Banking on Innovation

BPER Banca moves core banking applications to LzLabs Software Defined Mainframe®

BPER Case Study

LzLabs®
Set IT Free

BPER: Banca

"We chose LzSDM as it is the only platform that could support the incremental migration of our applications to a modern platform, while meeting our requirements for testing, controlling IT costs and, ultimately, accelerating time to market in our application portfolio.

Our core banking applications can now be gradually moved to a platform for innovation that will better serve the future needs of our business."

Omar Campana
Former Group Chief Information Officer, BPER Banca.

The Challenge

In an increasingly competitive banking market, BPER Banca (BPER) faced a challenge. Its business strategy demanded growth, organic as well as inorganic, largely driven by regular technological change, yet its IT budget was limited.

One area constraining both technical change and IT budget was the company's mainframe system. BPER's CIO sought a path to a modern IT environment for enterprise applications, where it could test more rapidly and more consistently, integrate quicker and deploy new applications faster.

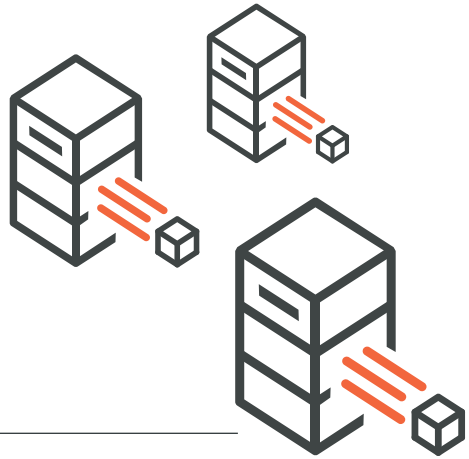
To achieve this, the company began to implement LzLabs Software Defined Mainframe®.

BPER's primary goals were:

- improve time to market.
- increase the pace of change within the business.
- control IT costs.
- up-skill its IT team in order to effect change more rapidly.
- begin the move towards greater use of container technology and DevOps for testing and deployment of core applications.

Solution

Working with LzLabs and its integration partner CWS, BPER has introduced LzLabs Software Defined Mainframe (LzSDM) and completed the first phase of an incremental migration of select core banking services to LzSDM.



Using the SDM:

- BPER now runs the first set of its core banking transactional services on Linux. The applications provide customers with multiple services within BPER's core banking portal, serving more than 1,200 branch offices as well as online banking.
- Data remains on BPER's mainframe during this phase of migration, ensuring graceful, incremental rehosting of transactional services and data to a modern environment.
- LzSDM allows BPER to control its IT costs, whilst offering a platform for future innovation and faster testing.
- No recompilation of applications or data modifications allowed tight integration between the company's mainframe change management support systems. Thus, the same application software could be deployed simultaneously on LzSDM and mainframe during migration.
- LzSDM's unique binary compatible interoperability features allowed the company's application portfolio to be enhanced at full pace (on average about 500 changes a day) during the introduction of LzSDM.
- Mainframe staff have been trained to manage applications in a modern, open environment.
- BPER can begin the move towards greater use of container technology and DevOps for testing and deployment of core applications.

LzSDM eliminates the need to modify and recompile mainframe application source code, and preserves mainframe data in its native encoding format when migrating mainframe applications to an open-source architecture.

In doing so, LzLabs presents companies with a low-risk method of modernizing their mainframe architectures, whilst helping them to navigate the perfect storm of cost, skills, and innovation challenges presented by their legacy platforms.

BPER Banca

BPER Banca is one of Italy's foremost national banks, offering a range of retail and corporate banking products and services to its customers across the country. The company has been running its mainframe systems for over 40 years. In a rapidly digitizing industry, the bank increasingly seeks ways to improve its customers' access to finance through technology while continuously growing its business – an effort that can be hampered by the constraints of its legacy IT.

Like many banks across the world, BPER's core banking applications and data sit on its mainframe. Controlling customer records, current account access and transactions, mortgages, and loan processing (plus many more), these applications are fundamental to the bank's operations.

However, many of these applications are locked into decades-old subsystems, and the antiquated development processes therein. Developing and enhancing them at pace to support modern innovations or integrate new branches is a significant challenge.

The Modernization Project

BPER's mainframe estate processes over 25,000 million instructions per second (MIPS). At this scale, the company has a significant dependency on the platform.

With a focus on controlling IT costs and modernizing IT processes, forging a path for greater use of open-source technologies for testing and maintenance of core applications, BPER has completed the first phase of migration of applications off the mainframe.

Its first transactional mainframe services now run on Linux operating systems using LzSDM – a workload rehosting and legacy application modernization platform.

Using SDM, the company's phase one applications have been migrated to a modern platform with the following benefits ▶

- A low-risk approach, in which services can be turned on and off easily, operational experience improves and cost is reduced significantly.
- Incremental migration capability – applications and data can be migrated piece by piece, while application development speed increases as applications are moved to a modern system.
- No requirement for source-code changes, recompilation,or conversion of data during each phase of migration.
- Data will remain on BPER's mainframe initially, making use of LzSDM's unique interoperability features, resulting in seamless operation.
- Open-source tooling is now standard for the management of the new environment. The existing open platform management tooling can be used to manage legacy applications.
- Begin the move towards greater use of container technology and Devops for testing and deployment of core applications.

A Business Case for Migration

After an initial workload migration to LzSDM:

- Mainframe budget can be reduced as mainframe consumption declines.
- Mainframe usage can now be controlled, mitigating the requirement for future increases in mainframe consumption.

Meanwhile, applications can be tested and deployed using LzSDM as an agile test environment, meaning:

- Time to market is shortened as many more tests can be run in parallel without increasing costly mainframe consumption.
- Testing can be individualized in a "shift left" approach, thus catching bugs earlier in the development life cycle. This approach reduces the cost of bug fixes significantly.

The value of incremental data migration

With LzSDM, applications can be migrated to modern systems incrementally with the option for any dependencies on data and applications that remain on the mainframe to be maintained.

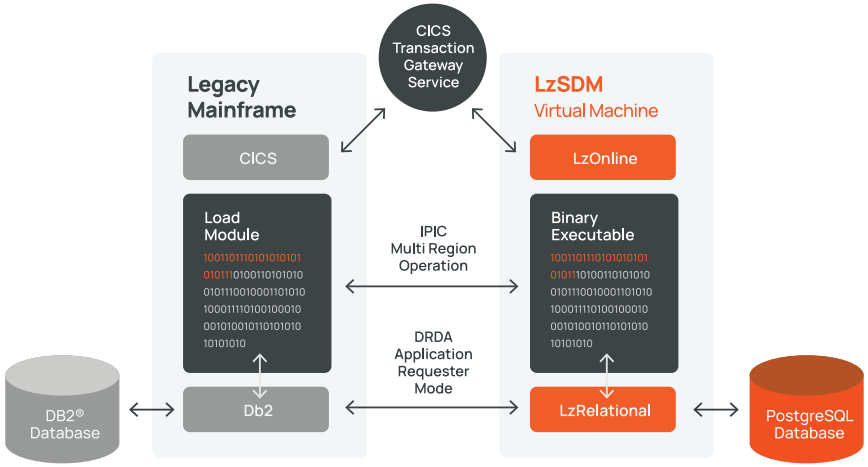


Figure: LzSDM supporting online transactions and mainframe data compatibility during phased migration.

The Results

With LzSDM's capability to support incremental migration, BPER can focus on migrating only the applications that require modernization to Linux operating systems in a phased process.

This approach allowed data to remain on BPER's mainframe during the first phase – sustaining full access and security protocols during the project, until the company decides to begin porting it to a modern database (based on PostgreSQL).

The migration also sets a modern platform for the modernization of core applications. With programs now running on an x86 instruction set architecture, deployment in modern container technologies is straightforward. Over time, the CIO's goal is to standardize container-based testing and deployment of applications, to improve agility.

As shown in figure 1, LzSDM enables rehosted applications to interact with those that remain on the mainframe via the CICS Multi Region Operation feature. Additionally, LzRelational ensures that Db2 data, upon which the re-hosted applications depend, can be accessed via a built-in DRDA application requester capability.

Finally, organizations can dynamically switch transactions between LzSDM and standby copies of the rehosted applications, which remain on the mainframe, using LzSDM's support for CICS Transaction Gateway.

This capability gave BPER the confidence to proceed with migration without any possibility of interruption to the service it was providing.

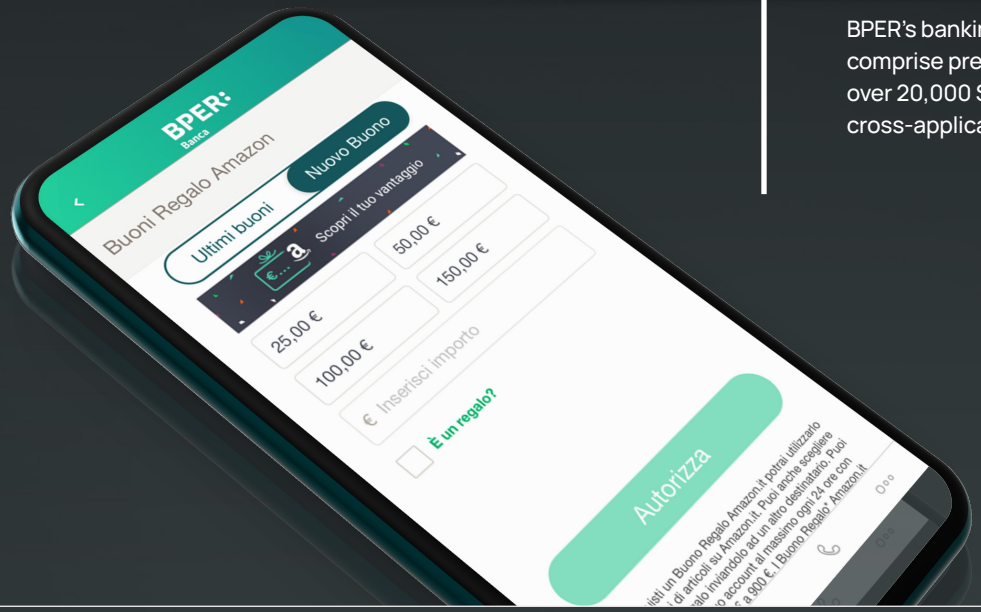
The BPER Application Portfolio

Running three mainframes in a Sysplex environment across two sites, in phase one BPER now operates about 30 services in LzSDM LzOnline™ region in a virtual machine, aligned with the two sites.

With data sharing across all sites and SQL providing remote access to Db2® systems, the company worked with LzLabs to identify applications to migrate in phase one, while sustaining performance and ensuring seamless access to data still on the mainframe.

The applications chosen for the first phase of migration control BPER's front end customer portals, used to manage its retail banking account access.

The company goal, by the end of 2021 is to migrate substantial workload to LzSDM, plus a continuous flow of additional services that can be migrated over time.



BPER: Banca

Moving theses application to LzSDM required interoperable, interface-compatible support for several mainframe technologies like:

- COBOL, Assembler, and C
- CICS®
- CICS Transaction Gateway
- Db2® database and utilities
- Distributed Data Facility (DDF)
- Call Attach Facility (CAF) and Resource Recovery Services Attachment Facility (RRSAF) access to Db2®
- Numerous VSAM files and Partitioned Data Sets (PDS)
- 3rd party utilities for scheduling, replication, database loading/unloading, and file transfers
- Integration with the Software Development Life Cycle ChangeMan

BPER's banking applications in phase one of the offloading scope comprise predominantly COBOL V4 programs, some C and Assembler, and over 20,000 SQL statements. The CICS® element uses a profile of many cross-application services.

The LzLabs Software Defined Mainframe®

At LzLabs our mission is to create revolutionary software solutions, leveraging the creativity of open-source innovation and the power of cloud computing to reduce the risk of legacy application modernization.

The LzLabs Software Defined Mainframe® (SDM), eliminates the need to modify and recompile mainframe application source code, and preserves mainframe data in its native encoding format when migrating mainframe applications to an open-source architecture.

In doing so, we present companies with a low-risk method of modernizing their mainframe architectures, whilst helping them to navigate the perfect storm of cost, skills and innovation challenges presented by their legacy platforms.

If you're seeking new opportunities to set your IT free, then let's work together to make them a reality.
Our Vision

About LzLabs

To unlock the value embedded in legacy systems.

Our Mission
Our unique software transforms existing IT into a modern computing environment and we are passionate about leading our customers to technology that is fit for the future.

Our Story
We love technology, but it's what people do with it that really gets us excited.

Since 2011, we have built and refined technology that revolutionizes how our customers do business.

Along the way we have helped organizations on their modernization journeys, joined forces with partners that help us deliver on our mission and built a team of 100+ brilliantly different people across the world.

Let's Connect

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