



# Enabling the Digital Economy

An Australian perspective on the future financial ecosystem



The financial services sector is facing a once in a generation opportunity to transform. As financial service institutions (FSIs) respond to rising competition, shifting consumer expectations and ongoing reform, the sector's leaders are transforming their business and operating models and preparing to become part of an intelligent financial ecosystem.

Legacy platforms and siloed data are making way for more flexible trusted cloud solutions, open application programming interfaces (APIs), and artificial intelligence (AI) while the sector keeps a watch eye on emerging technologies such as blockchain and quantum computing. Much is at stake: the financial services sector is the largest contributor to the Australian economy, adding around \$140 billion to GDP and employing 450,000 people<sup>1</sup>. It is also a sector facing radical transformation as it grapples with the ripples from the Royal Commission, regulatory flux, accelerating reformation and technological innovations at an unprecedented pace.

#### Royal Commission

- Massive impact across the sector
- Heightened scrutiny by ASIC and APRA
- Customer trust needs to be rebuilt

#### Regulation

- APRA revises cloud guidance with more open stance.
- APRA releases new information security prudential standard
- Consumer Data Right enacted to implement Open Banking

#### Reformation

- Open Banking starts 2019
- New Payments Platform launched
- SWIFT and NPP establish innovation sandbox
- SWIFT global payments innovation gathers pace
- Customer expectations ratchet up

#### Technology

- Fosters neobanks/disruptors
- Transformation dividend from cloud/AI/open APIs injects agility, reduces risk
- Financial crime mitigation from application of AI, cloud and blockchain

### Drivers of Financial Services Transformation

As one of the world's most important financial services events, Sibos 2018 attracted 7,000 of the world's leading bankers and finance technology experts from 150 countries to Sydney recently. The focus of the event was "enabling the digital economy" at a time of massive geopolitical flux, rapid technology innovation, and heightened cyber risk. It was an opportunity to take the pulse of the sector as it faces the future.

The clearest message was that disruption is a fact, transformation is a choice.

For Australia's leading FSIs that choice is clear.

<sup>1</sup> <https://fintech.treasury.gov.au/the-strength-of-australias-financial-sector/>

# Finance Sector in flux

A new era of financial services looms for Australia, one that's fueled by technology, catalysed by regulatory and sectoral reform, and accelerated by customer expectations.

In Australia payments is at an inflexion point thanks to the introduction of the domestic New Payments Platform (NPP) allowing real time payments anytime, anywhere and giving rise to a flurry of innovative new services. Meanwhile SWIFT's global payments innovation (gpi), underpinning the transformation of international financial transactions is underway and Australia's Open Banking regime looms which will transform every bank into a software business and accelerate AI's progress in the sector. Other financial sector firms can expect to experience the impact of the Consumer Data Right in their own spheres before long.

It heralds an era requiring fresh organisational thinking, transformed strategy and structure, and deep digital insight.

Speaking during the opening of Sibos, ANZ CEO Shayne Elliott warned that as a result of this finance sector flux the era of FSI oligopolies was waning as intelligent ecosystems took hold. "The only way to win in the future is to do a few things and do them well," he warned.

This heralds a new era where the ecosystem will be more powerful than the individual. That ecosystem will rely on vertical and horizontal partnerships forged between incumbents, with fintechs, neobanks and other disruptors, and ultimately with third parties to create entire new classes of financial services and fresh revenue streams.



## Industry facing huge challenges



### FRICTIONLESS CUSTOMER EXPERIENCES

**54%** of banks think removing friction from the customer journey is the most important trend in retail banking



### NON-TRADITIONAL PLAYERS

**37%** of Generation Y customers use non-traditional banks



### CHANGING BUSINESS MODELS

**44%** of banks are planning to integrate their own products or capabilities into foreign ecosystems



### FRAUD & CYBERCRIME

**25%** of banks think cyber risk is the top threat in the Financial Services industry



### REGULATIONS

**\$72B** Projected Risk Technology spending by 2019. Basel III | MIFID LCR | SCE, FDIC, Dodd Frank Ringfencing | Recovery & Resolution GSIB | KYC | PSD-2 | AML | T2S SEPA | FATCA



### LEGACY SYSTEMS

**37%** of bank executives plan to upgrade their IT infrastructure to cut cost and improve efficiency

Elliott stressed to Sibos delegates that;



## The only way to be better is by constantly adjusting to the customer,



reinforcing the agility that successful banks will need to cultivate. Institutions are already adjusting their structure, their cultures, their workforces – and also transforming digitally, embracing cloud, open, secure APIs and AI for the agility and performance lift that they promise.

Technology analyst Gartner posits a grim future for financial services firms which fail to transform, warning that by 2030 80 per cent of “heritage” firms will “go out of business, become commoditised or exist only formally, but not competing effectively.”

Their existence will be challenged, says Gartner<sup>2</sup>, by the rise of global digital platforms, fintechs and non-traditional players which harness technology to change the economics and business models of the industry.

Successful firms cannot delay, but must transform into truly digital enterprises according to the analyst. Getting the digital foundations right creates the opportunity for new revenue streams to be cultivated as sector leaders explore opportunities to monetise assets by including data with APIs, and create entirely new businesses using the cloud.

After all, the entire economy of Australia passes through the computer systems of FSIs day in, day out. The inherent value in that data – which represents the real time movement of money in the nation - represents an as-yet largely untapped new business opportunity for innovative FSIs.

<sup>2</sup> <https://www.gartner.com/en/newsroom/press-releases/2018-10-29-gartner-says-digitalization-will-make-most-heritage-financial-firms-irrelevant-by-2030>

# Cloud and AI accelerate financial services transformation

Currently, across financial services, four key related imperatives stand out:

- Create more personalised customer experiences
- Combat financial crime more cost effectively
- Modernise core systems to enable Open Banking, including the creation of market place hubs for new customer experiences and management of third-party distribution
- Move workloads to the cloud for more speed and agility, less risk

This digital transformation supports FSIs as they seek to:

Deliver differentiated customer experiences	Drive real-time payments	Manage risk across the enterprise	Optimize financial crime operations
Accelerate growth by infusing AI to create a differentiated customer experience	Modernize bank data centers to enable real time payments and generate new revenue streams	Improve risk insights & comply with regulatory requirements	Lower compliance costs down while protecting the bank and its employees

The barriers to successful transformation are lowering. In September, APRA released its 2018 Information Paper providing guidance on cloud computing. It reflects APRA's more open stance on cloud usage and acknowledges advances in cloud safety and security as well as a greatly increased appetite for the cloud, led by new and aspiring entities and accelerated by sectoral incumbents which recognise cloud as the best platform for digital transformation and innovation.

APRA takes an holistic approach to supervising FSIs' use of cloud – examining cloud provider capability and security, along with the FSI's own capacity to properly manage its use of cloud to protect its data and services.

The starting point in APRA's guidance is that the FSI's due diligence, governance and risk management on outsourcing to the cloud must be targeted and proportionate:

- Targeted in the sense that any risk and materiality assessment must be based on a clear understanding of the cloud service and the FSI's planned use of it.

- Proportionate in the sense that higher risk scenarios that implicate more sensitive data and more critical business processes deserve greater scrutiny by the FSI and by APRA. And vice versa for low risk scenarios.

Cloud is not prohibited from even the most extreme inherent risk cloud use categories – such as core banking and other systems of record - but firms must demonstrate to APRA appropriate levels of diligence in selecting a cloud provider and risk management and mitigation capability.

The regulator differentiates public clouds from “community clouds” that offer services to businesses with similar risk profiles, such as Microsoft's Azure Australia Central Region designed to deliver Azure from data centres exclusively available to Australian and New Zealand government and critical infrastructure customers, including financial services providers.

Microsoft has a long track record partnering with FSIs, fintechs and neobanks to demonstrate compliance and resilience to the regulator. A copy of Microsoft's Response to APRA's 2018 Information Paper on Cloud can be downloaded at [www.aka.ms/APRAresponse](http://www.aka.ms/APRAresponse).

# AI infuses smarts across financial sector

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## A signal message from Sibos was the growing importance of Artificial Intelligence (AI) to the financial sector.

A recent survey of more than 400 business executives and policy makers, conducted by The Economist Intelligence Unit and sponsored by Microsoft, revealed that there is already significant use of AI across financial services, almost half (48 per cent) are using virtual assistants, as well as predictive analytics (38 per cent) and machine learning (36 per cent).

Predictive analytics is described by survey respondents as extremely useful in reducing the risk of loan defaults, while machine learning can help identify patterns of transactions that might indicate fraudulent activity.

Harnessing AI also allows an FSI to develop a 360-degree customer view that then allows the creation of personalised and relevant experiences. Operationally, AI can help speed the lending process with automated workflows that at the same time ensure all compliance obligations are fulfilled.

Predictive analytics can be deployed to anticipate customer needs and prevent problems developing. AI and cognitive capabilities can be used to augment human decision making for speedier and more efficient interactions.

The challenge for many enterprises is knowing where to get started. First and foremost it is essential to align AI experimentation with business strategy.

By analysing business processes for analogue hotspots it is often possible to identify opportunities to introduce AI and robotics into the business to automate those processes. AI's capacity to swiftly solve small problems allows an FSI to rapidly build AI capability within the organisation.

In the area of security and fraud prevention Sibos speakers particularly noted the role that AI is already playing in reducing the number of false-positives that human operators have to review, instead identifying with increasing levels of accuracy genuine issues worthy of further investigation reducing risk and accelerating impact.



**We look to responsible AI to augment and amplify human ingenuity.**

**Norm Judah** CTO Enterprise, Microsoft





## The eyes have it

National Australia Bank (NAB) demonstrated its facial recognition proof of concept at Sibos. Developed in association with Microsoft the concept, developed using Azure Cognitive Services, has been designed to improve the customer experience by removing the need for physical cards or devices to access cash from ATMs. Instead, a NAB customer who opts into the service is able to withdraw cash from an ATM using facial recognition technology and a PIN.

It has been designed to improve the customer experience by envisaging a card-less world and helps guard against the fraudulent use of stolen cards and card skimming.

# Foundations for an intelligent financial ecosystem

Financial sector leaders are already transforming their processes, their people and their products. By harnessing trusted cloud and AI these pioneers are able to turbo charge their transformation and innovation agenda with no compromise on security, privacy or performance.

The grail is seamless, friction-free services delivered at pace, anywhere anytime with reduced institutional and societal risk.

Achieving that relies on open, but highly secure, APIs and a platform based, cloud-first approach to financial services that will drive the agility and flexibility expected by customers and deliver the trust and resilience demanded by regulators.

Microsoft Azure services have been developed to facilitate regulatory compliance through adoption of advanced security controls, built in resilience, deep analytics ensuring information transparency, and streamlined reporting.

Specific Microsoft cloud solutions have also been developed to help FSIs meet their obligations in areas such as anti-money laundering, know your customer (AML/KYC), document and data retention, and using artificial intelligence, to spot and stop attempted fraud.



## Azure for Financial Services



The **Largest Global Footprint** for residency and latency



The only hyper-scale cloud supporting **right-to-audit**



The **broadest and deepest compliance** coverage



Designed to **exceed regulator requirements**



Supports the **broadcast selection of security tools** and features

Earlier this year Microsoft switched on Azure Australia Central, a highly secure white-listed cloud designed specifically for national critical computing, which has been rated by the Australian Signals Directorate to a level considered sufficiently secure for Protected level Government information. Azure Australia Central is being embraced by market leaders as a trusted custodian of financial data.



# Azure transforms payments, expands opportunities

Businesses in every sector are striving to provide customers with a frictionless, omni-channel experience enriched by data and integrated into the ecosystem where they transact. A key component of that is efficient real time payments (RTP) which in Australia are facilitated by the NPP.

RTP isn't just payments, it's about the data that travels through bank payment systems in real-time, day-in and day-out. Embedded in this data are valuable insights for businesses and their banks in terms of cash flow forecasts, sources of liquidity, and counterpart risks. Understanding the behaviour of these financial flows forms the heart of accurate management of the working capital cycle for businesses and with proper alerts, systemic protection.

Working with partners such as Finastra, Temenos, CGI and Volante, Microsoft is supporting banking clients around the world to:

- Enable real-time payments to address customer, competitive and regulator demands;
- Modernise their datacentres to support new business models;
- Enable banks and partners to build next generation intelligent fraud and payment solutions (AML, screening, etc.) on the real-time payments platform; and
- Utilise AI to unlock new revenue streams from real-time payment data inside the banks' payment systems.



At Sibos 2018, the world's premier financial services event, Microsoft and SWIFT announced a cloud native proof of concept to host SWIFT infrastructure and enable cloud native payment transfers on Microsoft Azure. It's an important step to facilitate the future deployment of SWIFT messaging solutions in the cloud, enabling faster, more efficient and secure operations for banks, corporates, service bureaus, and other payments ecosystem players.

In November 2018, APRA promulgated its first Prudential Standard on Information Security, which commences in July 2019<sup>3</sup>. Microsoft cloud services help facilitate compliance with these new regulatory obligations by regulated entities that use them.

<sup>3</sup> [https://www.apra.gov.au/sites/default/files/cps\\_234\\_july\\_2019\\_for\\_public\\_release.pdf](https://www.apra.gov.au/sites/default/files/cps_234_july_2019_for_public_release.pdf)

# NAB transforms with cloud

National Australia Bank (NAB) expects cloud computing to play a huge role in transforming product, services and strategy and to play an important role in improving the customer experience. Its cloud-first strategy will see it transition most key applications to the cloud, and use cloud to accelerate development and innovation.

It is the first major Australian bank to transition workloads across to Azure Australia Central, Microsoft's cloud region designed specifically for national critical computing. It has also worked with Microsoft on a proof of concept using artificial intelligence developed using cloud cognitive services to identify customers at an ATM through facial recognition. NAB's also transitioning core platforms such as SAP to Azure; and is exploring data analytics opportunities that simply weren't possible in the past.



Cloud allows us to move much faster, to take advantage of features and capabilities that are being deployed to customers all over the world. Also, the elastic nature of the cloud and the elastic nature of storage allow our teams to solve problems and ask questions of my data that were **previously unthinkable**.

**Steven Day** Executive General Manager  
for Infrastructure, Cloud and Workplace, NAB



# Cloud analytics provides early warning

The Australian Prudential Regulatory Authority (APRA), has intensified its scrutiny of mortgage lending practices and established benchmarks for local institutions regarding loan serviceability and investor lending portfolio growth.

A cloud-based data analytics platform designed to provide fine-grained analysis of the mortgage market is being rolled out to help manage risk across the financial sector, and provide earlier alerts of emerging problems. Developed by Perpetual Corporate Trust with support from Microsoft, the platform allows FSIs to stress test their residential mortgage portfolio using macroeconomic factors such as house price indexes, GDP, unemployment and the cash rate. This lets them perform 'what if' analysis – giving an understanding of their mortgage performance four years into the future.

## Commbank rides blockchain wave with Bond-i

Commonwealth Bank (CBA) has been mandated by the World Bank, to be the sole arranger of the first bond globally to be created, allocated, transferred and managed using blockchain technology. Microsoft conducted an independent review of the CBA blockchain platform's architecture, security and resilience ahead of the first transfer of the Bond-i.

# Enhanced support for financial sector compliance

The Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry coupled with the Productivity Commission's report into competition in the financial sector raise the prospect of increased regulatory scrutiny of FSIs.

FSIs must also cope with the rapid pace of regulatory reform affecting the sector – some local, some international. For example, APRA's updates to its economic and financial statistics reporting regime come into effect in early 2019. While many FSIs are well progressed to comply with those requirements, organisations with legacy platforms and siloed data are being challenged.

Many FSIs must also comply with their international obligations such as Europe's General Data Protection Regulation and for banks, prepare to adopt SWIFT's global payments innovation (gpi) within two years.

Many incumbents cite siloed data and legacy infrastructure as challenges in terms of rapid access to data. There are however now moves to deploy cloud-based solutions, AI and robotics to autofill regulatory reports and meet compliance obligations.

## Global cost of compliance

REGULATIONS  
**\$72B**

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Ringfencing | Recovery & Resolution GSIB |  
KYC | PSD-2 | AML | T2S SEPA | FATCA

In its 2017 Census of 166 Australian fintechs, EY revealed<sup>4</sup> that these organisations enjoyed a 208 per cent median annual revenue increase compared to 2016. Unshackled by legacy systems or process - but still compliant with regulatory requirements - fintechs are nimble, fast growing and 54 per cent have plans to expand globally.

Neobanks similarly have built their businesses on agile cloud-based platforms with the capacity to scale rapidly while meeting regulatory requirements. Both fintechs and neobanks serve as beacons of the art of the possible for FSIs.

## Cloud core underpins volt bank

Temenos' Azure-based core banking system T24 allowed volt bank to launch quickly and meet the Australian financial sector regulations. It will initially offer savings and transaction accounts, term deposits and foreign exchange, before moving into personal loans, mortgages and business banking as it transitions to a full license.

Volt is Temenos' first client in the region to be hosted on Azure. According to Steve Weston, Co-founder and CEO of volt bank; "By partnering with leading cloud services volt is well positioned to challenge the incumbents of Australian banking.



Having early access to emerging technologies such as AI and machine learning we can provide our customers with a banking experience that supports them with the information and tools they need to manage their money wherever and whenever they want.



<sup>4</sup> <https://fintechaustralia.org.au/australias-fintech-industry-median-revenue-up-200-per-cent-from-2016-major-research-report-finds/>

# Seize the Day

As FSIs respond to shifting consumer expectations, regulatory change – and the opportunity to become part of an intelligent banking ecosystem – forward-facing institutions are reviewing their digital foundations in order to transform their business and operating model.

Market leaders are preparing to become platform businesses which can respond rapidly to ongoing change, introducing cloud technologies, open APIs and AI and partnering with fintechs to reach new markets and drive new revenue streams. As FSIs compete for the best fintech partners, they are also developing new skills in software development, cloud management, API creation – even evangelising their APIs to encourage partners to join them and foster an intelligent banking ecosystem that they recognise is the key to future success.

Microsoft is increasingly the partner of choice for Australia's and the world's leading FSIs as they grasp this once in a generation opportunity to transform.



Deep Industry  
Experience and Credibility



Rich Partner Ecosystem



Best custodian for trusted data:  
Regulatory compliance, Ethical AI



Global, Scalable,  
natively Hybrid Cloud

For further information please visit:  
<https://enterprise.microsoft.com/en-au/industries/financial-services/>