



BANKS CAN OUTSMART THE COMPETITION WITH INTELLIGENT OPERATIONS

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BANKS HAVE INVESTED BILLIONS of dollars to create elegant digital storefronts where customers can buy financial products and initiate service transactions. But most banks have not invested enough in the digital and automated operational capabilities needed to deliver a differentiated client experience and industry-leading efficiency.

To fully digitize their operating model, banks must combine four elements: smart technologies, end-to-end digital reengineering, customer-centered design, and agile delivery. We call this integrated approach *Intelligent Operations*. Leading banks have applied the approach to achieve breakthrough efficiency, a fully digital client experience, and competitive advantage.

Amazon offers a model for banks to emulate. The company's customer-facing front end, although good, is not its main source of advantage. The key features that set Amazon apart are its fast, reliable supply chain and top-of-the-line distribution network, which allow it to deliver a customer

experience that is consistently superior and continually improving.

Today, the methods and tools underlying Intelligent Operations are sufficiently mature to enable banks to meaningfully move toward full digitization. But launching a transformation is not easy. Banks must acquire new skills and capabilities in order to design and build a new operating model. They must also invest in enablers such as centers of excellence to help their workforce transition to new ways of working and digitally enabled roles or learn to use advanced technologies and analytics. In our experience, banks that succeed in this effort can reduce operations costs across their front, middle, and back offices by 20% to 40% over three to five years.

Delivering Value Through Intelligent Operations

Banks can capture some value by deploying the four components of Intelligent Operations individually. For example, when banks deploy lean or smart technology

well, using an end-to-end perspective, they can make existing processes more efficient and improve the customer experience. In most instances, however, taking steps to streamline and automate existing processes yields only incremental improvements. And because incremental improvements fail to generate sufficient momentum, banks often shut down programs before they deliver promised benefits. To achieve breakthrough impact in multiple areas, a bank should implement the components of Intelligent Operations interactively and in harmony. (See Exhibit 1.)

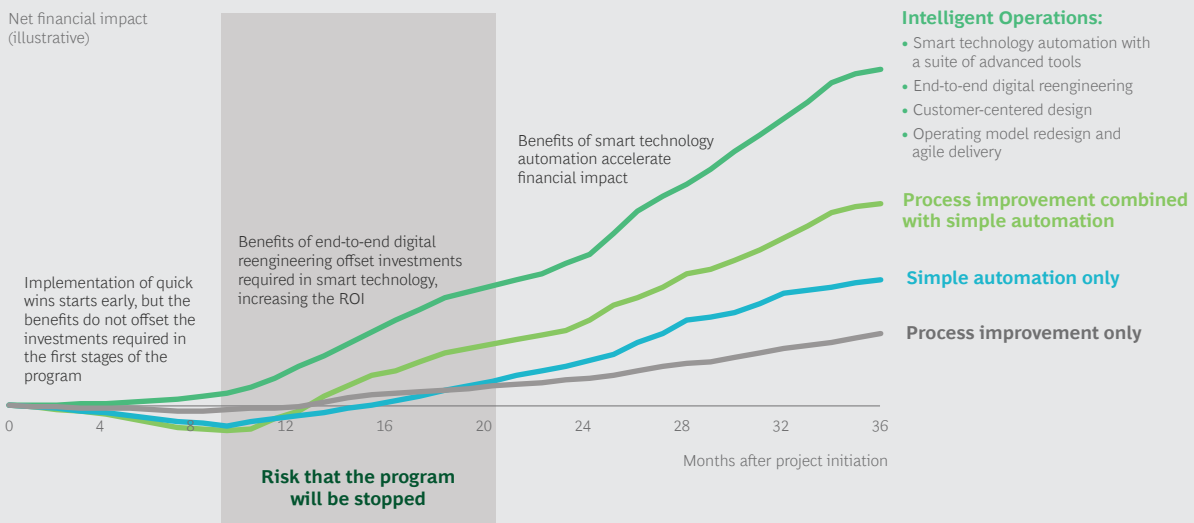
Banks should deploy Intelligent Operations as part of a comprehensive operating model redesign. The redesign effort should challenge and make suitable changes to policies, governance, roles and responsibilities, organizational structure, location strategy, and sourcing elements, among other topics.

Here is a brief explanation of the four interlinked parts of Intelligent Operations.

Smart Technologies. To automate rule- and decision-based activities across end-to-end processes, banks need to deploy a suite of smart technologies. (See Exhibit 2.) The included technologies support an array of critical human activities:

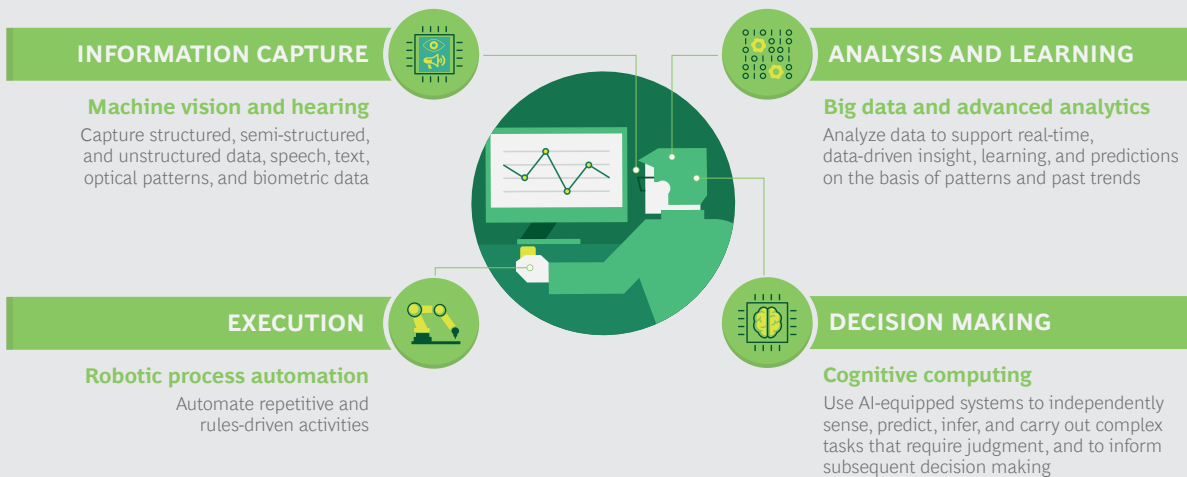
- **Information Capture.** Machine vision collects structured and unstructured data, text, optical patterns, and biometric data. Optical character recognition (OCR), for example, digitizes and extracts information from structured or semi-structured documents or images. An advanced version—intelligent character recognition (ICR)—does the same things with handwriting. Technologies that support natural-language processing and understanding can interpret text or spoken inputs (such as customer emails or conversations), understand the context and sentiment of communication, and guide employees in how to respond.
- **Analysis and Learning.** Applying advanced analytics to big data permits real-time, data-driven insight. Machine learning (ML) supports gathering insights from data by automatically applying complex analytical models to data analysis, recognizing patterns and historical trends, and making predictions. Deep learning—an advanced form of ML that uses artificial neural networks—can achieve human-level performance in such tasks as classifying objects, tagging images, and learning to make optimal decisions.

EXHIBIT 1 | To Maximize Value, Banks Must Implement and Integrate an Array of Levers



Source: BCG experience.

EXHIBIT 2 | Smart Technologies Support Numerous Human Activities



Source: BCG analysis.
 Note: AI = artificial intelligence.

- **Decision Making.** Cognitive computing systems—systems equipped with artificial intelligence (AI)—can augment human intelligence and decision making. These systems can sense, predict, and make inferences about how to carry out tasks that require judgment, and they can guide employees in solving complex problems or making better decisions.
- **Execution.** Robotic process automation (RPA) and OCR can perform repetitive, high-volume, and rules-driven tasks. Deploying them gives employees time to focus on activities that add more value.

Delivery Model. How a bank applies smart technologies is critical to the results that it obtains. In our experience, banks can generate the greatest impact by using a hybrid delivery model that combines a robust approach to operating model redesign with agile methods for building and implementing redesigned and automated processes. A robust operating model design starts with a clear operating strategy tied to the business strategy. The bank then designs each operating component through the lens of what digital and analytics can achieve. Agile methods accelerate the development and building processes.

For example, a cross-functional team might begin by defining the target state and dis-

aggregating it into a set of minimum viable products (MVPs). The team can then use agile methods to build the MVPs quickly and improve them in rapid iterations. Next it codifies the MVPs and readies them for launch at scale. Banks that have adopted the hybrid delivery model have increased their velocity of execution two- to three-fold, without harming the quality of the output or the customer experience.

End-to-End Digital Reengineering. Banks should thoroughly review and reimagine their end-to-end processes, and then redesign them to achieve step-change improvements in performance. They must ensure that the reengineered processes deliver a differentiated experience and continually evolve in response to rapidly changing market needs.

Data and analytics can help banks unlock substantial value. Metadata can detect exceptions, and ML systems can identify patterns and define routines likely to cure the exception. OCR and natural-language processing technologies can reduce the manual labor required for quality assurance by reading and interrogating information about out-of-tolerance conditions that need correction. Applying ML analytical models and statistical methods to historical data can isolate risks and suggest corrective actions before a risk results in lost value.

By reimagining a process through the lens of what smart technologies can do, a bank can achieve breakthroughs in speed, resilience, efficiency, and customer satisfaction. For example, a universal bank reduced the operations cycle times of several processes (including card issuance and remittance) by at least 40%, improved customer satisfaction by 25% to 40%, and reduced the number of complaints by approximately 25%. Efforts to incrementally build on and automate what exists today cannot yield improvements of that magnitude.

Customer-Centered Design. Too often, banks define the customer experience without considering all of the relevant production factors and all opportunities to use data to deliver previously unidentified benefits to customers. In many cases, they rely solely on broad metrics such as net promoter score, rather than systemically capturing and using data to improve the customer experience. To differentiate themselves, banks must design processes across the operating model with the customer in mind, using untapped production factors and data. For example, a bank might apply insights from internal data to reduce the number of touch points, or it might alter its queue logic to deliver even the most challenging fulfillment or exception cases within the committed time

frame. Banks can also use data to make policy exceptions for bank customers in unique circumstances.

Time to Transform End-to-End Operations

A comprehensive transition to Intelligent Operations allows banks to capture a wide array of benefits. (See Exhibit 3.) Their efficiency and organizational resilience increase, and so do their capabilities for managing operational risk, enhancing the customer experience, and generating incremental revenue through new products and innovative services.

Most banks have already deployed lean or smart technologies on a limited basis to capture low-hanging fruit relating to these benefits. But the opportunity to reinvent end-to-end operations by applying the four components of Intelligent Operations remains largely unrealized.

Moreover, the smart technologies and data analytics techniques that underlie Intelligent Operations have matured, enabling hundreds of use cases for business process management software, RPA, OCR, ICR, ML, and emerging AI applications. The substantial and accelerating investment in smart technologies across different sectors

EXHIBIT 3 | Intelligent Operations Yield Benefits in Multiple Areas



Source: BCG analysis.
Note: AI = artificial intelligence.

reflects the technologies' maturity. For example, as of 2018, more than 3,000 companies developing AI-related solutions had received a total of approximately \$51 billion in funding, according to a study by the BCG Center for Innovation Analytics.

Launching an Intelligent Operations Program

An Intelligent Operations program can include the entire bank or focus on a specific segment or business unit. Launching an Intelligent Operations program involves four main steps: assess the opportunities; develop a strategic roadmap; set up the program; and execute the program.

Assess the opportunities. Start by understanding where opportunities for improvement exist with respect to customer experience, process digitization and automation, organizational resilience, and revenue opportunities. An Intelligent Operations program addresses a wide range of work activities in the front, middle, and back offices and across all banking segments and product lines. At many banks, in the aggregate, these activities account for more than 55% of FTEs. Banks can gather insights into each end-to-end process by various means, including surveys, workshop sessions, and discussions with subject matter experts.

Identifying the opportunity across the organization requires a standard taxonomy and a financial baseline of end-to-end processes. A typical universal bank may have 30 to 40 large end-to-end processes, more than 300 subprocesses, and thousands of individual activities and tasks. The financial baseline identifies the addressable spending by business units, corporate functions, and each of the end-to-end processes.

A rich qualitative fact base is essential for assessing the applicability of Intelligent Operations methods and tools and for identifying the required capabilities. Several categories of information are relevant:

- Process complexity, including the degree of process standardization and

fractionalization, and the prevalence of manual work and human judgment

- Pain points and leading opportunities related to process steps and tasks
- Automation potential and applicable types of smart technologies
- Potential to improve customer experience, operations risk, and efficiency
- Capabilities required, including data readiness, new technologies, the ability to integrate automation technologies and legacy technologies, and design and development resources

Beyond gathering facts, the business or functional area must define its objectives for success, including the target state and the near-term ambition for each end-to-end process. Objectives to consider will vary by process, but examples include industry-fastest times for launching new products and industry-leading levels of systems resilience, employee retention, or satisfaction in resolving customer inquiries.

Develop a strategic roadmap. The roadmap prioritizes and sequences the transformation of end-to-end processes across the enterprise or business unit. It also identifies common capabilities that the bank must develop in order to implement the roadmap—for example, automation technologies, AI-driven digitization, or analytics-enabled decisions to optimize a given process. To facilitate decision making, the bank should develop a prioritization framework with clear evaluation criteria. A well-defined approach balances tradeoffs among reducing costs, enabling growth, enhancing the customer experience, and improving risk management.

Carefully selecting the first end-to-end processes to transform is a critical task. The processes selected can make the difference between success and failure because companies that do not build sufficient early momentum risk losing the organization's support. Many successful programs strike a balance between improving processes to

generate early wins and building capabilities in new areas—such as ML and AI—that are critical to scaling the program. Stakeholder buy-in is as important as the processes selected. Analyses may indicate that a process presents an attractive opportunity, but leadership support and business readiness (or lack thereof) can make the difference between success and failure.

Set up the program. In order to implement Intelligent Operations, a bank needs to build a number of capabilities, including ones related to supporting strategic planning and program oversight and providing technical and operational expertise. Establishing a central unit—an Intelligent Operations Center—can be effective way to develop and scale up capabilities, especially at early stages of program build-out.

The Intelligent Operations Center typically will perform a wide range of tasks:

- Use the strategic roadmap to assess gaps between existing and required capabilities, and develop recruiting and partnering strategies to bridge near-term and middle-term gaps.
- Facilitate decision making on topics such as prioritization, sequencing, resourcing, technology selection, and risk management.
- Establish multidisciplinary agile teams to execute the program.
- Build robust change management and communications.
- Design the approach to reskill or upskill existing personnel to help them transition to smart-technology-enabled roles.
- Work to ensure that the program captures benefits and realizes the business case.

Execute the program. Execution is a two- to five-year effort that involves building

substantive new capabilities. Governance of execution should reside at the organization's senior levels, to ensure an enterprise-level, multitechnology remit and to provide sufficient strategic guidance. The appropriate execution approach depends on the maturity and scale of the bank's existing capabilities, as well as its ambition. Banks that have not yet gained experience with substantive elements of Intelligent Operations should start with a few strategically selected lighthouse efforts that will generate early impact, demonstrate value, build capabilities, and prepare the organization to scale up the program over the long term. Banks that already have some experience may choose to launch several work streams simultaneously, so that they can maximize impact in the program's early stages.

TO KEEP PACE with evolving customer expectations and to maintain competitiveness through higher levels of efficiency, executives should set a bold transformation agenda centered on Intelligent Operations. Successful banks start by establishing ambitious targets. In our experience, banks can reduce the cost of end-to-end operations by at least 20% to 40%. To capture this value, successful banks do not simply automate their existing processes; instead, they use all of the components of Intelligent Operations to transform their operating model and achieve a step-change in performance. Likewise, rather than simply changing their workforce, they invest in new capabilities and skills to transform their ways of working. Armed with a clear baseline, specific aspirations, and a structured methodology, banks will be well positioned to capture the full value of Intelligent Operations.

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