

WHITE PAPER

Get Your Business Intelligence in a "Box": Start Making Better Decisions Faster with the New HP Business Decision Appliance

Sponsored by: HP and Microsoft

Dan Vesset

Brian McDonough

February 2011

IDC OPINION

At a time of great economic volatility, managers and executives of most midsize organizations or corporate departments have experienced a significant decrease in the ability to rely effectively only on experience or intuition to make decisions. They are finding that old cause-and-effect mental models are becoming less relevant, while the demand to respond faster and with greater insight to ongoing internal and external events based on facts is increasing. As a result, more organizations, in both commercial and public sector industries, are turning to business intelligence (BI) and data warehousing — collectively referred to by IDC as business analytics solutions.

Organizations that have adopted these solutions to enable better decision making report positive results. IDC research shows that managers at the most competitive organizations are two times more reliant on business analytics (rather than intuition) than managers at their least competitive peers. The most competitive organizations indicate two times more frequently that output of BI solutions is very influential on actions taken by their employees.

As evidence of the value of BI solutions to drive competitive differentiation mounts, leading organizations have recognized the need to take full advantage of all the available relevant information to raise the level of BI of their entire workforce.

However, many organizations are constrained by the current realities of having to do more with less. IT budget and staff cuts in the recent past are exacerbated by an environment of growing data volumes and growing numbers of business end users requesting access to information to improve their own decision-making capabilities. In addition, many midsize organizations simply lack the staff with the necessary expertise in deploying and supporting BI and data warehousing technology. Many are now looking for more prepackaged solutions that enable rapid deployment and optimized system performance, as well as simplified technology acquisition and support options to these increasingly critical decision support and decision management systems.

THIS IDC WHITE PAPER EXAMINES

In this white paper IDC highlights the latest research about the evidence of the competitive differentiation to be gained from investment in BI and data warehousing. The paper highlights the need to view BI and data warehousing technologies as complementary components of a decision support solution. Further, the paper describes

the requirements and benefits of BI and data warehousing solutions and the corresponding new joint HP and Microsoft technology offering to address these requirements. In addition, the paper provides recommendations for midsize organizations and departments in large organizations looking to improve profitability and customer service as well as optimize operations and mitigate risks based on better decisions.

SITUATION OVERVIEW

Business Intelligence Needs on the Rise

Better Business Intelligence as a Competitive Advantage

Changes in the global economy and technology markets have brought about a new environment that is redefining relationships among producers, distributors, and consumers of goods and services. In many midsize organizations, these changes have resulted in a significant decrease in the ability of managers to rely effectively only on experience or intuition to make decisions. The old cause-and-effect mental models are becoming less relevant, while the demand to respond faster and with greater insight to ongoing internal and external events based on facts is increasing.

There is, in fact, growing evidence of the combined value of faster access to relevant data and the analysis of that data in improving decision-making processes across all business functions. Recent IDC research shows that investments in BI and data warehousing technology, processes, and staff can create competitive advantage in commercial transactions, enable sustainable management of communities, and promote appropriate distribution of social, healthcare, and educational services.

This new environment is pushing midsize organizations toward allocating more resources to leverage their existing internal data and a growing volume of external information. However, the BI, data warehousing, and analytics demands are likely to overwhelm organizations unprepared for the current changes. IDC defines these organizations as "fumblers," compared with "fact finders." Our market research shows that fact finders have a higher level of analytical orientation and furthermore that analytical orientation — a set of policies, procedures, and processes enabled by BI and data warehousing solutions — has a correlation with competitiveness.

For example, in a study published in December 2008, IDC evaluated over 1,100 organizations across 11 countries and identified key indicators of pervasive BI and four BI competency levels for each of these indicators. As part of this research, we segmented organizations into leaders (most competitive organizations in an industry) and laggards (least competitive organizations). IDC analysis shows that 80% of leaders but only 58% of laggards have the highest level of analytical orientation.

Investing in Business Intelligence Solutions

The need to address a growing number of business end users requesting (or demanding) access to BI solutions, coupled with the need to integrate and manage a growing amount of data, will become more acute. In the October 2010 *IDC and ComputerWorld Business Intelligence and Analytics Survey*, 40% of respondents from midsize organizations indicated that they are planning to make BI and analytics

solutions available to new or additional users over the next 12 months (another 54% are planning to keep the number of users unchanged). In the same survey, 56% of respondents from midsize organizations indicated that they are planning to increase the number of BI and analytics projects in the next 12 months. Furthermore, in the beginning of 2010, despite the weak economy or perhaps because of it, midsize organizations expected to increase their spending on business analytics software to 4.5% of their total software spend.

These are just a few indicators suggesting growing demand for BI technology as awareness of the potential benefits of better BI has increased over the past few years. The pressure on IT to deliver BI support to end users is mounting, and a number of different technologies should be brought together to provide such support, including query, reporting, analysis, collaboration, and productivity tools, as well as the data warehouse platform.

It's important to note that in many cases a project or rather an ongoing program focused on improving decision-making capabilities consists of two interrelated efforts:

- End user-facing BI**, including features and functionality for query, reporting, analysis, and collaboration
- Data warehousing**, including features and functionality for data integration, cleansing, management, and processing

Although it is possible to deploy BI software without a data warehouse, often the greatest benefits occur when the data warehouse serves as one of the source systems for the BI software.

Any midsize organization or department or business unit in a large organization has a number of options when selecting BI and data warehousing technology. These options include:

- Standalone software, server, and storage components
- Reference architectures that represent guidelines or templates developed based on the expertise of the technology vendor or vendors for deploying technology in an optimized fashion
- Fully prepackaged appliances that have been optimized based on the expertise of the technology vendor or vendors and that can be purchased as a single unit

Based on the October 2010 IDC and ComputerWorld survey, 17% of midsize organizations are planning to adopt an appliance in the next 12 months, and IDC expects the number of midsize organizations adopting appliances to grow rapidly because of the possibility of such prepackaged solutions to overcome common challenges and complaints of many end users. For example, in a 2009 IDC study that investigated the challenges of BI projects, 35% of the more than 1,000 midsize organizations indicated that the design and deployment time of BI projects is too lengthy, 43% indicated that the requirement to have special skill sets for implementation is a challenge, 46% indicated that complex data preparation and data model development is a challenge, and 48% indicated that high cost is a challenge.

Based on the challenges midsize organizations report to IDC, we believe that prepackaged BI solutions exhibit many characteristics that can overcome these challenges.

Prepackaged Business Intelligence and Data Warehousing Technology Solutions Benefits

There are several benefits of prepackaged solutions — both appliances and reference architectures. Specifically, when reporting on the expected and realized benefits of appliances, organizations indicate that better performance is the top reason for deploying the appliance, followed by faster time to deployment and better support and customer service. There are also additional benefits, highlighted in the following paragraphs, that in combination help reduce project risk, cost, and duration and increase subsequent benefits.

- ☒ **Simpler acquisition.** To create prepackaged appliances, the technology vendor or vendors test software and hardware components to come up with recommended configurations given a certain level of data volume, number of users, and typical workloads on the proposed system. By identifying their own specific requirements, technology buyers can then select the most appropriate configuration as a starting point for their solution. By substantially decreasing the need to decide which individual technology component should be included in a purchase, vendors simplify the technology acquisition process for the end-user organization.
- ☒ **Faster time to deployment.** By doing the integration and optimization work themselves, vendors providing appliances eliminate the need for certain steps in the technology deployment process at the client site. Instead of spending weeks or in some cases months installing, configuring, testing, and deploying the technology, organizations can reap substantial benefits by deploying prepackaged solutions. Fully deploying an appliance may not always be quite as easy as simply plugging the appliance into the electrical grid and the communications network, but the initial installation of an optimized hardware and software unit does become a trivial task.
- ☒ **Optimized performance.** Optimized performance is another benefit of an appliance. Given an expected amount of data and a number of users, technology vendors optimize the performance of the appliance to address the most prevalent user-generated workloads. Although much of the discussion about any database deployment centers on query performance as experienced by end users, it is just as important to mention the performance of end user-facing query, reporting, and analysis tools. In addition, optimized performance contributes to efficient energy consumption.
- ☒ **Simplified support.** For all of the previously mentioned reasons, prepackaged appliances as well as deployments based on following reference architectures recommended by the technology vendors can have lower ongoing support costs. When users trust their vendors' recommendations and deploy the technology as suggested (even if with some modification), vendors are in a better position to respond to any support request faster and at a lower cost to both the user and their own organizations. In addition, using commonly available software and hardware skills can help keep down internal technology support costs.

Entering the prepackaged BI technology solutions market, HP and Microsoft have jointly engineered an appliance that represents a significant change in how customers can deploy their information access, analysis, and collaboration software. The appliance enables faster implementation, optimized performance, and peace of mind with support services from HP.

Prepackaged Business Intelligence and Data Warehousing Offerings from HP and Microsoft

HP and Microsoft have had a long-standing partnership for delivering solutions to joint customers. In January 2010, the companies solidified this relationship (including a joint \$250 million investment) with further investments in technology, staff, and support services for bringing BI and data warehousing solutions to midsize organizations that look to prepackaged solutions that simplify or eliminate some of the steps in the technology acquisition, development, deployment, and support processes. A key new joint offering from HP and Microsoft is a BI appliance that comes as a pretuned and pretested bundle of server and storage hardware with BI software. Another offering is a continuum of data warehousing reference architectures with several options for midsize organizations or individual departments or business units of larger organizations.

Business Intelligence Appliance

The jointly engineered BI appliance product, named HP Business Decision Appliance, is a self-contained, preconfigured software and hardware device that is composed of HP server and storage components optimized for Microsoft SQL Server 2008 R2 and SharePoint Server 2010 with PowerPivot. The appliance also includes HP support services for HP hardware and Microsoft software as a part of the standard offering, with an option to upgrade to higher support levels or extended durations.

In the latest version of SQL Server, Microsoft has included a new product called Microsoft SQL Server PowerPivot. PowerPivot comes as both an add-in to Microsoft Excel 2010 and an add-in to SharePoint Server 2010. The Microsoft PowerPivot add-in to Excel is an in-memory, multidimensional analysis and data visualization tool that IDC expects will have broad adoption among midsize organizations — not only because of its functionality but also because it is free to Microsoft Excel 2010 users. The HP Business Decision Appliance includes SharePoint 2010 with PowerPivot that facilitates sharing and collaboration of PowerPivot documents. The appliance provides additional functionality to simplify management of shared PowerPivot workbooks and assists customers in quickly getting started with PowerPivot in Excel.

The primary business need that the HP Business Decision Appliance addresses is the greater demand for managed self-service BI by business end users. IDC research has shown a quantifiable correlation between more pervasive BI and the ability of the organization to provide end users with timely responses to requested BI content, features, and functionality. In today's market there is a chorus of requests for more self-service access to BI content and technology. The primary reasons for these requests are greater awareness by business end users of the value of fact-based decision making and recognition by IT groups that their limited resources are best spent on tasks that require their IT expertise rather than constant building, rebuilding,

and updating of reports, dashboards, or data cubes. In other words, we expect this BI appliance to provide value not only to end users but also to IT groups.

One of the key components of the HP Business Decision Appliance is Microsoft PowerPivot add-in for SharePoint 2010. Although it is a relatively new product, there has already — before the announcement of the self-service BI appliance — been evidence of PowerPivot's adoption by users of Microsoft Excel 2010 to author the PowerPivot workbooks. The HP Business Decision Appliance will likely play a significant role in accelerating the adoption of PowerPivot and vice versa by empowering organizations to quickly and easily establish a SharePoint environment to share and collaborate around the PowerPivot workbooks. IDC surveys throughout the years show consistently that Microsoft Excel is the most widely used tool within organizations' BI toolsets — this is especially true among midsize organizations. The HP Business Decision Appliance provides these users with a new means to gain access to critical information, analyze that information with an already familiar yet more powerful tool in the form of PowerPivot, share that information with colleagues and partners within SharePoint, and, finally, make decisions based on that analysis.

Data Warehousing Reference Architecture

A data warehouse is not a prerequisite for a BI technology deployment, but having a data warehouse can play a significant role in improving an organization's overall BI capabilities. For midsize organizations seeking data warehousing technology, HP and Microsoft offer a set of data warehousing reference architecture configurations. HP solutions optimized for Microsoft SQL Server Fast Track Data Warehouse come in a range of pretested configurations that support data warehouses with a broad range of data volumes. Reference architectures enable customers to purchase the hardware based on a detailed bill of materials (BOM) — and separate SQL Server software from Microsoft — and build the data warehouse based on the reference configuration on their own or with the help of a data warehousing systems integrator.

The Microsoft SQL Server Fast Track Data Warehouse Reference Architectures are based on prescriptive guidelines developed by Microsoft and jointly tested and optimized for query workloads patterned for large sequential reads.

In the spectrum of available reference configurations, the two options that might be most appropriate for midsize organizations or individual departments or business units of larger organizations are the Entry Reference Architecture (built on HP ProLiant DL370 G7) and the Basic Reference Architecture (built on HP ProLiant DL380 or ProLiant DL385 and HP StorageWorks P2000). All reference architectures are based on Microsoft SQL Server 2008 R2 software. The primary difference between these two reference architectures is the amount of data — from less than 1TB to 5TB for the Entry Reference Architecture and from 6TB to 12TB for the Basic Reference Architecture — for which each can be optimally deployed.

The HP Fast Track Data Warehouse solutions for Microsoft SQL Server may be more appropriate for lower-scale data warehouses and/or data marts or in situations where a customer may want to have flexibility or purchase software and hardware components separately. However, both options are scalable or expandable to accommodate growth in data and/or users as overall BI and data warehousing needs evolve.

With HP Fast Track Data Warehouse solutions, midsize organizations or individual departments or business units of larger organizations have the option to start small and to grow their data warehouses incrementally as business requirements dictate.

Beyond Software and Hardware: Support and Consulting Services

The technology — its functionality, performance, and cost — is not the only factor that should be considered by prospective HP and Microsoft customers. IDC research shows that aftersales support ranks as one of the top factors that technology buyers consider in their BI and data warehousing technology selection process. To that end, HP provides integrated hardware and software support for the HP Business Decision Appliance across the HP and Microsoft components of the appliance, thus providing customers with a single point of contact and accountability.

HP has also worked with Microsoft to provide data warehousing consulting services through a large combined worldwide staff of highly skilled professionals. For example, for the HP Business Decision Appliance, these services include assistance in deployment and utilization of the technology and a one-week service for preparation of the proof of concept. The latter includes a five-day period during which the customer receives comprehensive appliance training and a usable proof-of-concept designed to help develop a plan for the ongoing BI and data warehousing program. HP also offers a full range of professional services that include assistance for project steps such as assessment and business discovery, architectural design and data migration assessment, and deployment of the technology.

OPPORTUNITIES AND CHALLENGES FOR HP AND MICROSOFT

Opportunities

Joint HP and Microsoft BI and data warehousing technology offerings are likely to have a positive reception from midsize organizations and individual departments or business units of larger organizations. These organizations are experiencing growing demand for technology to support information access and analysis tasks, but many of them do not have the internal expertise to develop the solution from all the necessary software and hardware components. The various prepackaged options for the BI and data warehousing technology will provide these organizations with solutions that are easier to acquire, faster to deploy, and less expensive to support.

Challenges

At the same time, HP and Microsoft will face certain execution and competitive challenges, which are not unique to any particular vendor. On the technology side, one of the keys to the vendors' success will be a coordinated postsales support process that needs to provide customers with a single point of contact to address any ongoing support issues. Another challenge will be to align the companies' vast network of partners that are in a good position to provide customers with additional value-added services for improving information access, analysis, and decision-making processes.

ESSENTIAL GUIDANCE

One of the top 10 predictions made by IDC for 2011 is the emergence and adoption of business analytics appliances that focus on end user-facing functionality of query, reporting, and analysis rather than only on data warehousing. In other words, we expect BI appliances to become the next phase in the broader trend toward more prepackaged technology solutions deployed to support information access, analysis, and decision-making processes.

Several decision-making process, organizational behavior, and technology issues need to be considered when evaluating decision support and decision management requirements. For each of these three variables, any opportunity to simplify the effort involved as part of the overall project should be considered. However, only a subset of all decision processes and very few organizational behavior issues lend themselves to prepackaging. Therefore, it is the focus on the technology variable where organizations have the opportunity to derive efficiency from their BI projects.

Thus, we recommend including prepackaged offerings, such as BI appliances, on the short list of technologies to be evaluated to support information access, analysis, and decision support needs. The benefits of leveraging the know-how of technology vendors in optimizing the specific software on a specific hardware platform can be significant in mitigating project risk and controlling initial project costs and ongoing support and maintenance costs.

A BI appliance can also help kick-start a project faster than an equivalent custom-built product by eliminating certain steps in the acquisition and deployment of software and hardware. The speed to deployment is an important variable in any BI project because by their very nature, BI projects are iterative — it is difficult to predict all the various decision support requirements.

When deciding whether to consider a BI appliance, midsize organizations should reflect on some of the following questions:

- ☒ How many users require access to the BI appliance? Not all employees are analysts whose primary role is to slice and dice data. However, every employee makes decisions, whether strategic or tactical, and therefore, organizations should ensure appropriate access to the relevant information at all levels. For example, the HP Business Decision Appliance is tuned for 80 concurrent users or 150 maximum users.
- ☒ What types and levels of support are provided by the IT vendor or vendors? Does one of the vendors take the lead in the support process to ensure that the communication process is streamlined? Nobody benefits from "finger-pointing" or passing on the blame for a customer complaint to another party. A single point of support is one of the key value propositions of an appliance. In the case of the HP Business Decision Appliance, HP takes on the responsibility for customer support.
- ☒ What is the expected direct technology maintenance cost for the BI appliance compared with a technology solution built from individual components onsite? An appliance not only provides an initial prepackaged technology product but also helps in clarifying the forward path to scale the system, including expected future technology upgrade and maintenance costs.

- ☒ What types of internal BI technology skills exist in our organization? Are there appropriate skills to build the BI environment from several individual components? Are there enough experts to deliver desired functionality in a timely manner?
- ☒ Does our existing BI technology solution include all the necessary functionality to support both individual information access and analysis and collaborative decision making?

By considering the guidance provided in this document, midsize organizations will be well served in their BI and data warehousing technology selection processes, which should take into account the currently available prepackaged software and hardware solutions.

Copyright Notice

External Publication of IDC Information and Data — Any IDC information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Vice President or Country Manager. A draft of the proposed document should accompany any such request. IDC reserves the right to deny approval of external usage for any reason.

Copyright 2011 IDC. Reproduction without written permission is completely forbidden.