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Cloud computing
More than just a CIO conversation

Top takeaways



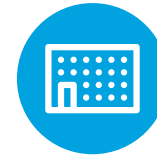
Cloud is more than just a technology conversation. It is a topic that belongs on the agenda of executive management and boards.



“The cloud” is more than a place or a destination for data and applications to drive down the cost of computing power and storage or to create elasticity for variable demand. It also is a platform for enterprise business transformation—a potential game-changer for how banks and other financial services institutions (FSIs) will operate in the future.



Retail and wholesale banking industry leaders increasingly are focused on leveraging the cloud to drive innovation and new capabilities, optimize the organization, reduce infrastructure costs, and support improved business performance and shareholder returns.



Companies can be all-in on cloud strategy without moving 100 percent of workloads to the cloud. Banks will be deploying hybrid and multi-cloud models over the coming years to support their business and operating strategy and to address specific requirements.



Cloud is influencing key business and technology trends, leading to emerging use cases that solve for unique challenges.

The bank of 2030 will look very different from today. Facing changing consumer expectations, emerging technologies, and alternative business models, banks need to start putting strategies in place now to help them prepare for this future. An important indicator of the shifting landscape? Cloud computing is moving to the forefront as a focus for the chief information officer, C-suite executives, and board members.

Banking and capital markets leaders increasingly recognize that cloud is more than a technology; it is a destination for banks and other financial services firms to store data and applications and access advanced software applications via the Internet.

Cloud can be a catalyst for enterprise business transformation; a potential game-changer for how FSI organizations will operate in the future.

The leading public cloud providers offer an array of innovative products-as-a-service that can be accessed on their platforms and help banks implement business and operating models to improve revenue generation, increase customer insights, contain costs, deliver market-relevant products quickly and efficiently, and help monetize enterprise data assets. The cloud also offers a huge opportunity to synchronize the enterprise; to break down operational and data silos across risk, finance, regulatory, customer support, and more. Once massive data sets are combined in one place, the organization can apply advanced analytics for integrated insights.

After years of focusing on the technology's value as a cheaper, faster, and more "elastic" alternative to on-premise data storage, bank leaders are considering how they can leverage the cloud in three areas "above the line" to create new business frontiers and in three areas "below the line" to optimize the organization (see figure 1). Applying cloud technology in these six areas may help banks drive improved business performance and shareholder returns.



Figure 1. Critical sources value enabled by cloud transformation

“Above the line” – New business frontiers



Synchronize the enterprise

- Better integration of business units through sharing data, driving integrated decisions, and moving more quickly to solve customer problems.
- Creating common, connected data sets; enabling deeper, more sophisticated insights and analytics; enhancing collaboration through new shared platforms and tools, and increasing speed of decisions.



Drive business innovation

- Helping innovate and driving strategy to build new customer experiences, create and market offers, optimize operations, and manage talent through leveraging tools such as machine learning, IoT platforms, AR and VR, image recognition, natural language processing, etc. Leveraging new tools and capabilities to increase revenue, cut costs, make operations more consistent, and retain personnel more effectively.



Unleash new talent and new ways of working

- Aligning tech with business unit needs to benefit functions requiring new talent and new ways of working.
- Tech capabilities and solutions attract new workers and provide access to ecosystems with new skill sets—DevOps, agile, UX, etc.
- Impact is enabling process improvements such as automation or human augmentation to improve productivity and create firm integration, resulting in agility, connectedness, and transparency.

“Below the line” – Optimizing the organization



Build resilient operations

- Enhance companies’ overall resilience to respond more quickly—physical outages, disruption, etc.
- Moving from companies’ data center but gaining ability to replicate data and app services across more than a single data center or region.



Enhance IT security

- Cloud providers have extreme security standards—and have a track record. Environments can be as secure or more secure than on-premises—but only when implemented correctly and with skilled and trained security.



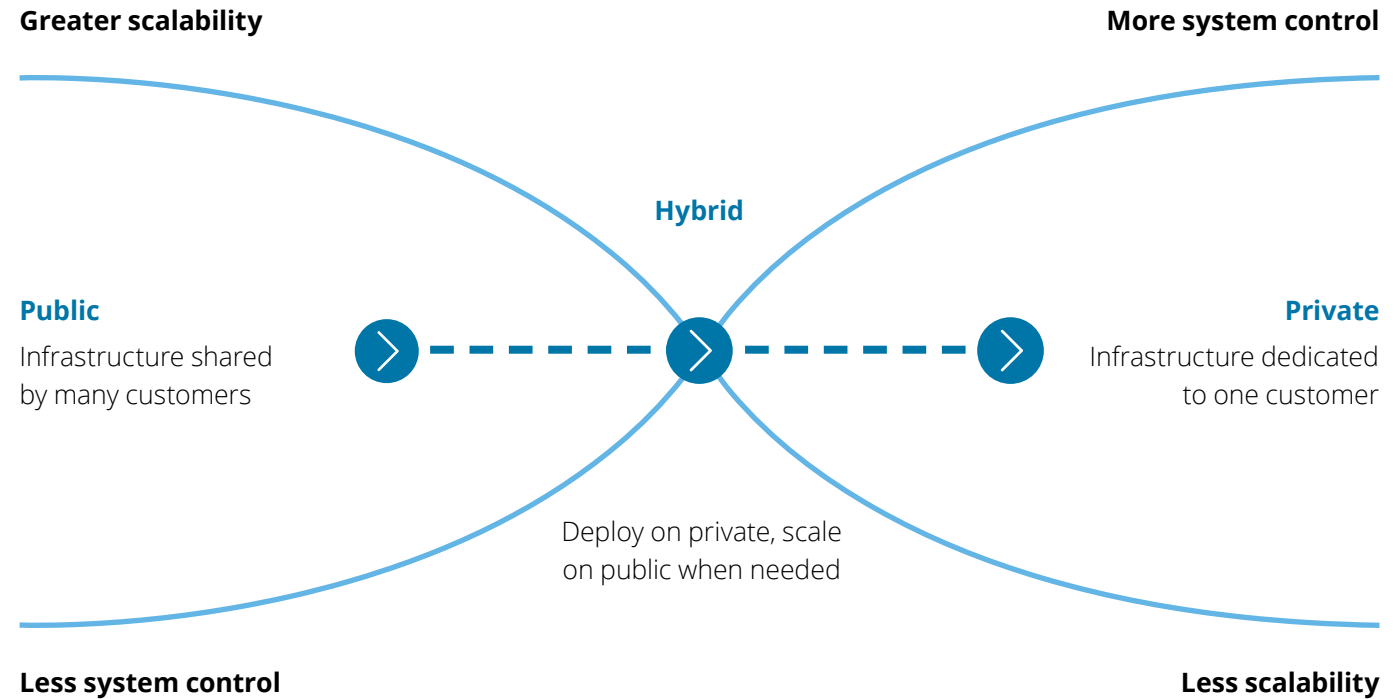
Scale computing costs as needed

- Helping organizations with the way they pay for tech—away from heavy up-front capital spending and toward operational based.
- Companies can respond more quickly to market shifts or changes in financial priorities.
- Capture cost efficiencies in dynamic cloud pricing by increasing or decreasing computing capacity as needed and facilitating granular spending control.

Business unit and IT executives accustomed to an on-premise data center may find the prospect of upgrading or replacing legacy systems with an enterprise-level cloud solution to be quite daunting. Fortunately, banks can approach this transformation incrementally. They can mix and match hybrid and multi-cloud solutions based on their organizational needs, maturity, and readiness (see figure 2); most organizations choose a multi-cloud approach. Whatever the deployment model, data residing in the cloud can be as (or more) secure than it is with on-premise storage models.

Figure 2. Cloud deployment models

Companies can be all-in on cloud without being 100 percent cloud; they can mix and match based on needs. In each option, data can be as (or more) secure than it is with on-premise options.



Among strategic and tactical elements banks should consider when planning and implementing a cloud solution are:

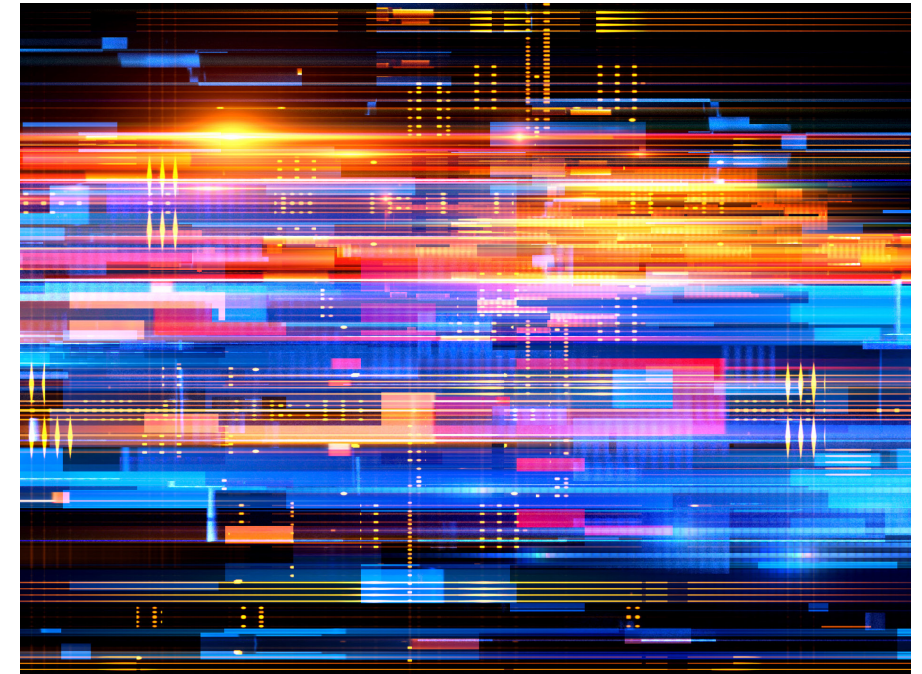
Business case development

Not only is the cloud helping to innovate IT strategy, also it is becoming an engine to quickly build new capabilities and services to address business imperatives. Many transformative solutions (e.g., customer relationship management, finance, enterprise resource management) already are cloud-based—they are just not primarily communicated as such. A cloud business case should emphasize how the bank can cost-effectively tap into cloud-delivered solutions to drive customer insights, experiences, and offers; grow revenue; lower costs; find and onboard better talent; and provide more consistent enterprise

operating platforms. It also should include a baseline cloud value-assessment model to map the economics of changing market forces, pricing, and business assumptions and aid in scenario planning. Finally, the business case should address change management issues: Cloud technology may dramatically alter certain employee roles; what steps may be needed to help adapt the organization's culture and mindset?

Solution design and execution

The cost and effort to migrate workloads to the cloud may be a major concern for financial institutions contemplating executing cloud strategies. Cost and time to market are key factors when companies are seeking to leverage business-building technologies such as advanced data analytics and machine learning. External cloud providers offer these and other capabilities that can shorten development time versus building capabilities in-house.



Vendor management

The banking industry will be transitioning through both hybrid and multi-cloud environments for years to come. During this lengthy period, vendors likely will be offering new, cloud-based services and capabilities on a regular basis. Financial services organizations should avoid vendor lock-in so that they can adapt to marketplace changes without having to re-platform when moving from one vendor to another. Also, as vendors mature, they may offer better pricing flexibility by leveraging different cloud platforms that enable an organization to move workloads from one cloud to another to meet business needs, and to apply best practices built on one cloud platform to departments using other cloud vendors. Adopting a multi-vendor/multi-cloud strategy can be complex and challenging; developing a common understanding of architectural components and governance strategy enables optimal use of multi-cloud environments.

Security

Data security concerns are top of mind for bank leaders. An important part of understanding the cloud is considering how an enterprise's current infrastructure and capabilities may be limiting its ability to detect and address new risks and vulnerabilities—and how cloud technology can help. Security is different in the cloud because of the tools that are native to each cloud provider's environment and the fact that cloud providers typically take responsibility for the security of the lower-level infrastructure layers. The shared security responsibility between cloud providers and the clients they host changes how organizations should anticipate and prepare for security risks.¹

Regulatory compliance

Cloud computing can help banks and financial services firms meet ever-evolving regulatory reporting requirements (e.g., Comprehensive Capital Analysis and Review [CCAR], Solvency II) in multiple operating jurisdictions—a critically important capability in an industry where cross-border transactions are the norm. Cloud solutions can also help banks conduct intraday liquidity and risk calculations, and mine trade surveillance data to detect anti-money laundering (AML) and other fraud issues. A cloud platform enables data-brokering placement capabilities based on data criticality and Certified Safety Professional (CSP) certifications.

From 2016 to 2018, Deloitte Global saw a threefold increase in the number of organizations adopting cloud to promote innovation.² As might be expected, the chief information officer/chief technical officer is the primary driver of a cloud transformation, followed by the chief executive officer and business leadership.³ Companies across the global financial services industry have been on the public cloud journey for the last three-to-five years, with tremendous acceleration over the past 12-18 months.



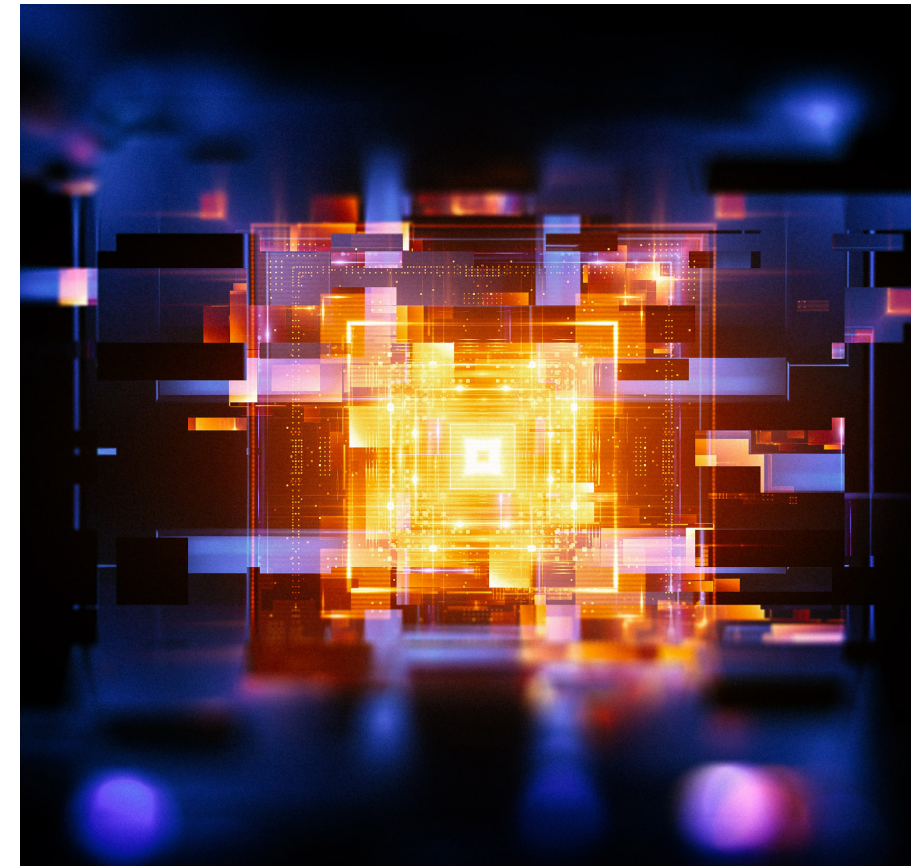
A global financial services firm and one of the largest banks in the United States began using a platform-as-a-service private cloud five years ago. It evaluated public cloud providers in 2016 and currently has two wholesale trading apps on a public cloud.



A leading investment bank has been using a public cloud provider for regulatory reporting solutions. It is conducting pilots with two vendors for a cloud-based infrastructure-as-a-service solution.



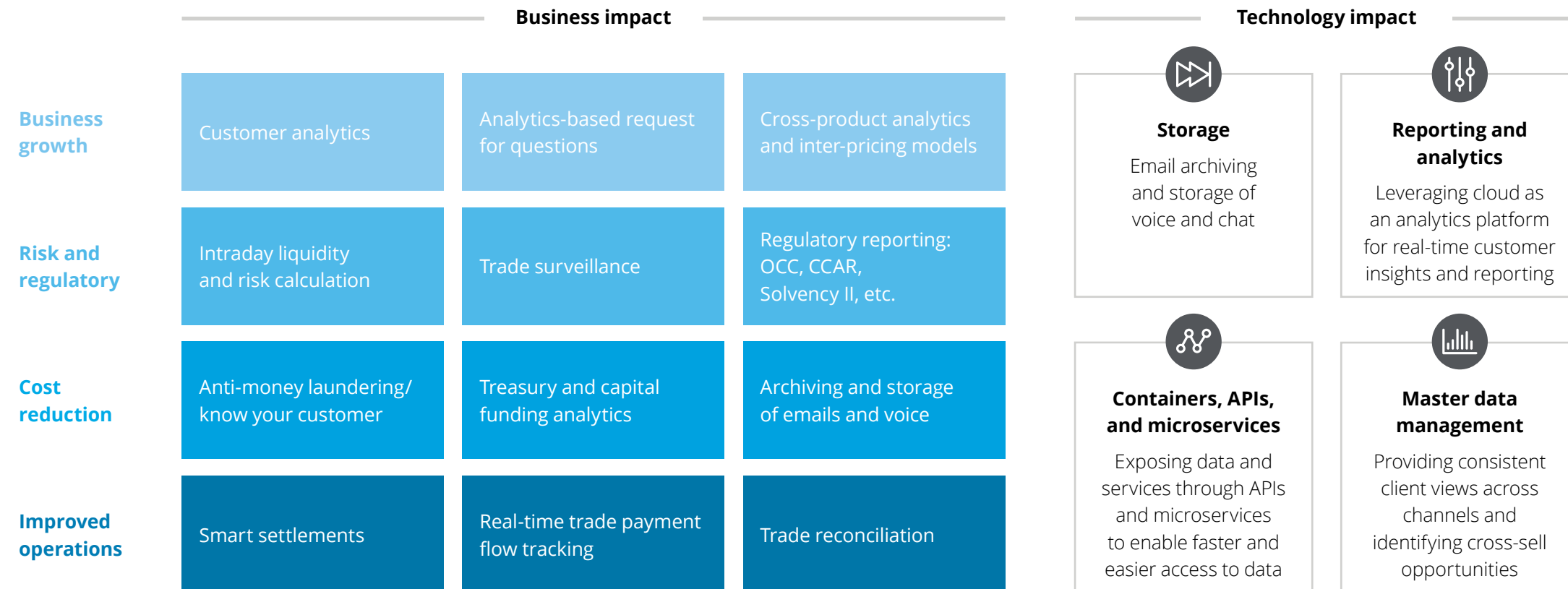
A major bank in North America currently is on a private cloud and getting its feet wet on public cloud, primarily using software-as-a-service and infrastructure-as-a-service. The bank expects to be multi-cloud in the next four years.



Numerous use cases featuring a range of cloud providers' solutions are highlighting cloud computing potential business and technology impacts (see figure 3).

Figure 3. Emerging use cases in FSI

Cloud is influencing key trends leading to emerging use cases that solve for unique business and technology challenges



Technology spend levels and growth projections confirm that cloud computing is the most important force shaping the market for technology services.⁴ Across the global financial services industry, organizations are leveraging private, public, and hybrid cloud solutions to create innovative products and services, fuel enterprise transformation, and redefine the “art of the possible.”

For additional Deloitte insight on cloud computing, see the *Wall Street Journal* article, [“Why cloud is on the board’s agenda.”](#)

If you want to learn more about how your bank can use cloud technology as the catalyst for enterprise transformation, please contact us.

Contacts

Michael Tang

Global Financial Services
Digital Transformation & Innovation Leader
Deloitte Canada
mtang@deloitte.ca

Endnotes

1. "Why cloud is on the board's agenda," *CIO Journal*, Deloitte, and *Wall Street Journal*, November 13, 2018, <https://deloitte.wsj.com/cio/2018/11/13/why-cloud-is-on-the-boards-agenda/>.
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4. Gartner Public Cloud Forecast 2017 Q1, <https://www.gartner.com/en/newsroom/press-releases/2017-02-22-gartner-says-worldwide-public-cloud-services-market-to-grow-18-percent-in-2017>.



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