

Data, digital, and the employee experience

In the futuristic 2014 film *Her*, a man befriends his operating system, a software program that's believably human. Google Futurist and Director of Engineering Ray Kurzweil has said it's a world that's not far off, famously predicting that computers will read at human levels and take on human characteristics by 2029.¹

Business strategist and speaker Andrew Winston, author of *The Big Pivot*, sees the world in the next 10 years as even more open and less private.² The amount of data collected on people, products, and organizations will skyrocket, while well-developed technological tools will emerge to analyze the growing data. Artificial intelligence (AI) will plan much of our daily lives, and the technology will make us all more efficient.

For the financial services industry, the transformation to digital and increased focus on data is already underway. Over the next 10 years, industry participants expect even bigger changes in the banking world, which is currently in the midst of a major disruption. The financial services industry is being shaped by the rise of artificial intelligence, big data, and advanced analytics; competition from tech-savvy players; and by consumers who increasingly expect a seamless and personalized digital customer experience.

By 2030, the banking business model will look very different than it does today, according to our research and the ClOs of some of the world's leading financial institutions. In the next 10 years, the financial services industry will find itself in the midst of an increasingly competitive environment, but also one that is marked by great progress, innovation, and a superior customer experience that builds trust and brand loyalty.



¹Kurzweil Claims That the Singularity Will Happen by 2045, Futurism.com, October 2017 ²The Big Pivot, Andrew S. Winston, 2014



The financial services industry is in the midst of a massive reinvention. Already, we're seeing institutions making major innovations in how they utilize data and interact with both their clients and employees, and that will only increase over the next decade."

 Laurén Robbins, VP and General Manager, Financial Services ServiceNow

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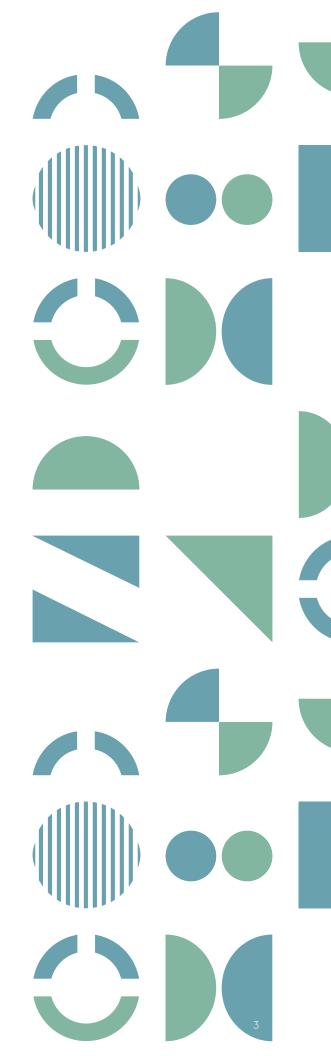
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Enabling operational resilience

Bank of England defines operational resilience as "the ability of firms and the financial system as a whole to absorb and adapt to shocks," rather than contribute to them.³ In the next decade, the way financial services institutions are regulated will undergo a significant shift. For the past 10 years, regulators have monitored banks for capital and liquidity. The future of regulation will emphasize operational resilience and the ability of financial services institutions to withstand financial shock.

Modern customers expect around-the-clock service from their bank. As financial services institutions look to the future, developing a model of operational resilience that is capable of withstanding unforeseen issues, like power outages or cyber-attacks, is critical to minimizing service disruption.

Savvy institutions will embrace a single-platform strategy that enables greater visibility across the entire organization. In a shift from traditional structures that are limited by operational silos, banks of the future will implement solutions that support better connectivity.

Large financial services institutions that are closely aligned with corporations and governments will be at the forefront of this new model.

A domestic systemically important bank (D-SIB) headquartered in the United Kingdom is implementing solutions to connect data across its teams. Having already started its digital transformation, it still needed to streamline internal processes to better support its customers. The commercial and retail bank faced challenges that limited its customer engagement and ability to deliver real-time insights to regulators. It also needed to integrate internal systems and eliminate repetitive processes.

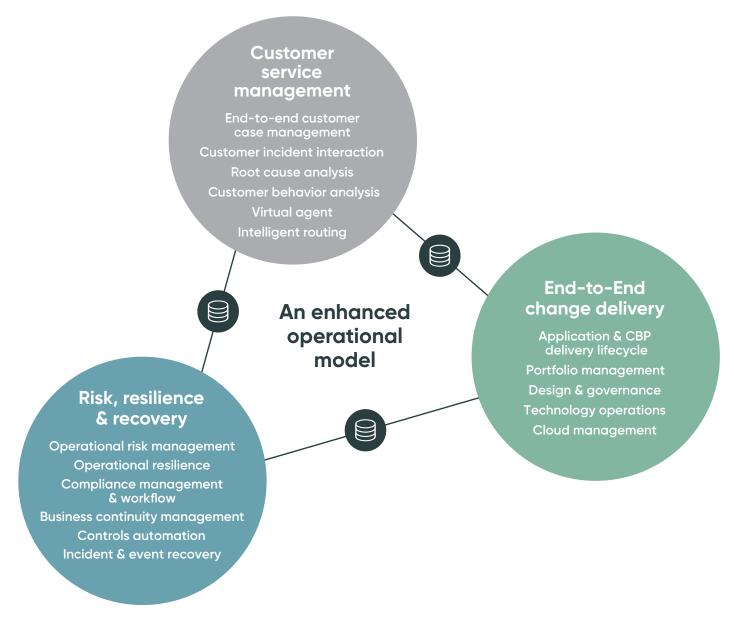
Rather than starting from scratch, it focused on building greater connectivity across three distinct areas.



With greater cohesion, this UK-based bank is providing its leadership greater visibility across their teams. Empowering the entire organization with consistent and relevant data has inspired informed decision-making for years to come. In turn, leaders can quickly identify, assess, and address potential exposure to risk on a continual basis.

The operational resilience framework goes beyond meeting regulatory requirements and unlocks opportunities to evolve across all operations. The bank's end-to-end change delivery creates a seamless colleague experience that spans business units and value streams.

With the productivity gains from consolidating access within its environment, the bank has developed an operational vision for the future. The results across each of its three focus areas have delivered improved outcomes for their respective audiences. Now with its broad access to reliable customer data, customers benefit from more tailored and relevant interactions. Collapsing internal silos resulted in greater collaboration and productivity, which has led to more informed decision-making. And by creating a view of relevant regulatory data, the bank can anticipate and meet the growing demands of regulators.



More data, more digital

The financial services industry of the future will revolve around real-time data and new technologies that help banks better serve their clients by personalizing the customer experience. Data will be plentiful, and Al and the Cloud will take center stage.

"Data allows us to create an exceptional customer experience on par with the digital giants," says Craig Bright, chief information officer of Westpac Banking Group. "It's emerged as a powerful source of competitive advantage, and that just continues."

More and more banks will find a way to deliver what consumers crave—seamless digital experiences that make managing their money easy. Products like plastic credit and debit cards and paper checkbooks will fade into the background, with more consumers depending on one digital device for all of their banking needs. According to Deloitte's 2019 Banking and Capital Markets Outlook, 28% of organizations prioritize digital capabilities⁴ (Figure 1).

In addition to anticipating a move to mobile, Milo Gusmeroli, CIO and vice director general of Banca Popolare Di Sondrio, envisions a greater modernization of datacenters and an increased use of blockchain, both for notarization and for smart contracts.

Dan Terrasi, chief information officer at U.S. Bank, says, "It's got to be digital first, and whatever products there are have to be simple." U.S. Bank recently hired a new chief digital officer and, like many major financial institutions, is investing heavily in digital.

J.P. Morgan, for one, has a tech budget of around \$11 billion, Bank of America around \$10 billion, Wells Fargo \$9 billion, and Citigroup roughly \$8 billion.⁵

At U.S. Bank, certain new technology products will be built in-house, says Terrasi, while others, like cloud and open source software, will be developed alongside vendor partners. Issues of privacy and security will become even more of a priority in the next several years, he adds, as customers mull over what they will allow banks to do with their data and new regulations determine how banks use their customers' data.

"People already have a heightened awareness about how their data is being used," Terrasi says, and going forward, "there will be a focus on protection and integrity of information." Bright adds that "trust becomes an increasingly important currency."

At the same time, however, physical branches will not entirely disappear. Customers will continue to want humans to anticipate their financial needs and assist them, Terrasi says. Data shows that human interactions highly impact opinions on customer service. Branch and contact center experiences have at least two times the impact on customer satisfaction than online and mobile channels do, according to Deloitte.⁶

"We still think there's a need for a branch," Terrasi says. "The question is, how do you make it effective?" Banks of the future will strive to balance digital with human capital and may make greater use of video technology, he adds.

More banks may develop creative ways to blend digital and face-to-face branch interaction, along the lines of what Pioneer Federal Credit Union is doing. With its myPioneer Personal Assistant app, the credit union lets customers videoconference with bank agents and sign forms within the app during the live video chat.⁷

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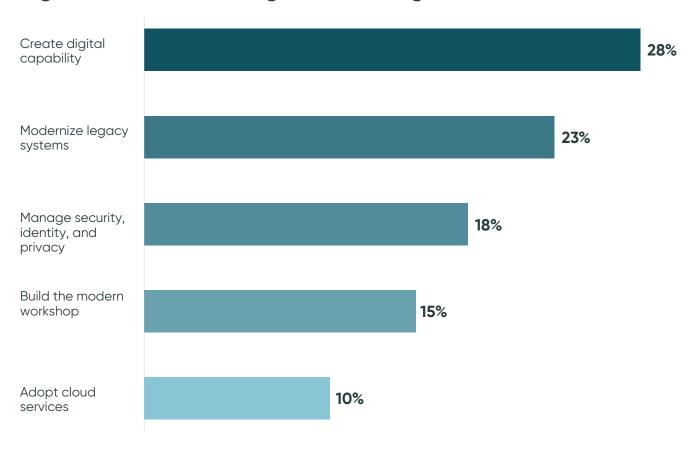
Craig Bright, CIO,
 Westpac Group

⁴2019 Banking and Capital Markets Outlook, Deloitte, 2019 ⁵Here's a Breakdown of How Much US Banks Are Spending on Technology, Business Insider Prime, 2019

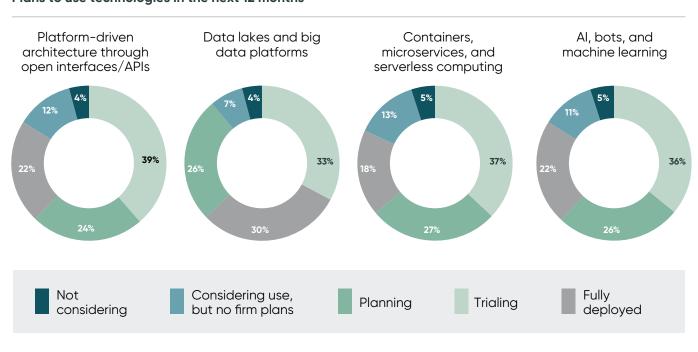
⁶Recognizing the Value of Bank Branches in a Digital World, Deloitte. 2019

⁷How an Idaho Credit Union Is Using Live Video Banking, Tearsheet, 2017

Figure 1: Plans to use digital technologies



Plans to use technologies in the next 12 months



Sources: ICT Enterprise Insights 2018/19—Financial Services & Payments: ICT Drivers and Technology Priorities of corporate banks, retail banks, payments, and financial market firms, Ovum. Totals may not add to 100 percent due to rounding.

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Tailored, intelligent banking

As data increases and financial institutions develop the tools to better mine it, the current banking business model will be upended. Replacing it will be a tailored, intelligent, and more connected customer experience that focuses on helping customers optimize their overall financial well-being. At the core of that experience will be mobile, which will build customer loyalty and engagement.

A recent banking survey by Accenture⁸ showed that 74% of bank operations executives cited customer experience as one of their top three priorities.

"We're relentlessly focusing on the customer," Terrasi says. "It's going to be critically important to provide insights to consumers around their objectives and saving goals."

Bright envisions a model that moves away from mobile banking apps and becomes more interactive. Banking will be brought into social media apps, where consumers can transact on the spot. For example, a consumer chatting about a vacation with a travel agent could book a trip in real time through the social media app they're using.

"It's no longer just about a customer and their account," Bright says. "Banking will become more tailored than it is today to individual circumstances, and more intelligent in leading and guiding people's action. There are small elements of tailoring today, but it's quite embryonic."

Consumers will be able to give consent—to family members or businesses— to access their account. For example, a parent could set aside a certain amount of money within an account for their son or daughter and create specific spending boundaries. "This changes quite dramatically how you think about the consumer banking model," Bright says.

Al will also make banking smarter. When a consumer of the future accesses their account, a virtual assistant will know what transactions they typically make and when, and can ask the consumer if they accessed their account for that purpose. Al will also be able to notice if a regular payment hasn't been made and alert the consumer, to analyze whether or not they use credit efficiently and make recommendations.

Westpac's Look Back capability, a snapshot of how customers engage in banking during a year, is already being used by a segment of the bank's customers. The capability helps customers change their behavior to optimize their financial well-being, Bright says. "It's using what we know about our customers to help guide them more effectively," he says.

"A lot of banks are looking at building an experience," says ServiceNow's Robbins. "The ecosystem is going to become more and more intertwined." Already, out of the 50 largest global banks, three out of four pledge themselves to some form of customerexperience transformation, according to McKinsey.⁹ 66

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⁸North America Banking Operations Survey, Accenture, 2018

 $^{^{9}}$ Managing a Customer-Experience Transformation in Banking, McKinsey, October 2018

The rise of biometrics

As banking becomes more personalized and the ecosystem more intertwined, customer security becomes more important than ever. Using evolving technologies, banks of the future will experiment with new ways to reliably identify and protect their customers.

Many CIOs see biometrics, or automatically verifying a person's identity based on their biological traits (such as their fingerprints, their finger vein patterns, their iris, or their voice), becoming even more prevalent. "Biometrics will be key to identity," Bright says, "both from a security and a convenience point of view."

Already, many major banks have enabled Touch ID fingerprint recognition on their mobile banking apps, and the technology continues to grow. For example, The Royal Bank of Scotland (RBS) announced a pilot of payment cards featuring biometric fingerprint technology in 2019. The fingerprint replaces PIN entry to verify transactions over £30 (\$33.58).¹⁰

The use of microexpression technology could become much more common, as well, says Bright. The technology analyzes split-second changes in a person's facial expressions, and it has gained traction in Asia.

Two artificial intelligence researchers, one from Nomura Securities and the other from Microsoft, have used the technology to analyze changes in the facial expressions of Bank of Japan Governor Haruhiko Kuroda during his post-meeting news conferences.¹¹

More recently, Chinese banks—among the first in the world to use the technology commercially have started to use microexpression technology to try to spot early signs of fraud in customers' facial movements.

"There are some really fascinating uses," Bright says, though "microexpressions might take a while to catch on in the Western world."

At U.S. Bank, Terrasi is also preparing for the increased use of biometrics over the next decade. "Your persona and your one device are all that you'll probably need to do anything," he says.



¹⁰RBS Trials UK's First Biometric Payment Fob, BBC News, 2019

¹¹Researchers Analyze Kuroda's Facial Microexpressions to Predict Central Bank Policy Moves, Japan Times, October 2017

Growth through partnerships

Amid the explosion of new technologies and ballooning data, banks of the future won't go at it alone. Partnerships—with fintech or large technology companies—will be the norm, working together to build, fine-tune, and deliver products to customers.

"We can't build everything ourselves," Terrasi says. "Partnering helps us to get things out quicker. We're stronger together than we are separately." In the coming years, "we're going to focus on partnerships across the board," he says.

The banking model will shift to one of "open banking," or a vast, connected network of financial services providers that share data, with connections enabled by blockchain technology. As Figure 2 shows, open banking is being adopted across the globe.

Partnerships might include relationships with social media companies to facilitate banking transactions within social media apps. The beginnings of that are already evident in Asia. In 2016, Facebook first ran a trial in Thailand, in partnership with Southeast Asia-based fintech company 2C2P, allowing users to make a payment to a page owner without leaving the social network.

"I see this continuing to grow," Bright says. "Banks will have a lot more partnerships."

Gusmeroli says alliances with fintech companies will accelerate, and those collaborations will allow for a more integrated offering. Banks will come to rely on that network of relationships to define new service offerings, he says.

"Fintech is having an incredible role in resetting and redefining the kinds of experiences customers are expecting from their institutions," Robbins says.

Fintech companies like Kabbage, which gives small business loans in minutes, and German direct bank N26, which can onboard a customer in minutes, are creating differentiation and taking market share as they reimagine processes. ¹⁴ Developments like these will only continue over the next decade, according to Robbins at ServiceNow.

Banks are not just streamlining underlying operational processes in the customer experience to provide a fintech-like experience. More than 50% of a financial institutions' business processes are impacted by regulation. Banks are also investing in digitizing those processes to intuitively embed risk and compliance policies. As an example, many banks are transforming how they manage complaints, which involves not just the ability to route a complaint to the right department and resolve it, but also the audit trail that proves that the complaint was managed in accordance with the Consumer Finance Protection Bureau guidelines.

Also key will be the increasing openness of financial institutions to regtech solutions, or managing regulatory processes in the financial industry through technology, Robbins adds. More and more banks will move away from people and spreadsheets and toward regulatory solutions that give a real-time view into compliance and provide an end-to-end audit trail for Chief Compliance Officers and regulators.

"We're seeing more heads of operations in Financial Services focused on not just streamlining and taking cost out of business operations. The resilience of the bank's operations has become equally important. Regulators are pushing banks to have a firmwide view of the risk to delivering their critical business services, such as ATMs, online banking or fast payments across the technology, people, cybersecurity, facilities and suppliers required to deliver those business services," Robbins says.

¹²Data Sharing and Open Banking, McKinsey, September 2017

¹³Facebook Is Testing Social Commerce Payments in Southeast Asia, TechCrunch, 2016

¹⁴Digital Onboarding for Financial Services, Deloitte, 2017

Figure 2: Global open banking



Source: McKinsey Payments Practice

An increasingly adaptive workforce

Major changes in the financial services industry over the next decade will make their mark on employees, forcing the financial services workforce to become even more nimble and adaptive to quickly evolving technologies.

Financial services workers of the future cannot be complacent, says Terrasi. They will have to master banking but also new technologies and constantly keep up with ever-changing products and functionalities to be successful. As machines automate more banking processes, employees will need to master other skills. Learning fast and becoming adept at problem-solving and empathy will be crucial.

"Change will inevitably be the norm," Bright says, "and those that can adapt are those that will survive." The employee mindset must shift, he adds, from one of delivering products to one of delivering propositions that are tied to life events, such as getting married or having a child. "It's a fundamentally different way of thinking about banking," he says. "It requires us to turn our organization sideways and operate quite differently."

Workers with a background in commerce, data science, and engineering will become even more sought after, says Bright. Meanwhile, training programs will evolve to build up these specialized workers' understanding of banking concepts. "There will be room in banking for multiple disciplines," Bright says.

A recent World Economic Forum report¹⁵ points to major job growth for computer and mathematical roles such as data analysts, information security analysts, and database and network professionals in the financial services and investors sector.

Robbins notes middle and back office workers, especially, will see expectations for their roles shift, coming to focus more on the customer. "Customer service will no longer be just a front office responsibility," she says.

Terrasi adds, "We have to be one bank, where everyone has a 360-degree view of the customer."



Customer service will no longer be just a front office responsibility."

 Laurén Robbins, VP and General Manager, Financial Services, ServiceNow

¹⁵The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, World Economic Forum, January 2016

An evolving employee experience

As workers with an expertise in data and technology become more sought after, financial institutions will increasingly have to compete for talent. Over the next 10 years, institutions will dedicate more time and money to reimagining the employee experience and creating an appealing company culture to attract and retain workers.

At the same time, banks will have to navigate an increasingly diverse workforce, as the gig economy continues to expand, with multiple generations—who have disparate needs and working preferences and styles—working side by side.

"Banks are very focused on not just what it's like to bring an employee on board," Robbins says, "but how easy is it for employees to do their job?"

"At U.S. Bank, we're also focusing on optimizing our employees' experience with technology, providing them with tools and resources to enhance the way they work and collaborate," Terrasi says.

Successful banks will develop tools that allow employees to work in a more client-centric way, and they will simplify and enhance the employee onboarding experience, according to ServiceNow's Robbins. For example, more companies may make use of portal technologies that allow them to create a relationship with a new hire before the employee even walks through the door. The technology would allow new employees to get access to trainings and request a laptop before day one.

"It's about making it really easy for employees as they're coming on board," says Robbins, with self-service tools and one-click access on any device.

Empowering employees to easily handle administrative tasks on their own frees them up to focus on strategic projects and removes red tape and silos across a large organization, she says. Organizations that successfully do so will excel.

The next decade will be a hectic one for the financial services industry as data proliferates, digital dominates, and competition heats up. Institutions that invest now in their systems, infrastructure, customers, and employees will be well positioned for success heading into 2030.



