#### BANKING TECHNOLOGY VISION 2017

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## **TECHNOLOGY FOR PEOPLE**

Banks' path to becoming their customers' everyday trusted advisor and their staff's employer of choice



There is no argument that technology is changing banking. In traditional banks, basic transactions continue to migrate from physical to digital channels, leading to major changes in distribution mix as banks downsize their branch networks. In many developed markets, startup financial technology (fintech) companies continue to nibble at the edges of the industry, siphoning off both volume and value in payments and lending. In Asia, the migration has been more dramatic, with ecommerce players like Ant Financial becoming the market leaders in areas like mobile payments. We are also seeing the GAFAs (Google, Amazon<sup>®</sup>, Facebook<sup>®</sup> and Apple®) circling the banking industry, looking for ways to participate and create value without taking on the burden of a regulated balance sheet. Finally, the focus of European regulators on creating API-driven open banking may be a harbinger of more intrusive, consumer-oriented regulation that uses technology to reshape industry competitive dynamics.

Yet, despite these forces of change, the migration of volume and revenue outside of the traditional banking sector remains limited in most markets. This creates a window of opportunity for banks to respond, incorporating the latest technology trends and repositioning their business models to be more competitive and sustainable in the digital economy. However, in a world of value chain fragmentation and plug-and-play technology, there is likely to be far more diversity of successful bank business models in the future. Some banks, like RBC®, BBVA and mBank, aim to become Digital Relationship Managers, creating and relying on customer- and advice-centric, integrated ecosystems to meet a broad range of everyday financial and non-financial needs. Others, like Square® and Quicken Loans®, are deciding to compete as Digital Category Killers, doing one thing very well to serve a narrow set of customer needs while keeping their own value chain participation high. Others, like solarisBank and Fidor Bank, are positioning as Open Platform Players that offer a gateway through which other product providers (most likely Digital Category Killers) can interact with customers, create

and sell products and services, and share value. Still others, like the recently launched CLEAR Bank, hope to thrive as Utility Providers, manufacturing and distributing banking products using a lean operating cost structure while leaving management of the customer interaction to others. Of course, a mix of and variations on these four business models will emerge as banks choose what best suits their markets and customer segments.

As banks' chart a new course and seek to reshape their business models to compete in a digital world, it is easy to assume that technological prowess will become the dominant source of competitive advantage. That humans will fade from the picture as customers interact almost exclusively with digital agents. However, we believe that tomorrow's winners will be characterized not only by their technological prowess, but also by their ability to use that technology to empower their staff. We believe it is that combination of people and technology that will truly create competitive advantage in the banking industry of the future.

The paradox of digital is that while customers want seamless digital transaction experiences on the platforms of their choice (many of which the banks will not own), 87 percent of U.S. consumers still see themselves using branches in the future, and they want human interaction when they go there.<sup>1</sup> The challenge is therefore to integrate digital innovations into physical channels ("phygital") in ways that not only enhance the customer experience but also make the bank more efficient in delivering products and services.

Nearly 90 percent of the banking executives participating in our 2017 Technology Vision survey agree that their organization must innovate at an increasingly rapid pace just to remain competitive. Yet, many feel burdened by legacy systems and cost models that limit their ability to move at the speed they think is necessary. They also recognize that at some point, banks may start to lose ownership of customer interactions as some digital ecosystem platforms put others in control and new regulation makes permissiongranted data public. Despite this potential future in which banks risk becoming irrelevant, banks' investment efforts are not keeping pace with the challenges. Less than half (47.8 percent) of bankers say they are investing comprehensively in digital as part of their overall strategy.

Thus, the people challenge for banks is twofold. For customers, banks need to enable their natural migration towards digital transactions. They also need to create opportunities through sales and customer service touchpoints to route customers back into a conversation with a staff member whenever they need and want it. Staff members must be fully empowered by technology and data to offer the best advice at the right time. For employees, banks need to use technology to empower them to do what people do best: be empathetic, solve problems and provide the human interaction that the vast majority of customers still want from their bank. In this model, banks remove the boring and administrative tasks from employees by using technology to amplify what is truly differentiating about personal interactions and, in the process, make their jobs more productive and more meaningful.

This report highlights the five trends identified in the Accenture 2017 Technology Vision that underscore the importance of focusing on "Technology for People" to achieve digital success. It highlights responses from the 589 bank executives from across 30 countries interviewed in the study. As banks strategize ways to secure their own digital future, they should address these trends to best put their customers and employees first.

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## THE UND CHARTED Set New Standards

Pioneer new bank rules of engagement yourself, or risk being regulated out

## PIONEER NEW BANK RULES OF ENGAGE-MENT YOURSELF, **OR RISK BEING** REGULATED OUT.

What lies ahead for banks is, in many ways, a blank page. Major aspects of the future are waiting to be mapped out. For example, while Europe's Payment Services Directive (PSD2) mandates that financial institutions give customers and third-party integrators programmatic access (typically API-based) to their data, it does not specify where the data should reside. Nor does it clarify how the security and authentication models will work.

As part of their rotation to winning-digital business models, banks must take the lead role in setting guideposts. They can build on the fact that customers still have a lot of confidence in the banking sector to protect their data and execute transactions in a safe and secure manner. In North America, for example, 86 percent of consumers trust their bank over all other institutions to securely manage their personal data.<sup>2</sup> Just as the technology industry took the lead in shaping its own standards, banks cannot wait for regulators and governments to set the terms of competition. Sixty-six percent of bankers globally (82 percent in US) say government regulations have not kept up with the pace of technology advancement; 61 percent say that the industry's regulatory environment is outdated and a barrier to growth. For example, legacy regulations in Japan limit a bank's ownership in non-finance companies to 5-15 percent.<sup>3</sup> Regulators in Japan consider fintechs to be technology firms, not financial firms—so

while megabank Mitsubishi UFJ might want to take a portfolio approach to investing in fintech startups, regulations make that impossible. In response, Mitsubishi UFJ is building an in-house financial technology R&D division to deliver the innovation they need.<sup>4</sup>

Bankers understand industry challengessecurity, fraud, privacy, digital ethics, emerging technologies like blockchain and so forthmuch better than regulators. First movers can move faster than regulators (and even pull regulators along) to pioneer uncharted banking terrain and influence customer behavior. They can help shape the new standards, processes, practices and crossindustry partnerships that will underpin innovative models. Those who are finding a place at or near the center of their new ecosystem look to gain freedom to innovate (53 percent), opportunity to develop standards that competitors will be expected to follow (52 percent) and expanded opportunities for trusted partnerships (52 percent). Those who are not risk being regulated out or being poorly positioned in a competitive landscape they did not have a role in creating.

Smart banks are aware of this need to shape the regulatory environment. Slightly more than three-quarters of bankers agree that their organization feels it has a duty to be proactive in writing the rules for emerging industries. In fact, 36 percent said that their organization has joined a tech consortium



that helps set rules for their industry (compared to 41 percent of insurers), while an additional 51 percent are considering joining one. Banks such as JPMorgan Chase and BNY Mellon, for example, are already collaborating with tech firms in both the Hyperledger<sup>®</sup> and Ethereum Enterprise Alliance consortia to work on standards and best practices that will move blockchain technology ahead towards industrial implementations.<sup>5</sup> Bank leaders also cited certain codes and policies they expect to review or update at least quarterly, as shown in figure 1.

#### FIGURE 1. Priority bank codes and policies to update at least quarterly

	BANKERS	CROSS-INDUSTRY AVERAGE
SECURITY	50%	43%
DATA PRIVACY	45%	40%
EMPLOYEE CONDUCT	35%	32%
ETHICS AND ORGANIZATION/	25%	27%

### TREND 5 THE UNCHARTED

## THREE ACTIONS TO TAKE. NOW.

Shape rules that will help banks maintain customer trust and data security as more transactions move to other platforms and as regulatory directives grant third-party providers access to customer accounts, payments, product data and other data through APIs.

Create a special team to ensure security policies and measures are current, aligned and robust enough to safeguard against fraud and other risks in an Open Banking environment.

Join and actively play in all the right forums that set directions for industry rules and standards.





## DESIGN FOR HUNDANS HISPITE New Behaviors

Rethink customer journeys which now run inside and outside the bank

## RETHINK CUSTOMER JOURNEYS WHICH NOW RUN INSIDE AND OUTSIDE THE BANK

According to Harvard Business Review, more than 85 percent of retail banking transactions in the US are digital.<sup>6</sup> In business models like the Open Platform Player and Utility Provider, the human interaction totally disappears. While human contact is diminishing in terms of volume, the quality and importance of any human touch points will increase. This is especially true for Digital Relationship Managers and Digital Category Killers where human connection can play a vital role in building the brand and shaping the culture of the business.

Take robo adviser servicing start-up Betterment, a Digital Category Killer. It uses smart design to provide a friendly and intuitive way to guide customers to the right investment decisions. While machines do the math and complicated logic, Betterment's design features—including questions to prompt the right actions and tax impact previews-offer the best potential options based on their customers' behavior. Investors can then make choices to help achieve their long-term goals in a simple and engaging way.7 Betterment recently announced new service offerings that include access to human certified financial planners and licensed financial experts.8 The technology itself is impressive, but more importantly, it is built around a thorough understanding of human interactions, both with machines and with other humans.

Bankers are beginning to recognize the importance of adapting for unique human behavior to shape the quality of the customer journey and the effectiveness of technology solutions. Eighty-one percent of bankers agree that organizations that can truly tap into what motivates human behavior and design the customer experience accordingly will be the next industry leaders; 34 percent are planning to extensively use human behavior analysis and insight to guide customer experience design. The majority (80 percent) also agree that organizations will need to understand not just where people are today, but where they want to be, and then shape the technology to act as their guide.

That part is easier said than done. Despite an increase in the amount of customer data and insights available, 67 percent of bankers agree that their organization struggles to fully understand their customers' needs and goals. Nearly 80 percent of bankers report a moderate to significant gap between what customers want versus what they need; 27 percent say they are pioneering actions to improve the "match" of what their customers say they need and what, by action, their customers actually need and receive. A good example is bank rewards programs. While the 2016 Accenture Loyalty and Rewards Benchmarking Study reveals that 91 percent of financial services executives believe members are satisfied with their loyalty programs; in another recent study of financial services customers, only 31 percent said their loyalty programs are "great."9



Perfecting that match makes designing technology capabilities to fit unique human behavior that much more advantageous particularly in the face of modern, digital banking models, such as ecosystem platforms and channels not owned by banks. Platforms, for example, bring in customers who come from outside the sphere of the bank's knowledge. Within such models, banks typically have only the financial transaction to impress consumers with whom they may never connect again. And, the amount of time that banks have to sway consumers grows shorter and shorter.

Thus, design-centered thinking will need to be surgically precise. Interactions are hardwired into the technology. As design thinking changes, the bank's technology must be agile. Imagine a customer walking up to an ATM with a blank screen simply waiting for the customer to dictate the interaction. It means that the bank must adapt its model, infrastructure, and workforce to ensure that every customer interaction is a low-friction, enjoyable experience that fits with the way customers want to interact, not how the bank wants them to interact.

### TREND 4 DESIGN FOR HUMANS



Condense human touch down to the bank's most important interactions, and draw on artificial intelligence to deliver them at the right time.

Develop a good way to guide customers in and out of the stream of human interaction, recognizing what the customer is doing and having the right intervention at the right time.

Enact "bring your own device," so that customers and employees use the same interfaces (where staff-only features are hidden).



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# WORKFORCE NARKET DESCRIPTION OF THE STATE OF

On-demand talent as a true banking innovation

## ON-DEMAND TALENT AS A TRUE BANKING INNOVATION

The future of work is already unfolding in banking. Leaders are creating a workforce with built-in flexibility and scalability for more agile ways of working. In fact, bankers said that 16 percent of their workforce are already independent freelance workers and 29 percent expect their organization's use of these workers to increase more than 51 percent over the next year.

It's a smart move. Agile workers represent a broad pool of sought-after skills, knowledge and experience that banks can access asneeded to compete as an agile, efficient on-demand organization. It is also one aspect in banks shifting the workforce from an industrial "run the bank" mindset focused on executing tasks to a modern "change the bank" mindset focused on success in the ever more digital future. The latter creates the innovative, collaborative, failfast-iterate-fast culture that makes modern bank models work. It is entrepreneurial, and becomes more automated, scalable and advisory (inside and out) overtime, which affects budgets and people. For example, Société Générale's "Digital for All' program is designed to help conceive the bank of the future through customer relations, internal working methods and digital technology. It is gradually and securely rolling out latestgeneration office and collaborative tools to its teams, updating its infrastructure and network, and enabling communication without the barriers of location or traditional hierarchy, which can stifle workforce agility and frustrate tech-savvy workers.<sup>10</sup>

Still, in the heavily-regulated world of banking, people change can be tricky.

Many work roles in the industry fall under tough compliance rules that call for specific training and certifications. Banks will need to determine how best to stay compliant while ramping up their workforce scalability. Solutions may include identifying which staff roles are best suited for agile workers, and then adapting and governing the roles for easier compliance. At RBC, for example, a steering committee of leaders from procurement, human resources and enterprise operations is responsible for managing the company's extended workforce.<sup>11</sup> An international banking group resized its workforce moving workers from dedicated job functions into a more agile pool of resources enabled with collaboration tools and available on demand. As work requests are raised around the business, resourcing leads are required to check the pool for the right workers with the right skillsets to fulfill the requests before looking externally.

Banks could pair artificial intelligence (AI) with people to fundamentally change not only the way bank employees work, but also the type of work they do—enhancing workforce efficiency, flexibility, compliance and skills that engage the customer. They can also tap on-demand labor platforms, like Freelancer.com® and Gigster, which employ data analytics to optimize the right freelance workers—24 percent of bankers say their organization is already doing this. Then, there is the stack of banks' red tape. Seventy-two percent of bankers believe corporate bureaucracies are stifling productivity and innovation. Yet, bankers are less likely to consider an increase in innovation via dynamic teaming (36 percent) as the top motivator for an agile, or liquid, workforce. Innovation must indeed be on the table. Banks can draw on familiar businesschange tactics—squad-like teams, guerilla warfare and so on—to begin fitting digital effectively into the overall operating model. Bank hiring managers might also consider newer recruitment models and marketplace tools such as Kaggle to attract necessary talent and ideas. For example, in one challenge on Kaggle (a platform for data

science competitions) 925 participants spent two weeks analyzing data to improve credit scoring and better predict credit default.<sup>12</sup> Banks can organize around problems and tap external resources to help solve them.

Banks that shift from outdated, bureaucratic management models and hierarchies toward agile structures will reap advantages. Seventysix percent of bankers agree that organizations that are able to build a strong liquid workforce will win the war for talent, while 81 percent agree that organizations that successfully integrate a liquid workforce into their business model will gain a significant competitive advantage through innovation.

### TREND 3 WORKFORCE MARKETPLACE



Understand the drivers of today's workforce, what the workforce needs to look like, and how technology can execute tasks—freeing people to organize around changing the business.

Develop the strategy for augmenting and empowering your workforce, including investments in training, AI, collaboration technology or compensation.

Consider repatriating offshore skills as location of these highly experienced people may be important as banks right-size the workforce and retain talent through employee motivations that matter (such as helping them meet their personal and lifestyle goals).







Platforms are the ties that bind bank people, partners and technology

## PLATFORMS ARE THE TIES THAT BIND BANK PEOPLE, PARTNERS AND TECHNOLOGY

Like companies in other industries, banks are increasingly integrating their core business functions with digital ecosystem platforms as they seek to manage broadbased customer relationships in a fragmented value chain. In fact, banking executives are more likely than average (36 percent of bankers, versus 31 percent of all respondents) to believe that it is very critical to adopt a platform-based business model and engage in ecosystems with digital partners. The Digital Relationship Manager, for example, will make money from financial products delivered through their own personalized customer-centric ecosystems (such as for home buying or retirement planning) as well as from financial transactions like payments that are embedded in other non-bank transactions.

Seventy-six percent of bankers agree that competitive advantage will not be determined by their organization alone, but by the strength of their chosen partners and ecosystems. Platforms, like Uber, WeChat and Amazon's Alexa®, are where much of the transaction banking of the future will take place. However, being a platform player does not necessitate being the platform owner. Consumers expect banks to be there, regardless of who owns the platform.

Bankers understand and are responding. Twenty-three percent indicate their organization is leading one or more digital ecosystem(s). For example, BBVA in Spain is opening up its core platform and services upon which others may build their companies and services which, in turn, will help the bank build new businesses. It is already giving authorized third parties access to account data and aggregated card profiles to benefit customers, for example by enabling intelligent consumer lifestyle choices like timing of restaurant visits and recommendations.13 Its US bank, BBVA Compass, opened its payments API to digital payments startup Dwolla to allow real-time money transfer between bank accounts in the United States-a process that typically take a few days.<sup>14</sup> This mirrors our survey findings. Bankers cited the top three benefits of participating in digital ecosystems: improved customer satisfaction (53 percent), increased speed and agility in developing solutions (52 percent), and access to a new customer base (47 percent).

Effectively leading or participating in a digital ecosystem means new challenges. Along with cybersecurity (36 percent) and uncertainty as to how industries will be disrupted (21 percent), banks will need a strategy for protecting their brand positioning and deepening their influence in the customer's life. Seventy-six percent of bankers agree that ecosystem participation involved giving up control in favor of an overall better outcome (such as speed, agility, access, lower costs) while 69 percent agree that ecosystems are creating an environment for unlikely partners. Slightly more than 70 percent agree that their organization's API strategy is instrumental to their brand and 73 percent believe that in five years' time ecosystems will have shared responsibility for a brand.

Of course, being an Open Platform Player is not the only way for banks to play in the digital economy. As banks are experiencing signs-from open banking regulation and fintech explosion to low market valuations and digital native competitors-that the traditional banking model is coming to the end of its growth curve, most are looking to jump to the next curve to survive. Some banks may seek to create platforms that offer predominantly third-party products; others will choose to become Digital Relationship Managers that manage most of the value chain while enabling transactions on other platforms. Some may only serve a narrow set of needs as a Digital Category Killer, or as a Utility Provider that provides product solutions or regulated entity services to other players. In any case, banks must evolve to digitally-fit business models.

### TREND 2 ECOSYSTEMS POWER PLAYS



Develop a new or refresh an existing platform strategy that optimizes your potential value to potential ecosystem partners.

Create most viable scenarios of participants' roles where the bank and partner brands would take center stage, and get comfortable with the idea of losing control as some bank services will end up on others' platforms.

Sketch out the transition map to the ecosystem strategy, delivering on the customer value proposition and growth.



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Readying for banking's shift from mobile-first to AI-first

## READYING FOR BANKING'S SHIFT FROM MOBILE-FIRST TO AI-FIRST

Artificial intelligence (AI) in banking is not new. Banks are already using AI in heavilymanual processes for accuracy, efficiency, speed and cost benefits. What is new, however, is the move of AI beyond process to interaction. By automating the interaction between all of the different tools and people in an IT environment, for example, a New York-based investment bank achieved a 93 percent reduction in average resolution and fix time (from 47 minutes to 4 minutes).<sup>15</sup> Thirty percent of bankers are currently using intelligent virtual assistants on large scale projects or broadly across the organization. The next stage of AI in banking will be toward simpler, smarter interfaces: machine learning to reengineer back-office processes, and AI tools that allow better interaction with customers.

Banks can use advanced machine-learningsystems that gain knowledge from data as "experience" and adapt to apply what is learned in upcoming situations-to streamline back-end processes and support networks. For example, text-mining algorithms pointed at data from internal text, voice, social media and other data sources can help identify unusual and potentially risky or illicit trading patterns. Machines can learn from that data analysis to help banks better detect fraud. A prominent global bank intent on seizing first-mover advantage in its digital strategy successfully tested the IPsoft Amelia AI platform's ability to support its network of mortgage brokers by providing guidance on policy details.16

Tapping AI-enabled tools (like centralized platforms/assistants or messaging bots) to enhance front-end services is a gamechanger. For example, Capital One® Bank developed a "skill" for the Amazon Echo's® Alexa, allowing people to check their accounts and pay credit card bills via the Echo device.<sup>17</sup> Customers of HSBC® can connect with the bank's virtual assistant, Olivia, to get answers about their credit cards or current accounts.18 "Collette" is one of Accenture's premier virtual mortgage advisers that uses cognitive science, AI and user-centered design to provide tailored advice on complex mortgage applicationsarticulating its own thoughts, understanding the intentions and emotions of the customer, making recommendations, and, if necessary, referring the customer to a human assistant.<sup>19</sup>

Most banks get it: 79 percent agree that AI will revolutionize the way they gain information from and interact with customers; 29 percent believe it is extremely important to offer their products/services through centralized platforms/assistants or messaging bots; 76 percent believe that in the next three years, the majority of organizations in the banking industry will deploy AI interfaces as their primary point for interacting with customers; and 71 percent believe that AI is capable of becoming the face of their organization or brand. Basically, AI is creating a new era of computing, rapidly moving from mobile-first to AI-first in the customer experience and moving staff to more judgment-based and higher value added roles.

For both front- and back-office applications, banks are focusing on several AI-related technologies to progress forward. They expect to invest in the following capabilities extensively over the next three years:

- Embedded AI solutions (40%).
- Computer Vision (40%).
- Machine Learning (38%).
- Natural Language Processing (37%).
- Robotic Process Automation (34%).

Bankers do expect high returns on such investments. Their top three reasons for embedding AI into user interfaces: data analysis and insight (60 percent), productivity (59 percent) and cost benefits/ savings (54 percent). Interestingly, 67 percent of US bankers place cost benefits/savings at the top of their reasons to invest in AI. Bankers also expect AI to accelerate technology adoption throughout their organization (80 percent) and ease use of and simplicity in the user interface to ensure a more humanlike experience (78 percent). Seventy-six percent believe organizations will increasingly compete on the ability to make technology fade, or appear invisible to the customer. Reaping such benefits will require banks to tackle privacy issues in embedding AI into user interfaces (38 percent), integration/ capability issues between AI and current IT (36 percent), and data quality (36 percent).

### TREND 1 AI IS THE NEW UI

## THREE ACTIONS TO TAKE. NOW.

Confirm you have a clear strategy for your data and the role Al tools can play to help access, use, and build upon it to add value to your employees and customers.

Explore the feasibility of developing an AI Center of Excellence to build a central capability that addresses the reality of scarce skills.

Create a scalable, flexible test-and-learn environment dedicated to explore AI and cognitive processes, and speed up innovation.



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## TECHNOLOGY-POWERED BANKS AS TRUSTED PARTNERS FOR PEOPLE

Banks would do well to use technology as a catalyst to empower and motivate people to lead the way to their digital future. Artificial intelligence, digital ecosystems, on-demand labor platforms, design thinking and other key technologies can help banks respond to people based on their wants and needs, even as the bank evolves to a digital-first business model.

In doing so, banks will become true and trusted partners—helping customers and employees achieve their goals. The more goals a bank helps people achieve, the more confident people will be in the partnership, yielding an ever-stronger relationship with each interaction. When bank customers and employees succeed, so does the bank.



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#### **ABOUT THE TECHNOLOGY VISION**

Every year, the Technology Vision team partners with Accenture Research to pinpoint the emerging IT developments that will have the greatest impact on companies, government agencies, and other organizations in the next three years. For the third year, we conducted a global survey of more than 5,400 business and IT executives across 31 countries to understand their perspectives on the impact of technology on their organizations, and to identify their priority technology investments over the next few years. The survey was fielded from November 2016 through January 2017.

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