Compuware joins BMC to empower the next generation of developers to mainstream the mainframe. Bring apps that run on the mainframe to market faster with increased quality as you accelerate your evolution to an Autonomous Digital Enterprise.

**Business Challenge**

One of Europe’s largest private banks faced a common IT management challenge. Although its mainframe development needs were increasing, it stopped developing new mainframe applications and allowed its mainframe development staff to shrink around 30 percent by attrition.

For one thing, use of the bank’s mainframe applications and data by new and existing distributed, web, and mobile applications is increasing. At the same time, developers no longer build new COBOL applications but must constantly modify mainframe code to assist non-mainframe applications.

For another, the bank can’t wait forever for coding changes to be completed. Competition in the financial services market is intense, making time-to-benefit important, whether for customers’ mobile experiences or new capabilities for staff, and putting pressure on the mainframe software development lifecycle.

That lifecycle has to produce defect-free code. The bank’s mainframe applications are critical to everything it does and everything customers and regulators expect. Mainframe test/QA must be rigorous and fast. If the testing process uncovers a problem, it must be rapidly and accurately diagnosed, fixed, and tested again.

Another issue is the more the bank’s non-mainframe applications tap into its mainframe environment, the more vigilant the IT team must be about performance and capacity utilization issues. Every new query and transaction originating outside the mainframe adds to the mainframe workload.

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**Lead Software Configuration Manager | Large European Private Bank**

The success of a non-mainframe application rollout or update often depends on a seemingly small but critical piece of mainframe code. It’s a very good idea for IT to invest in new visual mainframe DevOps tools that make it as easy as possible for development and test/QA staff at all skill levels to modify mainframe code as required—quickly and with the highest degree of confidence.

BMC Compuware Provides Visualization for European Bank to Improve Mainframe Code Management
If a non-mainframe/mainframe interface is badly designed, it can monopolize a mainframe resource, adversely impacting other systems.

“It’s not easy when you’re stuck between disinvestment in the mainframe and increasing pressures to make a growing number of relatively small but potentially high-impact changes across all your mainframe programs,” says the lead software configuration manager. “That obviously forces mainframe managers like me to do things a lot differently than we have in the past.”

Disinvestment affects the mapping of mainframe developers to mainframe applications. When staffing levels were higher, a lead developer took ownership of one or two applications and maintained familiarity with the evolving inner complexities and idiosyncrasies of each. Today, as headcounts decline, long-term mapping is gone and developers must work on unfamiliar, poorly-documented applications.

Lack of familiarity makes it difficult and time-consuming for developers to understand how coding changes impact primary applications and applications dependent on primary applications. In test/QA, lack of familiarity with applications makes it difficult and time-consuming for developers to diagnose root-causes of functional failures or poor performance.

Given the complexity-accumulated inter-dependencies between applications and databases, developers even struggle to understand coding and performance issues within applications they know relatively well.

The solution has been to embrace visualization with BMC Compuware tools like BMC Compuware Topaz, BMC Compuware Xpediter, BMC Compuware File-AID, and BMC Compuware Abend-AID, providing developers with visually intuitive insight into application relationships, runtime behaviors, and problems in programming logic flows.

Issues that previously took hours to find now take developers minutes with these visualization tools, which also help developers understand in advance the implications of coding changes to avoid re-coding and re-testing.

In one example, given the ability to graphically visualize a mainframe application’s runtime activity in high-level production and “drill down” to a detailed view, the team noticed a batch process was completing later and later. If the trend continued, the process would not complete before the open of business, spelling trouble for the bank.

Using BMC Compuware’s Topaz for Program Analysis, they zeroed in on a sort-program call repeating hundreds of thousands of times a night. A simple code fix reduced that egregious performance bottleneck to a single call.

The manager also points out that a well-visualized dev/test workspace with the right tool integrations makes it easier for developers to move between mainframe and non-mainframe environments, regardless of their “home field.”

This benefit is vital for two reasons. First, as mainframe veterans retire from
the bank, Java/x86 developers must pick up the slack, but not with dated green-screen tools. Instead, they use highly intuitive visualizations to navigate unfamiliar, poorly documented, complex mainframe applications. In one case, rapid visualization helped the team avoid a potentially disastrous technology snafu, saving IT hours of frantic troubleshooting.

Second, as the manager’s sort-program call example demonstrates, mainframe and non-mainframe code must increasingly work in tandem, and keeping them in silos is counter-productive. Visualization gives all developers on all platforms a single, common basis for collaborating on great applications.

"Some people view visualization as a ‘nice-to-have,’ but it is actually a powerful and essential enabling technology for any enterprise—especially a world-class financial institution like ours—that has to leverage its mainframe applications and data in the context of its total digital business effort."

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