

Case Study

Bank Hapoalim Accelerates Digital Transformation with OpenLegacy Hub

Decreases Development Time 20x, Unlocks Innovation



20x
acceleration in
time-to-market

75%
cost reduction in digital
innovation from core systems

Bank Hapoalim, with over \$110 billion in assets, is one of Israel's largest banks. The bank operates subsidiaries across the UK, Europe, and North America, and offers a full range of financial products including consumer and commercial banking, credit cards, mortgages, insurance, wealth management, and more. Bank Hapoalim needed a new approach to untangling core systems and data so it could extend its legacy of digital innovation.

Microservices ■ IBM Mainframe ■ z/OS Connector ■ Agile ■ OpenShift ■ DevOps



The Challenge

Over the past few years, digital banking has increasingly become the norm in the Israeli banking sectors. Consumers expect a seamless banking experience across connected devices, with navigation between connected accounts and perform a range of banking operations with a few clicks of the button.

To keep up with consumer expectations and maintain its market leadership position, Bank Hapoalim decided to launch an entirely reimagined mobile app experience: what it called internally “Dor Shalosh,” or “Generation Three.”

But the bank encountered friction and obstacles in the development process.

Like many financial institutions, Bank Hapoalim's architecture is built on top of legacy technology: specifically, an IBM mainframe housing critical assets and information. The bank's technology stack consists of multiple layers facilitating communication with the mainframe, including IBM's message-oriented middleware MQ and an enterprise service bus (ESB).

The bank's developers had created a variety of REST APIs on top of the ESB to deliver digital experiences to end users. But the bank's monolithic and highly customized architecture, combined with multiple layers of middleware, meant that the process of developing and deploying APIs was slow and manual.

According to Bernard Ben Avi, the bank's Chief Architect at the time: “Bank Hapoalim has always been a digital pioneer, but we couldn't keep navigating all of these layers of middleware. We needed a shortcut: a native, direct connection between digital services and our mainframe system.”

Contributing to the challenge was the difficulty in discovering and accessing existing legacy assets. Bank Hapoalim had thousands of SOAP services in production – but no systematic and efficient way to catalog them for use in digital services.

Chief Information Officer Eti Ben-Zeev had a powerful vision for a “marketplace” of reusable legacy assets: one that would radically accelerate innovation by decoupling

the development of digital services from the need for deep firsthand knowledge of the mainframe system. But no solution had yet presented itself.

Ultimately, the bank envisioned a solution that bypassed their ESB to enable direct digital innovation on top of their mainframe, while helping them centralize and organize their existing legacy assets.



The Solution

Founded in 2012, OpenLegacy helps enterprises untangle monolithic core systems for the speed and simplicity of cloud development. The company's patented integration technology enables companies across industries to build APIs from legacy assets like mainframes and midrange systems.

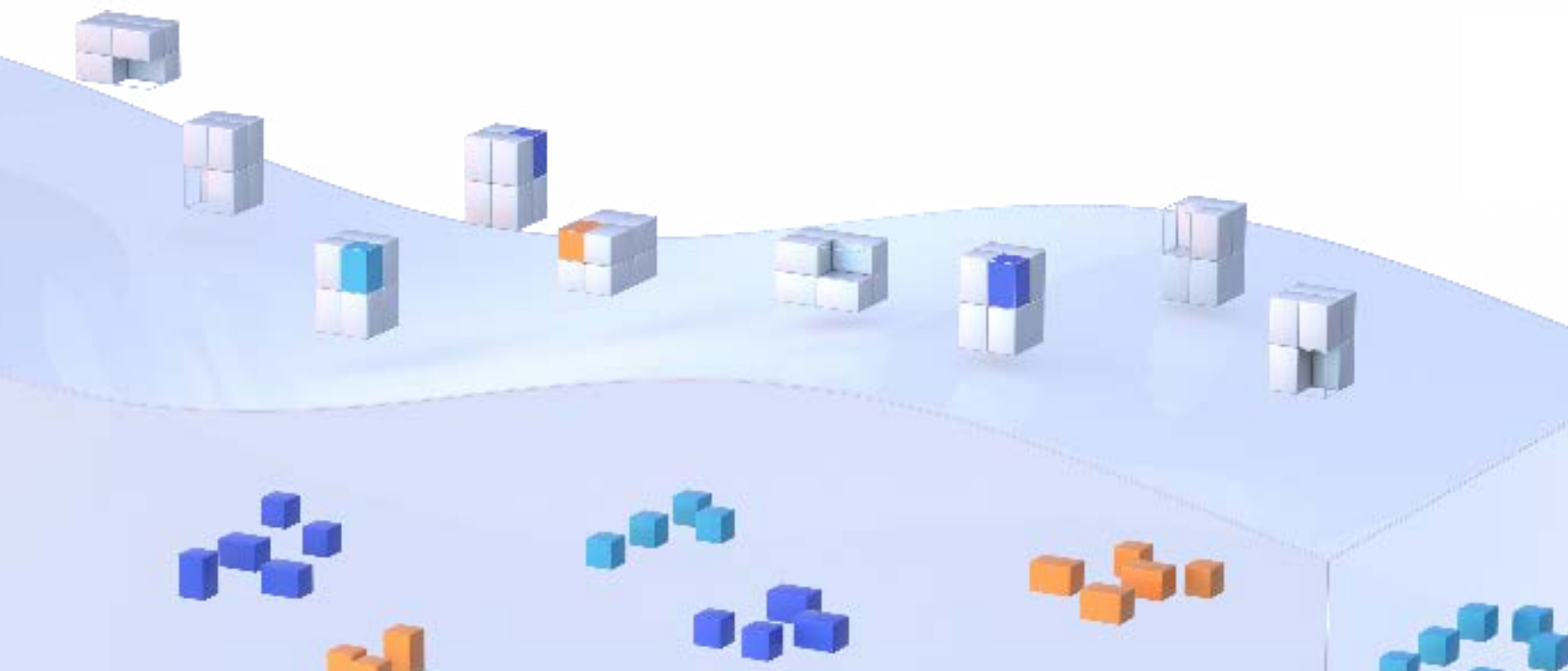
OpenLegacy's recently-launched flagship product, OpenLegacy Hub, was a perfect fit for the bank's needs. After years of working with clients like Bank Hapoalim, OpenLegacy had seen firsthand the challenges not just of integrating with legacy systems, but of building and maintaining the "marketplace" envisioned by CIO Eti Ben-Zeev.

OpenLegacy Hub is designed as the only all-in-one digital modernization platform built to give enterprises with monolithic core systems the speed, simplicity, and standardization of cloud native development. Hub allows organizations to easily consume and test core system assets. Enterprises can then:

- Rapidly generate digital services
- Extend the capabilities of core systems without changing underlying applications; and
- Create a single comprehensive view of all assets in a searchable and language-agnostic repository, available for easy re-use, and ready for deployment in any standard environment.

"OpenLegacy Hub is based on everything we've learned from working with organizations that are trying to become digital to the core," said Romi Stein, CEO of OpenLegacy. "We felt confident that Hub could help Bank Hapoalim realize their vision of market-leading innovation on top of their legacy infrastructure."

OpenLegacy and Bank Hapoalim agreed to enter into an engagement with the goal of accelerating the bank's digital transformation efforts.





The Result

During implementation, the OpenLegacy team leveraged the OpenLegacy platform to import transaction copybooks from the mainframe and generate them as modules that could be reused across projects, automatically tested and verified, and enriched with metadata and documentation.

These modules are used in Hub to design digital services along with out-of-the-box snippets, templates, or deployment options from the Solutions Center. The Bank Hapoalim team, for example, used Hub's point-and-click interface to rapidly generate a digital service directly into Red Hat OpenShift's Open Container Platform (OCP).

Bypassing Bank Hapoalim's ESB infrastructure – combined with Hub's support for continuous integration, development, and backend automation – led to rapid time to value for the bank. On the first day in production, the team generated three APIs with Hub. A torrent of new APIs followed in rapid succession.

Bank Hapoalim now regularly uses Hub to design digital services. The bank estimates that Hub has reduced the time to develop digital services from legacy systems by roughly 20x, from several days to a matter of hours.

Beyond that, Hub has fundamentally changed the team's approach to using legacy assets in the design of digital services. Hub now serves as a comprehensive repository for the bank's mainframe transactions, allowing continuous reuse whenever the bank builds a new API. Digital developers no longer need deep mainframe expertise. The result has been a radical streamlining and outpouring of innovation, which the bank has channeled into delivering better customer experience through initiatives like its third-generation mobile app.



OpenLegacy helped us become truly responsive by letting us build APIs and microservices in a single sprint—five microservices in two weeks, instead of one in many months.



Bank Hapoalim

"OpenLegacy Hub has fundamentally changed the way we interact with our mainframe," reflected the Transformation Department Manager at Bank Hapoalim. "We're bypassing our ESB and harnessing our legacy assets as an engine of innovation. Digital development has never been more rapid or scalable – and we're prepared for whatever technology change the future brings."

About OpenLegacy

OpenLegacy's Digital-Driven Integration enables organizations with legacy systems to release new digital services faster and easier than ever before. Connecting directly to even the most complex core systems, OpenLegacy automatically generates the digital-ready components needed to integrate legacy assets into exciting new innovations. With OpenLegacy, industry-leading companies release new apps, features, and updates while spending a fraction of the time and resources, so they quickly and easily become digital to the core.