

# Beyond the Mainframe

in the 21<sup>st</sup> Century

**For decades**, the mainframe has been the epitome of high-performance, mission-critical computing. Virtually every *Forbes Global 2000* company, including hospitals, insurance companies and financial institutions, has relied on mainframes at some point in the past 40 years to handle vital business workloads. But business needs are constantly evolving. Today there's more pressure than ever before to address budgetary and regulatory constraints while finding more efficient ways to provide exceptional service. Customers demand more cost-effective solutions that enable greater flexibility without compromising service levels and customer satisfaction.

## Legacy Technology, Modern Challenges

Enterprise customers are facing new challenges with their mainframe installations. Modern application solutions can deliver substantial increases in business productivity, but many of these applications are not available for mainframe platforms, which narrows the mainframe's ability to address the company's needs. According to Gartner, "Although these [legacy] applications provide tremendous value over their life cycle, the inevitable impact of age on the applications is becoming a limitation to many companies' business imperatives ... Even those applications that satisfy current business demands are often seen as difficult and expensive to operate and not agile enough."<sup>1</sup> In addition, new advances related to highly productive software development tools and Services Oriented Architecture (SOA) solutions are more commonly available on newer platforms such as Microsoft's .NET system. Traditional mainframe-style batch processing and terminal-based computing are no longer sufficient for real-time customer demands and dynamic market changes. The computing user base now includes virtually every employee, so IT departments must provide modern systems that are intuitive and easy to use. When the time comes to invest in new enterprise systems, you must choose

an agile infrastructure that supports both old and new enterprise application paradigms and has a broad ISV community with solutions to typical business scenarios.

A major reason why mainframe customers are evaluating other platforms is the shrinking base of trained IT professionals to maintain mainframe environments. According to Gartner, "One of the greatest risks for these systems is not the applications themselves, but rather the skills necessary to continue to develop, maintain and operate them."<sup>1</sup>

In order to protect IT investments and enable business continuity, mainframe-class solutions must deliver exceptional reliability and the latest enterprise technology. This is vital in areas such as patient records, banking and process control, where there is zero tolerance for delays and errors.

## Mainframe Alternatives To Address Current Needs

As you evaluate alternatives to your mainframe environments, another key consideration is total solution cost. Many companies are choosing lower-cost Microsoft® Windows®-based solutions for their next-generation enterprise platform. In particular, mainframe-class HP Integrity servers with Dual Core Intel® Itanium® 2 processors and Microsoft

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— Gartner, Inc.

To find out how solutions from HP, Intel and Microsoft can help future-proof your company, visit [www.futureproofnow.com](http://www.futureproofnow.com)

<sup>1</sup> Gartner, Inc., "Impact of Generational IT Skill Shift on Legacy Applications," Dale Vecchio, March 14, 2007



**Microsoft**

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Windows Server 2003 deliver business value across a broad range of enterprise applications for substantially less cost than other platforms.

The growth of the Intel processor performance curve over the last decade means that Intel-based servers like HP Integrity can scale to meet the most demanding workloads in areas such as financial services, manufacturing and health care. And, with Windows-based servers now representing over two-thirds of the server market, modern application vendors, service providers and IT professionals are increasingly standardizing on Microsoft solutions. The volume economics that helped drive down the cost of Intel-based Windows computers are now benefiting the enterprise server space.

The HP-Intel-Microsoft platform delivers features often associated with mainframe computing. Intel's Explicitly Parallel Instruction Computing (EPIC) technology provides advanced implementations of parallelism, predication and speculation, resulting in extreme performance while offering superior availability. HP Integrity servers, such as the highly scalable Integrity Superdome, support up to 128 Intel Itanium 2 processors, can host multiple operating systems through virtualization technologies and include a range of high-availability features such as N+1 hot-swappable components, built-in error-correction diagnostics, fault-isolation technologies and online I/O and memory upgrades. Microsoft Windows Server 2003 and SQL Server 2005 include powerful services that enable customers to address next-generation computing requirements. These capabilities include fail-over clustering, transaction monitoring, resource management, systems management tools, enterprise application development tools and interoperability with other enterprise systems and applications. The Microsoft solution ecosystem also includes numerous tools that help customers to move existing mainframe applications to Windows through the support of COBOL, CICS and other legacy systems.

## You Have a Choice

For customers worldwide, choosing a more modern enterprise platform is crucial to continued success. Traditionally, the **São Paulo Stock Exchange (Bovespa)** chose mainframes for its most mission-critical needs. However, when it had to develop a modern system for its clearing and depository operations, Bovespa selected an HP-Intel-Microsoft platform. The new system helped to address time and budget constraints as well as give the IT staff a chance to work with a more agile, advanced platform. "Development was faster and cheaper than on the mainframe, and this was a great opportunity for our IT professionals to evolve their knowledge on the new platform," says Joel Ribeiro, system development manager. Based on the success of the initial trial project, the organization has moved all of its mainframe

workloads, applications and IT skills to the new HP-Intel-Microsoft standards-based platform. The results have been dramatic. Bovespa now has high-performance, lower-cost and scalable systems that provide a secure, reliable environment for stockbrokers. Bovespa's IT staff has been trained to develop new applications faster and manage their systems more easily with the latest system automation tools.

Customers in other industries have also benefited from moving their legacy systems to HP Intel-based servers running Windows Server 2003. An IBM OS390 mainframe was running fine at **AmerenUE's Callaway nuclear power plant** — but executives sensed that the inflexibility of mainframe technology would position them poorly for the future. So they migrated and consolidated 50 mainframe applications to an infrastructure based primarily on the Microsoft Windows Server operating system, which enabled them to decommission the Callaway mainframe. They rewrote small- and medium-sized applications using Microsoft .NET-based tools and they adopted more than 20 commercial, off-the-shelf applications. The result: Callaway gained the agility to respond to business needs faster and more effectively than before. The company saves nearly \$1 million annually in reduced personnel and licensing costs, and it gets the same reliability it enjoyed on the mainframe. "The mainframe was very stable, but so is Windows," says Janice Hoerber, applications IT supervisor, AmerenUE at Callaway nuclear power plant. "I can say that after five years of experience on the Windows platform."

## Today's Innovation

Modernizing mainframe solutions doesn't mean you have to stay tied to one vendor's old technology, nor does it mean you have to abandon your mainframe application investments. You can migrate applications while gaining full access to one of the highest-performing, modern enterprise platforms available. With cost-effective HP-Intel-Microsoft solutions, you benefit from a modern platform that runs both mainframe-class applications as well as bleeding-edge enterprise solutions. If you are considering modernizing your data center, then HP's Application Modernization Services can help you prioritize next steps and develop a customized modernization road map. Together, we can address your ROI and agility goals while minimizing the risk of business disruption during the process. ■

### Ready to get started?

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