

Legacy system review, strategy development and delivery for Lowes Menswear.

About Lowes

Lowes Manhattan Pty. Ltd. was started over 100 years ago and is a family run company with over 200 stores around Australia that employs over 3,000 people.

They have always been innovative and were one of the first retailers to introduce their own payment system with their “**Pay as you wear**” accounts that started in the 40’s - now known as Zero Card - well before current solutions such as ZipMoney and AfterPay.

They are self-funded, with many millions of dollars under management, have over 350,000 Zero Card members - who conduct up to 15,000 transactions every week - and over 1.8 million loyalty members through their Rewards Card program.

The Zero Card product is responsible for 25 – 35 % of business revenue, and as such is critical to the ongoing success of the business.

Lowes 100 years: <https://www.youtube.com/watch?v=oOcuLvexNz8>

George Karindjias has been with Lowes for 8 years, and in his role as **Head of Fintech**, he looks after all of the Zero Cards and Rewards Cards.

This case study was drawn from an interview with George Karindjias.

The Problem

Lowes were using an internally built Microsoft Access solution for their Loan Management System, and went to the market to look for a replacement in 2016 that was more compliant in terms of the National Consumer Protection Act.

At the time ARMnet was the only option in Australia and was being used by some big clients such as:

- Pepper Finance
- Rapid Finance
- Money 3

Lowes used ARMnet to replace the existing legacy system in 2016, and they started having issues almost immediately with the poor performance of the application for their purposes.

It constantly ran slow and would crash when running reports or generating statements.

As they were processing a large number of customers and transactions per week, the poor performance of ARMnet would cause the POS in stores to crash as well, creating in store and customer engagement issues.

The Solution

Andrew Bauer, the founder of Calibrated Systems, initially came in for a week to review and advise what could be done to resolve the issues in April, 2017.

“Andrew was amazing, he picked up an understanding of our business requirements very quickly, reverse engineered the processes built into ARMnet, and started to make it more efficient almost immediately.”

Andrew’s **Strategic Development Plan** was to, in the short term, reconfigure ARMnet to match the business requirements, and then in the long term develop them out of ARMnet altogether.

This occurred across 5 phases:

1. Reimplement ARMnet
2. Transition Lowes into the cloud
3. Build a Customer Portal
4. Replace ARMnet application with a Team Portal
5. Redevelop the Loan Management System database and back-end

“Andrew engaged in discovery activities as well as delivery and was responsible for both.”

Re-implement ARMnet

After the initial review of ARMnet, it was obvious to Andrew that Lowes finance product was based on a rolling credit (an in-store credit card); however ARMnet had it incorrectly implemented as a personal loan. This resulted in processes not happening that should have and processes that shouldn’t have happened occurring.

“Before Andrew reimplemented ARMnet, it was as if everything was on fire. We used to walk into the office and jokingly ask before the day started ‘Where is the next fire going to happen?’”

Preventing “new fires from occurring” on a daily basis became a major business priority to free up resources so that Andrew could help them look for ways to innovate.

Transition Lowes into the cloud

While reimplementing ARMnet, Andrew noticed that the internal servers ARMnet had setup for Lowes had limitations which were causing intermittent outages. Andrew suggested instead of just reconfiguring, updating and/or replacing the servers where they were, that they leverage Lowes existing relationship with Microsoft and migrate to the Azure cloud.

“His reasoning was to not just solve the issues with ARMnet, but to also give Lowes cost savings across the board, by making cloud services available to other departments. In addition, as Azure does their own patching, we no longer have to use our own servers which saves us a lot of cost. Andrew also helped us transition our relationship with Microsoft to include an Enterprise Agreement.”

Andrew recreated the servers in Lowes Azure subscription and helped their IT team develop a High Availability plan, to future proof their IT systems, making them more adaptable and agile to meet new business requirements.

Build a Customer Portal

Because of these previous steps, it opened up the possibility for innovation in terms of customer engagement and team efficiencies.

When Andrew suggested to George that they create a self-service customer portal, he was thrilled with the idea, as it was not even a possibility in the previous implementation.

“Andrew looks at things like:

- *How is it going to apply in the real world?*
- *How are people going to use it?*
- *How is it impacting the business?*
- *How can we make it better?*
- *How does it interface with other systems?*

99% of developers do not understand business processes. Andrew can look at processes and translate into software. We always get extra benefit and extra uplift from his ideas. He just keeps making the system betterer and betterer.”

Calibrated Systems built and delivered a plan for the customer portal which included:

- Displaying current account balances
- Displaying customer contact details & additional cardholders
- Make account payments directly through the portal
- View current month's transactions
- Show Statements, Contracts, POS dockets, Company Communications, Arrears Notices and any other letter they send to the customer in a digital format
- Make the Customer portal available and usable on Mobile devices.

Replace ARMnet application with a Team Portal

With the success of the Customer Portal, Lowes wanted to look at **what else was possible** with replacing the ARMnet application and save on the monthly licencing fees.

“We went to Andrew to assist us with this as his approach is to start with the problem, think about business logic, outcomes, delivery, and come up with his own suggestions of the best way as well as listening to the client. Andrew built a plan for us including the structure of the steps and the process flow for every stage.”

Calibrated Systems devised a 2 phased plan which entailed creating a Team Portal that integrated into the existing database to replace the ARMnet client application, then they redeveloped the database and back-end systems to gain further cost savings and efficiencies. The typical path is to just create a full system in a silo and then swap out the old with the new. This is a large capital investment that doesn't see returns until

implementation and it is difficult to get feedback on. Instead, **Calibrated Systems** undertook a side-by-side development so that they could get feedback from the client much quicker and give returns on investment to Lowes as soon as possible.

This process resulted in improved efficiencies, productivity gains and reduced training and support via simpler more intuitive user interfaces.

With the Team Portal in place, Lowes was able to outpace their call centre while maintaining security and control.

As ARMnet was a critical business system with interfaces impacting multiple parts of the business, this process required engagement with many cross-functional teams within Lowes.

“Everybody loves him because he always tries to do the best for Lowes”

Andrew worked closely internally with the Head of Fintech, CTO, POS team, Marketing team, IT infrastructure team, Magento 2 development team; as well externally with the SmartMail platform and their team, Debt Collection Agencies, Microsoft, Card Printing company, Mail House and Lowes bank.

“The business was very siloed previously, but Andrew has pulled them all together.”

Redevelop the Loan Management System database and back-end

ARMnet’s system architecture didn’t suit Lowes’ needs. A lot of the internal workflows off-loaded their calculations onto the database, mandating that the server be much higher specification than reasonably expected. Simple processes that should have only taken 5 calls to the database, were taking between 50 and 250 calls. With Lowes’ high number of customers and transactions, this had noticeable performance issues. **Calibrated Systems** re-architected the system to be in alignment with Lowes business model and made some suggestions on how to improve it further, offering functionality that would have never been possible in ARMnet.

“Andrews’ great skill was reviewing the existing system, understanding the business imperatives and suggested improvements and replacements for existing processes pro-actively.”

During the interview, George also provided the following additional comments:

“Working with Calibrated Systems has paid off in spades.”

“Andrew is cutting edge and understands what he is doing, and why he is doing it.”

“They (Calibrated Systems) believe in collaboration and want to understand holistically first before development begins.”

“Andrew takes the time to sit down and understand it before he starts.”

“The POS integration is amazing and seamless now”

“Andrew’s biggest strength is to think about business decisions, understand them and convert them into a software application. Starts with the problem, thinks about business logic, outcomes, delivery, and comes up with his own suggestions of the best way as well as listening to the client.”

George has indicated that he would be happy to take prospective clients of Calibrated Systems step by step through the systems Calibrated Systems has built for them. Please let us know if you would like to contact him.

About Calibrated Systems

Calibrated Systems provides services in strategically planning & designing business enabling technology solutions across a multitude of business sectors. These services include consulting & advisory on: Agile development of Cloud Applications, systems analysis and designing and developing custom solutions. They can help your organisation adapt and migrate your legacy systems to the cloud, or redevelop them into cloud native applications.

About the author

Andrew Bauer is the Chief of Intelligence at **Calibrated Systems** and has over 20 years experience in building complex IT systems and products from scratch. He has a unique skill of grasping his client's business vision and translating it into a technical, scalable product. His analytical mind coupled with high emotional intelligence makes him a rare find amongst the tech community and a valuable asset for any organisation. He is available to provide Virtual CIO services and to work with clients to build Strategic Development Plans.

Andrew is available for a no obligation discussion to learn more about your business challenges and discuss how he and Calibrated Systems can assist your business.

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