Meeting the Challenges of Business Intelligence
For Small Enterprises

SAP

The Best-Run Businesses Run SAP™

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Initiating a business intelligence (BI) strategy can be intimidating for small enterprises and departmental deployments. BI is often seen as a complicated, jargon-filled arena that requires lots of IT expertise and resources. There is also a tension between delivering fast results economically and doing the right thing for long-term growth and flexibility. This paper provides smaller organizations with a framework to evaluate and select the right BI solution and approach that meets their requirements today and tomorrow.

Why Small Enterprises Need Business Intelligence

As an executive of a small enterprise, you face a unique set of challenges in running the operations of your company. How you respond to these challenges can be the difference between remarkable success and a fight for survival.

Challenges you may face include:
- **Ensuring growth** – Profitable and sustained growth is critical for a small enterprise. Without it, you risk either being made irrelevant by faster competitors or being swallowed by a larger company. Profitable growth requires pulling the right levers on a consistent basis, so you need clear insights into your business. For example, knowing which products, segments, and customers yield higher profits will help you allocate more resources toward them. On an ongoing basis, you should be able to monitor and validate if your incremental investments are indeed delivering an expected increase in sales and profits.
- **Achieving speed** – Your ability to rapidly take advantage of a new market opportunity is one of your biggest advantages. However, smaller

organizations often have limited resources. You need to know what is working well, so it can be quickly capitalized, and what is not working well, so it can be rapidly addressed. If you know the revenue, costs, and spend for recently introduced products, you can more easily identify poor performers and quickly shift spend away from them. Without such insights, you may take longer to make such decisions and continue betting on poor performers, or you may make incorrect decisions that are wrongly influenced by one data point.
- **Staying focused** – Unlike large companies, small organizations sell a narrow portfolio of products and services and usually have limited resources. Continued success lies in getting everyone in the team on the same page by using the same set of assumptions based on the same version of the truth. So, if your engineering, sales, finance, and marketing organizations use the same analysis on pipeline, revenue, and margins, they are more likely to share the same conclusions and be aligned on priorities.

BI helps you to turn data from financial, manufacturing, and sales systems into useful and meaningful information.

Overview of Business Intelligence

Incorporating business Intelligence (BI) with reporting, dashboards, and self-service data exploration allows you to better understand, analyze, and even predict what's occurring within your company. BI helps you to turn data from financial, manufacturing, and sales systems into useful and meaningful information. You can then distribute this information to those that need it, when they need it, so every manager within your company can make timely and better-informed decisions.

BI provides you the speed advantage by succinctly surfacing what is working and what is not on an ongoing basis. It shows the impact of changing conditions on your business, so you can correctly prioritize and rapidly act and react. It also enables focus by providing every manager within your organization with the same version of the truth, so there is alignment between strategy and operations and any disconnects are eliminated.

Finally, business intelligence acts as an enabler for profitable growth by providing you and your managers with an in-depth analysis of your business, so everyone has a finger on the pulse of your operations and can make decisions based on facts rather than instincts. According to research by Oxford Economics, small and midsize enterprises (SMEs) value business analytics most highly as a means to drive cost-efficiencies and improve product and service development. The research also indicates that the most profitable small companies see BI and analytics as the most competitive drivers.[1]

Along the business intelligence continuum, reports provide a familiar way to deliver information. Dashboards, the next step, deliver summarized results to decision makers. Data exploration enables self-service access to the information your business users need, with intuitive search, exploration, and visualization functionality.

Data exploration enables self-service access with intuitive search, exploration, and visualization.

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1. Oxford Economics, Research on 2,100 SME executives across several industries and 21 countries in Q2, 2013.

BI Challenges for Small Companies

Small and midsize enterprises have limited IT resources and small IT budgets. Any initiative that requires deep IT expertise or a big IT budget becomes nearly impossible to fund and difficult to successfully execute. In its research about SMEs, Gartner says, "Their biggest challenge is delivering IT services with a small staff and limited IT skills that do not grow in proportion to the demands of the business. [...] Many SMBs have traditionally shied away from BI and analytics solutions due to concerns about the complexity and high cost of deploying and managing them, although they can help SMBs identify their most-profitable customers, accelerate product innovation, optimize pricing, and discover the drivers of financial performance."[2]

In addition, most managers at small companies wear multiple hats, and it becomes challenging for operational and executive staff to take on multiple new initiatives simultaneously. As a result, BI solutions for SMBs are purpose-built: they are less expensive to deploy and require minimal IT resources.

BI solutions are being widely adopted by SMEs around the globe. Oxford Economics research highlights that the technologies most commonly deployed today by SMEs are business management software (48%), mobile (46%), and BI and analytics (44%). Smaller firms are expanding their use of analytics: more than half of those with sales under US$100,000 will use these tools in three years – a jump of 43%.[3]

Gartner challenges midsize organizations to increasingly adopt such solutions, saying, "Midsize organizations are at a decision point. They have to fold BI and analytics into their application portfolios or risk losing market share to those enterprises that are leveraging BI and analytics."[4]

It's important that BI solutions for small enterprises support the following tenets. Specifically, they should:
• Model a "crawl, walk, run" approach
• "Fit like a glove" in an IT-constrained environment
• Provide the richness of enterprise BI deployments at an affordable cost of ownership

2. Gartner Research, "Agenda Overview for Small and Mid-size Business Marketplace, 2013," Published: 7 January 2013, Analyst(s): Robert P. Anderson.
3. Oxford Economics, Research on 2,100 SME executives across several industries and 21 countries in Q2, 2013.
4. Gartner Research, "Predicts 2013: Now Is the Turning Point for Midsize Enterprises," Published: 29 November 2012, Analyst(s): James A. Browning, Susan Galberaith, Mike Cisek.

**MODEL A "CRAWL, WALK, RUN" APPROACH:
A ROAD MAP**
SAP believes that small enterprises should implement business intelligence in phases by starting with small steps, achieving success at it, and then building upon it. Such an approach provides for organizational learning on small budgets, where mistakes are not expensive. It also helps ensure that lessons learned from initial BI deployment build a prioritized road map for broader company-wide BI implementation.

As depicted in the figure, the three phases of BI deployment are:
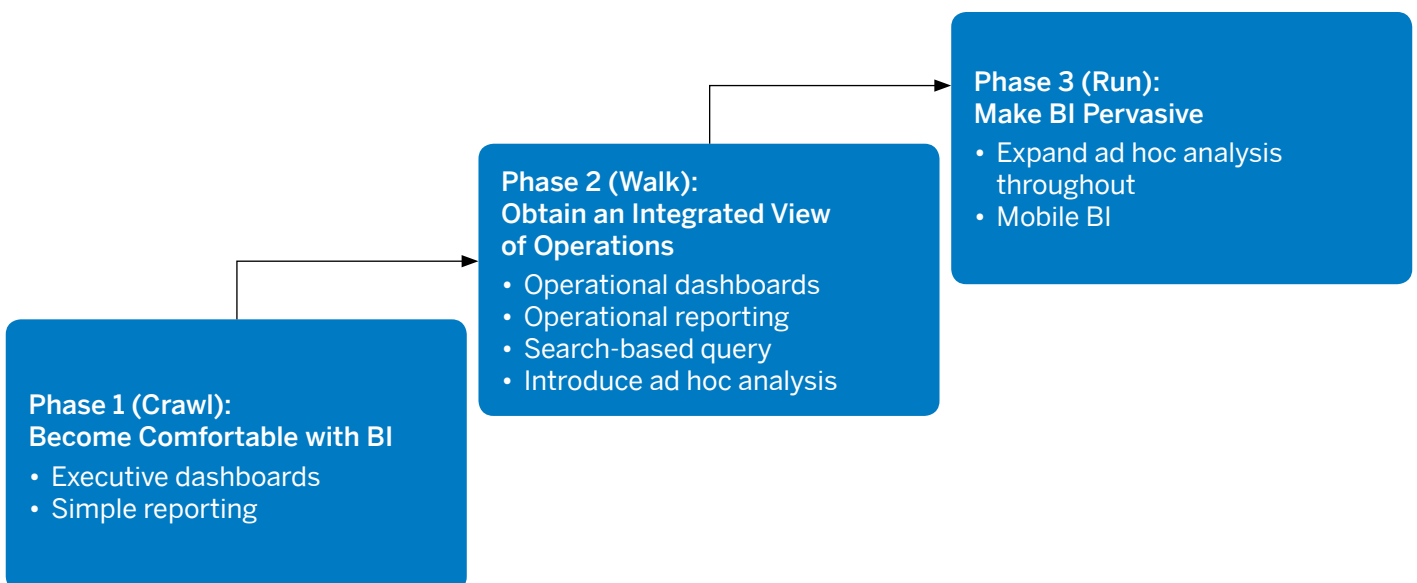
1. **Crawl** – The objective is to become comfortable with BI technology. Focus on deploying those aspects of BI that can have an immediate impact on daily decision making while providing the basis for organizational learning. Examples include executive dashboards and simple operational reports.

2. **Walk** – The objective is to build upon early successes and expand the scope of BI such that the organization becomes comfortable with using various facts and insights from the BI system for decision making. Examples include implementing operational reporting, operational dashboards, and ad hoc search query and analysis.

3. **Run** – The objective is to achieve pervasive use of BI – so all decisions are made on facts rather than intuition. Companies in this phase expand BI to mobile devices and roll out ad hoc analysis and data visualization capabilities to all department business analysts.

Figure: The Multiple Phases of Business Intelligence (BI) Deployment

**Phase 1 (Crawl):
Become Comfortable with BI**
- Executive dashboards
- Simple reporting

**Phase 2 (Walk):
Obtain an Integrated View
of Operations**
- Operational dashboards
- Operational reporting
- Search-based query
- Introduce ad hoc analysis

**Phase 3 (Run):
Make BI Pervasive**
- Expand ad hoc analysis throughout
- Mobile BI

Implementing a Crawl, Walk, Run Approach

In order to implement a crawl, walk, run approach, your solution must encompass the following characteristics:

- **A single-solution framework that grows with you** – A single BI product should be able to take you through all three phases (crawl, walk, and run) so all the components fit together and you do not have to buy different products for different capabilities. If you selected reporting-only or dashboard-only solutions in the early phases of BI, at a later time you will be forced to buy multiple products and build multiple skill sets – an expensive proposition for a small company. The right product offers a common semantic layer, so a single representation of data can be created and accessed by dashboards, reports, and query tools. This reduces administration effort and cost of ownership.
- **Adjacent BI capabilities** – When evaluating BI solutions, it's also important to consider your company's growth trajectory and changing needs. As you grow, you start looking at adjacent BI solutions to make better data-driven decisions or improve user productivity by taking over manual data crunching work-through solutions such as business planning and budgeting. They not only leverage BI at their core but also are often used by the same people who use BI. Familiarity with user interface and constructs of their BI application will help them easily adopt the new budgeting and planning solutions.
- **Fast adoption and ease of use** – In the past, technical specialists primarily used BI tools, but that has changed. A suite of BI products with a consistent look and feel across all components and built-in templates, that allow business analysts to access data directly without needing IT

support or training, has enabled this transition and democratized BI usage. Ease of use has also played a key role in faster adoption of BI.

These capabilities enable companies to more effectively implement a crawl, walk, run approach within their organizations.

MAKE BI "FIT LIKE A GLOVE" IN AN IT-CONSTRAINED ENVIRONMENT

SMEs have limited IT budgets and resources, so users should be able to access trusted data without creating a backlog for IT or outside consultants. To further reduce costs, the solution should also take advantage of virtualization. Your BI solution should enable:

- **Self-service for business users** – To reduce cost of ownership, the right BI solution should ensure that users can find the information they need with intuitive, self-service tools. However, many BI solutions require an understanding of advanced queries, take hours of training to get started, and may require IT's help to locate and expose data sources. The ideal solution provides a simple, intuitive way for easily locating and exploring BI content and interactive data presented in consistent business terms.
- **Distribution and control** – Small companies should be able to use their BI system to create and run production reports, such as a sales report showing monthly sales and commissions sorted by salesperson and then by customer. The report distribution should be controlled so that each sales or production manager can see only the data for his or her scope of work, such as sales force, product, or warehouse location. The report might be e-mailed or interactively viewed through a Web browser or mobile device.

- **Support for virtualized environments** – Many software companies developed their pricing and licensing models prior to the advent of virtualization, a cost-saving technology that allows multiple "virtual" servers to run on a single physical server. Thus, they often use complicated licensing rules to govern what you can and cannot do in a virtualized environment. The outcome often is not favorable and reduces the value of virtualization. For example, adding processors to virtual servers may require purchasing more licenses. The same challenges come into play when deploying reporting for extranets. The BI solution should allow you to support virtualization and extranets cost-effectively.

Forrester notes, "The knowledge workers will significantly benefit from a new generation of self-service – lean and agile – BI solutions that would allow these workers to fulfill most of their information requirements while requiring minimal IT support."[5]

RICH ENTERPRISE DEPLOYMENT AT AN AFFORDABLE COST OF OWNERSHIP

BI solutions developed for enterprises often contain rich functionality that is not provided in their SME versions. However, such features are equally relevant to small enterprises and should be included within the core product packaging for an SME solution. Functionality that is relevant to both large and small enterprises includes:

- **Quick integration with a wide variety of sources** – Information also resides outside the core business system in spreadsheets, e-mail systems, or other databases. Although SMEs can run analytics against individual systems for an initial view, eventually data from several sources – including social media and the cloud – is needed to portray the total picture. A BI solution should make it easy for small organizations to incorporate data from multiple sources into their reports while hiding the complexity of accessing such information. In addition, not every employee should have access to every report or data source – so security and control are also a key part of the BI environment.
- **Mobile-ready content and interface** – BI should deliver reports and dashboards to smartphones and tablet computers, with content formatted to match the form and functionality of these devices. It should support mobile-friendly capabilities, such as allow users to hover over a display to obtain summary results, and drill down for additional details.
- **Performance without expensive hardware (using a separate transaction and reporting environment)** – Ideally, to optimize database performance and scalability, you want to run database tasks on your database server while reporting is run on separate servers. However, many reporting solutions require you to purchase additional licenses for such separation. Your BI solutions should enable you to implement reporting on a separate server, without needing to buy an additional license. Such functionality helps improve performance and scalability of both the database and reporting solution.

5. "Self-Service: An Essential Capability Of BI," A Forrester Consulting thought leadership paper commissioned by SAP AG, April 2011.

Overview of SAP® Crystal Solutions

SAP® Crystal solutions provide essential reporting, dashboard, and data discovery and visualization functions. Highlights include:

- A single data model that presents a consistent view of data in business terms for reports, dashboards, and data visualization and exploration with SAP Crystal Server software; this helps reduce administration and cost of ownership while offering business users confidence that their data is accurate
- Data discovery with native support for mobile devices from SAP BusinessObjects Explorer® software, giving your business users immediate answers to ad hoc business questions; SAP BusinessObjects Explorer provides the simplicity of search with the power of business intelligence so that anyone can tap, swipe, and zoom to find and explore relevant data
- Production reporting with SAP Crystal Reports® software for picture-perfect, interactive reports
- Drillable dashboards to monitor performance with SAP Crystal Dashboard Design software
- Data visualization and analysis with SAP Lumira™ software; SAP Lumira gives data analysts the power to combine, transform, and analyze data in an interactive, visual way
- Consistent functionality across all supported browsers

- Flexible licensing for virtualization and extranet deployments
- Application programming interfaces (APIs) for both .NET and Java, for integration into custom applications
- Reports processed on a separate server
- Integration into the environment business professionals already use with:
  - SharePoint portal integration kit
  - SAP BusinessObjects™ Live Office software to integrate reporting and dashboards into Microsoft Word, Microsoft Excel, and Microsoft PowerPoint documents
  - Support for Microsoft Windows Server and Microsoft SQL Server
  - Support for Microsoft Active Directory single sign-on

Additionally, SAP Crystal solutions leverage the same technology as SAP BusinessObjects BI platform and SAP BusinessObjects BI software, Edge edition. Content you create with SAP Crystal solutions can be migrated to these platforms, so you expand functionality and scale while protecting your BI investments.

Smaller firms are expanding their use of analytics: more than half of those with sales under US$100,000 will use these tools in three years – a jump of 43%.

Oxford Economics

Summary

A well-executed business intelligence deployment is a source of competitive advantage for small and midsize enterprises. BI helps SMEs identify their most profitable customers, accelerate product innovation, optimize pricing, and discover the drivers of financial performance.

Since SMEs have limited IT resources and small IT budgets, any initiative that requires deep IT expertise or a big IT budget becomes nearly impossible to fund and very difficult to successfully execute. However, with a BI solution that is specifically designed for small organizations, the possibilities are unlimited. Such a solution needs to model a crawl, walk, run approach; fit like a glove in an IT-constrained environment; and provide the richness of enterprise BI deployments at an affordable cost of ownership. SAP Crystal solutions – essential BI solutions that include reporting, dashboard, and data discovery and visualization for small companies – is designed to address all these needs.

"The knowledge workers will significantly benefit from a new generation of self-service – lean and agile – BI solutions that would allow these workers to fulfill most of their information requirements while requiring minimal IT support."
Forrester Consulting
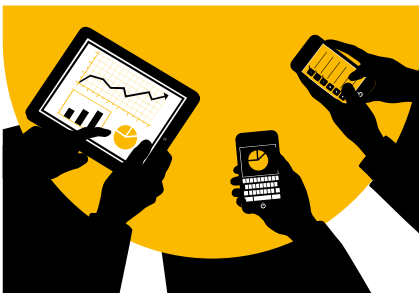
FOR MORE INFORMATION
To learn more about how you can meet the challenges of reporting and dashboard creation, please use these resources:
- **SAP Crystal solutions (home page and evaluation download)**
- **SAP Crystal Server community site (SAP Community Network resources and knowledge center)**

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