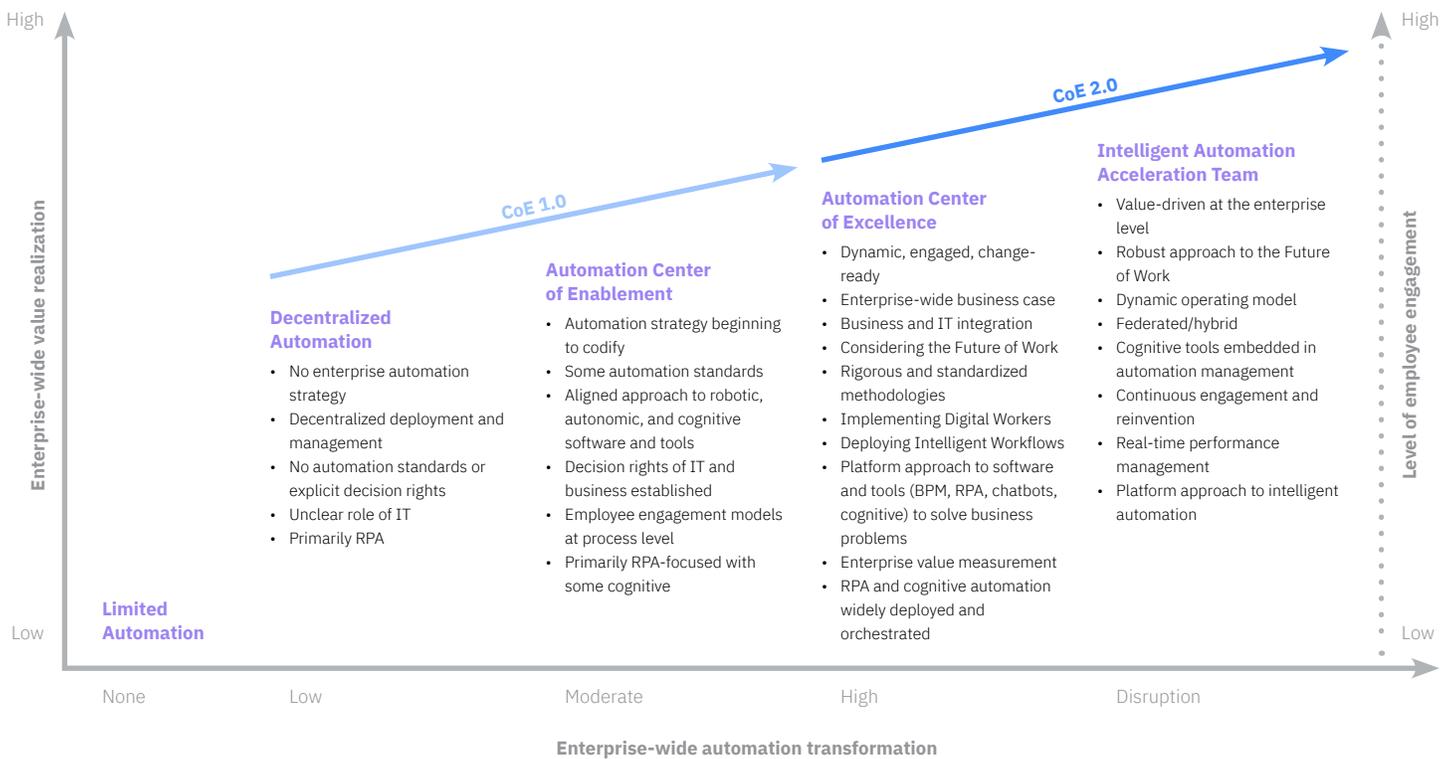


Figure 4. The concept of an automation CoE is evolving.

We have helped many clients take their first steps in automation, and also have worked alongside enterprises as they move from pilots to automation at scale and from RPA to intelligent automation. We are now guiding a new generation of Automation CoEs that are embracing a broader range of technologies and addressing the wider implications of the rise of the Digital Worker to shape the Future of Work.

To learn more, please visit www.ibm.com/automation.

CoE

2.0

a movement focused on engaging the enterprise to embrace a hybrid workforce delivering customer value with increasingly intelligent workflows.



Ben Chance

Director, Offerings
IBM Automation

About the author

As the Global Leader of IBM Automation’s Advisory Offering, Ben Chance collaborates with clients on their automation-led transformations with best practices from his many years of Automation Strategy and CoE leadership. His expertise includes designing and delivering Automation Transformation programs with CoEs that integrate IT and business to enable rapid, scalable benefits realization from Cognitive Virtual Agents, machine learning, and Robotic Process Automation using industry-leading platforms.

**For more information on this technology,
contact Ben Chance at bchance@us.ibm.com**