Kmart Australia Drives Cost Savings, Increases Agility, and Mitigates Risk by Migrating to AWS

First published February 2024

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Contents

Introduction

Founded in 1969, Kmart Australia Limited (Kmart) operates more than 300 retail stores across Australia and New Zealand. It offers customers a wide range of everyday products at low prices. According to Kmart, 85 percent of Australians have shopped at Kmart over the past year. As of 2023, Kmart has 38,000 employees globally. The company is owned by the Kmart Group division of Wesfarmers, an organization that also owns and operates retailer Target in Australia and New Zealand.

Since 2016, Kmart has embarked on a cloud transformation involving mainframe applications, e-commerce applications, and more. Over the past 12 months, the organization has migrated 55 business applications from an aging on-premises IT environment to AWS. Leveraging the AWS Cloud Value Framework, this value realization study showcases the value to its business that Kmart has realized through this transformation.

"Migrating to AWS's Managed Services has transformed the way our teams work. We've achieved significant cost savings, freed up our application teams from operational processes, and directed our focus towards more strategic initiatives."

—Suresh Adiga, Head of Engineering Platforms, Kmart Australia

The AWS Cloud Value Framework

To help organizations quantify the benefits achieved by moving to cloud computing, AWS has worked with over 100 AWS enterprise customers and analyzed more than 1,500 public AWS case studies to develop the [AWS Cloud Value Framework](). The framework comprises five key pillars of value that AWS customers generate by moving to the AWS Cloud: Cost savings, staff productivity, operational resilience, business agility, and sustainability.

Cost Savings

Cost savings are realized by eliminating the need to supply on-premises infrastructures with large fixed spend, and reducing ongoing variable spend through the AWS economies of scale.

Example KPI: 20 percent reduction in total technology infrastructure costs ([The Business Value of Migration to AWS]())

Case study: [https://aws.amazon.com/solutions/case-studies/razer-case-study/]()

Staff Productivity

Staff productivity refers to increased output by the same-sized team because much of their previous tactical work is no longer needed.

Example KPI: 66 percent increase in administrator productivity ([The Business Value of Migration to AWS]())

Case study: [https://aws.amazon.com/solutions/case-studies/dunelm-case-study/]()

Operational Resilience

Operational resilience is achieved by enhanced availability, security, and less downtime.

Example KPI: 22 percent reduction in security incidents ([The Business Value of Migration to AWS]())

Case study: [https://aws.amazon.com/solutions/case-studies/expedia/]()

Business Agility

A business is considered more agile when it can deploy new features or applications faster, with less errors.

Example KPI: 35 percent reduction in time to insight (The Business Value of Cloud Modernization)

Case study: https://aws.amazon.com/solutions/case-studies/ocado-aws-is-how/

Sustainability

Sustainability refers to actions a business takes to minimize the environmental impact of its operations.

Example KPI: 72 percent reduction in carbon footprint on average (The Carbon Reduction Opportunity of Moving to AWS)

Case study: https://aws.amazon.com/solutions/case-studies/cropx-case-study/

Kmart Australia's Cloud Transformation

The Migrate to Cloud (M2C) program manager at Kmart Australia, says, "We had a lot of disparate systems, and it took a lot of time to make application changes. We also wanted to improve overall application performance to give our customers a better experience, and we needed to give the business more agility so we could focus more on finding new opportunities and less on IT management and maintenance."

Before 2016, Kmart operated a range of IT environments, each with different providers, capabilities, and use cases. Additionally, the organization relied on an on-premises environment to host its business-critical applications, which resulted in large fixed costs, a limited ability to visualize costs, significant operational overhead for IT infrastructure management, and a risk of failure due to applications running on end-of-life software.

The first step in Kmart's cloud transformation was data warehousing, followed by migrating a legacy mainframe system that was costly and challenging to manage. As part of the mainframe migration, the company [migrated more than 30 mission-critical mainframe applications](#), including product registration, order replenishment, and supply chain systems, to AWS—achieving increased scalability, business agility, and cost savings almost immediately.

Next, Kmart [replatformed its online store and moved it to AWS](#), adopting cloud native and serverless-first design principles for the platform, with an event-driven architecture for the backend. This reduced infrastructure costs by two-thirds and gave engineers more time for application development. Additionally, the company can manage triple the normal traffic volumes at twice the speed, doubling customer conversion rates.

In 2022, Kmart took its transformation efforts to the next level by embarking on an initiative it called M2C, migrating a further 55 on-premises applications to AWS. Applications migrated included x86 workloads and key business applications for HR and Finance, Supply Chain, Merchandise and Inventory, Stores, Infrastructure, and Workplace Technology. In addition, Kmart is using containerization, machine learning, and personalization to improve customer experience and accelerate time to value.

For Kmart's IT leadership, one of the best aspects of the M2C project has been the 24/7 support provided by AWS Managed Services (AMS). Applications migrated to AWS and leveraging AMS benefit from full-lifecycle services to provision, run, and support their infrastructure. AMS automated common activities such as change requests, monitoring, patch management, security, and backup services. The

engineering manager for inventory at Kmart Australia, says, "Our teams are much less focused on infrastructure now that we're on AWS. They can now focus more on improving applications and business logic."

While Kmart has been on a cloud journey for several years, the scope of this value realization study considers specific components of value achieved as part of a broader, more comprehensive cloud transformation.

Business Outcomes

Cost Savings

- **Saving $1 million in annual infrastructure, licensing, and other cloud system costs.** By migrating to AWS and reducing its hardware footprint, Kmart has saved over $720,000 in infrastructure costs, which accounts for approximately two-thirds of its original infrastructure costs, and over $250,000 in licensing and other cloud system costs per year.

- **Gaining better visibility into costs.** By moving to AWS, the organization has a clearer understanding of how much money is being spent on each functional area. One area that benefits particularly from this is Kmart's supply chain business. The technical lead for international supply chain at Kmart Australia, says, "Previously, we didn't have any visibility into costs. Using AWS, we can clearly see why something costs so much and how we can improve it. All those questions can be answered now because we have the cost analysis available at a team or individual level."

Staff Productivity

- **Accelerating application development.** Kmart's merchandising and engineering application developers are taking advantage of better system performance to develop applications faster than before. The engineering manager at Kmart Digital, says, "Our engineering staff saves time because we're doing more releases every day, and they can see application changes quickly and respond quickly to anything that takes place in production."

- **Focusing on application development instead of infrastructure management.** The company's merchandise application team has become more agile, enjoying an increased focus on application and business logic rather than infrastructure management. In addition, because processes such as patching, backups, and monitoring are managed by AMS, Kmart application teams can focus entirely on strategic initiatives. "The fact that we have access to AWS tools means we can experiment," says Kmart's engineering manager for inventory. "Previously, we were very limited in terms of developing and testing new applications and features. With AWS, we can turn something on and then easily shut it down if it isn't working. AWS helps us ensure we're functioning to the best of our ability."

- **Saving more than 28,500 work hours.** Thanks to automations and workflows created by moving to AWS, Kmart saved more than 28,500 work hours in 2022.

Operational Resilience

- **Mitigating risk.** By leveraging tighter security processes and more frequent patching from AMS, Kmart application teams have greatly reduced security risk. For example, the company's supply chain application team has automated patching and made the process monthly instead of quarterly. The head of site and network services at Kmart Australia, says, "Resilience is native to the AWS platform. AWS invests in resilience for all its customers, including us."

- **Gaining visibility into owners.** Through AWS resource tagging capabilities, Kmart security teams now have better visibility into specific asset owners within the company. Because they know exactly whom to reach out to, security staff can respond faster to incidents.

- **Increasing monitoring and alerting.** Working with AMS, Kmart has increased its monitoring and alerting capabilities and is more proactive about detecting incidents. In 2022, AMS helped Kmart identify and resolve more than 1,500 high security risks before they turned into problems. The global team lead of security operations at Kmart Australia, says, "AMS provides 24/7 monitoring, and they will reach out to us immediately if any anomalies are detected. Speed matters when it comes to cybersecurity, and AMS gives us confidence that we can solve problems immediately."

- **Increasing application performance.** Using AWS, Kmart improved its Order Management System (OMS) application performance by 20 percent and Kmart Online frontend application performance by 40 percent. This means Kmart is able to offer a faster platform and a better experience to its customers. The improved application performance also means Kmart will be better able to support continued business growth.

Business Agility

- **Releasing new features five times a day instead of once a week.** The Kmart Online engineering team has reduced its release cycle for new features and enhancements from once per week to five times daily. "Everything is automated now, so rolling out new features is a non-event," says Kmart Digital's engineering manager. "We can perform updates much faster, which ultimately helps our internal customers."

- **Reducing batch process time.** Kmart Online can now receive real-time notification of store sales, down from 30 minutes previously. The technical lead at Kmart, says, "This is one of our most important systems. In the past, we've had instances where the online system thinks there's stock available of a product in a store, but the stock isn't actually there because we had delays in batch processing. Getting a more accurate, updated view of inventory in our stores will make the customer experience much better."

- **Improving application response time.** Internal merchandising and engineering platform team users now have sub-200 millisecond response times, leading to a better user experience and increased productivity. "Now, when our business users open an application, they're getting responses immediately," says Kmart's engineering manager for inventory.

- **Faster resizing of application environments.** Kmart's HR and Finance application teams can now resize application environments within one day—a process that used to take 5−7 days. The delivery manager of IT Finance at Kmart Australia, says, "Now, we can quickly size servers up or down whenever we need. We can control when and where to resize the environment to improve system performance."

- **Improving the developer experience.** Through continuous automation on AWS, Kmart has improved productivity, agility, and the overall developer experience. "Ultimately, everything comes back to our customers – the business teams at Kmart," Kmart's engineering manager for inventory explains. "In terms of development, we can serve them more effectively now because we can test things more easily and get business outcomes faster."

- **Scaling to support web traffic spikes.** By replatforming and migrating to AWS, Kmart Online can now seamlessly scale its online store to meet online traffic spikes of up to five times more than usual during each year's holiday shopping season. "With AWS, we can definitely draw a lot more capacity when we need it," Kmart Digital's engineering manager says. "On Black Friday, for example, we can scale very quickly to meet customer demand." In addition, the company's stores department can scale its IBS application on demand to meet peaks in online traffic. "As we move forward on AWS, we'll see significant architectural benefits, which opens up the possibility of getting data to more than 30 applications in near real time," says Kmart's technical lead.

- **Increasing customer conversion rates by 30 percent.** By leveraging Amazon Personalize, Kmart can manage triple the normal traffic volumes at twice the speed, resulting in doubled customer conversion rates.

Sustainability

- **Decommissioning 136 physical servers.** By migrating applications to AWS, Kmart has eliminated 136 servers and expects to lower its carbon footprint by 72 percent, reducing environmental impact.

- **Reducing energy usage.** Kmart is reducing energy usage and its overall carbon footprint by shutting off unused infrastructure at the end of each day.

Conclusion

By migrating and modernizing its IT environment to AWS, Kmart has achieved business value along the five pillars of the AWS Cloud Value Framework.

Looking ahead, Kmart continues to transform on the cloud through containerization, machine learning, and personalization. As a prime example of its commitment to enhancing customer experience, Kmart uses Amazon Personalize to provide personalized online recommendations to its customers. The results have been impressive, with the company observing a 30 percent increase in customer conversion rates as a direct result of actions recommended by Amazon Personalize.

Brad Blyth, chief information officer for Kmart Group Australia, says, "To better support our long-term strategic initiatives, Kmart has been transforming our systems and processes and uplifting our people over the past few years, with AWS playing a big part of that transformation. Our cloud migration and modernization have brought value across the business. We can now move more quickly, enhance security and resilience, and reduce costs along the way. As we continue to integrate AWS into our transformation, we're excited to discover new areas of value."