CHAPTER 5

Banking's Legacy Infrastructure

EMBRACING MODERNISATION THROUGH PLATFORM ENGINEERING

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cycloid

Introduction

In today's dynamic banking landscape, managing legacy infrastructure has become increasingly complex. Ops are often more busy putting out fires than innovating solutions, and lack of centralised oversight leads to resource and budget drain. In addition to that, legacy infrastructure is harder to scale to the ever-evolving demands of customers and more complex security regulations. This is why many banks are looking towards embracing modern platform solutions.

Platforms offer the promise of regulatory compliance, streamlined operations, and the ability to harness the latest technologies—everything that banks are currently struggling with. What are the benefits of self-hosted SaaS platforms? Can a GitOps approach bring about a real transformation? And what are the cultural challenges of implementing modern infrastructure management?

Challenges of Legacy Platform Infrastructure

- **Difficult to manage.** Legacy infrastructure is often complex and outdated, making it harder to maintain and troubleshoot effectively.
- **Doesn't scale.** Legacy infrastructure lacks the flexibility to accommodate growing demands, making it challenging to expand or adapt to changing workloads and user needs.
- **Ops are busy putting out fires.** With legacy systems, operations teams frequently find themselves dealing with unexpected issues and constant maintenance, leaving them little time for innovation.
- **Weak security.** Legacy infrastructure is prone to security vulnerabilities as it may not receive regular updates or patches, making it a potential target for cyberattacks and data breaches.
- **Wasted resources due to lack of oversight.** Organisations may struggle to monitor and optimise resource usage efficiently, resulting in unnecessary expenses and underutilised hardware.

Why Banks Need to Transition to Modern Platform Engineering

Platforms offer regulatory compliance and greater scalability for on-prem infrastructure.

Most banks are trying to embrace SaaS solutions, especially for non-core functions, to benefit from greater scalability, agility, and access to the latest technology without the burden of maintaining complex on-premises infrastructure.

Regulatory Compliance

Banks operate in a highly regulated environment, and compliance becomes more complex when dealing with legacy systems. Older systems might lack the necessary capabilities to quickly adapt to changing regulations, potentially resulting in non-compliance and legal consequences.

Modern platforms offer advantages in this regard. They can be designed with compliance in mind, incorporating features to track and manage regulatory requirements effectively. Automation and advanced data analytics can aid in generating the required reports and ensuring transparency.

Furthermore, modern platforms can facilitate better audit trails, making it easier for banks to demonstrate adherence to regulations and handle compliance audits efficiently.

Legacy Systems and Integration

Legacy systems, while once cutting-edge, can create challenges when integrating with newer technologies. The mismatch in architecture, data formats, and protocols can lead to complexity and inefficiency during integration efforts.

Transitioning to modern platforms enables smoother integration due to their modular and standardsed design. Application Programming Interfaces (APIs) play a crucial role, allowing legacy systems to connect with modern applications while preserving data integrity.

Risks of Transitioning to Modern Platform Engineering

The Complexity of a GitOps-based Approach

GitOps is a great approach to start optimising and modernising your infra management. It uses Git as a source of truth to deliver Infra-as-Code and applies DevOps best practices natively to improve collaboration, compliance, security, and CI/CD. However, getting started with GitOps requires time and technical expertise, which can be a barrier in traditional organisations like banks. It also usually leaves no opportunity for upscaling and therefore cannot support your long-term business goals.

Platform engineering can make your GitOps approach more user-friendly and accessible. Therefore easier to adapt to. With Git as the source of truth, the deployment process is automated and streamlined, allowing developers to focus on what they do best - writing code.

Cultural Change

Moving to platform engineering requires a cultural shift within the organisation and may require employees to adapt to new processes and workflows. Banks are traditionally very siloed in their organisational structure making change management essential for success, but lengthy to make the move.

This can be remedied by modelled behaviour—let your platform team handle the tools and specifics, but don't forget developer and end-user experience (DevX) in the process. If you build your platform with end-users in mind, your intended audience will welcome it easier.

The best hope is for gradual change—it will build incrementally, attract like-minded new employees, and gradually become the norm in your organisation.

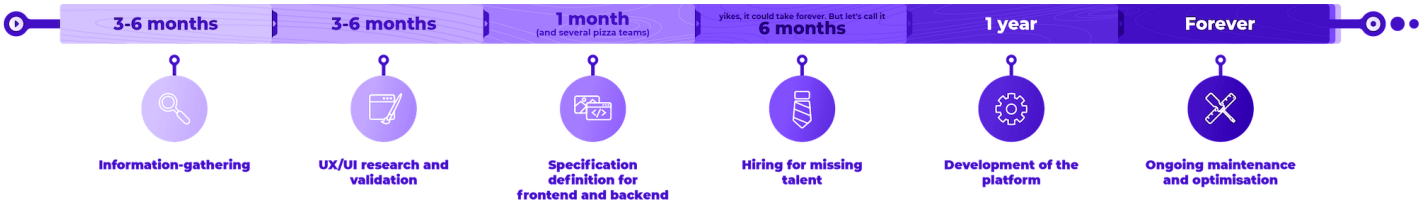
Conclusion

The world of banking infrastructure management is undergoing a profound transformation, and embracing platform engineering emerges as a definitive solution to its multifaceted challenges. As we have seen, platforms offer banks the assurance of regulatory compliance and a new level of scalability. Beyond this, the power of platforms extends to modernising and centralising legacy infrastructure, allowing banks to streamline operations and optimise performance.

However, the journey toward Platform Engineering is not just about technology; it necessitates a cultural shift within banking organisations. With siloed structures being the norm, change management becomes paramount to ensure a successful transition.

Moreover, the introduction of platforms paves the way for a more user-friendly and accessible GitOps-based approach. The combination of Git as the source of truth and platforms as the facilitator empowers banks to leverage Infrastructure-as-Code with greater ease, thereby boosting collaboration, compliance, security, and continuous integration and deployment.

It's clear that from regulatory compliance and modernisation of legacy systems to overcoming cultural barriers and simplifying GitOps, platforms bring forth a comprehensive solution. Embracing Platform Engineering will propel banks toward a future of unparalleled efficiency, innovation, and success.



About Cycloid

Cycloid aims to promote efficient infrastructure & software delivery alongside digital sobriety. We do this by optimizing platform engineering, alleviating the cognitive load on IT teams, and advocating for Green IT practices.

Our mission is to enable a future where technology and sustainability can coexist harmoniously, leaving a lasting positive legacy.

Flagsmith

Get in Touch

Flagsmith is an open source feature flag software that lets developers release with confidence. We work with banks and financial institutions across the world to help them transition to modern feature management and software development, offering on-premise deployments, security features, and technical support to cover your needs. We also partner with OpenFeature to support open standards and prevent vendor lock-in.

"Our development speed and velocity have increased. Mainly, though, I just feel good about releases. I know when I ship something to production it's going to be safe and I won't have to do a thousand tests to make sure I don't miss something. When things are behind a feature flag, I know what is and isn't enabled in production and I have the visibility I need."

Vontobel

Globally active investment firm with Swiss roots

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