

Know More, Do More, Spend Less: Improving ROI with HP and Oracle Business Intelligence

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EXECUTIVE SUMMARY

Business intelligence systems are no longer an option for companies seeking to increase revenue or cut costs. Such systems are expected to deliver high return on investment (ROI) for the business. Executives often explore the pros and cons of a single vendor solution or choosing “best of breed” solutions providers. Oracle and HP jointly deliver best of breed benefits while eliminating risk through one of the most effective partnerships among leading technology providers.

This paper explores how Oracle and HP offer business intelligence solutions that provide clear business value and looks at emerging trends important to most businesses. Within the paper, you’ll find practical examples of companies in major industries such as retail, telecommunications, financial services, and consumer packaged goods leveraging this joint solution for business advantage. In fact, companies that already use Oracle and HP to manage their data have found that they can improve return on their investment through better business intelligence.

ACHIEVING RETURN ON INVESTMENT

Business intelligence systems are rarely built for speculative business benefit today. Rather than embarking on lengthy implementation strategies that may or may not yield ROI, companies are typically deploying incremental solutions that require about 3 months to build. ROI is measured at delivery of each of these increments.

Common business drivers are now apparent. These drivers include needs for “right time” data delivery to enable insight for meaningful business decisions, business intelligence and corporate performance management delivered enterprise-wide, more timely deployment of technology solutions, and reduced total cost of ownership.

“Right Time” Insight into the Business

Most organizations have some type of business intelligence solution. Typical solutions range from basic reporting on operational systems to data warehousing topologies for more sophisticated reporting, ad-hoc queries, and analyses. As business intelligence and corporate performance management environments mature, such solutions evolve toward enabling better tactical decisions, supplementing earlier efforts that merely enabled strategic planning.

Some of the more advanced solutions attempt to deliver up-to-the minute data, sometimes described as a “real-time” or “near real-time” environments, or as “Zero Latency Environments” (as offered by HP). More traditional business intelligence solutions rely on batch feed mechanisms for extraction, transformation, and loading (ETL), and also cleansing of data. Oracle9i Warehouse Builder provides the capability to create source-to-target maps

Vanderbilt University’s ROI studies project a conservative savings of 185% over the next five years taking into account the performance, availability, and efficiency gained from the Oracle and HP business intelligence system.

including transformations and name and address cleansing, and automatically generate ETL. Near real-time or “trickle” feeds are more likely to use queuing mechanisms or other high-speed mechanisms. The Oracle9i Database provides Streams, a combination of queuing and log-based replication, as a solution for “publish and subscribe” data movement.

As the Oracle9i Database capabilities matured with advanced optimization of queries against hybrid schema and built-in “materialized views,” a single database can now be practical for “daily business intelligence,” eliminating latency associated with data movement. Oracle’s non-escalating lock management in the database and HP’s flexible and extremely scalable hardware configurations enable high performance even during frequent updates.

More advanced tactical solutions can require advanced analytics. Sometimes described as “active” data warehousing, the capability is made possible by Oracle9i Database’s ability to embed SQL analytic functions and OLAP and data mining services in the same relational database.

Amazon.com leverages SQL analytics and gains “right-time” insight using an Oracle9i Database of over 10 Terabytes in size residing on HP Superdome and HP StorageWorks XP disk arrays. Known for providing individualized recommendations to customers shopping on their retail web site, Amazon.com has implemented a “closed-loop” solution in which the data warehouse is both the target of data extracted from source systems, and a source to the web servers. In addition to delivering very high performance, this solution also meets Amazon’s reliability and high availability requirements. Amazon’s 800 business users perform a variety of analysis tasks using Oracle’s SQL analytics to gain insight into customers, inventory, orders, products, supply chain, website activity, pricing, and financial activity.

"The Oracle/HP data warehouse paid for itself very quickly, in about six months. With a single view of its business, Amazon.com can quickly understand and manage its entire global business at any level, from enhancing customers' experiences while visiting Amazon's Web sites to managing product flow through the entire supply chain to providing business intelligence for Amazon.com management." – Mark Dunlap, Data Warehouse Program Manager, Amazon.com.

Enterprise-wide Intelligence

A growing trend is the need for more complete historical data kept for longer periods of time and available to more users. Data growth is also fueled by the need for more transaction level detail and a desire to increasingly perform analysis across business areas and share data externally with partners and suppliers. These “enterprise-wide” views have been accomplished with federated solutions in companies where the business areas remain fragmented and somewhat independent. But in companies where the data is increasingly shared and costs are a concern, the trend is toward consolidation of these independent data marts into a single enterprise data warehouse.

“Oracle and HP provides a strategic data warehouse platform that delivers a complete picture of the business required for P&G to manage its business on a global level that was not possible with their legacy systems.” -- Rick Hamilton, Associate Director of Data Services, P&G SourceOne

“Over the years, HP has proven to be a valuable partner in the development of our clustering technology.” --Juan Jones, Vice President, Oracle Systems Platform Division

Consolidation is leading to database sizes commonly growing beyond Terabytes and into the tens of Terabytes. Oracle estimates there are over 200 Oracle databases deployed using over a Terabyte of disk storage today. Procter and Gamble (P&G) consolidated multiple data marts into a multi-Terabyte Oracle data warehouse on HP Superdome. The data warehouse is P&G’s source for approved management reporting of critical information such as financial, marketing, human resources, and supply chain.

Consolidated solutions built to support an entire enterprise often introduce requirements for high availability. HP and Oracle have jointly worked for years on solutions to enable fail-over in case of a hardware system failure. In 1999, HP and Oracle announced the industry’s first guarantee of 99.95 percent uptime on open systems. Today, Oracle9i Real Application Clusters (RAC) can provide fail-over of active queries to a second system accessing the same database transparently to business analysts who submitted these queries. More Oracle9i RAC data warehousing customers have been deployed on HP platforms than on any other platform (survey results as reported in Giga Research “IdeaByte” by Lou Agosta, June 3, 2003).

Consolidated solutions built to support an entire enterprise also introduce strict security requirements. Oracle has a leading number of security certifications for the most demanding government agencies in the world, an indication of Oracle’s leadership in this area. Many Oracle data warehouses leverage Oracle Virtual Private Database or row-level security to ensure data access is managed in the database, instead of through “views” that users can more easily circumvent to gain access to data they should not see.

Timely Deployment of Solutions

Leading technology is interesting to IT, but business requirements mandate solutions that can be deployed rapidly. With a complete and open solution of software, hardware, and services, Oracle and HP enable fast deployment to fit any environment. Customers can choose a complete solution from Oracle and HP or select systems integrator partners who have tremendous skill in building business intelligence solutions using this combination.

Oracle and HP have long been market share leaders in providing transactional database solutions that are highly available and scalable. Now that organizations recognize business intelligence as a ‘must have’ for competitive advantage, the combination of Oracle and HP is a logical choice for delivering highly scalable and available business intelligence solutions.

The Oracle and HP alliance has a long history of delivering open solutions and driving standards on UNIX. The first 64-bit Oracle database became available for AlphaServer platforms in the early 1990’s. Oracle efforts led to the creation of standards in key areas significant to business intelligence and data warehousing such as XML, CWM, SQL, and SQL analytics. HP is a key partner to Intel in the

development of the Intel® Itanium® processor, and Oracle quickly provided a database solution, Oracle9i Release 2, for this platform on a variety of HP supported operating systems.

Oracle and HP bring more to business intelligence than simply hardware and software. For example, at Nextel, Oracle Consulting recommendations improved Nextel's Oracle data warehouse design on HP and the result is an optimal and better performing configuration that has room for further growth.

Reduced Total Cost of Ownership

With increasing focus on lowering IT costs, many companies seek solutions that are "open" on a choice of platforms and are easy to manage. Banco de Credito, Peru's largest bank, manages a two-terabyte Oracle-on-HP data warehouse with fewer dedicated Database Administrators (DBAs), after migrating from a NCR Teradata solution. Oracle and HP continue to collaborate and develop initiatives to maximize productivity in the IT departments.

Oracle believes that the key to a low-cost solution is to provide an increasingly self-tuning and self-monitoring database. For example, Oracle introduced the Database Resource Manager in Oracle8i to transparently manage CPU utilization for specific user populations, and later improved it in Oracle9i to also govern queries. The Database Resource Manager enables companies to meet Service Level Agreements with minimal day-to-day management.

Ease of management through a common interface that can be utilized across a variety of operating systems is also important in containing costs. Oracle Enterprise Manager monitors the database and is used in user, tuning, and performance management. But database management is just one part of the platform solution. HP's OpenView for management of HP resources has an SMART Plug-In for Oracle to extend to HP OpenView Operations, Performance, and Reporter. HP can thus provide a centralized, proactive monitoring and control of Oracle database instances through the same interface monitoring the operating system and hardware.

As noted previously, open platform choice also helps lower cost. Oracle and HP have hundreds of joint customer examples deployed on a variety of platforms ensuring real choice. Many companies are evaluating Linux today as a low cost option for deployment. The Ellis Island Foundation deployed a web-accessible on-line database of immigration information utilizing Oracle9i Real Application Clusters (RAC) and Red Hat Linux on a HP Proliant DL580 cluster. Containing over 24 million immigration records and 3.5 million images, the data is stored in 3 Terabytes of disk storage.

HP and Oracle agree that Grid computing has an important role in the future of large-scale computing, and both companies are delivering an increasing array of solutions to make such deployment practical. HP delivers this capability through an HP Adaptive Enterprise solution, matching supply and demand of IT resources

"With Oracle, we're expecting to save US\$1 million each year, in terms of lower-cost maintenance, hardware, better performance, scalability, and total availability for our applications. Compared to the competition, Oracle delivers twice the performance for almost half the cost." --Ricardo Bustamante, CIO, Banco de Credito, Peru's largest bank"

Sam Daniel, Director of IT at the Ellis Island Foundation, believes that his Oracle9i RAC on Linux implementation will be sufficient for at least three years. He goes months without having to reboot. "The hardware is gathering dust. We never have to touch it," he said. – Walt Jordan's article "Ellis Island Upgrades Access", Database Trends and Applications, February 2003

in real time such that businesses can manage and quickly capitalize on change. Services, solutions and software are combined to form a reference architecture that is built step-by-step enabling enterprises to better measure, architect, manage and operate their IT environments. Oracle delivers key software components in the HP Darwin Reference Architecture for these increasingly scalable and cost effective solutions.

CONCLUSION

Oracle and HP together successfully deliver complete business intelligence solutions that solve real business problems for the most complex and mission-critical environments. Oracle and HP are providing solutions addressing key emerging business intelligence trends: the need for “right time” data delivery providing insight for meaningful business decisions; business intelligence and corporate performance management delivered enterprise-wide; more timely deployment of technology solutions; and reduced total cost of ownership. Oracle and HP have formulated solutions that will continue to solve deployment challenges and will yield the most cost effective solutions while delivering true business value, differentiation, and ROI.

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