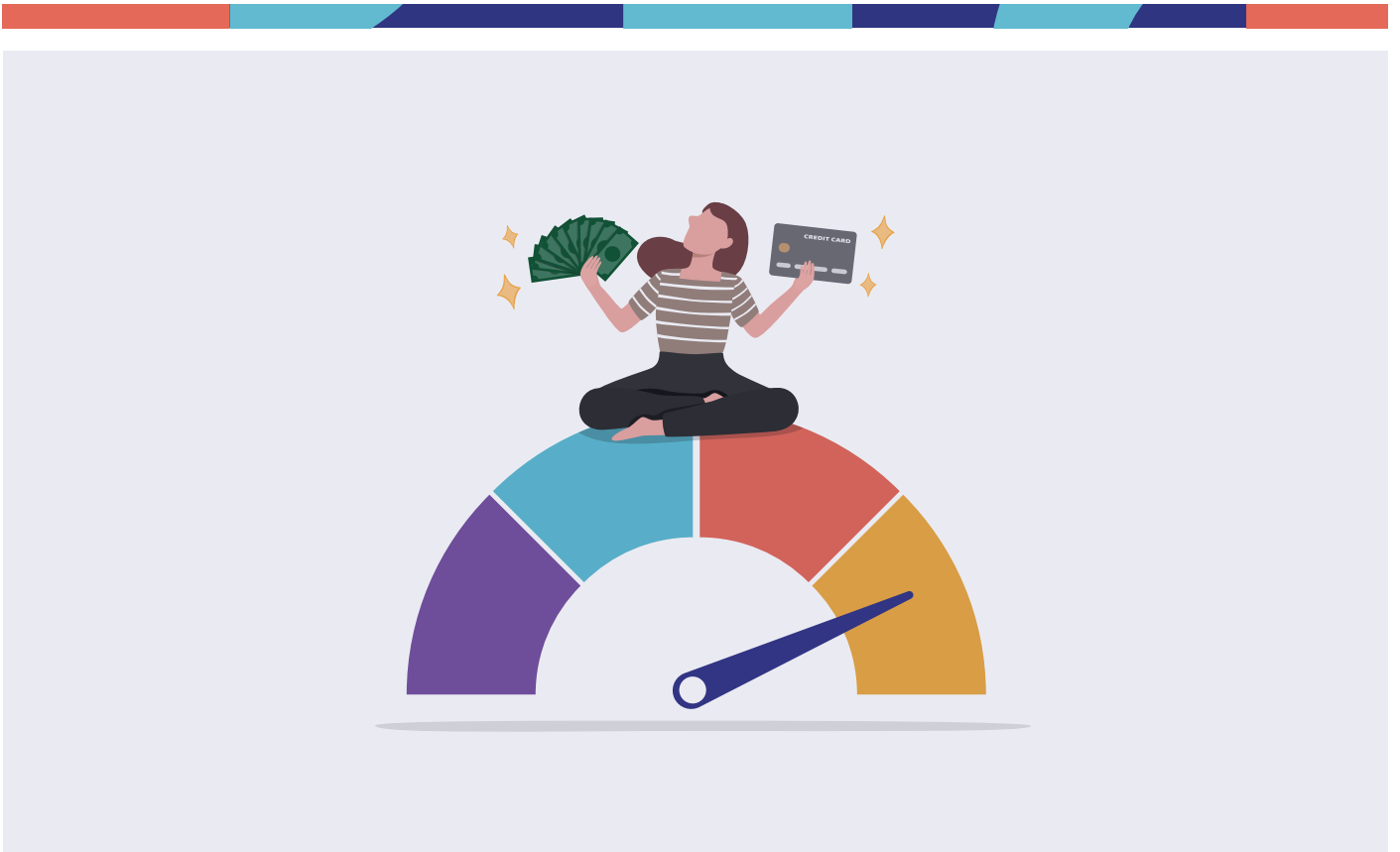# Data Drives Innovation and Growth at Australian Fintech

A tailored strategy combining software engineering, data engineering, and ML operations enabled data-led business decisioning for a fintech enterprise.

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Our client, a leading Australian non-banking fintech providing digital instalments and lending services to customers across Australia, New Zealand, and Singapore, was facing a unique challenge. Having acquired and integrated several small businesses over the years, the company was grappling with a mix of disparate and legacy systems and processes, making it extremely arduous to build critical components around Machine Learning and Security. Compounded by a lack of relevant context and technical skills in the disparate and legacy components led to a pressure-cooker situation all the time.

This is where Sahaj Software stepped in as a partner tasked with making the client more data-led in their decision making, providing experienced experts across Data Engineering, Machine Learning, and ML Ops.

The Ask

The key requirements from this engagement were data platform modernisation, revolutionising key business functions to operate in a data-native manner, and harnessing the full potential of data in driving business growth and innovation. We had to connect disparate systems, transform and migrate the data from various systems while providing support for the system and saving their expenses on operations while driving decision-making efficiencies across various business problems such as:

- enabling data-native marketing in a process to detect form abandonment of forms applied for loans
- unblocking insurance business through managing data privacy requirements and outreach to customers
- data analysis and ingestion across collections platforms and risk modelling integrating data assets and platforms for critical acquisitions for new channels

The (Data-Led) Solution

To meet the client's modernization needs, we developed a tailored strategy that combined software engineering, data engineering, and ML operations to enable data-led business decisioning with the following solutions:

Enabling Data-Native Marketing
Microservices-based decisioning engine: We engineered a robust decision engine based on microservices architecture. This engine seamlessly conneced marketing systems to the front-end digital systems, integrating DevOps for efficient data pipeline management. Additionally, ML algorithms were made available as services, enhancing the precision of marketing strategies.

Unblocking insurance business through data
Data analysis and ingestion: We identified critical data elements and unblocked them by analysing and ingesting new datasets from multiple upstream systems into their datalake. Post-transformation, this data was efficiently integrated into a graph database, enabling the insurance team to seamlessly complete customer journeys and craft personalised offers.

Integrating critical acquisitions for new channels
Unified data platforms: We orchestrated the integration of data platforms and assets from two distinct organisations. This data was then transitioned to an integrated cloud-native platform, fortified with robust PII management, dynamic data encryption, and masking capabilities. This integration extended to various critical systems.

Risk Modeling and Monitoring
Auto-scaling analytics and ML platform: We engineered an auto-scaling, multi-tenanted analytics, and machine learning platform. This platform seamlessly integrated with existing data sources, delivering a secure and scalable risk dashboarding platform for the organisation. Role-Based Access Control (RBAC) was implemented to ensure secure data handling.

The Impact

The highlight of this engagement was Sahaj's ability to scale up rapidly. Our team demonstrated its resilience by proving its strength in every situation and context. We brought in transparent communication and faster delivery. The key was to reconvene, address the gaps, learn and move on and upwards from there. Given below are the respective impact of the individual solution delivered:

Enabling Data-Native Marketing
Through targeted abandonment messaging across digital channels, the team achieved a remarkable increase in conversion rates and revenue, demonstrating the power of data-driven marketing.

Unblocking Insurance Business through Data
This breakthrough unblocked the insurance team's potential, enabling them to create tailored offerings and enhancing customer experiences.

Integrating Critical Acquisitions for New Channels
This integration not only modernised technology for new business areas but also resulted in cost reductions by retiring current mainframe assets, as the organisation moved towards a more agile cloud-native platform.

Risk Modeling and Monitoring
This initiative empowered the organisation with objective, data-driven measures for risk monitoring and modelling, complementing human assessments with quantitative insights.

This platform modernisation initiative stands as a testament to the transformative power of technology in the fintech industry. By harnessing the full potential of data, we not only unlocked new business capabilities but also elevated customer experiences. This partnership exemplifies the strategic importance of adopting a data-native approach in driving innovation and growth in the fintech landscape.

A Solid Foundation

We had common core principles, which really helped. It was one of the key reasons why the client engaged with us. We brought core principles of good quality software engineering practices to the world of data. When our teams worked together with their engineering teams, we brought in an understanding of what this could be in the future and how we can leverage that today to help them provide scalability, to help them provide more resilience, and reusability in systems.