Case Study: Commonwealth Bank Of Australia Gets Service-Oriented Via Cloud Computing

Transforms IT From Cost Center To Innovation Center By Leveraging Cloud And Policy-Based Orchestration

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WHY READ THIS REPORT

Facing rising IT infrastructure costs, inflexible vendor contracts, and labor-intensive processes, Commonwealth Bank of Australia (CBA) undertook a massive IT transformation over the last five years. To return more value from IT to the business — and drive strategic advantage — the bank's IT team reorganized its staff, automated processes, and changed the way IT resources were sourced, provisioned, paid for, and reclaimed. The solution was a wholesale transformation of people, process, and technology to a cloud-based IT operating model. The bank has successfully made this transition for a large portion of its IT infrastructure and platforms, and it reports dramatic cost savings, efficiency gains, and vendor leverage. By fully embracing the core tenets of cloud computing, policy-based automation, and vendor multisourcing, CBA said it has cut its nonstrategic IT spend in half.

THE SITUATION: IT INFRASTRUCTURE SPEND RISING, EFFICIENCY FALLING

CBA, "committed to being Australia's finest financial services organization" through excellent customer service, is a leading provider of retail, premium, and business banking, funds management, insurance, and investment products and services in Australia. The 100-year-old giant serves the country's largest banking customer base, including nearly 4 million electronic users, and employs 52,000.

In 2008, as part of a massive core banking modernization program, the bank realized its existing IT infrastructure spend wasn't delivering enough business value — half of the money spent went to basic infrastructure maintenance and provided no measurable strategic advantage. Part of the problem was that existing arrangements with its large outsourcing vendors were monolithic and inflexible. The bank had also seen its internal IT workforce shrink and was running out of data center space and facing the need to spend nearly A$300 million to build a new one.

Confronted with these operational, commercial, and technology issues, CIO Michael Harte launched a massive transformation project to change the fundamental nature of CBA's IT infrastructure from a cost center to a driver of value through business innovation.

THE SOLUTION: THE EVERYTHING-AS-A-SERVICE CLOUD

Harte based his new vision for IT infrastructure on the core principles of cloud computing: IT resources moving forward would all be delivered as standardized services to his business customers. IT would no longer see itself as a product provider but as a true services provider. And success would be measured not solely on cost reduction but on the measurable business value delivered by each IT service investment. Forrester calls this success imperative the IT-to-BT (business technology) transformation.[1]

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The bank built a large-scale private cloud architecture on which IT now delivers everything-as-a-service. This meant virtualizing existing resources, developing a standard set of well-defined IT services based on those resources, and then making services portable. These mobilized services can be run from the most cost-effective location, whether in-house, at a managed-services provider, or in the public cloud. To help refine and accelerate this agile and lean cloud strategy, the bank worked closely with ServiceMesh, provider of an enterprise cloud management platform.

The bank has essentially become a cloud service integrator: The IT team defines services and specifies how they should perform and maintains end-to-end service management and orchestration functions. Vendors are then invited to bid to provide those services, an approach the bank calls "multisourcing." As a result, vendors are now required to adjust their own commercial terms to meet the bank's business requirements, instead of the other way around.[2]

CBA built a cloud operating model and reference architecture to align with six core tenets, the fundamental principles that underpin its everything-as-a-service vision:

- **Pay-as-you-go.** Business customers only pay for products and services actually used on a metered, chargeback basis under flexible service agreements, as opposed to fixed-term contracts.
- **Contestability.** Every IT service is offered for bid to multiple vendors (internal or external) to encourage competitive pricing and eliminate lock-in to any one exclusive provider.
- **On demand.** Requests for IT services should be delivered immediately as requested, supported by real-time processing to cut the time required to begin the fulfillment process.
- **Automation.** Business customers must be able to request services from a catalog via self-service interfaces. Fulfillment is then executed by governance policies, fully automated approvals, and on-demand provisioning processes.
- **Standardization.** The IT organization defines and enforces the use of a set of standard services articulated in a comprehensive service catalog to encourage reuse and cost predictability.
- **Workload portability.** IT services are designed to be fully portable between infrastructures and vendors, letting the bank easily move workloads to the most cost-effective location.

Harte and his team learned early on that following these principles meant transforming more than the technology infrastructure. A holistic cloud approach was required — one that included people and processes as well as technology — to ensure ongoing sustainable benefits. Therefore, the team first built the organization and processes required to deliver infrastructure-as-a-service (IaaS) then went to work transforming the existing IT infrastructure to support these new capabilities. Four years in, several best practices have emerged.[3]

Best Practice: Strong Leadership Eases The Transition To A Service-Led Organization

Traditional IT organizations are typically structured around technology silos, specialized skills, or teams allocated to specific business units. Transforming such an organization to a standards-based services provider model is never easy, and CBA faced early challenges. But Harte's strong evangelizing skills combined with the dedicated efforts of management and HR staff have resulted in a new, leaner, and more efficient infrastructure technology and operations (IT&O) team. The team succeeds by:

- **Driving organizational change from the top down.** Harte created a new operating model built on workload portability across multiple platforms, vendors, and technology teams. Put simply, he made a bet that his team could make the transition to a service-based operating model in time to avoid building another data center. He enforced clear accountability, allowed organizational flexibility, and eliminated redundancy. He sought out staff members who thrived on learning new skills and encouraged them to drive the move to a simpler commodity infrastructure including a limited set of x86 and Linux environments. And he notified vendors that they too had a new role: utility service providers on short-term contracts.

- **Developing clear cloud service quality objectives and metrics.** According to Jon Waldron, general manager of infrastructure engineering at CBA, this organizational shift meant "taking down verticals and running them as horizontals," meaning moving staff away from building customized environments for each business unit. The bank also created a new team dedicated solely to measuring service quality. This move to a results-oriented operating model away from a widget-provider model is reflected in Waldron's title — as GM, he holds profit-and-loss (P&L) responsibility for the IT business, which is now measured by how much spend drives business innovation.[4]

Best Practice: Get Your Cloud Service Catalog And Operations Processes In Place First

According to Waldron, the IT&O team spent six months developing the new cloud operating model before selecting or implementing new technologies. He credits this approach with reducing resistance to change and providing deeper insight into where current processes were lacking. "Our request and provisioning processes were pretty much manual or based on various tools," Waldron said. "We 'Trojan horsed' the cloud model in to start; we were more interested in understanding its impact on processes first." He encourages peers to:

- **Build a holistic cloud operating model first.** What the bank learned was that a cloud operating model is as much a commercial construct as it is a technology construct. "We had to look holistically at our processes for vendor sourcing, provisioning, and chargeback. This let us elevate our IT resources to strategic assets," Waldron told us. To start, the bank developed a target state automation model that described how technology components would be delivered as a utility, on demand. The target state model included the service catalog, billing and recharge, orchestration, and provisioning and governance domains.

- **Enforce standardization to take advantage of cloud economics.** Waldron also said to "build your own processes and own them" and "focus your energy on standardization." Cloud economics work when you offer a limited set of well-defined services, and this becomes more difficult the further you move up the stack from IaaS to providing higher-order IT services such as (development) platforms- and databases-as-a-service (PaaS and DBaaS). "Corporate agility often comes at the expense of some individual agility," said Waldron.[5]

Best Practice: Define Clear Vendor Roles And Implement Policy-Based Governance

CBA's cloud operating model also drove the process of renegotiating the bank's existing IT outsourcing contracts and laid out an approach to new provider contracts. The goal was to enter into arrangements on CBA's as-a-service terms (short terms, no exit fees, low transition costs) with vendors that understood that they would have to compete regularly to continue to provide IT services. This policy further encourages standardization and forces vendors to "think like manufacturers," according to Waldron.

To maintain consistency and portability across vendors and clouds, the bank chose the ServiceMesh Agility Platform as its cloud management foundation. The ServiceMesh Agility Platform is an application-centric cloud management suite that offers policy-driven governance, security, and cloud workload life-cycle management. The Agility Platform manages the full delivery life cycle of cloud-based applications: planning, development, testing, release, and operations. It includes various modules to simplify the creation of standard cloud service templates and stacks (e.g., virtual machine [VM] golden images and embedded tools and utilities) and assemble multi-tier topologies.

CBA relies on the Agility Platform to implement the policies at the core of the bank's cloud operating model. The bank uses the Agility Platform to enforce policies for standard operating environments, workload placement, access control, VM quotas, and scheduling. "You need to start with your policies first," Waldron said. "Then you can automate away all the control points between infrastructure elements — those are the points where you lose time and incur additional costs."

THE RESULTS: SAVINGS, SPEED, AGILITY, AND A PLATFORM FOR THE FUTURE

While CBA's IT transformation is still underway, significant benefits have already been realized. The bank has moved from a fixed to a variable cost basis for IT services, which lowers unit costs overall. In the process, CBA has successfully shifted its IT capital investments closer to the end user business customers — demonstrating greater business value and helping to further embed the IT organization into the strategic goals of the business. Highlights of benefits realized to date include:

- **Early cloud returns fund new strategic IT initiatives.** The bank credits its multisourcing strategy and cloud operating model for saving A$100 million per year in IT infrastructure costs. These savings are being reallocated to other strategic initiatives, such as the billion-dollar-plus core banking modernization project currently underway.

- **Cloud savings drive down the amount spent on basic IT infrastructure operations.** CBA has improved its ratio of IT spending on basic infrastructure to IT spending that drives strategic advantage. Just five years ago, the split was about 50 to 50. Today the ratio is 26% to 74%. Harte credits the cloud operating model for this: CBA can deliver more secure and reliable services for less infrastructure cost, raising the overall efficiency across his IT investments.[6]

- **Workloads are deployed to the most efficient internal or external locations.** CBA can now choose the most reliable and cost-efficient location to deploy existing or new applications. Workloads can be moved between two in-house data centers, or on Fujitsu, Datacom, and Amazon Web Services cloud platforms — with optimal workload placement governed and orchestrated automatically by the ServiceMesh Agility Platform.

- **Reduced wait times for infrastructure save additional time and money.** Business users no longer wait six weeks to three months for new IT infrastructure. Service delivery time has been reduced to 15 minutes for pre-production (test and development) environments and 24 to 48 hours for production environments. Waldron suggested asking how much it's costing your business to wait for IT infrastructure to be provisioned.

Next Steps: Expanding The Cloud Service Portfolio And Increasing Automation

CBA has already achieved dramatic results from its cloud transformation project, but the IT team anticipates even greater benefits from expansion of the cloud model to additional services and through further automation. As it expands this to more applications and business services, it will provide additional efficiency benefits for future application development efforts, including big data analytics processing and core banking applications.

In addition, the bank has extended its internal private cloud environment to an external virtual private cloud (VPC) environment with one of its services providers. The services provider built its VPC solution for CBA to the bank's reference architecture specifications, an excellent proof point for the extensibility of its everything-as-a-service approach and its ability to provide true vendor contestability. Said Waldron, "We IT buyers have underestimated our collective power to force innovation on the supply side, but the balance of power is shifting." That's the real power of cloud economics.

ENDNOTES

[1] Technology is the foundation for the CIO's contribution to the success of the enterprise. And it is the dream of most CIOs that they partner with business organizations to co-create a business strategy. See the June 15, 2012, "Optimize The IT Organization To Support BT Strategy" report.

[2] For a review of best practices for multisourcing and driving innovation and agility in multivendor contract environments, see the May 3, 2012, "Maximize Value With IT Services Contractual Terms" report.

[3] To understand your readiness to execute a cloud computing strategy and become an enabler of both internal and external cloud services, use the assessment framework in the related report. See the May 29, 2012, "Assess Your Cloud Maturity" report.

[4] Measuring service quality requires that you identify clear cloud service objectives and metrics. Take advantage of the Balanced Scorecard approach. See the June 13, 2012, "Develop Cloud Metrics Using The Balanced Scorecard" report.

[5] Review the three stages of cloud economics and learn how to achieve higher returns from cloud investments by moving through them strategically. See the May 22, 2012, "Drive Savings And Profits With Cloud Economics" report.

[6] Forrester finds that the amount of IT budget spent on strategic initiatives is typically in the range of 25% to 30%, the inverse of that achieved by the bank. Learn about typical IT MOOSE spending (IT spending to maintain and operate the organization, systems, and equipment) versus new initiative spending. See the October 27, 2011, "2012 IT Budget Planning Guide For CIOs" report.