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Using ERP and BI to Turn Data into Insights

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KEY HIGHLIGHTS

- Many SMEs (small to medium-sized enterprises) are drowning in data but can't get the insights they need from this data because it's inconsistent, inaccessible and/or untrustworthy.
- To make better-informed business decisions and to run their companies more effectively, SMEs need both a dependable data foundation and business intelligence (BI) tools tailored to their specific needs.
- SAP Business All-in-One solutions provide a unified, integrated ERP foundation to give SMEs consistent and current data, and embedded business analytics to visualize that data to spot insights, trends, threats and opportunities.
- SMEs that require more comprehensive data consolidation and analytics can expand Business All-in-One capabilities further with SAP BusinessObjects Edge BI software.

For years, small to medium-sized enterprises (SMEs) could only watch with envy as larger firms capitalized on the many advantages conferred by business intelligence (BI) software. By building data warehouses and using the data analysis, reporting and visualization capabilities that enterprise BI solutions delivered, large enterprises could analyze mountains of data to find gems of business insight necessary to make business decisions more rapidly and with greater confidence.

But early-generation BI software was expensive, difficult to deploy and maintain, and accessible only to a handful of trained IT analysts and business managers. As a result, most SMEs have been forced to make critical business decisions based on rudimentary hunches, intuition and experience rather than on sophisticated data analysis.

In recent years, a variety of BI solutions designed for SMEs have emerged. But there's been a catch: Aggregating and rationalizing data from different business units and functions is beyond the means of most SMEs. Without a foundation of accurate, consistent, current and easily accessible business data, there is no easy way to quickly and continually consolidate that distributed data to create "one version of the truth." As a result, any BI solution, no matter how good, is inevitably destined to come up short.

Increasingly, SMEs are tackling this dilemma with a combination of enterprise resource planning (ERP) and BI solutions. A multifaceted ERP solution serves to consolidate and standardize existing data throughout the organization, and to continually generate new common data that is shared by all of the business's core applications. BI tools can then analyze and visualize this expanding pool of unified, dependable data to generate useful information and actionable insights. These insights, in turn, can serve as critical tools to help SMEs realize their full growth potential, advance their competitive positions and, fundamentally, run their companies better.

In this paper, we examine the data management and information analysis problems SMEs face, and discuss some of the key criteria required to make good, information-driven decisions. Throughout the paper, we also present information about SAP Business All-in-One, ERP software for SMEs that includes embedded business analytics and business-process best practices. We explore the business and IT needs that convinced some companies to deploy an SAP Business All-in-One solution and, in some cases, to supplement core functionality with the vendor's full-featured BI solution, SAP BusinessObjects Edge BI. We discuss the business benefits that customers have realized from gaining the ability to make better-informed business decisions, and conclude with our views on their experiences, and how SAP Business All-in-One is enabling them to achieve their business goals.

SECTION 1: ARE DATA SHORTCOMINGS UNDERMINING YOUR COMPANY'S SUCCESS?

Even small companies are generating and accumulating staggering amounts of data, with some recent estimates approximating 20 GB stored for each employee at the typical SME. This data is spread across different databases, spreadsheets and applications, and is stored on servers, personal computers and a wide variety of mobile devices as well as in the cloud.

Ironically, more than 30 years into the "Information Age," it's often difficult to turn this data into reliable, accessible and actionable business information. Companies both large and small find it challenging to consolidate this data, verify its accuracy, keep it up to date, and—ultimately—use it as the basis for making smart and timely business decisions.

Given the pace and volatility of business today and the stark consequences of poor business decisions, it's fair to say that the Information Age has spawned an "Insight Economy." In this economy, companies that are best able to identify and act upon business trends, threats and opportunities hold an increasingly large advantage over competitors.

SMEs realize the importance of analyzing and visualizing data to gain business insights, but find it challenging to achieve this goal. In an SMB Group survey of small and medium-sized companies, the top technology challenge cited—noted by fully one-third of the respondents—was the need to get better business insights from existing data. As illustrated in **Figure 1**, there are several warning signs that indicate that a company's growth may be stymied by problems with data analysis.

Figure 1: Warning Signs That Your Company Has a Data Analysis Problem

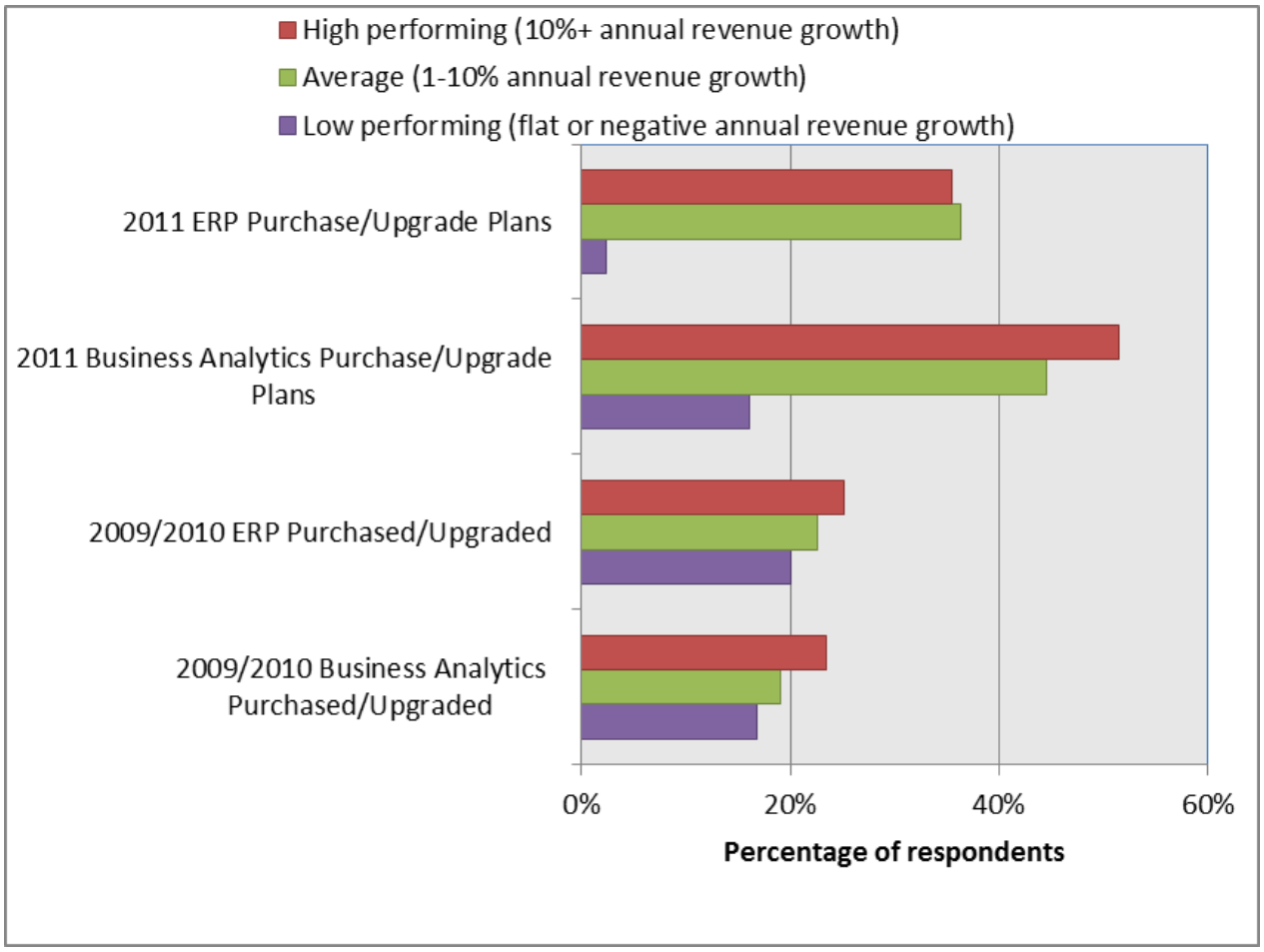
✓	Employees spend too much time re-entering data from one system to another, and reconciling data from these different systems.
✓	Managers invest too much time creating Excel spreadsheets to make business decisions.
✓	Different managers are making decisions based on different sets of data that tell different stories.
✓	Managers are not using the company's business data because they don't trust it.
✓	Managers have no way to measure key performance indicators such as productivity, return on investment, time to report, days sales outstanding, etc.
✓	Managers are unable to track actual performance against the strategic plan.
✓	Only a handful of specialists are able to analyze data and generate reports; most users have to request analytic reports that are labor intensive and slow to arrive.
✓	Reports are routinely created for historical reasons ("that's what we've always done") rather than for business-driven reasons.
✓	The budgeting and forecasting process is complex and takes weeks instead of days.
✓	There is a lack of real-time visibility and collaboration capabilities.

Source: SMB Group, 2011

The study also highlighted the important role that both ERP and business analytics can play in a company's growth. As shown in **Figure 2**, the study indicated that high-performing midsize companies with revenue growth of more than 10% annually are purchasing or upgrading ERP at about the same rates as average-performing firms—and significantly above that of low-performing SMEs. The differences are even greater in the case of business analytics and BI solutions. High-performing companies outpace both average- and low-performing SMEs in their business-analytics purchase and upgrade plans.

"We had huge amounts of information that we could not integrate. As a result, we didn't have the flexibility or visibility we needed for the business to grow." — Alex Vörös, quality assurance manager, Ego Pharmaceuticals

Figure 2: High-Performing SMEs Place High Priorities on ERP and Business Analytics



Source: July 2010 SMB Group SMB *Routes to Market* Study

LDH (La Doria), a 60-employee canned and dried food supplier based in the U.K., found that its legacy ERP system wasn't able to provide the visibility it needed into its supply chain shipment, or help it forecast future demand. "We need tight control over and keen insight into our stock and our customers' forecasts in order to minimize on-hand stock while making sure we can meet our delivery promises," explains Paul Nicholas, logistics director for LDH. "The length of time needed to simply review each SKU was overwhelming. Plus it was extremely difficult to forecast requirements with any accuracy," continues Nicholas.

"My organization was continually developing reports, until we had literally thousands of them. Most of the reports were redundant, but because reporting and analysis were not standardized, we simply lost track and would repeat our effort."
— Mark Anson, IT director, LDH

Faced with these shortcomings in its legacy system, LDH purchased an SAP Business All-in-One solution, which provided powerful ERP capabilities and embedded business analytics. “With our SAP Business All-in-One solution, we are in control of our stock on a pallet level, which gives our retail customers the utmost confidence in our stock integrity,” says Nicholas. The solution has also greatly aided LDH’s forecasting abilities, he continues. “We feed financial data into our SAP Business All-in-One solution, and it determines the best course of action to help us achieve our goals. Once our employees began trusting the output, they were able to make more informed decisions.”

Section 2: Beyond Integrated Software—How ERP Can Create a Solid Data Foundation

Most companies purchase ERP solutions primarily to automate and integrate core business applications and processes. However, a growing number of buyers are also looking to ERP to help them get a handle on out-of-control business data. Done right, an ERP deployment can serve as the mechanism via which companies can survey their existing data landscape, and link existing data stores and applications to the new ERP system. Once up and running, the ERP solution becomes the default source for current, reliable data that is both shared among the applications and used for business analysis and decision-making.

Many SMEs have trouble establishing a common foundation of trustworthy data because they have relied upon disparate applications, spreadsheets and/or other ad hoc systems to conduct their business. Data collected or generated by one system often isn’t shared with the other systems—and when it is, it can be difficult to determine which data is correct if inconsistencies arise.

Other SMEs, especially those that have grown via acquisition, end up with a collection of incompatible and disconnected ERP applications. Such was the case with Lextron, a wholesale distributor of animal health and feed products. Based in Greeley, Colorado, the 700-employee company found itself with three separate ERP systems following a series of acquisitions. “These multiple ERP systems made it difficult to leverage economies of scale and to control inventory and manage logistics,” says Tim Hays, Lextron’s director of IT. “Sharing customer data was frustrating and nearly impossible. We knew we needed a common ERP platform and a shared solution.”

Lextron decided to standardize on an SAP Business All-in-One platform. “We needed to treat customer service, operations, and finances as an integrated whole,” says Hays. “We set a strategic goal—to operate as a unified company over all Lextron locations, product lines, and customers.” With the solution in place, Lextron has been able to establish common processes that utilize common data throughout the entire company, he says.

Any SME wanting to make data-driven decisions must meet the same basic requirements. It needs to establish a foundation of trustworthy and accessible data, ensure that its core business applications and processes operate on this common data, and have access to BI tools, dashboards and reports to find and exploit the valuable information that massive amounts of data can obscure. **Figure 3** provides a checklist of the various elements required for companies to turn the data that they collect and generate into insights to run the business more effectively.

"We made the decision to look for an enterprise ERP solution that would help us integrate new acquisitions quickly and could provide a universal platform for future growth."
— Tim Hays, director of IT, Lextron

Figure 3: The Essentials Necessary for Making Sound Business Decisions

✓	Accurate, up-to-date and comprehensive business data; "one version of the truth"
✓	Integrated business applications that operate on the same data sets, and that continually generate and share new business data
✓	Business processes optimized to generate critical data and to rapidly analyze that data in support of business decisions
✓	Business intelligence tools that can analyze both historic and real-time data to spot trends, threats and business opportunities
✓	BI dashboards and reports that can visualize and present key performance indicators, trends and other meaningful data in an easy-to-grasp fashion
✓	Easy-to-learn and easy-to-use business analytics capabilities that are available to every employee whose role requires data analysis and reporting; the ability to generate dashboards and reports without involving IT
✓	Easy-to-design and easy-to-execute "what-if" analyses
✓	Alerts and notifications that enable employees to focus on exceptions as well as on routine or steady-state operations

Source: SMB Group, 2011

By adding integrated business analysis capabilities to the mix, SAP Business All-in-One solutions give SMEs the foundation required to make good business decisions. As explained in the following section, SAP's implementation partners can work with customers to implement a variety of business analytic tools, dashboards and reports that are available as part of the core Business All-in-One platform. Companies with more demanding BI needs can add SAP BusinessObjects Edge BI analytics to their SAP Business All-in-One solutions.

SECTION 3: SAP BUSINESS ALL-IN-ONE—INTEGRATED DATA, DATA ANALYTICS AND A BI GROWTH PATH

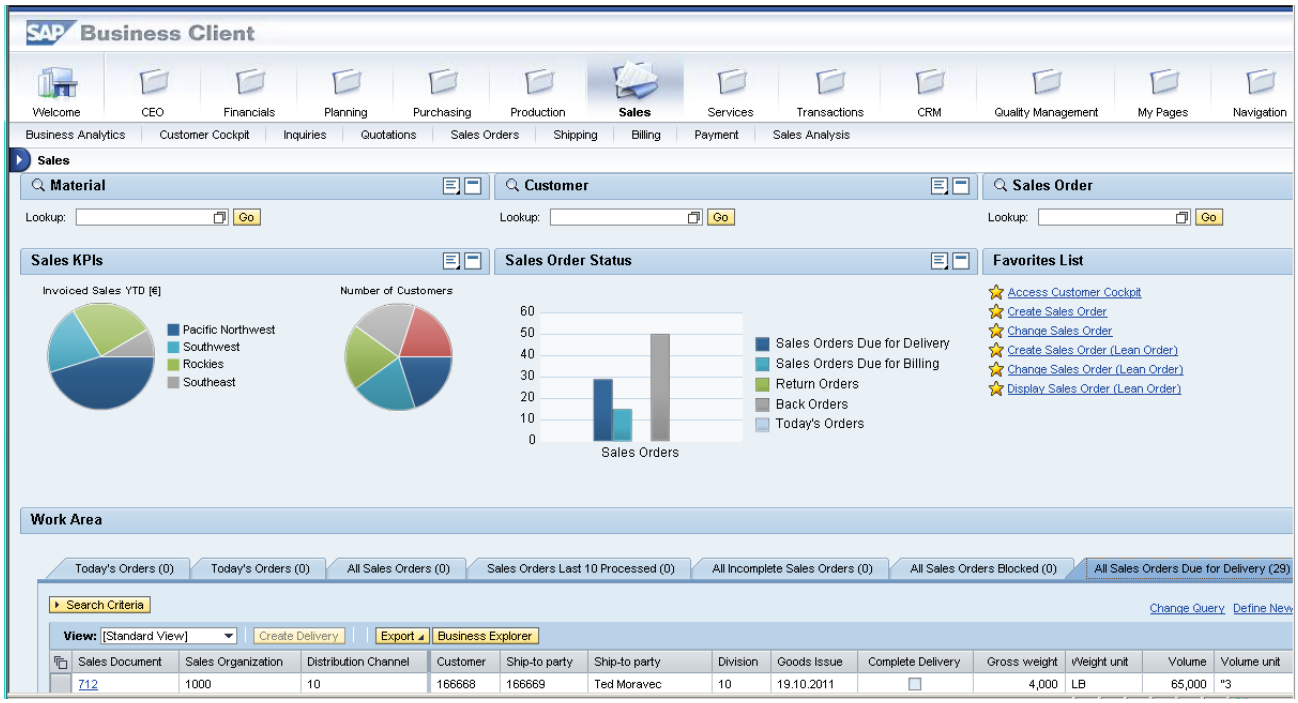
SAP Business All-in-One solutions draw directly from SAP's portfolio of proven enterprise software and best practices expertise. Each SAP Business All-in-One solution contains the same SAP ERP and SAP NetWeaver (the vendor's standards-based technology platform) that the vendor sells to large enterprise customers.

But, SAP and its partners tailor the modules in each of more than 800 industry-specific SAP Business All-in-One solutions to give SME customers the functionality most relevant to their needs, speeding implementation and training times. With the full functionality of SAP ERP "under the hood," different modules can be turned on or off as needed to fine-tune the solution to each customer's specific industry or business process requirements.

To assist with guidance and business process expertise, each SAP Business All-in-One solution includes a partner-selected subset of the SAP Best Practices packages, which are embedded process "blueprints" for more than two dozen vertical industry sectors, from automotive to wholesale distribution. SAP has also produced cross-industry packages of best practice blueprints to help customers perform core functions, including business intelligence.

SAP provides its implementation partners with an ETL (extract, transform and load) data integration tool to pull data from customers' existing systems into SAP Business All-in-One. Moving beyond basic ERP capabilities and into the realm of data-driven decision-making, Business All-in-One customers can take advantage of the software's embedded dashboards and reports. Furthermore, customers can make use of the SAP Best Practices for UI Enhancement package, a free option that enables customization of the user interface to include BI content (**Figure 4**).

Figure 4: SAP Business All-in-One's Integrated Business Analytics Dashboard



Source: SAP

These built-in capabilities are often ample for SMEs' analytics requirements. Companies with more extensive business analytics needs can take advantage of the SAP BusinessObjects Edge portfolio of solutions, which includes:

- ***SAP BusinessObjects Edge Business Intelligence***, a comprehensive business intelligence platform that includes reporting, dashboards, ad-hoc query and analysis, and data exploration capabilities, as well as data integration and quality management options
- ***SAP BusinessObjects Edge Rapid Marts***, which are preconfigured data marts that combine domain knowledge and best practices to speed and facilitate business user query, reporting and analysis tasks
- ***SAP BusinessObjects Edge Planning and Consolidation***, an application that allows all stakeholders to participate in a simplified and streamlined budgeting, planning and forecasting process, as well as financial consolidation and reporting
- ***SAP BusinessObjects Edge Strategy Management***, an application that includes scorecard functionality to help companies execute against strategic goals by linking metrics to initiatives, plans and operational activities

SECTION 4: REALIZING THE BENEFITS OF DATA-DRIVEN INSIGHTS AND DECISIONS

SMEs are achieving significant business benefits thanks to the one-two punch of SAP Business All-in-One's combination of ERP and business analytics, which enables them to generate and track key performance indicators including:

- Discounts lost from suppliers (%)
- Spend managed strategically (%)
- Receivables overdue (%)
- Order to ship cycle time (days)
- Ship to invoice cycle time (days)
- Manufacturing cycle times for primary products (days)
- Invoices with unauthorized deductions (%)

For instance, food supplier LDH can now predict its goods, receipts and sales with 95% accuracy for planning purposes. "It's quite amazing how we can predict with such accuracy what to expect over a 10-week period, considering that we're bringing in product from all over the world, and we don't necessarily have firm commitments from retailers," says logistics director Nicholas. "The result of this accuracy is that our stock holdings have become very consistent, which in turn enables us to plan better financially. We know exactly what money will be going out and coming in."

In addition, LDH now knows the margins of every product associated with every customer down to a granular level. "We can run margin analyses inside and out. We understand the financial controls of the goods in transit as soon as they arrive at the warehouse. Our landed cost accuracy and better visibility over fluctuations in currency bring greater control to our financial department," Nicholas says.

The shift to SAP Business All-in-One has also proven to be a major boon to Ego Pharmaceuticals, an Australia-based manufacturer that sells more than 100 skin health and skin disease treatment products. The 250-person company was using 650 spreadsheets to capture and convey information internally, which left it vulnerable to data errors and serious inefficiencies. Furthermore, Ego was struggling with a large number of labor-intensive business processes, lacked a common source of integrated corporate data, and needed an ERP solution that would work well with existing IT systems.

"We have confidence that our management figures are second to none. We know when we're making money and when we're losing money on a particular item."
— Paul Nicholas, logistics director, LDH

To meet many of these demands, Ego purchased an SAP Business All-in-One solution. To further bolster its business analytics capabilities, including the ability to interface with other existing systems, Ego also installed SAP BusinessObjects Edge BI. "SAP provided all the interfaces and functionality we needed," says Alex Vörös, Ego's quality assurance manager and project manager for the SAP implementation. "We had interfaces with our dispensing software and our forecasting software, which had cost us a lot of money to develop. For the forecasting to work properly, we also needed an interface with our sales data."

Having largely replaced the 650 spreadsheets it had been using for data reporting and analysis, Ego can now easily generate key performance indicators that are critical for tracking its business. It is producing monthly profitability statements for products and markets, a rate far greater than the few times per year it could previously generate this information. As important, it can provide its R&D department with a single source of accurate data about raw material availability, pricing and regulatory information.

SECTION 5: SUMMARY AND SMB GROUP PERSPECTIVE

The core paradox of the Information Age is how hard it can be to find and take advantage of truly useful information. Exponential advances in processing power, storage capacities and communications bandwidth are routinely producing once-inconceivable amounts of digital data. A modern PC can hold as much data as a corporate database in the 1980s, and the accumulation of ever-greater amounts of business data shows no signs of abating.

SMEs that find themselves drowning in data need a lifeline to bring them—as well as valuable information and insights—to the surface. Getting a handle on dispersed, inconsistent and aging data isn't a trivial task, but the benefits SMEs can realize by doing so far outweigh the costs. SAP Business All-in-One gives SMEs a reliable data foundation, a suite of integrated applications that share the common data, enterprise-grade data analysis and visualization tools, and best-practice guidance to help make all of the elements function in an optimal and efficient fashion.

A growing community of companies is achieving a wide range of business benefits with SAP Business All-in-One. These SMEs understand that to compete in the global market—including the need to keep pace with enterprise competitors—they can no longer rely just on gut instincts and ad hoc spreadsheets to make critical business decisions. They need trustworthy and common data as well as integrated BI capabilities to survive and thrive in the Insight Economy. Multifaceted SAP Business All-in-One solutions give them the means to accomplish this goal.

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