![Red Hat logo]

RBBH transforms its core banking platform and cuts time to market dramatically

![Raiffeisen Bank International logo]

Headquarters
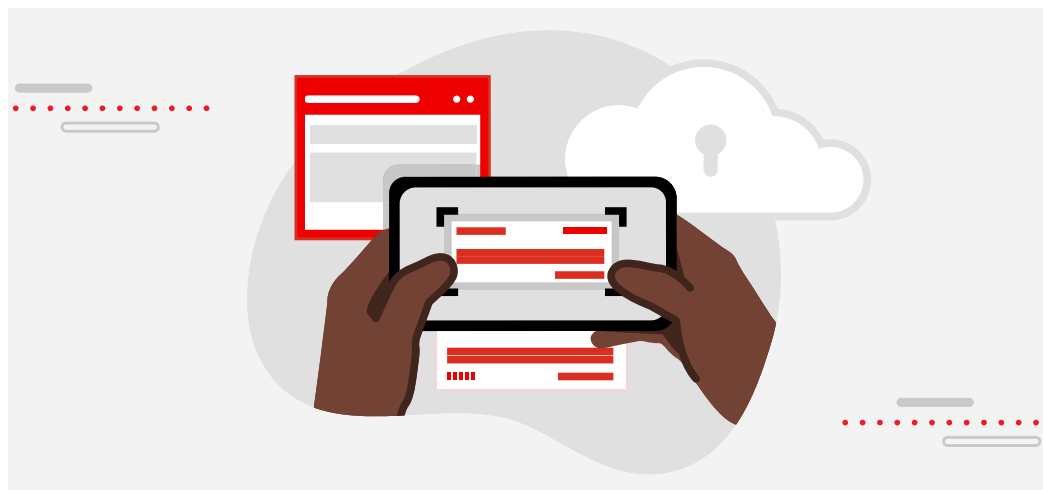
Sarajevo, Bosnia and Herzegovina

Industry

Financial services

Size

1,300+ employees

"Temenos running on Red Hat OpenShift draws on the good OpenShift features we experienced in previous projects while giving us flexibility at both the application and the infrastructure layers."

Kreshnik Halili
CIO/COO, RBBH

Raiffeisen Bank Bosna i Hercegovina (RBBH) actively invests in new technologies. The customer-focused bank is proud to offer the most innovative products and services in the market. But its monolithic traditional core banking system was limiting its ability to quickly deploy new products and services. Together, Red Hat OpenShift and Red Hat Application Foundations provide a modern, security-focused, scalable application platform for the bank's Temenos core banking system. RBBH can now boast high levels of stability, rapid time to market, efficient operations, and a focus on innovation.

Software and services

Red Hat® OpenShift®

Red Hat Application Foundations

Red Hat Consulting

Red Hat 3scale API Management

Red Hat build of Keycloak

Streams for Apache Kafka (formerly Red Hat AMQ Streams)

Benefits

▸ Delivered a very stable core banking platform

▸ Cut time to market from months to weeks

▸ Reduced time spent managing systems significantly

▸ Established multiple CI/CD pipelines, gained valuable knowledge, and adopted a DevOps approach

![Red Hat Innovators in the Open logo]

About Red Hat Innovators in the Open

Innovation is the core of open source. Red Hat customers use open source technologies to change not only their own organizations, but also entire industries and markets. Red Hat Innovators in the Open proudly showcases how our customers use enterprise open source solutions to solve their toughest business challenges. Want to share your story? Learn more.

> *"With Red Hat OpenShift, we can release new functionality much more often—as often as once a week."*

Fedja Koluder
IT Director, RBBH

Leading banking innovation in Bosnia and Herzegovina

Raiffeisen Bank dd Bosna i Hercegovina (RBBH) is a network unit of Raiffeisen Bank International AG (RBI). RBBH is proud of its investments in new technologies, customer focus, and innovative products and services. "RBBH wants to provide the products and services our customers need to support them in their daily business," said Fedja Koluder, IT Director, RBBH.

Built in house and evolved over the last 25 years, the bank's traditional core banking platform was significantly limiting its ability to meet customer needs. RBBH had only limited flexibility in its product line and couldn't implement changes quickly. "Today's customers are demanding digital, instant services from banks," said Kreshnik Halili, CIO and COO, RBBH. "We have embarked on the journey to modernize our technology infrastructure, including our core banking system, to better meet evolving demands."

The main aims of the transformation were to provide customers with better services and access to those services whenever they need them, 24x7. "We wanted to reduce time to market and quickly build new products, all while providing continuous services for our customers," said Koluder. "At a technical level, we also wanted to process transactions in real time, increase integration between our systems, and simplify and decouple our domains."

RBBH identified a strategy to replace its current core banking system with a modern and flexible modular core banking solution based on the Temenos solution, which provides clients with modern services focused on security, functionality and availability. By combining Red Hat OpenShift and Temenos technologies, the bank has embarked on a successful digital transformation.

Adopting a modern application platform that links to core traditional systems

RBBH sought a collaboration to provide a suitable technology foundation, understand its challenges, and provide a reliable solution to support the running of its successful mobile banking project on Red Hat OpenShift. "Temenos and Red Hat are 2 strong players and bringing them together would provide even more benefits for our organization," said Halili. "Temenos Transact running on Red Hat OpenShift draws on the good features of OpenShift we experienced in previous projects while giving us flexibility at both application and infrastructure layers."

Red Hat and Temenos worked together to optimize the hybrid cloud core banking solution for Red Hat OpenShift. The core banking application now runs on an on-premise foundation based on Red Hat OpenShift along with Red Hat Application Foundations, which includes integration, messaging, and security tools like Red Hat 3scale API Management, Streams for Apache Kafka, and the Red Hat build of Keycloak:

- Business logic runs in Red Hat OpenShift, which integrates Red Hat 3scale API Management to authenticate and secure API access.
- Streams for Apache Kafka (formerly Red Hat AMQ Streams) provides the bank with real-time integration for processing payment transactions with high throughput and low latency.
- The Red Hat build of Keycloak (known formerly as Red Hat Single Sign-On) provides authentication and authorization services.

The bank then refactored its core banking services and migrated them to Temenos Transact running on Red Hat OpenShift. Red Hat Consulting helped RBBH decouple its traditional core banking system, adapt services to a containerized microservices approach, and expose data securely. "Red Hat Consulting provided us with a great deal of value," said Koluder. "They showed us the most suitable architectural approach for our needs and instructed us on how to build our services and properly create containers for our environment."

Case study   RBBH transforms its core banking platform and cuts time to market dramatically

Reducing management overheads while accelerating time to market

Delivered a stable foundation for core banking

With Red Hat OpenShift and containerization, RBBH's internal and external customers now experience more stable services. "With Red Hat OpenShift, we can provide our customers the continuous services they expect," said Koluder. "We're meeting internal controls and audit requirements for service continuity and more."

Adopting a development approach based on containers and microservices and dividing complex monolithic systems into smaller pieces has contributed to safeguarding service continuity. "Red Hat OpenShift has taught us to change our approach to building systems; we now divide the complexity of our monolithic traditional core banking system into smaller business domains," said Koluder. "Decoupling services and creating them for specific business domains means we can deliver high-quality services." Moreover, RBBH can now change services for one business domain while safeguarding service continuity for other domains.

Cut time to market from months to weeks

RBBH no longer needs to wait months to launch a new functionality. With Red Hat OpenShift and Application Foundations, it can now be released if required every week. "Being able to react quickly to new customer needs is very important in the digital era," said Koluder. "With Red Hat OpenShift and Application Foundations, we can release new functionality as often as once a week." Previously, it would have taken the bank a year to build new functionality and integrate it into its previous core banking system.

At a technical level, Red Hat OpenShift allows RBBH to reuse code and quickly adopt third-party applications. It doesn't matter whether an internal or third-party component is built in .Net Core, Java, or any other technology stack; the bank can containerize those building blocks and run them on the Red Hat container platform. "Red Hat OpenShift allows us to containerize and reuse components that have already been built," said Koluder. "And that allows us to launch new features and services much faster."

Moreover, the native self-service functionality within Red Hat OpenShift allows developers to build, deploy, and run their container environments. This feature helps reduce time to market because developers no longer depend on systems, storage, and network administrators, freeing these teams up to focus on other tasks.

Reduced time spent managing systems significantly

The time the operations team spends managing the Red Hat OpenShift environment is now significantly less than the time it typically spends managing parts of the bank's traditional systems. Teams can spend time innovating because they spend less time maintaining application servers. "Red Hat OpenShift optimizes our containers automatically," said Koluder. "Our operations team only needs to define some parameters, and it will improve response times, strengthen security—whatever we need."

Automation has been particularly important for applications where transactions are growing rapidly. RBBH has defined policies in Red Hat OpenShift based on the volume of transactions. Red Hat OpenShift now scales automatically, so customers don't experience any drop in service during business hours.

Established multiple CI/CD pipelines, gained valuable knowledge, and adopted a DevOps approach

"We are standardizing our continuous integration and continuous delivery (CI/CD) pipelines, and Red Hat supports all the tools we need, including our Azure development tools and GitHub. It also provides a container repository," said Koluder.

The bank currently uses 2 different CI/CD approaches: one for the development of traditional infrastructure and the other for modern application development. With the combination of Red Hat OpenShift and Application Foundations, the operations team was able to build both pipelines with ease. The technologies in Application Foundations have been engineered to help build, deploy, and operate applications with security and scalability in mind.

Expanding application modernization to the core banking system

The project means RBBH's technical staff are ready to react quickly, not only to customer demands but also to the needs of the business, helping it to meet its strategic goals. "The technology team is very proud to be ready to build new applications and services at speed, thanks to Temenos and Red Hat OpenShift," said Koluder.

Red Hat OpenShift and Application Foundations' support for hybrid cloud means RBBH is ready to evaluate cloud opportunities. "Investing in a cloud-ready platform was important for RBBH," said Halili. "We have established the fundamentals and, looking forward, we will evaluate opportunities to move some components to the cloud in compliance with regulatory requirements."

RBBH has strategically adopted a modular and scalable architecture, positioning Temenos as its core banking system and selecting Red Hat OpenShift with Red Hat Application Foundations as its preferred application platform. "We implement a modern core banking system on top of modern technology, unlocking new horizons for our bank," said Halili. "Red Hat and Temenos—with a clear and innovative vision for the future—are supporting RBBH in achieving its future goals in the digital arena."

About Raiffeisen Bank dd Bosna i Hercegovina (RBBH)

Raiffeisen Bank dd Bosna i Hercegovina is one of the largest banks in BH and was established in 1992 as Market Banka d.d. Sarajevo. The bank was renamed in 2000 when it was acquired by Auistrian Raiffeisen Zentralbank and now is 100% owned by Raiffeisen SEE Region Holding GmbH.

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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