

Accenture Technology Vision for Banking 2015

# Digital Banking: Stretch Your Boundaries Toward the Everyday Bank

Four yellow location pin icons are scattered across the page, one in each quadrant, pointing downwards.A large, thick yellow arrow graphic pointing from the left towards the right, positioned in the lower right area of the page.

High performance. Delivered.



# Fünf technologische Schlüsseltrends für die digitale, kundenzentrierte Bank der Zukunft

In der digitalisierten Welt der „We Economy“ verwischen traditionelle Branchengrenzen zunehmend und alles ist miteinander vernetzt: Unternehmen, Kunden und Alltagsobjekte interagieren miteinander. Diese Entwicklung stellt auch Banken vor völlig neue Herausforderungen. Ganze Geschäftsmodelle werden hinterfragt. Finanzinstitute müssen sich mit Blick auf den Kunden im Mittelpunkt eines digitalen Servicenetzwerkes als „Every Day Bank“ neu positionieren. Fünf aufkommende Technologietrends, die wir in unserer Technology Vision für Banken identifiziert haben, machen diese Herausforderung deutlich.

## **Internet of me**

Der Schritt zum „Internet of me“: aus den gegenwärtigen Produkten von der Stange werden maßgeschneiderte Produkte, die sich in viel stärkerem Maß an den Bedürfnissen des Kunden orientieren. Massenmarketing wird durch digitalisierte und skalierbare 1:1 Beziehungen zum Kunden abgelöst, auch durch die Nutzung neuer Interaktionskanäle. So ermöglicht beispielsweise die Finanzmanagement-App Movens nicht nur Einkäufe, sondern warnt vor Kontoüberziehung und ermöglicht das Verfolgen von Sparzielen und verknüpft diese Dinge eventbezogen mit dem Finanzverhalten des Kunden. Die Verknüpfung dieser Services und die Nutzung unterschiedlicher Kanäle innerhalb eines Transaktionszusammenhangs erhöht die Kundenzufriedenheit deutlich und reduziert Streuverluste auf Anbieterseite erheblich.

## **Outcome Economy and Plattform Revolution**

Die fortschreitende Vernetzung der Konsumenten mit Sensorik – von der Apple Watch bis zum Fitbit – verändert durch neue Kundenerwartungen die Angebotslogik grundsätzlich. Aus Produkten werden ergebnisorientierte Lösungen – die „Outcome Economy“. Dass dies auch ganz spielerisch geht, zeigt die russische Alfa-Bank. Hier können Kunden ihr Sparverhalten an das eigene Bewegungspensum knüpfen. Je aktiver sie sind, gemessen mit Fitness-Trackern wie dem Fitbit, desto mehr wird gespart. Neue Wertschöpfungsmodelle und Wachstumsimpulse ergeben sich zudem durch die

Freigabe von Schnittstellen und Daten für Partner nach dem Vorbild von Google, Apple und Co. – die „Plattform (R)evolution“. Banken sollten einerseits selbst zur Plattform und damit zum Zentrum des Finanz-Ökosystems um den Kunden werden, Chancen liegen andererseits aber auch in der Bereitstellung von Services für andere Plattformen, beispielsweise als Abwickler von Zahlungsverkehren oder Anbieter von Spezialkenntnissen bei der Identifikation und Bekämpfung von Betrugsfällen.

## **Intelligente Organisation und technologische Aufrüstung der Mitarbeiter**

Auch die internen Strukturen der Banken werden durch die neuen Technologietrends erfasst. Um das vorhandene Kundenwissen in Lösungen zu verwandeln braucht es die „intelligente Organisation“. Kognitives Computing ermöglicht einen weit effizienteren Umgang mit vorhandenen Datenmengen. Zusammen mit einem umfassenden Einsatz von Sensorik und Analytik können Bedürfnisse der Bankkunden künftig wesentlich effizienter adressiert werden. Verändern wird sich darüber hinaus die innere Struktur der Bank: Mensch und Technologie werden künftig in einer „Neuen Belegschaft“ als Team arbeiten. Denn die Nutzung neuer Möglichkeiten bei Interaktion, Sensorik und Datenauswertung verlangt neue Organisationsformen: Durch computergestützte Spracherkennung und -verarbeitung ist es weit einfacher geworden, mit Maschinen zu interagieren und die Fortschritte im Bereich Sensorik und Wearables ermöglichen eine nahezu nahtlose Integration von Technologie in die bestehenden Arbeitsprozesse.

Das Potenzial der „We Economy“ und der zugrundeliegenden Technologietrends ist riesig. All dies bietet Banken die Chance, wieder näher an ihre Kunden und deren Alltag zu rücken sowie neue Wachstumspotenziale zu erschließen. Die Konsequenz für Finanzinstitute darf daher nicht lauten, ob sie auf den digitalen Umbruch reagieren müssen. Es geht vielmehr darum, wie schnell sie es tun. Eine ausführliche Darstellung der Herausforderungen und Möglichkeiten für Banken in diesem Prozess hat unser internationales Team für Sie erarbeitet. Lassen Sie sich von den detaillierten, englischsprachigen Ausführungen auf den folgenden Seiten inspirieren.

## INTRODUCTION

Technology continues to shake-up the banking industry. Social, mobile, analytics, cloud and the Internet of Things present both disruption (think payments providers PayPal and Google Wallet) and opportunity (think collaboration and wearable devices that enable fast, self-serve employee interactions and training).



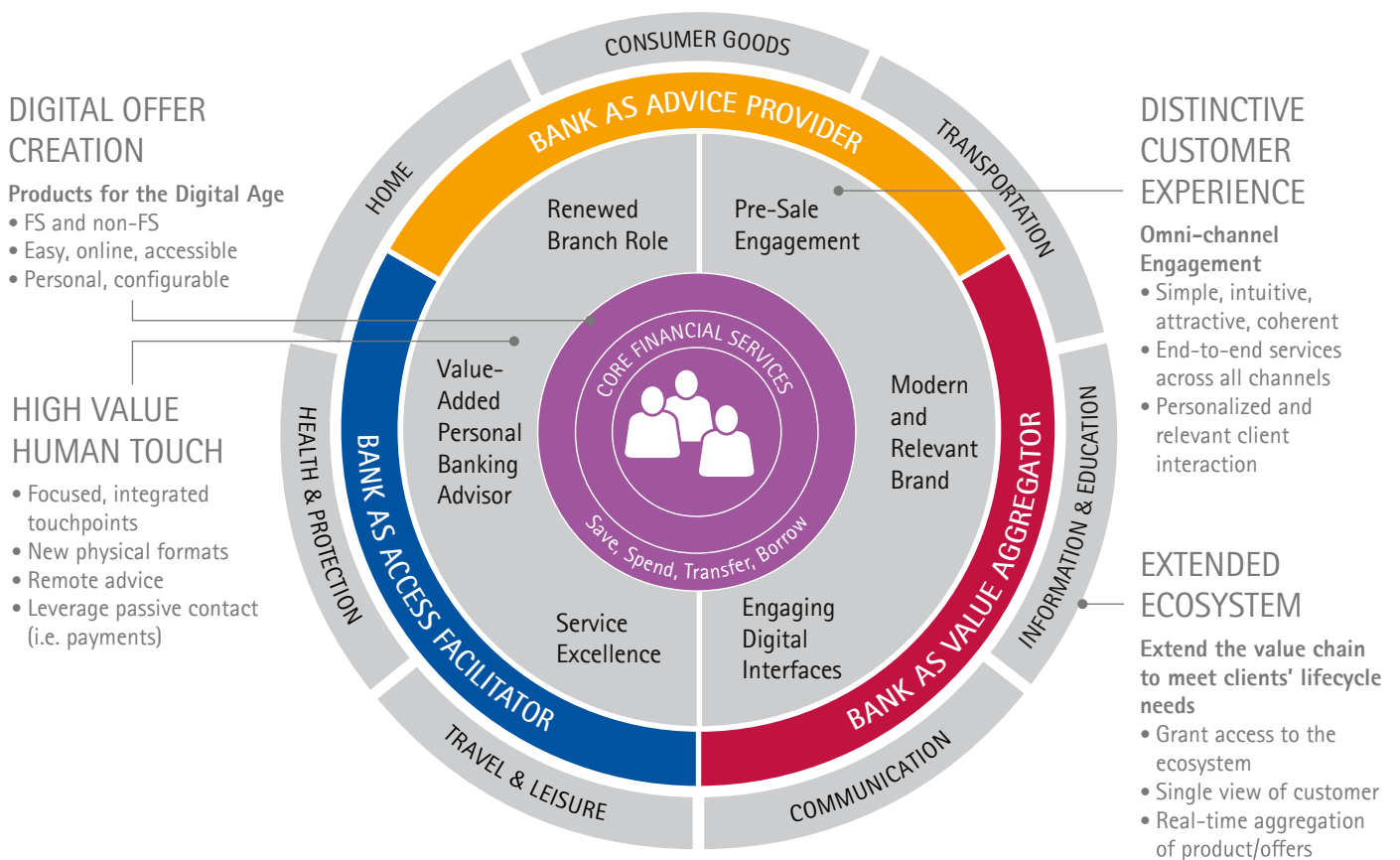
The Accenture Technology Vision 2015 survey maps out five key trends that are helping to drive the change: The Internet of Me, Outcome Economy, Platform (R)evolution, Intelligent Enterprise and Workforce Reimagined. This report offers a banking industry-specific perspective on these five trends. Each one suggests and reinforces the strategy for banks to become an **Everyday Bank** (figure 1)—drawing on technology innovation to digitize their operations and place themselves at the center of an inter-connected ecosystem of cross-industry providers and services that pivots around and serves customers' everyday needs.

Indeed, industry boundaries are blurring as connectivity between devices expands—enough to reshape not only individual companies, but entire markets. Pioneering enterprises are tapping into a broader array of partners and markets to craft new and engaging customer experiences, tackle challenges and create new lines of business in ways never before

possible. As they do so amidst the five trends, they are mastering the shift from “me” to “we” and ushering in a new economy—the “We Economy” where the progression and new possibilities of partnerships and collaboration can yield growth and profitability enabled by digital technology.

Leading banks agree. Almost all (88 percent) of the 243 executives from some of the world's leading banks polled in the survey believe that industry boundaries will dramatically blur as platforms reshape industries into interconnected ecosystems. More than 60 percent plan to engage new digital partners within their industry for digital initiatives, with traditional business partners dropping to second place (51 percent). Nearly one-third expect to adopt robotics to automate business processes. Those that capitalize on the five trends in smart ways can make big bets toward their future and becoming an Everyday Bank and make a step change in return on equity.

FIGURE 1. The Everyday Bank vision



Source: Accenture, The Everyday Bank: A New Vision for the Digital Age, 2014

## The Internet of Me: Banking, personalized at scale

Banks are already very focused on enabling highly personalized experiences that engage and exhilarate customers without breaching their trust—a trait of the Everyday Bank. They are using personalization technologies to tailor their products and services to the unique affinities of individuals and collecting highly contextual data to deliver personalization everywhere—from retail branch to online to mobile.



### Recognizing them

One bank is using facial recognition to give branch staff vital information and even tailor digital signage. The technology recognizes customers immediately on a tablet or other device, and retrieves customer information for the branch staff and other assisted or self-service services to deliver personalized service.

Moven's personal financial management app on the smartphone and, more recently, the smartwatch is a good example. It combines spending/saving psychology, behavioral science, location data, day-to-day gamification and other services (such as debit card and payments) to offer customers financial feedback in real time. Just after paying for the family's pizza night out, for example, a customer might get an alert on his smartwatch cautioning about a near budget overspend for the month. The smart phone version offers personalized banking service, including mobile check deposit, new options for loading cash onto the Moven debit card and soon-to-come impulse savings suggested to customers whose monthly spending falls below average. By using data from connected devices to deliver very tailored, context-based banking experiences, Moven engages customers (particularly tech-savvy millennials) in a more compelling way—helping them to control their spending and save money every day.

But this is just the start. The current Internet of Things revolution, with its proliferation of connected devices, is opening up new context information and new channels for agile banks. More than half of bank respondents view delivery of the new "Internet of Me" experience as a top priority.

As the Moven example shows, channels matter. Mobile phones remain the primary non-traditional channel after online that banks currently use (76 percent). Still, they also actively use tablets (60 percent) and are experimenting with interactive displays and connected TVs. More than 50 percent of bank executives (compared to 31 percent in insurance) indicate they are either using or experimenting with wearables—one of the newest categories of channels. Sixty-three percent expect wearables to be adopted broadly across the industry in the next two years.

Other channels and technologies are also worth banks' attention in highly personalizing the customer experience. For example, consumers are increasingly using intelligent personal digital assistants, such as Amazon Echo, Emu, Google Now or Timeful, to more easily manage their day-to-day lives. Banks can tap into the "thinking" of such digital devices to offer personalized advice on shopping, fund management, products and services based on life changes or a myriad of other day-to-day needs. This growth in personalization is core to Accenture's Everyday Bank vision.

Banks have a long way to go to achieve the level of customer trust needed to make the most of personal data for deep personalization. While banks already have massive amounts of customer data, more data will be needed to tailor experiences. At the same time, customers have very limited understanding as to how banks use their data. A focus on customer trust will be as important as customer experience in the future.

Delivering tailored, Everyday Bank service amidst ever-expanding big data, requires banks to improve their capabilities to:

- Capture data contained in internal exchanges with customers, such as from emails and voice recordings.
- Incorporate the enormous amount of data from outside banks' firewalls, including public data—social media, for example.
- Build customer trust by demonstrating that adequate safeguards are in place to protect confidential information and assets. More than 20 percent of bank respondents see security as the top barrier to greater adoption of personalization tools.
- Draw on analytics to micro-segment customers and offer more personalized products and services—ideally in real-time—to maximize the benefit of transient customer context (for example, location).

The prize? A rich customer experience that places the bank at the heart of "getting things done" in the customer's daily life.

#### KEY QUESTION TO ANSWER:

What information about the customer's location, mood, daily habits, friends or aspirations could influence and sharply tailor the bank's current sales and service processes? The data is out there.

# Outcome Economy: Device-driven refocus on banking solutions

Apple Pay is making mobile POS payments via smartphones much more secure by using fingerprinting in its Apple TouchID biometric system to verify a user's identity and simplify the online and mobile process.

Russia's Alfa-Bank launched a new activity savings account reflecting customers' exercise performance. A customer's account is connected with a common activity-tracking wearable, such as RunKeeper, Fitbit or Jawbone Up. The customer then assigns a cash value to every meter walked throughout the day. Savings are automatically transferred into a special activity account that rewards customers with a higher interest on savings. Results show that customers who opt for the service are saving up to twice as much as the average customer and walking 1.5 times as far. Alfa-Bank is helping the customer achieve both outcomes.

Meanwhile, Visa is exploring an in-car ordering solution with Pizza Hut that allows consumers to purchase a pizza while driving, without a phone, laptop, or even their hands—a solution that is likely to expand beyond ordering meals to other areas of e-commerce.

These are just a few examples of the device-driven outcome trend in financial services as providers explore various ways to use intelligence in devices to solve customer problems and make their lives easier. Nearly 90 percent of bank respondents believe that with more intelligent hardware, sensors and devices on the edge of networks, new business models will shift the focus of selling from products or services to outcomes—or as described in the Everyday Bank vision, a complete customer solution.

For banks, the outcome economy is very much about tailoring everyday interactions of customers with the bank, so that they are seamlessly integrated into the customer's daily routine. Eighty-six percent of banks indicate their organization is already using some form of sensor data to interact with the world, monitor conditions, react to situations or anticipate issues. The sensors provide for deeper understanding of how products are being used and what customers

want to achieve. Only five percent of bank respondents believe that the Internet of Things is irrelevant to the banking industry.

## KEY QUESTION TO ANSWER:

What is the customer wanting to achieve by buying this product? If the bank takes responsibility for achieving that outcome, then how would the offering change?

# Platform (R)evolution: Defining ecosystems, redefining banking

Advances in cloud, mobile platforms and application development are lowering or eliminating technological and cost barriers. Application programming interface (API) technologies—the secret sauce of the digital economy—are allowing companies to open up their data and platforms for others to develop applications on and to create value. The possibilities are alluring.

For example, Google expanded its API offering to more than just smartphones and tablets. It is enabling developers around the world to innovate and build new apps for smartwatches, in-car infotainment devices and TVs.

It means new ways for banks to get even more intimate with their customers. The opportunities are three-fold:

- Become the platform. Open up banking services and data via APIs, and build the ecosystem of platform partners who will help bring a broader range of products and services to customers.
- Be the banker for a platform. Initiate utility services, such as payments and fraud protection, to other platform providers and drive volume into core capabilities.
- Use platforms internally to build or improve existing capabilities. For example, medicine giant AstraZeneca plans to give its 51,000 employees access to Box to share files and encourage collaboration worldwide, an initiative that is part of a larger strategy to supply its employees across 100 different countries with secure, user-friendly tools to boost productivity—an application that banks could consider.



86% of banks today are using some form of sensor data to interact with the world.



Banks are taking notice. Digital platforms are becoming the tools of choice in building next-generation banking solutions and entire customer ecosystems, as well as improving collaboration in the “we” economy.

Consider Germany’s Fidor Bank, which has very low customer acquisition costs and high operating leverage. Its award-winning “banking 2.0” platform takes advantage of Web 2.0, e-commerce, mobile and social technologies to deliver transparent, easy-to-use, extremely efficient and scalable banking services, which extend to precious metal trading, insurance services, peer-to-peer lending and deposits (including virtual currencies).

Two-thirds of banking survey participants are already using open innovation programs to integrate applications and collaborate with business partners; 45 percent are integrating industry platform data with digital business partners; and 55 percent are either experimenting with Platform as a Service (PaaS) solutions or are applying PaaS to large strategic initiatives to enable faster deployment and integration of disparate systems (figure 2).

#### KEY QUESTION TO ANSWER:

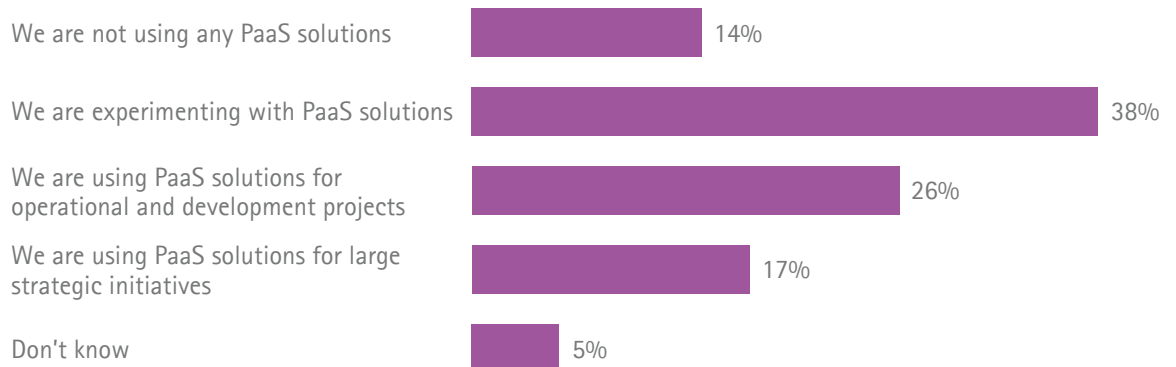
Which business capabilities could the bank offer up as a service provider? Which ones would the bank chose to consume from another provider, if it could? A whole new world of providers is starting to appear.

## Intelligent Enterprise: Smarter, more efficient banking

For years banks have been using software algorithms to help customers and employees make better and faster decisions. The emergence of cognitive computing (infused with data and cloud processing power) is set to make machines smarter.

Some banks are already taking advantage of artificial intelligence to extract greater customer insight. A major Spanish bank, for example, is using natural language processing to better predict customers’ life changes by better identifying how customers label their transactions and payments to their friends/ family. One of the US’ biggest banks uses IPsoft’s Amelia to manage its trading platforms. Amelia is a virtual, cognitive, artificial intelligence knowledge worker that automates and augments business processes across a broad range of functions for greater efficiency. It and other software agents offer at least two huge advantages: the ability to scale-up the capacity of the first-line support team at the click of a button, and the ability to roll out a policy change overnight with no training of people.

FIGURE 2. How is your organization using PaaS (Platform as a Service) solutions (e.g. Azure, Force.com)?



Source: Accenture Technology Vision Survey, 2015, n=243

**SIDE BAR**

## Working smarter: Sensors and predictive analytics in the DBS ATM network helped improve customer satisfaction, operational efficiency and uptime

DBS, a leading financial services group in Asia, successfully implemented its proprietary, first-of-its-kind banking analytics solution across its 1,100 ATMs—one of the world’s busiest ATM networks, processing more than 25 million transactions every month.

DBS now uses analytics to forecast ATM activity and predict customer behavior at different locations. It converts that information into a daily execution plan for optimal reloading at just the right time across its entire network for each individual machine. The solution helped DBS lower ATM out-of-cash occurrences by more than 90 percent. The number of customers impacted by the reloading process dropped 350,000 from the previous year. At the same time, the number of trips required to reload the network is down by 10 percent, while the amount of leftover cash returned to the bank decreased by over 30 percent.

With such workforce extensions, it’s not surprising that 84 percent of bank executives agree that they will need to focus on training their machines as much as their people within three years. Many are already taking action.

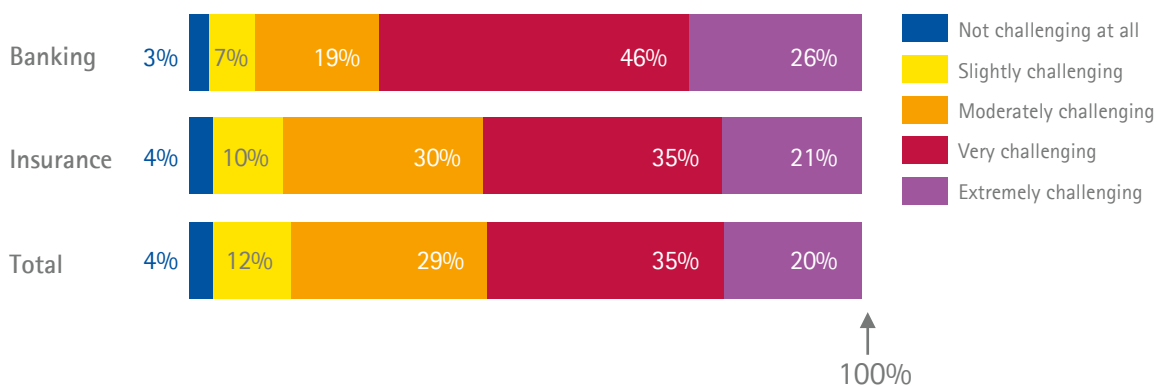
Particularly relevant to banks, such intelligence-related technologies can enable better regulatory compliance and help reduce errors and risk arising from workforce activity. Also, more than 90 percent of banking executives believe that software intelligence will be critical to simplifying IT—making for a more innovative, intelligent bank with greater operational excellence.

To reap such advantages, banks are tapping various tools and methods to embed intelligence into banking systems. Respondents prefer:

- Rule-based algorithms (63 percent are using; 24 percent are experimenting),
- Machine learning (45 percent; 40 percent),
- Predictive analytics (39 percent; 35 percent), and
- Intelligent agents (33 percent; 39 percent).

Yet, a hurdle for more banks in exploiting software intelligence is their vast, diverse and ever-changing data stored in multiple locations. Thirty percent of banks have seen more than a 75 percent growth in the volume of data they handled over the last year—a trend they expect will increase even more over the next year. Given that reality, 72 percent of the banks surveyed say managing data is very or extremely challenging (figure 3).

**FIGURE 3. How challenging is managing data for your organization?**



Source: Accenture Technology Vision Survey, 2015, n=243



Most executives are optimistic regarding the level of evolution of software intelligence. More than 75 percent of bank respondents agree that changes will revolutionize the way they use data and enable them to solve problems that were previously impossible to solve.

**KEY QUESTION TO ANSWER:**

Which of the automation business cases that didn't get the greenlight earlier should the bank now revisit? New software and approaches make automation more flexible and successful.

## Workforce Reimagined: Bank employees and machines

Banks are both reimagining and creating a new workforce comprised of employees and intelligent machines integrated in new ways to do more together as a "team". Advances in natural language processing are making it much easier for humans to interact naturally with technology and machines, while advances in wearable computing are allowing workers to seamlessly integrate more technology into their workflows.

Capitalizing on the advancements, banks are considering adoption of several emerging digital technologies to augment the human workforce:

- Technologies that enable employees to complete tasks that previously required IT experts (65 percent).
- Software automation and/or cognitive computing (51 percent).
- Sensors to increase intelligence gathering about the surroundings (39 percent).
- Crowdsourcing talent and skills from outside the bank (36 percent).
- Robotics to automate business and industrial processes (30 percent).

### SIDE BAR

## Collaborating differently: Barclays applies voice recognition to speed up customer authentication

Barclays is unveiling a voice recognition system that it believes will slash the time it takes to access a customer's account from 90 seconds to just ten. When a customer next calls the bank, their unique speech patterns are compared against the initial recording. If the voice sample matches the original, Barclays call center staff receives a notification verifying the caller's identity. The system has helped Barclays reduce customer complaints in its Wealth division by 60 percent.

At some banks, for example, interactive teller machines and a minimal number of central office employees work together to give customers at branches innovative, convenient and efficient yet personal self- and after-hours service. The machines are equipped with advanced video, audio, check scanning and signature capabilities. The employees man and provide face-to-face service support through the machines. Japan's biggest bank, Mitsubishi UFJ Financial Group, is piloting a new type of branch employee to assist customers: Nao, the robot worker with a human touch. Nao weighs in at nearly 12 pounds, stands slightly less than two feet and can speak 19 languages. He uses sensors and a camera on his forehead to analyze and interpret a customer's emotions based on facial expressions and tone of voice, enabling him to greet and interact with customers and direct them to the service they require.



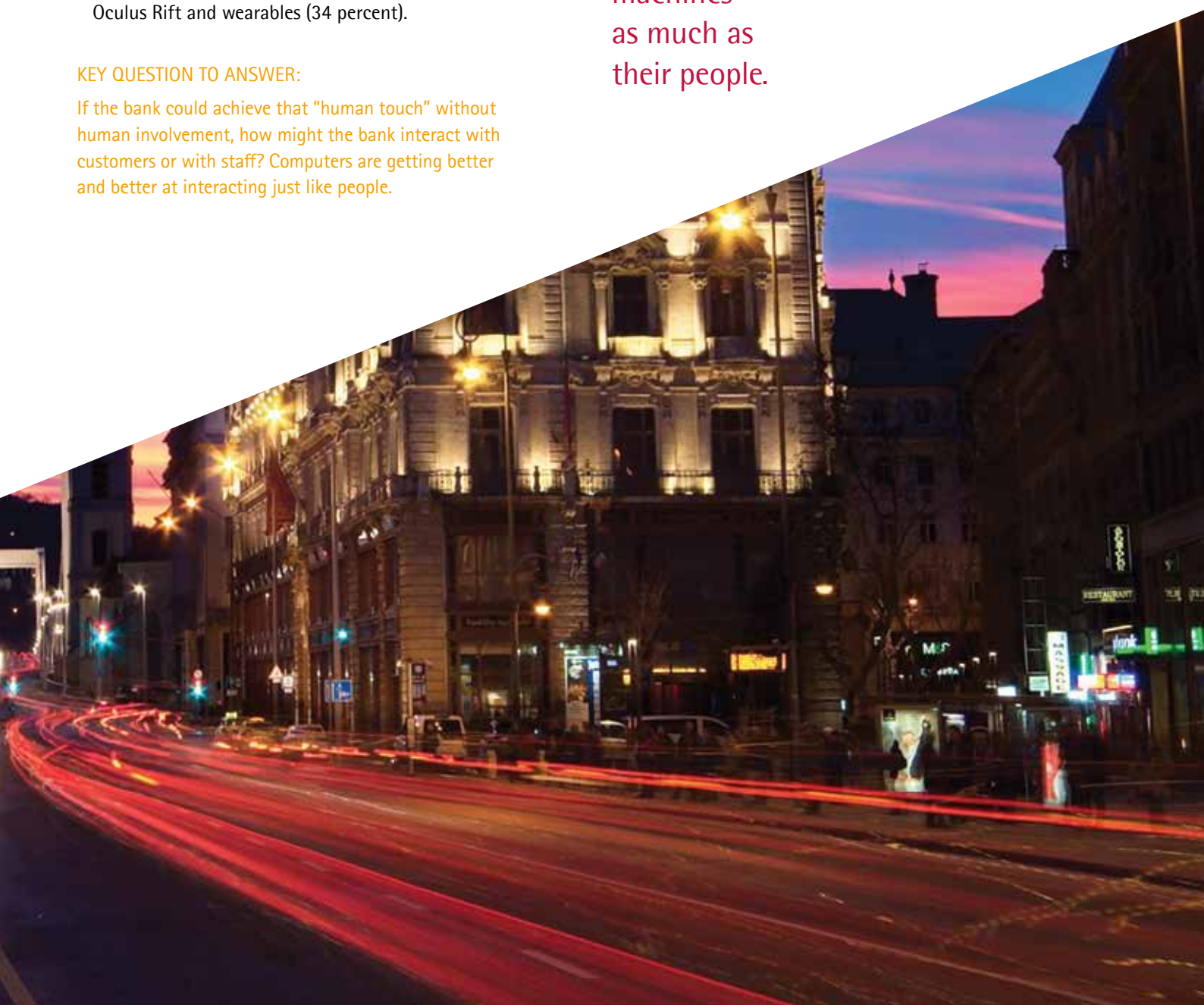
84% of bank executives agree that they will need to focus on training their machines as much as their people.

More than three-fourths of bank respondents believe that successful businesses will manage employees alongside intelligent machines—ensuring collaboration between the two. More than half of bank respondents already use Massive Open Online Courses (MOOCs) for workforce training, a number expected to grow to 90 percent or more over the next three years. Following closely behind are the training needs for people working more closely with machines in new ways:

- Virtual worlds (43 percent).
- Human-robot collaboration training (40 percent).
- Adoptive learning (39 percent).
- Immersive gaming technologies (39 percent).
- Crowdsourcing platforms (37 percent).
- Augmentation technology, such as Google Glass, Oculus Rift and wearables (34 percent).

#### KEY QUESTION TO ANSWER:

If the bank could achieve that "human touch" without human involvement, how might the bank interact with customers or with staff? Computers are getting better and better at interacting just like people.





## CONCLUSION

## Stretch traditional bank boundaries

These five key technology trends and the resulting rise of the “We economy” underscore the vision of the Everyday Bank. Still, building the interconnected ecosystems, extreme channel integration and flexible IT systems to achieve an Everyday Bank position won't be easy. It requires a much different approach to customer experience, distribution, marketing, operations and IT—one that is liquid, intelligent and connected.

Paths that banks can take to best make the shift are discussed in the **Digital IT Blueprint for the Everyday Bank** and **Role of Core in Digital Adoption** point of views. They highlight concepts and approaches that bank respondents echo in the 2015 Accenture Technology Vision survey about the critical role of IT in their digital transformation (figure 4). The essential digital foundation must be in place if banks are to reinvent themselves and stake their digital claim ahead of compelling competitors.

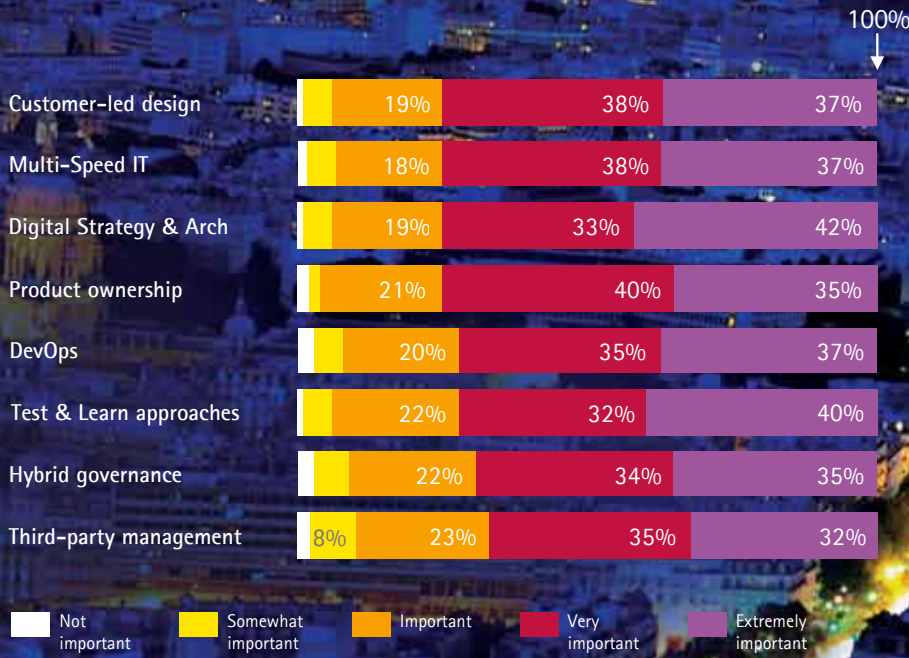
Accenture identified quick actions aligned to the five trends that banks can take over the next 100 days to begin putting the right foundation in place. Here are a few:

- **Internet of Me:** Appoint a cross-functional team to champion and develop the end-user experience based on a deeper understanding of who they are and what they want. Building a strategy for the Internet of Me begins with bringing the individual's voice to the table.
- **Outcome Economy:** Catalog the outcomes your customers are trying to achieve and map those outcomes to current product and service offerings. Where are gaps and opportunities to use hardware at the edge for new feedback loops?
- **Platform (R)evolution:** Conceptualize your business as a platform upon which others can build services. How could you, for example, package your ability to price and gauge risk as an API others could embed into their applications and services?
- **Intelligent Enterprise:** Develop a comprehensive understanding of software intelligence and the advantages it provides—from making decisions to self-evolution and discovering opportunities for innovation.
- **Workforce Reimagined:** Uncover and log opportunities for integrating technology to augment your workforce's operational efficiency and workplace safety. Tap knowledge from the human resources, business and technology areas.

Truly, the question for banks is not “If?” but “How quickly?”



FIGURE 4. How important are the following emerging IT capabilities for managing technology within your organization?



Source: Accenture Technology Vision Survey, 2015, n=243

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