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Irish Life

URL: www.irishlife.ie
Industry: Financial Services
Country: Republic of Ireland

Irish Life: A Moving Story

Switching platforms drives innovation

At a Glance: Irish Life

Optimizing the operating environment and modernizing core mainframe applications can reduce operating costs and enable future innovation – all at low risk and without disruption.

Challenge

The Irish Life Group is Ireland's leading life and pensions company. It has more than 2,000 staff and a million customers. It has served the people of Ireland with risk protection, pensions, savings and investment products since 1939.

In 2010, Irish Life reviewed their application portfolio – and the attendant hardware and supporting software – with a view to modernizing IT applications, platforms and processes to tackle long-term cost challenges and ensure they were competitive, cost-effective and agile enough to support future business demands.

The insurance systems portfolio and 3rd party mainframe software contracts were analyzed as part of a wider Group cost-saving initiative. Irish Life concluded that by selecting a different platform better suited to their unique situation, they could realize significant operating cost efficiencies while modernizing their mainframe applications.

Their new focus and strategic direction convinced them that Windows Servers and more competitively-priced tools and services were a much better fit – and could be the springboard that prepared Irish Life for the future.

Looking beyond efficiency savings, Irish Life also wanted to access a range of language options including the flexibility to intermingle legacy COBOL with other .Net languages. "We wanted the best of both worlds – contemporary technologies integrated with tried and trusted mainframe-application code. The business logic would run on Windows servers, enabling data access within a single enterprise database. All our business capabilities had to be there within the new systems from day one," explained Dave Cooper, Retail IT Architect.

Solution

- Micro Focus Enterprise Developer
- Micro Focus Enterprise Server

Highlights

- Optimized environment to run mainframe applications
- Significant operating cost reduction
- Seamless transition
- Increased flexibility
- Application refresh
- Improved, more agile development environment and processes
- Unlocked data

"We were unusual in that we wanted to go beyond a standard 'lift and shift' and embrace modernization."

Barry Ryan,
Chief Technical Architect,
Irish Life

Reuse, rewrite or replace?

The Irish Life portfolio was a complex web of interlinked mainframe CICS and batch applications. The key insurance systems were all built around CLOAS, a heavily-customized version of a CSC package with unique intellectual property captured in over three million lines of COBOL code, as well as a number of home-grown satellite systems supporting the CLOAS system.

Moving CLOAS epitomized the wider challenge around their application portfolio – to rewrite, or move to an alternative package or environment. The Irish Life team had plenty of on- and off-mainframe experience themselves and, keen to make a well-informed decision, drew on internal and external expertise to understand how they could best meet their modernization objectives.

The migration to CLOAS from previous legacy systems had been a major undertaking that had completed in 2005. Barry Ryan, Chief Technical Architect explains: "We had no appetite for the business upheaval that a new solution would entail. Other than cost we were largely happy with the application and the 'lift-and-shift' approach was appealing." Reusing existing code suggested a safer, more stable option.

They concluded that preserving and reusing the IP within CLOAS was essential, but some modernization to move data from their IMS hierarchical database to a SQL Server relational database would bring significant benefits.

Do it Yourself

Reusing the COBOL code base also meant Irish Life retained their subject matter experts, enabling the IT team to perform most of the modernization and optimization work themselves. However, they did need the help of a strong technology partner to move the applications to the new target environment, while providing the productive platform that would reduce technical debt and deliver future innovation.

"In our research Micro Focus came up again and again as the platform of choice for mainframe application lift-and-shift projects offering excellent legacy COBOL compatibility and mainframe feature emulation", said Ryan, "We were not disappointed."

Life: away from the mainframe

The three-to-five year investment program Irish Life predicted has already been delivered at less than the predicted cost – and a planned increase in policies under management has already improved the ROI. Reusing COBOL within the Visual Studio IDE framework made upskilling the team of 26 developers simpler, and, more importantly, easier to attract new talent, with no previous COBOL experience into the team.

The new, multi-year contract Irish Life signed with its mainframe provider is at much lower level. Capital expenditure has been reduced and the successful relaunch of the CLOAS application, now re-engineered to .NET, has improved efficiencies: some batch processes are much faster and a typical CLOAS batch window can be completed in an hour, rather than four. Ryan comments: "This provides us with flexibility around extending our core business operating hours (as the database is read-only during the batch), will reduce the need for out-of-hours cover and removes the risk of early morning system unavailability."

Problem-solving has also improved. Developers working in the new environment are spotting and locating issues much faster and much earlier than on the mainframe using a limited development LPAR and traditional tooling. "We use Visual Studio for everything we do in other languages and using a consistent IDE framework for our COBOL means our whole development team is delivering higher quality code in shorter timeframes", Cooper explained.

Life lessons

So what did Shane Tallant, CLOAS Development Manager, and his team learn from the process? "Go in with your eyes open. It's a big challenge that must be broken down into achievable goals."

"Our database has been re-engineered, the productivity gains have reduced our technical debt and we're prepared for the innovations that will deliver value in the future. While this solution won't work for everyone, it's definitely worth considering if the cost of 3rd party mainframe software is proving excessive and you have access to your application source code. We would do it again, but with the benefit of hindsight, there are two things that would have made it easier for us.

One: Don't underestimate the effort and complexity of migrating the niche components – in our case legacy PL/I, Easytrieve and utilities.

Two: Spend more time up-front weeding out redundant programs, files and jobs to avoid unnecessary testing and migration work."

Irish Life: the 'nuts and bolts'

The tables below highlight the technology involved in the project. Irish Life took a couple of different approaches when moving its systems that utilized 210 MIPS of a shared mainframe running z/OS.

For the main CLOAS application that did not make extensive use of CICS, they removed CICS and deployed the resulting COBOL/SQL Server version of CLOAS within the managed code .NET framework of Windows, re-writing a couple of Assembler modules in C#.

For the satellite systems that made more extensive use of CICS, they re-hosted these 'as is' to a traditional Windows environment to mitigate risk and deliver on time and within budget.

Core CLOAS System

Languages Rehosted or Converted	Number of Programs	Number of Lines of Code
COBOL (Rehosted to COBOL.NET)	3000+	3,000,000+
JCL (Re-hosted to Enterprise Server)	578 jobs	42,000
TP Systems Rehosted or Converted	**# Screens Rehosted**	**# Users / Transaction Volumes**
CICS	N/A	300 users 100k – 200k Transactions Per Day
Data Types and Volumes	**Data Store Post Migration**	**# Files/DB**
VSAM (11 GB) QSAM (1 TB)	Micro Focus ISAM Micro Flat Sequential files	2,403 files overall Largest VSAM – 4GB Largest Sequential – 9GB
IMS-DB (50 GB)	SQL Server 2008 R2	477 Tables Largest SQL Server database – 40GB
Mainframe Job Scheduler	**Windows Scheduler**	**Number of Schedules Involved**
OPC	IBM TWS	187
Mainframe Print Manager	**Windows Print Facility**	**Print Volume**
RMS Print	In-house utility + RMS for Windows	~8,500 pages per day

Satellite Systems

Languages Rehosted/Converted	Number of Programs	Number of Lines of Code
COBOL (Re-hosted to Enterprise Server)	178	605,267
PL/I (Converted to COBOL)	38	23,934
Easytrieve (Converted to COBOL)	39	169,939
TP Systems	**# Screens**	**# Users / Transaction Volumes**
CICS (Re-hosted to Enterprise Server)	385	250 users 300 Transactions Per Day
Data Types and Volumes	**Data Store Post Migration**	**# Files/DB**
VSAM (36 GB) QSAM (48 GB)	Micro Focus ISAM Micro Focus Sequential	64 VSAM files, largest 1.5GB 10 QSAM files, largest 8GB

About Micro Focus

Micro Focus, a member of the FTSE 250, provides innovative software that allows companies to dramatically improve the business value of their enterprise applications. Micro Focus Enterprise Application Modernization, Testing and Management software enables customers' business applications to respond rapidly to market changes and embrace modern architectures with reduced cost and risk.

Contact us at: www.microfocus.com