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Introduction

Finding new opportunities in a rapidly shifting landscape



Across the world, digitallysavvy banking consumers continue to fuel the rise of mobile and online innovations.

In one study, 61% of bank customers said they interact weekly on digital channels, a number that continues to grow.¹

This behavior is redefining the landscape. To meet customer expectations banks must move fast and constantly anticipate their needs while ensuring they are making the necessary investments in technology and people. In return they get more than customer loyalty. They also enjoy the lower acquisition and servicing costs and revenue growth that comes with it and are better positioned to reinvest in technologies, processes, and people that further speed the development and the delivery of new products and services.

Consumer preferences aren't the only significant change banks face. Surging competition—most notably from online-only fintech companies known as neobanks—continues to squeeze margins and put pressure on IT budgets and staffing, challenging their ability to move quickly and deploy innovative new services or business models.

Add on the need to comply with rapidly evolving privacy and security regulations, and it's clear banks are facing some of the most disruptive market conditions they have ever faced.

However, as this e-book will show, it's also a time of great opportunity. Learn how some of the world's biggest banks have accelerated their digital transformation journeys, and how they have become more nimble and adaptable to customer needs by strategically investing in technology.

Digital leaders are growth leaders

While 2020 proved a challenging year for almost all financial institutions worldwide, those that made previous investments in cloud and other digital transformation technologies experienced improvements in²:

Revenue:

150//

improvement

Time to market:

19%

improvement

Cost savings:

21%

improvement

Profits:

210//

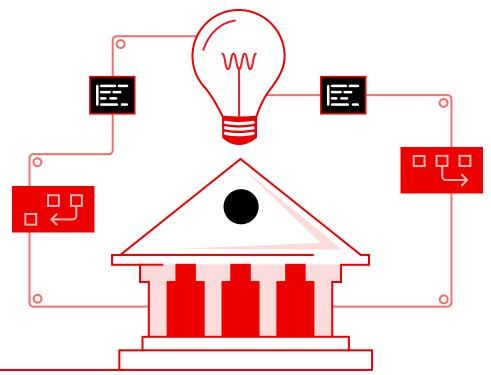
improvement



Banks everywhere are prioritizing their innovation agendas.

When asked for a word that would describe their top priority in their digital transformation efforts, financial services and banking respondents cited "innovation" most often.³

To be successful, innovation must be measured by its ability to boost customer loyalty or speed deployment times. It must also be affordable, and make the most of existing IT resources. As banks seek to transform their operations, they can learn from digital leaders in the following ways.



³ Red Hat. "Red Hat's 2022 Global tech outlook report reveals active participation in the financial services and banking sectors," 7 Jan. 2022.

Put customers in control of their experiences

One advantage fintechs have over traditional banks is the ability to start small and build and iterate based on customer habits and feedback. Their inherent flexibility and nimbleness make it easy for them to adapt to customer preferences.

For banks, providing a frictionless customer experience requires an open and flexible architecture that connects to their traditional and third-party banking systems in a way that's efficient and emphasizes security. This can help you better analyze customer behavior and collect customer feedback, and then make that information available to technology teams so they can incorporate those insights to speed and strengthen their digital offerings and give consumers what they expect.

2. Drive differentiation and competitive advantage through the cloud

The 2022 Global Tech Outlook found organizations in the financial services sector continue to prioritize hybrid cloud strategies, while another 20% of organizations are still establishing a cloud strategy.⁴

The reason is clear: it no longer makes sense to add layers of customization on top of costly and aging legacy core systems. As the demand for new digital services and the importance of personalized, real-time insights grow, legacy core banking systems are unable to keep pace. You need a flexible cloud-based environment that allows you to move data, applications, and services across environments and public cloud providers in a way that is security-focused, reduces costs, and accelerates time to market.

3. Take advantage of the partnership economy

Accenture calls the trend "ambient banking," where large consumer-facing companies weave financial services into their products and offerings in a way that feels uninterrupted to users, taking revenue and customers from traditional banks with them.

Amid growing competition and new business models, the choice for banks is either to promptly and significantly strengthen their offerings to compete, or partner with technology or other fintech companies to increase their market reach or deploy new innovations in a way that would be impossible alone.

of banking executives agree

that their organization's

ability to generate business

value will increasingly be

based on the limitations

and opportunities of their

technology architecture."5

⁴ Red Hat. "Red Hat's 2022 Global tech outlook report reveals active participation in the financial services and banking sectors," 7 Jan. 2022.

⁵ Accenture. "Banking technology vision 2021," July 2021.



Modernize your digital infrastructure



Start to build your roadmap to innovation.

Red Hat and its partner ecosystem gives you the capabilities to thrive digitally. You can choose to buy, build or partner based on your needs and to align with your digital strategy.





Create your digital platform on your terms

Buy

- For standard banking products and services (nondifferentiating).
- When packaged solutions provide near all features with low touch customization.
 - If packaged solutions "fit" into the bank business processes and technology roadmap.

Build

- If creating market differentiation and innovate products and services.
- When seeking fast change to keep market leadership.
- If packaged or partner solutions lock-in creates long term business risk.

Partner

- For emerging banking products & services or differentiating niche offerings.
- When executability or cost-benefit of buy and build doesn't add up.
 - When regulatory risks can be monitored and managed.

With Red Hat[®] Cloud Services as the foundational platform for composable banking, it makes it easier to pursue multiple technology strategies. It can also help you streamline development, and reduce the cost and complexity of delivering cloud-native applications.

Reimagining the bank of the future with a modern cloud platform to continuously evolve your digital platform Functional view of the bank Journeys Support Channels functions Governance, risk Digita and compliance Execution Marketing Product Channel Customer Loans and sales management management management management Product Payment Servicing Account development management and billing processing Embedded Enterprise banking support Products Accounts **Business** Market value drives changes priority and and banking strategy activity Using your digital platform to continuously create new value streams insights drive for the continuous "technology" Journeys Execution Supporting functions review of the (buy, build, "functional" partner) Technology delivery frameworks Products and tools Build Event streaming Integration Partner • Technology view of the bank

Innovation without limitation, a cloud platform for any team or infrastructure Partnerships Consulting Communities Cocreation Platform services Application services Data services Red Hat cloud services Red Hat cloud services

Red Hat has proven experience working with top banks globally and is ready to assist with not only platform technologies but also with consulting services, its partner network, its commitment to continuous software innovation via open source communities and even clients transformation via cocreation. Red Hat also has proven experience in the dynamic fintech ecosystem, supporting that ecosystem's needs on speed and scale.



Red Hat's extensive partner ecosystem gives you choice and flexibility for your hybrid cloud to meet future needs as they arise, and includes:

Temenos Finastra Infosys | Finacle (Edgeserve)

Red Hat and Temenos are working together to simplify a hybrid cloud banking platform that provides modern, security-focused services for bank customers. Red Hat and Finastra are collaborating on an end-to-end platform architecture to help modernize their treasury platforms and take advantage of containers. Red Hat's long-standing strategic partnership with Infosys is designed to help enterprises accelerate their digital transformation.



Real world success stories: Learning from banking digital leaders





Watch the case study video

With more than 8.5 million retail and business customers, ANZ is one of the top four banks in Australia and among the top 50 worldwide.

Like other banks, ANZ must contend with market disruption and customers who expect a different experience. The ANZ customer service platform is a critical part of the bank's commitment to maintaining strong customer relationships. As demand for services increased, ANZ had to ensure its platform could scale and keep pace. In this environment developer productivity and efficiency are critical, as is their ability to make platform updates speedily.

⁶ Red Hat case study. "ANZ Bank reduces deployment time by 98% with container platform," 3 April 2019.

To be successful, ANZ needed a solution that:

- Would manage its containerized environments.
- · Helped increase developer productivity.
- Speed time to the identification and fixing of potential performance issues.
- Help it deliver on its mission to build an even more agile, modern delivery function.

Based on its ability to support containerized environments, ANZ chose Red Hat OpenShift® to provide a foundation for its customer service platform.





Benefits

- With the new Red Hat OpenShift platform in place, developer productivity has increased. Where in the past it could take months to get new functionality deployed, it can now be done in as little as
- The developer team has also been able to embrace new agile ways of working, bringing new ideas that have the potential to benefit customers and employees with speed and increased security.







Emirates NBD cuts application launch times from months to hours

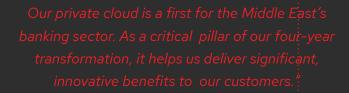


Emirates NBD is one of the largest banks in the United Arab Emirates (UAE), serving customers across the Middle East, Europe and Asia.

Like all large financial institutions, Emirates NBD's competitive landscape has changed significantly with the emergence of local and international nontraditional competitors. One of Emirates NBD's strategies to meet customer expectations for convenient, real-time banking was the launch of Liv., an award-winning digital bank—and the fastest-growing bank in the UAE—targeted to millennial customers who prefer digital banking. To continue this growth, Emirates NBD needed a scalable, resilient foundation for rapid, digital-native innovation.

The bank embarked on a US\$270 million digital transformation⁷ to enhance its end-to-end technology platform over a four-year period. This included Red Hat software.

- Using Red Hat OpenShift Container Platform for Kubernetes container orchestration, integration, and management, the bank created Sahab, the first private cloud run by a bank at scale in the Middle East.
- Sahab provides applications, systems, and other resources for end-to-end development through an as-a-Service model. It also has consolidated data storage and access across the bank for real-time customer insight.
- The Red Hat OpenShift platform runs Red Hat Fuse, and Apache Kafka, a stream-processing platform, to support real-time banking and partner interactions.
- Red Hat Enterprise Linux[®] provides a stable, standardized operating system.



Miguel Rio Tinto, Group CIO, Emirates NBD



Benefits

Emirates NBD reduced its app launch and update cycles from 6-18 months to hours as it planned to transition 95% of its more than 300 applications to Sahab, including Liv. Other benefits include:

- Simplified collaboration between internal teams and with partners using APIs.
- Established flexible yet stable foundation for private cloud today and hybrid cloud tomorrow.
- Positioned to achieve its goal of serving more than one million customers in three countries over the next three years.



⁷ Red Hat case study. "Emirates NBD builds cloud platform to offer innovative banking services," 1 May 2019.

Santander benefits from faster, more agile processes

Read the full case study



Headquartered in Madrid, Santander Group is one of the world's largest banking businesses.

Across the group, digital transformation initiatives—provided by its in-house technology division, Santander Tecnología—are helping differentiate Santander from its competition with continuous innovation.

Santander Tecnología's application development architecture, Darwin, is available on-premise and in a cloud environment, but adapting the architecture for different development teams, changing business demands, and multicloud use required a simple way to customize configurations and allocate resources.





We strongly believe open source provides not only key technology, but an optimal work approach, to create and scale holistic platforms that adapt to existing and future tools and cloud technology."

Joaquín Moraga Gallego, Head of Architecture, Santander Tecnologia⁸ Santander Tecnología worked with Red Hat Consulting to:

- Run its microservices-based applications on Red Hat OpenShift, supported by Red Hat Data Grid, MongoDB, and Apache Kafka, with a separate persistence layer.
- Participate in Red Hat Open Innovation Labs. Over a residency
 of several weeks, Santander Tecnología's teams worked with
 Red Hat experts to optimize its adoption of Red Hat OpenShift
 and adjust processes to deliver desired features and services to
 customers in less time.



Benefits

- Reduced provisioning times for big data environments from several weeks to an average of
- 10-12 minutes
- With more agile, iterative processes, Santander Tecnología can efficiently demonstrate potential new banking solutions and bring them to market in less time.
- By devoting time and resources to learning new, innovative ways of working and adopting emerging technology, Santander Tecnología has improved its ability to attract and retain skilled talent.



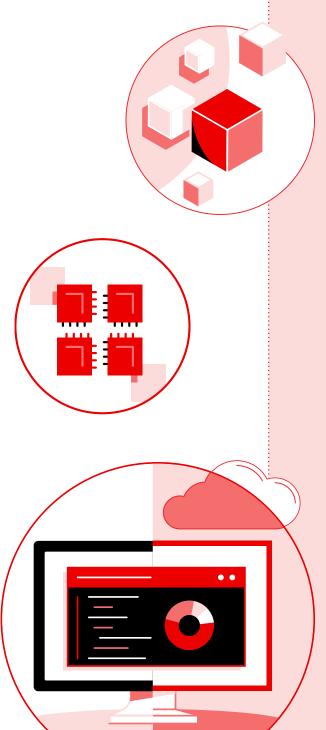
Ally Financial speeds time to market, strengthens competitive advantage

Read the full case study

Based in Detroit, Ally Financial is a digital financial services company that delivers online banking, auto finance and insurance, home loans, investing, and corporate finance services.

To ensure speed and efficiency, Ally needed to transform its IT capabilities to deploy releases much faster and with greater reliability. Ally partnered with Red Hat Consulting to determine how to move from traditional infrastructure to containerized development. Together, they built a containerized hybrid cloud platform for cloud-native application development. Ally also adopted DevOps processes to collaborate better and innovate expeditiously.



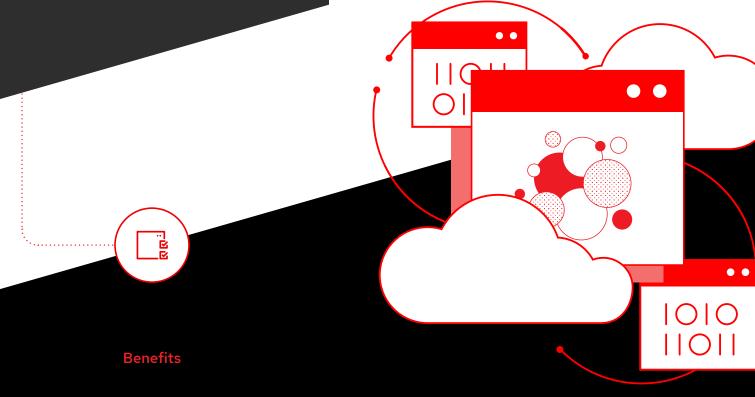




Our market changes quickly. To keep pace, we need reliable, efficient deployments and collaborative processes. Red Hat has helped us reduce deployment times and strengthen our competitive advantage."

> James Hixon, Senior Director, Cloud Automation and Engineering, Ally Financial⁹

The platform and processes are being aggressively adopted across all major lines of business, and most business-critical applications are being onboarded to the platform, including online banking, analytics, and auto resale.



Ally's new platform and processes have:

- Improved time to market, increased agility, and strengthened its competitive advantage.
- Reduced the time for go-live vetting, enabling teams to rapidly react to problems that arise.
- Freed up developers to innovate and introduced time-saving, self-service features.

⁹ Red Hat success story. "Ally Financial adopts cloud platform and DevOps, speeds time to market." 6 May 2019.



Additional digital success snapshots



Banco Pichincha reduces operating costs by 50%

Read the full case study

Banco Pichincha España sought a flexible, cost-effective platform to support its new digital division, Pibank.

The bank used Red Hat OpenShift, running in a private cloud environment, to improve its responsiveness and adapt to emerging technologies. As a result, the bank has cut time to market and operating costs by more than 50% each, compared to traditional infrastructure approaches.





Red Hat has helped us improve our customer experience. Lower costs than a traditional IT approach give us a competitive advantage."

Vicent Escorihuela, Director of IT Infrastructure and Core Banking, Pibank

Benefits

Cut time to market for new services by more than

50%

 Gained flexibility to adapt to new regulations without compromising customer experience • Reduced operating costs by

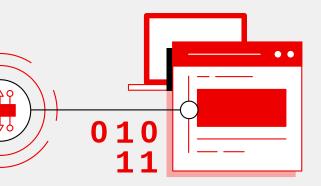


Red Hat case study. "Banco Pichincha España launches Pibank digital division with Red Hat," 5 Nov. 2020.

PT Bank Central Asia speeds time to market for new services

PT Bank Central Asia (BCA), Indonesia's largest private bank, sought to accelerate development to meet new customer expectations introduced by fintech startup competition.

Working with Red Hat Consulting and BCA built a cloud-native, microservices-based application programming interface (API) environment based on Red Hat 3scale API Management and the Red Hat OpenShift enterprise Kubernetes container platform that enables BCA to build and deliver the innovative digital experiences customers want, in less time.



Read the full case study









Benefits

- Reduced time to market for new services and features from three months to one.
- Automated scaling to respond to growing, unpredictable demand.
- Improved resiliency to achieve



Red Hat case study. "BCI builds banking services with APIs and Red Hat OpenShift," 21 Sept. 2021.



CYBG PLC digital banking grows by nearly 1 million customers in less than 12 months

Read the full case study

CYBG PLC, parent group of Clydesdale Bank, Yorkshire Bank, Virgin Money, and digital banking service B, wanted to expand and standardize its digital banking offer to stay competitive against market leaders and new disruptors.

CYBG united three of its brands' services on its operational platform based on Red Hat OpenShift. As a result, CYBG has established a more efficient, customer-focused business to build long-term growth.





Benefits

- Digital banking platform went from 40,000 to more than one million customers in less than
- Increased IT efficiency by automating repetitive tasks and optimizing hardware resource use.¹²

but now it takes as little
as two weeks. We can
react much more quickly
to changing consumer
demands and give them
the features they expect,

Thanussak Thanyasiri, Senior Delivery Manager, Kasikorn Business-Technology Group (KBTG)

12 menths



Kasikorn Business-Technology Group accelerates development times



Read the full case study

To accommodate dramatically increasing demand for its mobile banking app, Kasikorn Business-Technology Group (KBTG) sought to update and optimize its IT infrastructure.

By combining its new Red Hat platform, container, and messaging technology with agile and DevOps approaches, the bank has created a unified notification system and achieved the speed and scale needed to handle massive transaction volumes as its user base continues to grow.



Benefits

• Cut development time from one month to



· Achieved scale to handle

5,000

transactions per second.

 Centralized operational insight for more responsive management and security.¹³



Banco Galicia cuts development and maintenance costs by 20%

Read the full case study

One of Argentina's leading banks, Banco Galicia, wanted to continue to streamline its digital services by migrating its channels and back-end systems to a unified, cloud-native, omnichannel platform.

To support this Digital Experience Platform Initiative, Galicia standardized its retail platform with Red Hat container and integration technologies.



Benefits

- Cut service time to market from months to weeks.
- · Improved customer experience with



less downtime and efficient onboarding.

- Strengthened security with simplified management and compliance.
- Reduced development and maintenance costs by more than





Alliance Bank achieves 136% year-over-year growth

Read the full case study

Alliance Bank, a Malaysian financial services group, wanted to simplify its branch customer experience for opening an account or adding a service.

To build its innovative Branch-in-a-Tablet solution, Alliance Bank adopted agile development practices, supported by Red Hat OpenShift and Red Hat AMQ. This new approach frees employees to focus on higher-value innovation and customer interactions.







API-based integration architecture that allows us to deliver and scale applications faster. Red Hat technologies have accelerated time to market, empowering BCA to deliver the best financial services for our customers."

Heuw Haryanti, VP of IT Application Management & Integration, BCA

Benefits

Achieved

736%

year-over-year retail growth.

 Reduced time to market for new services from months to weeks. - Cut new customer sign-up time from 45 to



 Improved operational costs by optimizing provisioning and hardware use.¹⁵



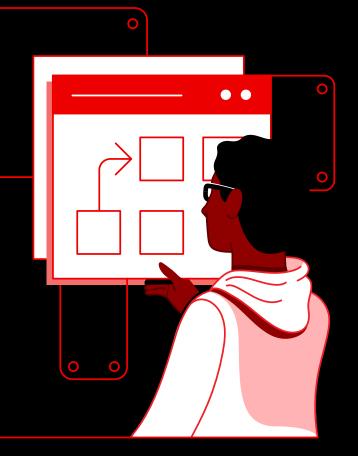
Banque Internationale Arabe de Tunisie reduces app delivery time by 85%

Read the full case study

Banque Internationale Arabe de Tunisie (BIAT), is the leading bank in Tunisia in terms of customers and annual revenue.

To strengthen its position as a market leader and respond to the increasing demand for new digital banking solutions, BIAT began a digital transformation journey, replacing its traditional IT infrastructure with Red Hat OpenShift and agile work approaches.





Benefits

· Reduced application delivery time by,



from weeks to days.

- Improved customer experience with more efficient online services.
- Created path to new revenue opportunities with digital service provider subsidiary, Digital Factory.
- Improved data security with enterprise platform support.16

Red Hat case study. "BIAT delivers banking services 85% faster with Red Hat OpenShift," 23 Mar. 2022.

Credit Europe Bank speeds customer onboarding

Read the full case study

Credit Europe Bank NV (CEB) serves more than 900,000 corporate and retail customers in six countries.

To build and deliver digital services to customers more efficiently, CEB sought to shift from its Java™-based legacy approach to microservices and cloud technology. Using Red Hat OpenShift, the bank can deliver new services to customers at the pace of market demand. Additionally, improved messaging and integration between the bank's systems, as well as third-party partners, helps new CEB customers open accounts in less time—without requiring in-person visits to a branch.





Benefits

- Reduced time to market for innovative digital services.
- Reduced customer onboarding time from two weeks to

15. Minutes

- Improved portability and flexibility across cloud and geographic environments.
- Eliminated infrastructure downtime with expert support.¹⁷





Banfico reduces its deployment times to near-instant

Read the full case study

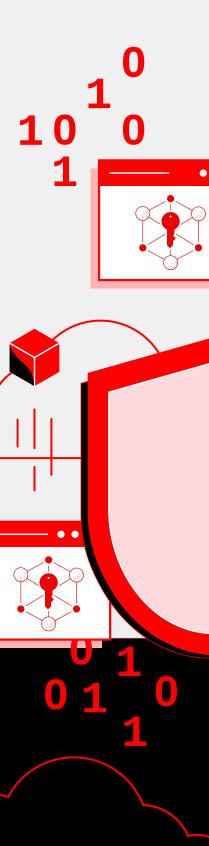
Fintech startup Banfico provides Software-asa-Service (SaaS) solutions to its client banks in alignment with the United Kingdom (UK)'s Open Banking mandate.

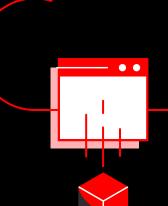
To deliver its services at the pace of market demand while maintaining compliance with the latest industry standards, Banfico sought to adopt a fully managed cloud application platform. With Red Hat OpenShift Service on AWS, the company can rapidly build new applications with self-service provisioning and automated management processes and scale across cloud providers and regions.



Benefits

- Expanded open banking partnerships with aggregated API platform.
- Created scalable foundation for global business growth.
- Reduced application delivery times from 25 minutes to near-instant deployment.
- Enhanced security through built-in, automated compliance with industry standards.





Banco Credicoop Cooperativo Limitado gains greater data and service insight

Read the full case study

Argentina's Banco Credicoop Cooperativo Limitado (BCCL) sought to improve service delivery through its various channels to 2.3 million customers across the country.

The bank decided to improve agility and productivity by replacing its existing enterprise service bus (ESB) with Red Hat Fuse, part of Red Hat Integration, running on Red Hat's enterprise container platform.

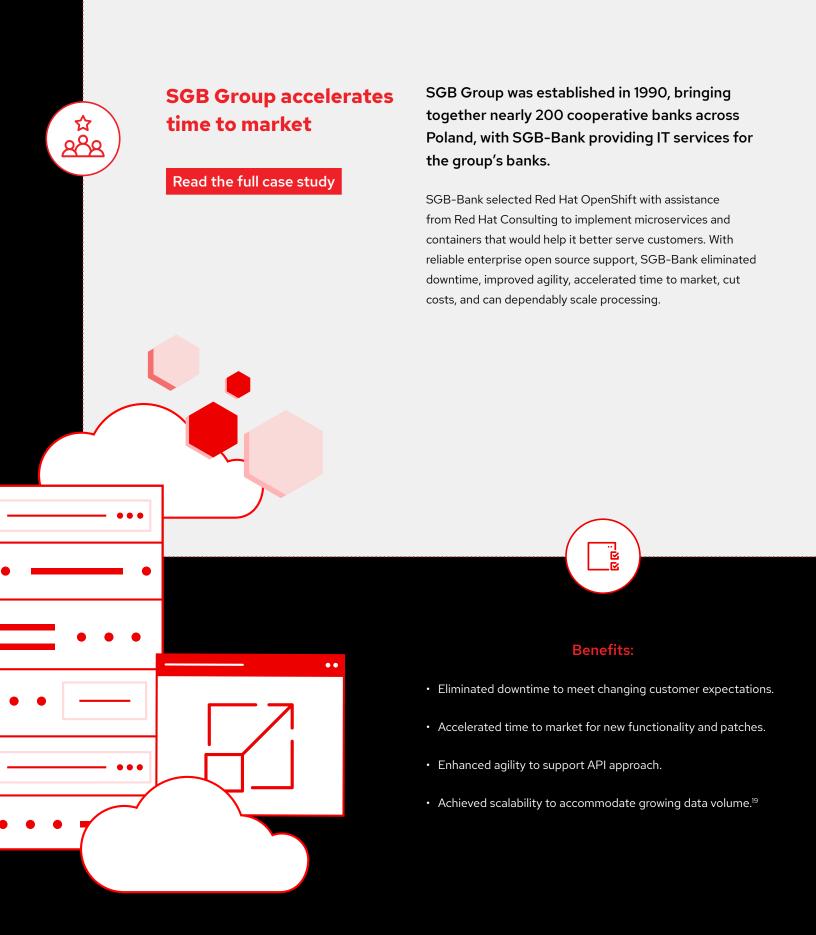
Now, BCCL can update and launch services in less time, supported by greater data insight and agile DevOps approaches.





Benefits

- Reduced ATM response times with modular, microservices-based design.
- Increased efficiency with agile and DevOps approaches.
- Improved management with greater data and service insight.¹⁸





How Red Hat can help

Let Red Hat accelerate your digital leadership journey

We're here to help.

Contact finserv@redhat.com and

let us help you accelerate your digital leadership journey.





About Red Hat





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