Mastering the business of intelligence

HP puts the pure power of information in your hands.

Flexible. Predictable. Superior return on technology.

Creating and acquiring mountains of data is one thing. The ability to access, integrate, analyze, and act on this data to create a business advantage is another. And this has never been truer than today, when the relentless pace of change demands that you be able to adapt quickly to survive and thrive.
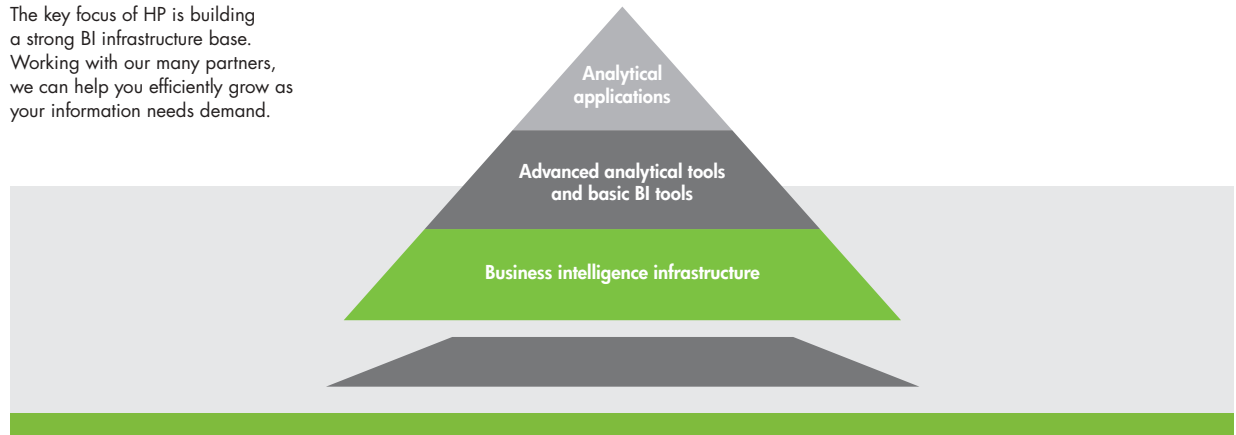
Knowledge is power, and HP can help put the pure power of information in your hands. We bring a unique combination of technology, partnerships, services, and experience to the business of intelligence so you can demand more from your data—and get it.

Business intelligence has become business critical

Business intelligence (BI) and its key enabling technology, the data warehouse, have been around for some time. Organizations have approached BI in many different ways. Some have built small departmental data marts. Others have developed enterprise-wide data warehouses. And still others have implemented BI as an extension of their enterprise resource planning (ERP) systems. Today, some organizations have tens or even hundreds of disparate BI solutions.

All of these approaches have something in common. The demands of business decision-making today are so high that traditional "back-office" thinking about BI and data warehousing just won't work anymore. How your organization handles decision-making may control the future of your business. BI solutions are now business critical and you can't afford any information bottlenecks.

Businesses are now rethinking BI solutions. They want to consolidate isolated solutions, and they are building integrated next-generation data warehouse architectures that will achieve economies of scale, better price/performance, decreased duplication, and improved IT flexibility. These organizations are striving to both manage and analyze enormous amounts of data without performance loss and respond to near real-time events and opportunities—so they can turn their data into knowledge, power, and profit.

HP infrastructure solutions deliver maximum return on the IT investment today and in the future

Whatever size and scope you need, whatever OS you run, or whatever software solutions you prefer, HP will work with you to integrate all the solution elements into a complete BI solution that turns your data into knowledge and your knowledge into profits. We build your solution on a flexible infrastructure foundation that is designed with BI in mind. At the base, you have an infrastructure designed to adapt and grow along with your needs, and we work with you to select the right analytical tools and applications offered by our many software and system integration partners. Wrapped around these solutions is world-class service and support from HP and our partners, and our years of experience delivering data warehouse and BI solutions.

With business intelligence solutions from HP, you'll have the power to integrate massive amounts of data and handle complex queries using data from everywhere—legacy systems, ERP systems, Web sources, and external data providers. And you'll have the analysis tools and applications to transform that data into actionable information—the single version of the truth—so that you gain the insight into your business that will drive more enlightened decision-making and enhance profitability.

3

The key focus of HP is building a strong BI infrastructure base. Working with our many partners, we can help you efficiently grow as your information needs demand.

Analytical applications

Advanced analytical tools and basic BI tools

Business intelligence infrastructure

Business goals and IT masterfully synchronized: an adaptive enterprise

The challenges

- Manage costs while investing in innovation for competitive advantage
- Increase the level and quality of IT services delivered to the business
- Manage risk to guarantee the secure and continuous operation of the business
- Drive competitive advantage with an IT environment that dynamically adapts and evolves to improve business agility
- Turn your business data into meaningful intelligence—the single version of the truth—leading to better decisions and improved profitability

HP is ready to meet the challenge. Working closely with our customers, partners, and industry leaders, HP has shaped a vision for the future of IT, called the HP Adaptive Enterprise. With the HP Adaptive Enterprise vision, business goals and IT investment evolve symbiotically into a close partnership that enables you to build a highly adaptable organization that is able to respond to opportunities and challenges in real time.

"Our performance for financial reporting improved across the board since installing the HP StorageWorks SAN. In some cases, jobs that took three hours to run now finish in 90 minutes."

Stan McCreight, Senior Technical Specialist, The Dow Chemical Company

The foundation of an adaptive enterprise is a powerful, flexible infrastructure

An adaptive enterprise needs a flexible platform for managing change, and HP is a leading provider of customer-proven BI infrastructure solutions. Our BI infrastructure employs a standards-based framework that leverages best-of-class technology and components to create a new level of integration between business and IT. This infrastructure can help ensure predictable performance, deliver superior service levels, and lower IT acquisition and operating costs. It provides the evolutionary path to an adaptive enterprise and an architecture in which business goals and IT investments are masterfully synchronized.

Your IT infrastructure provides the foundation technologies for your BI solutions. And HP knows how to get the infrastructure right, with the following options:

- **HP server and storage solutions for every BI workload**— HP platforms lead the industry in both raw performance and price performance. From a small data mart to the largest multi-terabyte data warehouses in the world, HP has a breadth of platforms that can ably handle leading BI solutions, including those based on UNIX®, Linux, Microsoft® Windows®, and Itanium®-based systems.

HP also offers a wide range of storage solutions, including a true high-end storage platform with our disk arrays. These solutions feature the fault tolerance, redundant architecture for no single point of failure, and excellent scalability demanded by large data warehouses.

4

Designed with BI in mind, HP Superdome is the industry's leading high-end server platform with superior performance, partitioning, connectivity, availability, and utility computing capability.

Business intelligence solutions are everywhere—from manufacturing and retail to finance, government, and telecom.

- Analytical CRM and supplier relationship management

- Call behavior analysis and campaign management

- Distribution analysis and fraud detection

- Inventory analysis and monetary risk

- Security and compliance analysis

- Sales patterns, service usage, and value chain analysis

Whatever your industry or application, HP and its partners can work with you to define, develop, and deliver the business intelligence solution that provides the predictability, flexibility, and superior return on IT you need to survive and thrive.

- **Start small and grow with on-demand solutions—** Too often data warehousing projects have failed because the systems they were built on couldn't grow along with them. System architectures unable to scale because of memory shortages, too few CPUs, too little I/O capability, and poorly tuned architectures for BI workloads have all contributed to information bottlenecks and lost opportunities. HP on-demand technologies, part of the HP Adaptive Enterprise strategy, can help you break this cycle by letting you match capacity and cost with your business needs. These technologies—Instant Capacity On Demand (iCOD) processors, metered capacity, and managed capacity—permit pay-as-you-go growth, giving you the flexibility of an incremental approach to business intelligence and data warehouse development and deployment.

- **Management tools ideally suited to handle dynamic workloads—**The award-winning HP OpenView management suite is ideal for monitoring and managing dynamic BI workloads. HP Managed Services can address the total management— operational and analytics—of BI applications, such as the Business Warehouse in SAP R/3 implementations.

- **IT consolidation solutions reduce cost and complexity by doing more with less—**Many of today's data warehouse projects began as independent data mart projects. This isolated or "siloed" approach to information is a huge obstacle for business intelligence solutions today. HP IT consolidation solutions are an effective way to bring together data integration, data staging, data warehouses, and independent data marts for cost savings, better management, scalability, and availability. These solutions also take advantage of iCOD processors and partitioning to deliver improved flexibility, performance, and management to complex BI environments.

- **Virtualization dynamically reallocates resources in response to changing business needs—**HP virtualization delivers fundamental technologies and solutions that allow you to pool IT assets across storage systems, servers, networks, and complete data centers so that resources can be quickly allocated and re-allocated to address your needs in the moment.

  One example is the HP Utility Data Center (UDC) solution, which provides the architecture and software for the first scalable, programmable data center, enabling even large computing environments to be flexible and cost-effective while delivering consistent quality of service.

- **Real-time BI with HP NonStop infrastructure—**At HP we understand your need to know your customers more intimately and react more quickly than the competition. We can deliver the real-time enterprise (RTE) today with our zero latency enterprise (ZLE) framework offered by our NonStop products, which can increase your competitiveness by eliminating information lag from IT systems and supporting functions.

  With HP ZLE, whenever events occur, you can gather and process data continuously, in real time, and immediately access it across the enterprise. The power of real-time BI becomes clear when you combine the HP ZLE framework with the traditional BI solutions based on data warehousing. You can now leverage the power of traditional strategic decision-making in real time.

With business intelligence solutions from HP and our partners, you'll have the power to integrate massive amounts of data and handle complex queries using data from everywhere.

Continental Airlines

Responding to turbulent times and a data center running out of space, Continental Airlines turned to IT consolidation solutions to optimize its IT infrastructure and achieve a payback period of less than one year.

The challenge
- Consolidate application environments running on multiple servers
- Develop a corporate-wide, enterprise solution to develop projects as well as run production applications
- Respond to corporate mandate requiring that all approved IT projects achieve a return on investment (ROI) in less than one year

The solution
- Storage area network (SAN)
- HP Superdomes
- HP SureStore Disk Arrays

The results
- One-time cost savings of several million dollars, with a savings of more than a million dollars per year thereafter
- Payback period of less than one year with an ROI exceeding 100%
- 30–50% application performance improvement over the legacy environments
- Easy expansion of the consolidation since initial implementation

The London Stock Exchange

To meet today's "speed of business" demands, the London Stock Exchange required a flexible, highly available solution to streamline communications between six primary retail service providers of stocks and its community of independent stockbrokers.

The challenge
- Replace an inefficient, cumbersome telephone process with automated communications
- Build a retail-market gateway to act as intermediary between retail service providers and brokers
- Provide a consistent interface for brokers
- Develop a message broker to route and log stock price requests, responses, and transactions
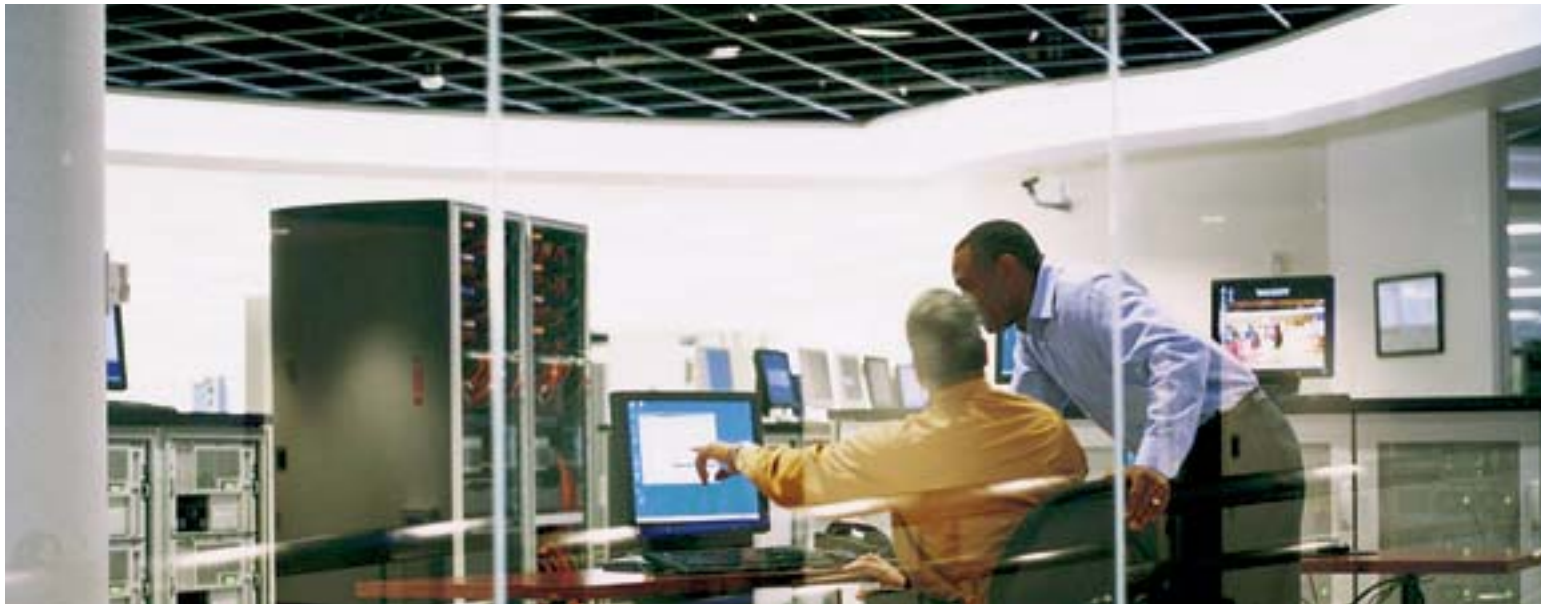
The solution
A business-intelligence solution built on HP, Accenture, and Microsoft:

- Front-end HP ProLiant Web servers
- Middleware business-logic platform (Accenture) running on HP ProLiant DL380 and DL580 servers
- Back-end database on ProLiant server with clustered Microsoft SQL database
- HP StorageWorks MA8000 modular array for "no single point of failure" performance and resilience
- Microsoft Windows 2000 and Microsoft business logic—Biztalk
- HP Business Critical Services and consulting services

The results
- 700,000 to 4 million transactions per day
- High-quality, real-time price information to market users worldwide
- Improved flexibility, availability, and scalability

We work with only the best so you get the best

HP has worked diligently to develop a world-class set of partnerships with the industry's leading business intelligence independent software vendors (ISVs) and systems integrators. These partnerships go much deeper than name only. We work together on everything from vision and joint R&D to cross-training our sales forces and technical staff to developing reference architectures and centers of excellence.

With these partnerships, everybody does what they do best. HP focuses on delivering the core systems, storage, and services infrastructure that form the foundation of your BI environments. Our partners focus on delivering a rich set of software tools—BI databases and infrastructure, basic and advanced BI tools, and complete analytical applications for both IT and knowledge workers. Together, we deliver a complete solution that will help you make the most of your data and IT investment.

"The solution that HP and Oracle are providing to Wells Fargo today is a truly integrated hardware and software package that provides seamless reliability, application failover, database redundancy. It's all we could ask for."

James Lynch,
VP, Software
Development,
Wells Fargo Private
Client Services

Solutions for all levels of business intelligence

	Partners
Analytical applications	Accenture
	Bearing Point
Insight into the business	Business Objects
Corporate and business performance management	Cap Gemini Ernst & Young
	Cognos
Business activity monitoring	Deloitte Consulting
Optimizing relationships	E.piphany
Analytical customer relationship management	Hyperion
	Oracle
Supplier relationship management	PeopleSoft
	SAP
Partner relationship management	SAS
	Siebel Systems

Advanced analytical tools	Ascential Software
Data mining	Business Objects
Deep analytics	Cognos
Profitability	First Logic
Forecasting	Hyperion
Profiling	Informatica
	Microsoft
Basic business intelligence tools	MicroStrategy
Query	Oracle
Reporting	ProClarity
	SAS
Online analytical processing	SPSS
	Sybase

Business intelligence infrastructure	Ascential Software
	BEA
	Business Objects
Foundation technologies for data warehouses, data marts, databases	Cognos
	Hyperion
	IBM DB2
	i-flex
Servers and storage	Informatica
Data integration	Microsoft
Data warehousing	Oracle
	SAS
	Sybase
	webMethods

Working with you every step of the way
With HP building from the bottom up and working with partners throughout, every aspect of your
BI solution is covered by the team member who knows it best.

Business modeling and customer engagement		Business vision
Business process consulting IT architecture and design	Partners	BI/data warehouse discovery and solution design
Prime system integration		Project management and systems integration
Application consulting/Application hosting		ISV startup solutions
IT consulting/IT hosting		IT consulting for BI/data warehouse and rapid IT deployment for BI/data warehouse
Platform support	HP	Business continuity solutions, utility computing solutions, mission-critical computing solutions
Platform		Servers and clients—HP-UX, Windows, Linux; storage and data integration; HP OpenView; ISV platform tuning and sizing

Building traditional and real-time BI solutions demands a global support infrastructure

As business intelligence and data warehousing solutions have become more powerful, they have also become more business critical. Your customers expect you to meet stringent service-level agreements, and business revenues are at risk if you don't meet them.

When you get the infrastructure right, everything is possible.

Infrastructure services are a key component of the HP Adaptive Enterprise vision, and are crucial to your business intelligence solutions. Using our proven methodology, HP Services business intelligence experts can help you build either a traditional or real-time BI solution that is tailored to your unique requirements.

From a departmental data mart running Microsoft SQL Server to an enterprise-wide data warehouse with Oracle on a Superdome to a real-time ZLE solution, HP Services consultants understand how to apply technology to deliver a real return on your IT investment. Our BI experts can help you get the most out of the platform you choose, and we have proven experience with a wide variety of industry-leading BI solution products.

With our collaborative approach to BI consulting, we have the flexibility to work with you in many ways so that you get the level of support you need—from the end-to-end analytical customer relationship management (ACRM) solution delivered by our Oneview practice, to BI consulting for Microsoft's .NET BI suite, to ZLE implementations for real-time BI. In addition to BI solution delivery, our consultants also provide know-how consulting and skills transfer to guarantee the long-term success of your projects.

A visionary in the business of intelligence

HP has deep roots in the business of intelligence. We've been there since the early days of decision support systems, and built our own data warehouse program in 1991. Since then, HP has delivered more than 400 data warehouses for customers and has more than 2,000 BI customers today.

HP leads the industry in BI infrastructure. And everything we've learned since our early entry into the market is woven into the fabric of our new design and development efforts. Our experience in business intelligence and data warehousing is reflected throughout all our hardware, software, OS, utility, storage, and service offerings. One example of HP's "design with BI in mind" is our Superdome server, a highly parallel system with huge I/O bandwidth, single-system availability, and hard and virtual partitioning—which makes it the most recognized platform for larger-scale BI implementations.

HP continues to break new ground in the computer and storage technologies needed for business intelligence applications, as well as drive innovation with the leading business intelligence ISVs.

Demand more— more accountability, more agility, and a better return on IT

DM Review shows that of the top 100 companies recognized in BI, HP is ranked in the top 5[1].

HP can help you create a platform of change for your company by working with you to build an adaptive enterprise that is masterfully designed for your business intelligence needs. Our combination of technology, partnerships, service, and experience makes us the best partner to help you build the dynamic link between your business goals and your IT environment—a link that will put the pure power of information in your hands.

Demand more from your data and you'll get it from HP.

For more information
To learn more about business intelligence solutions and the adaptive enterprise from HP, visit one of the following Web sites:

www.hp.com/go/bi

www.hp.com/go/adaptive

Many of the world's most powerful computers are running BI projects. Telcos, banks, and retailers are building large data warehouses and doing deep analytics on HP Superdome servers[2]. Some of these companies include:

–ABN AMRO
–Amazon.com
–BellSouth
–France Telecom
–Telecom Italia
 Mobile
–Wachovia Bank

HP is the Market Leading Vendor of BI Servers in 2002 according to IDC[3].

[1]DM Review, annual readership survey of the top 100 companies in BI/data warehouse, December 2002.

[2]TOP500.org, June 2003.

[3]BI Server Market Forecast, 2002–2007, IDC, April 2003.