Summary

CUSTOMER

MFS Investment Management

CHALLENGE

Global Portfolio Modeler (GPM) application was not fast or scalable enough to keep up with growth.

OUTCOME

Migrating GPM from a relational database to InterSystems technology enabled MFS to reach its goals for performance, reliability, application availability, scalability, and risk reduction.

MFS Investment Management + InterSystems

MFS Investment Management Improves Performance, Reduces Risk

Switch From Relational Database to InterSystems Data Platform Technology Accommodates Growth

Risk is inherent in investing, and minimizing that risk is a common goal for money managers. MFS Investment Management®, a global asset management firm based in Boston, Massachusetts, manages more than $410 billion in assets for clients worldwide. When operating at the level of MFS, any trading error can have major, costly consequences.

MFS created its Global Portfolio Modeler (GPM) application to help mitigate investment, operational, and technological risk. Investment and operations teams use GPM to rapidly generate models based on proprietary algorithms, assess risk, run compliance, and generate program trades for globally managed portfolios. But the original version of the application, built on a relational database, was not fast or scalable enough to keep pace with the organization's growth, the increasing speed of trading, and the mounting complexity of portfolios and regulations. So MFS decided to create a new version.

Manuel Delgado, Vice President of Investment Systems Software Development at MFS, observes that, "one of the principal objectives when deciding to revise GPM was to integrate a database that would allow for consistent levels of high performance coupled with a large degree of scalability." MFS chose InterSystems data platform.

InterSystems®
Health | Business | Government

In-Memory Database Speed, With Persistence

A meeting with InterSystems, and the promise of in-memory database speed with the reliability of automatic data persistence, led to a proof-of-concept project using the InterSystems database and Microsoft's .NET programming framework. The project focused on the compliance engine inside GPM. "The compliance engine is central to the investment process, and was running within our relational database," explains Delgado. Running any given model can result in thousands of complex rules being checked simultaneously and, even with tuning, performance on the relational database was lackluster and problematic. The proof-of-concept with InterSystems exceeded expectations for performance.

The Benefits of a High Performance Database in Financial Applications
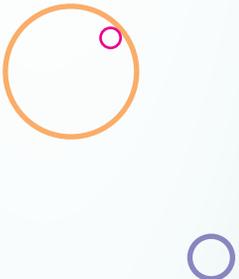
The switch has enabled MFS to reach its goals for performance, reliability, application availability, scalability, and risk reduction. GPM has been remarkably stable with minimal support and more efficient use of development resources. "I really enjoy the fact that now I never hear a word from users about performance problems in GPM," says Delgado.

Increased Performance, Lower Risk

The speed of GPM and its core risk algorithms gives portfolio specialists immediate feedback on risk and other significant metrics during the investment decision-making process. "We have seen a significant improvement in our time-to-market, from model instruction through compliance clearance to execution, since the change to InterSystems database technology," says Delgado. "More importantly, we have seen a significant reduction of investment and operational risk."

Increased Flexibility and Reliability

All InterSystems data platform products combine a highly efficient multi-dimensional data store that simultaneously supports object and relational data access. Developers benefit from having a range of development technologies to choose from, including InterSystems ObjectScript, C++, .NET, and Java, with flexible data navigation. "The whole team enjoyed being able to work with objects in .NET and just persist those objects without mapping," notes Delgado.

Reduced Technological and Operational Risk

Downtime in financial services may mean a significant loss of revenue. So MFS uses the high availability features of InterSystems technology to ensure that if there is a problem, work can continue uninterrupted. "Relational databases have their deficiencies in supporting data-rich, highly computational, transactional applications, which can lead to outages or significant delays," explains Delgado. "The data model offered by InterSystems is well suited for this type of environment. Using the InterSystems data platform we have had a perfect record of availability with GPM."

InterSystems Delivers the New Generation of Data Management

Switching from a "traditional" database has given one of MFS's key applications the speed, reliability, and scalability needed to carry the organization forward for many years. InterSystems data platform has proven to be a better solution for:

- Minimizing investment, operational, and technological risk

- Providing superior time-to-market response for managing portfolio cash flows

- Guaranteeing that a modeling exercise will not alter the risk profile of a portfolio

- Providing a flexible and scalable platform to enable business growth

"GPM is a vital application for MFS. Looking at the order volume generated by the application since its inception, GPM has proven to be a remarkable success," says Delgado. "GPM and InterSystems technology have helped us clearly mitigate the risk of trading errors on the investment and operational sides of the business."

"USING THE INTERSYSTEMS DATABASE WE HAVE HAD A PERFECT RECORD OF AVAILABILITY WITH GPM."

Manuel Delgado,
Vice President of
Investment Systems
Software Development,
MFS Investment
Management

The power behind what matters.

InterSystems®
Health | Business | Government