CLOUD AND CLEAR

Complete your journey to cloud.
Resounding innovation awaits.
After many years of hype, but little change, there is now compelling evidence that banking is truly being disrupted by digitization. Across major banking markets, there is a proliferation of new competitors, with 19 percent of all institutions new to the market since 2005. In the UK—the most disrupted developed market—around 14 percent of retail and commercial banking revenue has migrated to new entrants, and multiple neo-banks have now passed the 1 million customer milestone.1

Like other industries, banks are struggling to respond to disruption and build the systems they need to compete in the digital age because of the limitations of legacy IT systems. The cloud offers a way for banks to quickly develop new applications, add new online services and improve customer experience. Indeed, offerings such as mobile banking would be impossible without the cloud. Also, data-intensive applications such as artificial intelligence (AI) and complex data analytics that are increasingly important to banks, are typically cloud-based and indeed some of the most advanced AI technology available is now embedded in public cloud platforms. Hence, 53 percent of respondents to an Accenture and Oxford Economics survey within the retail banking industry believe cloud-based technologies are having the biggest impact on improving the operational efficiency of their industry and 40 percent of respondents in the same survey believe cloud-based technologies generate business value for their industry.2

Banks recognize the need to build future IT systems on cloud platforms, and there are pockets of cloud deployment across most banks. But many banks still lack a comprehensive cloud strategy that will enable a rapid shift to the cloud, and very few have defined an enterprise-level operating model for transferring existing applications to the cloud and systematically adding cloud-based applications and capacity.

These are some of the central findings of a recent survey of 35 retail banks conducted by Accenture (see figure 1). Based on this Accenture Cloud Readiness report, we conclude that many banks risk falling behind their competition because they have not laid the foundation for a rapid and orderly transition to flexible cloud-based systems. Given the increasing level of market disruption, banks should urgently develop a cloud strategy aimed at scaling cloud usage throughout the enterprise, creating detailed plans and timetables for cloud implementations, and building capabilities to manage cloud-based systems—including managing security and remaining compliant with regulation.

1. Accenture Research Analysis
2. Accenture - Oxford Economics study - in development and report to be published in October 2018
Why is a cloud strategy and implementation plan so important? The answer: it’s becoming very bad for business not to have one.

In a sense, not having a cloud strategy and comprehensive plan means not having a complete business strategy, since cloud capabilities are now so fundamental to how banks will conduct their businesses and grow in the future. A clear cloud strategy and plan, developed in collaboration with the business units, sets priorities for adding new cloud-based applications and transferring existing ones to cloud platforms to give the organization greater flexibility and efficiency and enable innovation and growth.

Figure 1. Survey demographics: 35 executives (CIO, CTO, CISO and VP IT) at global retail banks

Source: Accenture Research (Sample Base: Total Sample)
However, 43 percent of banks in our survey say they do not have a cloud strategy or have only started to implement basic cloud practices (see figure 2). In most of these banks, cloud architectures and technologies are found in pockets and do not exist in a comprehensive form at the enterprise level, even among banks that say they have developed a cloud strategy. And, while 83 percent of respondents say that IT has had “preliminary” or “thorough” discussions with business units about cloud strategy, two-thirds said that fewer than half of their lines of business are currently using cloud.

Not surprisingly, the lack of a cloud strategy has resulted in limited cloud deployment. Less than half of banks responding to the survey (46 percent) have for example implemented cloud-related automation, self-service and orchestration tools. This means that most of these banks are only at the “experimental” phase in developing cloud infrastructure, modernizing applications, and building cloud-management tools.
NEW OPERATING MODEL NEEDED

To move beyond the experimental phase, banks need a strategy that shapes a coherent and comprehensive plan that will inform both the future IT operating model and the roadmap for transitioning to the cloud and implementing new applications such as AI on the cloud.

Of course, it is essential to test cloud in selected areas to gain experience, e.g. by moving any new applications to the cloud per default, before starting to work on a comprehensive strategy. Nevertheless the efforts of developing a solid cloud strategy should not be underestimated.

Defining the underlying operating model is a critical step because it spells out how the organization will implement cloud infrastructure and applications. The operating model then specifies the talent and capabilities, processes, and technology by which to execute on that strategy and plan. All banks surveyed acknowledge that they must change their IT operating model, but only a quarter have defined the new operating model to implement yet (see figure 3).

Almost one-fourth of these banks have not created an execution roadmap of any kind and most of them do not have an industrialized production plan (which would be standard in a traditional IT environment) to move a certain percentage of applications to the cloud by a certain deadline. Only 37 percent currently have a roadmap in place with key performance indicators to measure progress (see figure 4).

Figure 3. Do you expect your transition to cloud to drive changes in your IT organization’s operating model?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>43%</td>
<td>Yes, and we already have defined the new operating model to implement</td>
</tr>
<tr>
<td>31%</td>
<td>Yes, we are in the process of defining the new operating model to implement</td>
</tr>
<tr>
<td>26%</td>
<td>Yes, but we have not yet defined the new operating model to implement</td>
</tr>
<tr>
<td>4%</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: Accenture Research (Sample Base: Total Sample)
Banks not only should have a strategy and plan for scaling cloud usage throughout the enterprise, but also clear ways of measuring “return on cloud.” These metrics should capture value in multiple ways—how the cloud deployment enabled a new business process or customer offering, shortened development time, increased efficiency, etc.

Cloud operations differ significantly from traditional IT operations, and banks should be ready. For example, with cloud one looks at trending mechanisms that indicate a workload has not been scaling properly. The service is not interrupted, but it is costing more, so IT needs to change the automation at the source. While IT is traditionally reactive, there is no mean-time-to-repair with cloud; it’s a matter of restoring service to optimal levels.

**Figure 4. Do you have a cloud strategy execution road map for your company?**

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, we have a cloud strategy execution roadmap, and use KPIs to measure progress</td>
<td>37%</td>
</tr>
<tr>
<td>Yes, we have a cloud strategy execution roadmap, but are not using KPIs to measure progress</td>
<td>40%</td>
</tr>
<tr>
<td>No, we do not yet have a cloud strategy execution roadmap</td>
<td>23%</td>
</tr>
</tbody>
</table>

Source: Accenture Research (Sample Base: Total Sample)

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**NORTH AMERICAN BANK**  
**Public Cloud as the Platform for Innovation**

At the beginning of this decade, the bank decided to develop a new IT infrastructure to enable digital banking. The company needed to deliver new tech-based features faster, requiring a flexible infrastructure to deliver new apps to customers quickly.

The bank migrated most of its IT operations to the public cloud, using Amazon Web Services, Inc. (AWS) as a key part of its cloud strategy. The company ultimately plans to reduce its data centers from eight to three, and it is experimenting with nearly every AWS service.
How can banks accelerate the “journey” to the cloud and gain the agility to compete effectively in the digital age?

Before they can craft a cloud strategy and determine how and in what sequence they should undertake cloud implementations (e.g. new applications versus existing applications), banks should address critical barriers and develop a clear understanding of how current applications work and how easily they can be transferred to cloud platforms. The limitations in legacy systems can be a major stumbling block in the path of cloud adoption. These limitations—flaws, complexities, and inadequacies—add up to “technical debt,” which is the cost to rework legacy IT so that the business thrives in the digital age. In another Accenture survey, 69 percent of executives said that they believe technical debt hinders their ability to respond to market change.3

3. Accenture Exponential IT research, 2018

Figure 5. What percentage of your IT budget would you estimate you are currently spending on cloud services? What will that percent be over the next 3 years?

Source: Accenture Research (Sample Base: Total Sample)
To make the shift to cloud-based systems, banks can start with a detailed assessment of legacy systems—both their flaws and their virtues. Nearly three-quarters of C-level bank executives surveyed in another Accenture study, for example, believe that valuable data is trapped in legacy systems and, if it can be unlocked, can help advance the business.4 Through a process that we call “digital decoupling,” banks can maintain the best of legacy systems while moving what they can to the cloud. In our Cloud Readiness survey, 69 percent of respondents said they intend to operate in a “bi-modal” way—maintaining key legacy systems (or those not easily replicated on cloud platforms) while transferring other systems to the cloud and adding new applications in the cloud.

Regarding applications, we find that most of the surveyed banks have made progress in identifying which legacy apps are good candidates for early migration to the cloud; 94 percent of respondents said they have or are planning to conduct formal planning and analysis of legacy applications to migrate. But only one-third have developed a strategy for application modernization for cloud. And less than a quarter have conducted code-level assessments to determine the degree of fit with target platforms, and confirmed the application migration type and effort. Only 31 percent of banks in our survey have a strategy for developing cloud-native applications, although 49 percent plan to do so (see figure 6).

Figure 6. Have you developed a strategy for cloud-native application development?

![Chart showing the distribution of responses to the question of whether banks have developed a strategy for cloud-native application development.]

- Yes: 31%
- No, but this is planned to be done in the next 12 months: 49%
- No, and this is not planned yet: 20%

Source: Accenture Research (Sample Base: Total Sample)

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Many of these banks are already proceeding with the selection of Software as a Service (SaaS) and Infrastructure as a Service (IaaS) vendors for their cloud implementations. Half of respondents (49 percent) have completed SaaS provider assessments; 34 percent are in the process of evaluating SaaS suppliers.

Bank technology executives focused on a systems strategy believe that IaaS will be key to increasing cloud benefits, by providing access to shared resources that can be rapidly configured, provisioned and released. Seventy-seven percent believe that the ability to scale up and down when needed will be one of the top benefits they expect to gain from cloud. However, only 29 percent of the surveyed banks have decided on an IaaS approach based on workload, scaling and integration with existing operations.

Nearly half (45 percent) are still in the evaluation stage and 26 percent have not yet started IaaS evaluation. Only 11 percent of banks surveyed have implemented a cloud-management platform, while 29 percent say they are developing one. In terms of deployment, banks have focused first on using IaaS for disaster recovery and data backup—typical early-stage IaaS use-cases.

### ASIA PACIFIC BANK
**Improving Time to Market with the Cloud**

The bank was spending too much money on maintenance and updating of systems of record that had been built up over 40 years. The company adopted an IT as a Service strategy, ripping out and consolidating decades-old technology platforms. The next move was a cloud transformation project, implementing an internal platform. Ultimately, the bank implemented a multi-provider cloud model, giving the company the ability to deploy applications on multiple platforms.

By using cloud services, costs for IT infrastructure and software development and provisioning fell by about 40 percent. The time to market for new applications and services was reduced by 4 to 6 weeks.
ORGANIZATION AND MANAGEMENT TO SUPPORT CLOUD

The transition to cloud is not possible without new management skills and organizational approaches.

The banks we surveyed are clearly committing organizational resources to cloud implementation; 94 percent of them have a dedicated team in charge of the definition and execution of their cloud strategy, or plan to have one in the next 12 months. And 91 percent of them say they have or will have a dedicated team or dedicated resources to help internal users secure, customize and use cloud resources.

Surveyed bank executives are quite confident about their skills for developing cloud strategy and managing cloud operations, but are less certain when it comes to applications and infrastructure (see figure 7). For cloud management, 89 percent of respondents rate their skills as “mature” or “advanced,” and 80 percent say they are mature or advanced in cloud development capabilities. However, only 45 percent say they have mature or advanced skills in managing cloud infrastructure and 60 percent say they are mature or advanced in managing cloud applications. These skills shortfalls could be a considerable obstacle in advancing the overall cloud agenda.

A red flag in the survey data points to security and compliance capabilities, areas of concern that typically have been viewed as inhibiting banks’ cloud adoption. For example, 37 percent of the surveyed banks say that their policies related to cloud regulatory compliance are only in the early stages of development and are in need of major improvement. Just 34 percent of them say they have complete plans for addressing issues related to security and compliance raised by cloud adoption.
NORTH AMERICAN BANK
Simplifying M&A Integration

After a decade of mergers and acquisitions, the bank was left with a complex, disparate and costly set of data centers, computing architectures and vendor relationships. Simply transitioning to a shared virtualized computing platform, while less costly, would not achieve the goal of being as agile, flexible and efficient as young, web-scale companies.

It was impractical to entirely rip and replace the current IT infrastructure, so the bank launched a greenfield transformation project, part of which followed Open Compute Project (OCP) standards, while simultaneously winding down its brownfield legacy systems.

The bank’s adoption of new IT infrastructure and development practices has resulted in the creation of a range of new digital products and services for consumers, small businesses and investors.
ACTIONS STEPS

Based on the Accenture Cloud Readiness report findings, what should banks be doing today to accelerate their cloud journey? Here are several important actions:

1. **GRAB THE LOW-HANGING FRUIT**
   Immediately identify the first set of applications that can readily be moved to the cloud. Then engage in deeper application analysis to identify where cloud can support innovation.

2. **INVEST IN SKILLS**
   Building the necessary skills for cloud management is extremely important, especially in applications and infrastructure.

3. **TRANSFORM PROCESSES AND TOOLS**
   To be effective in the cloud, processes and tools should be transformed, taking into consideration sustained cloud production services at scale. It is important to move from the experimentation stage to real and comprehensive production based on minimum viable products and pilots. According to our survey, only 46 percent of respondents provide dedicated resources to help internal users secure, customize and consume cloud resources.

4. **TURN STRATEGY INTO ACTIONABLE PLANS**
   Banks are clearly committed to the cloud and many have well-developed strategies. But strategy needs to be implemented, with a methodical plan and a roadmap that will make the transition to cloud a vehicle for innovation and transformation. Most importantly, banks should revisit their IT operating model to make sure that it is cloud-ready.

5. **DEVELOP AN ACTION PLAN AROUND COMPLIANCE**
   Before you embark on your cloud journey, share your roadmap with your compliance team first for a careful evaluation on potential regulatory effects. Define—if needed—how you need to interact with regulatory bodies during your journey to cloud in order to ensure a smooth running of your project.

From the results of our survey, banks are exploring cloud’s potential as a business-building tool, but they might not be acting quickly enough to avoid disruption. One-off, small-bore projects won't help banks catch up. Nor will such projects force the needed leadership and cultural changes in moving to the cloud.
Figure 8. Are you employing Agile Methods and/or DevOps in software development?

<table>
<thead>
<tr>
<th></th>
<th>AGILE METHODS</th>
<th>DEVOPS</th>
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<tr>
<td>51%</td>
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</table>

Source: Accenture Research (Sample Base: Total Sample)

THE CLOUD MATURITY INDEX

Our survey has also shown that a few banks have already made significant progress in reaping the benefits of the cloud. A quarter of the banks surveyed (26 percent) are well ahead of their peers in their journey to cloud. Based on a “cloud readiness score” which we calculated from the survey data, these “leaders” show a total score of 84 percent compared to 59 percent for the remaining banks (see figure 9). We also used this scoring model to develop a “cloud readiness diagnostic,” a simple and pragmatic tool, which banks could use to gauge their level of maturity in transitioning to the cloud, as well as measure of how they compare to the survey benchmark. A higher score indicates in general a greater “readiness” and ability to transition to the cloud. If you have specific questions on your journey to cloud, our readiness index or about our survey in general, we are ready to hear your thoughts.

Figure 9. The Cloud Readiness Score

Source: Accenture Research (Sample Base: Total Sample)
ABOUT THE ACCENTURE CLOUD READINESS SURVEY IN RETAIL BANKING

This survey explored the views of global retail banking executives about their cloud strategy, as well as key initiatives implemented or planned. Analysis of the findings sought to determine where banks are in their cloud journey.

Data for this study was gathered through a quantitative survey, focusing on banks in North America, South America, Europe, Africa and Asia Pacific. Banking executives (Chief Technology Officers (CTO), Chief Information Officers (CIO), Chief Information Security Officers (CISO), Vice Presidents (VP) within information technology, or Technology Directors were surveyed between November and December 2017. Thirty-five executives from top global retail banks took part in this survey.

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