SAP Crystal Solutions

SAP Thought Leadership Paper
Business Intelligence

Meeting the Challenges of Business Intelligence for Small Enterprises
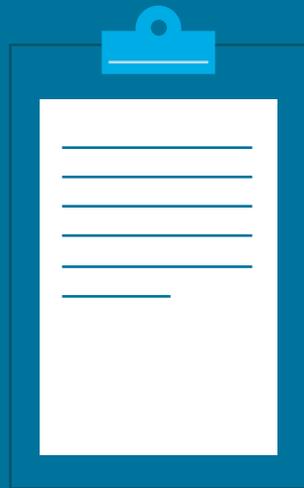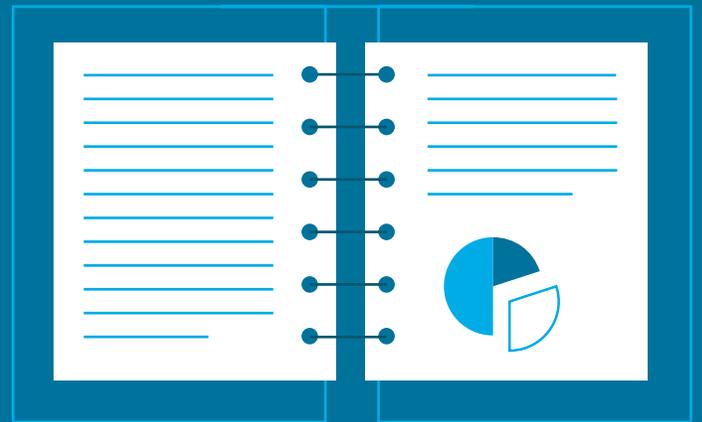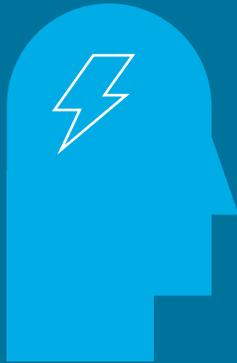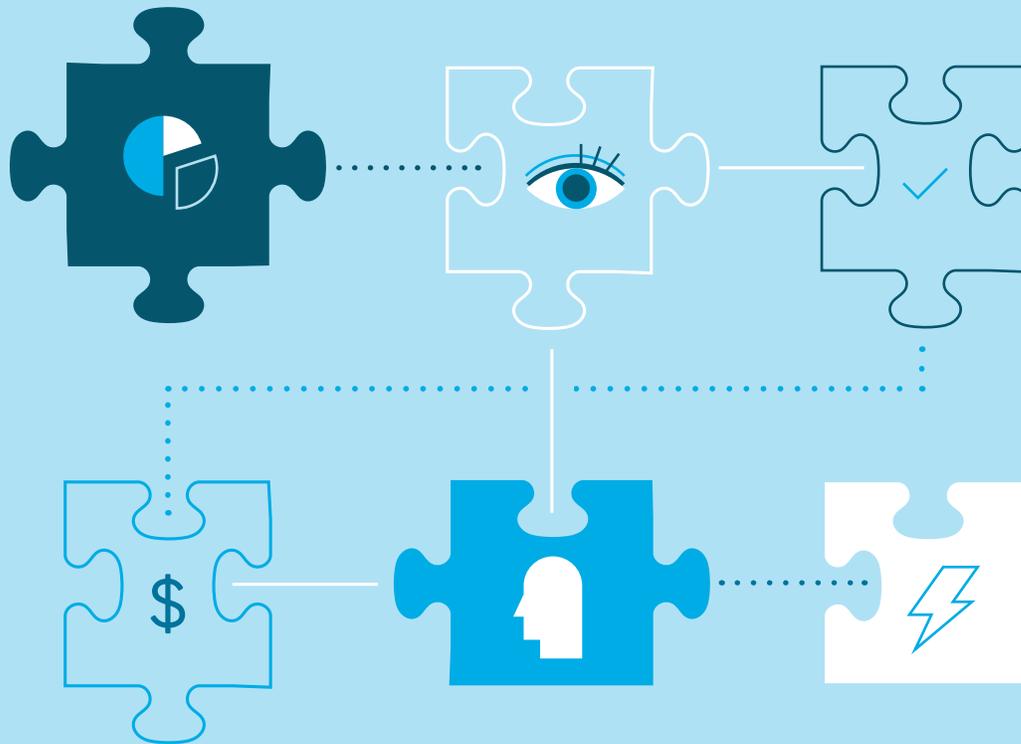
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Initiating a business intelligence (BI) strategy can be intimidating for small enterprises and departmental deployments. BI is often seen as a complicated, jargon-filled arena that requires lots of IT expertise and resources. There is also a tension 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. Without it, you risk either being made irrelevant by faster competitors or being swallowed by a larger company. Profitable growth requires 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.

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 be aligned on priorities.

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

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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, BI 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.

Along the BI 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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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."

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.

Gartner challenges midsize organizations to increasingly adopt such solutions, saying, "Mid- size 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."

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

Making the Case for BI - An Interview with Consultant Jeff Hieber

Jeff Hieber is a technology professional with a focus on communication and business analysis. He has a managerial background as well as skills in database administration, network and systems administration, product management and project management. Keen on application design and development, Jeff also has considerable experience with Microsoft Windows operating systems and Crystal Reports.

We talk to Hieber about how to make the business case for BI, and why opening data up to staff can transform training, customer knowledge, and marketing campaigns.

What are the biggest challenges customers experience with BI?

The first thought that comes to most new users' minds is that they don't have the time or experience to do the work needed to get the project up off the ground and paying dividends. Next on my list is the 'that's the way we have always done it' guy, or the guy in the organization that views the change as a job stealer from him.

I generally position these concerns to an owner/executive and their team by showing them that by utilizing strong BI tools, we are able to reduce time spent on one area and focus that time on another area that may help generate additional income for the company.

For example, if my sales manager is busy tracking data down and compiling it into usable reports, he isn't managing his staff or selling. If I can deliver that data to him in the exact detail he needs to see, when he needs to see it, I can keep him mentoring his staff and selling more product.

How do you make the business case for BI?

My first approach is to explain what it offers, and then to show some real life examples based on their business vertical. Then I explain really how easy it is, that you don't need to be a guru to use BI, that you just really need a little experience in the software and to know your business and you are well on your way to being a BI-friendly company.

In some cases we can put together a cost perspective for an end user,demonstrating how utilizing a BI tool can allow the company to shift the time and responsibilities of gathering and presenting data away from their staff, so that they can refocus that labour into areas that will help the company achieve its goals, and deliver superior data to their teams and their customers.

What common misconceptions do customers have about implementing BI?

In my experience it's that they don't have the expertise to get it done, that obtaining the expertise will be costly and that the expense of the tools is too great. Once you show someone just how easy it is to get started, they get hooked.

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What benefits can your business experience by enabling staff to use BI?

I can't see any downside to knowing what the data tells you about your business. When we counsel our customers, we discuss how BI can play a role in job training for staff.

By that I mean, we can present data that reflects the strengths and weaknesses of their team. In turn, this gets used for further training for teams in the weak areas and accolades in their strengths.

I don't think there is a reason not to empower your teams to use BI, as it can be used anywhere and everywhere to strengthen business knowledge and to offer an extremely efficient way of getting tasks done.

I have literally used a BI tool to analyze data, dump results to an export, and automated another piece of software to read those results and implement changes based on them.

Do SMBs need a data scientist to run BI, or can they benefit by opening it up to staff?

I don't think an SMB requires a data scientist, just staff that know their market and business vertical. In order to be agile as an SMB you almost have to open up the BI to your staff, perhaps only to staff members that know your market and business vertical, as they'll be able to offer the greatest insight as to what data is most important to the business.

Can you describe the importance of the role data can play within an SMB?

Without proper knowledge of the data you hold, I just don't think you're going to be as successful as you can be in business.

You wouldn't build a marketing campaign without first doing market research to determine what avenues will work best in reaching your customers. The same is true with knowing your data. The more information you can analyze the more you're going to learn.

For example if you're a call centre, understanding that your data tells you the most successful times to reach your client base means a greater contact rate. Just blindly making calls and hoping to reach someone is bad business.

If my data tells me that the most common time for me to reach you is 7pm on a Tuesday, because the majority of our previous contacts have been at that day and time, then it only makes sense for me to contact you then.

With impending data protection regulations like GDPR, how important is it for organizations to understand what data they have and how they should safeguard it?
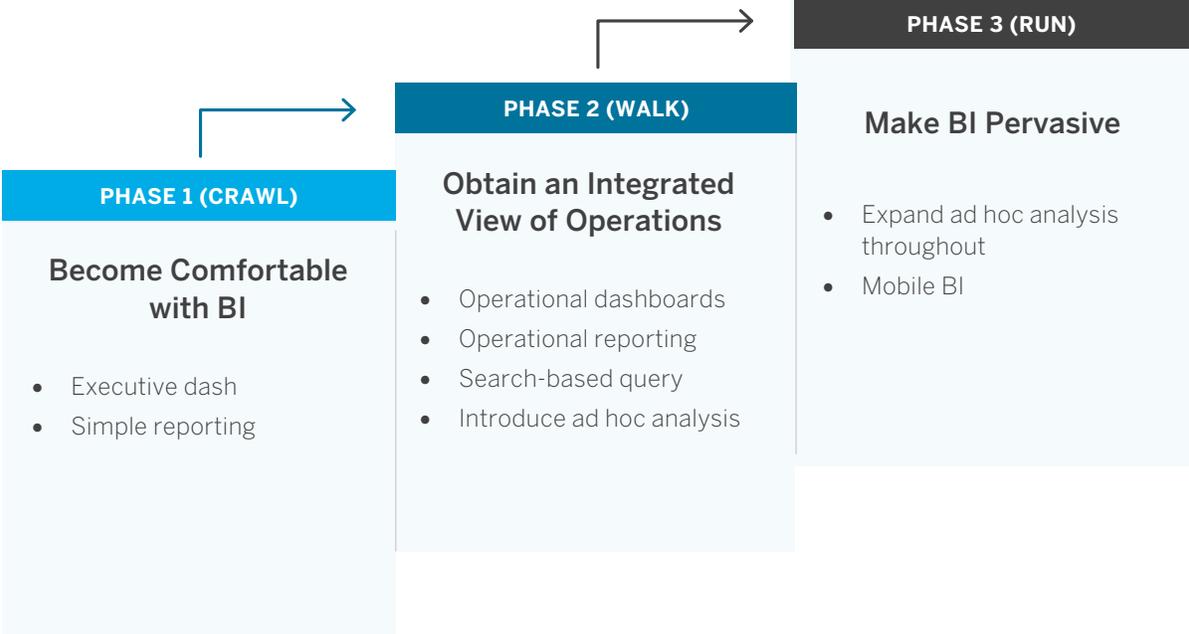
It should be of the highest importance, and this is where as a business owner/ operator you need to get out of the way and bring in an expert. We hire accountants to help us all through tax season and be the expert in making sure in our business life and personal life we get the best tax breaks we can. The same holds true here; hire an expert that can assist you in taking the proper steps to ensure your complaint and protecting sensitive data.

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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 (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 (build upon early successes) –** Expand the scope of BI such that the organization becomes comfortable with using various facts and insights for decision making. Examples include implementing operational reporting, operational dashboards, and ad hoc search query and analysis.

3. **Run (achieve pervasive use of BI) –** 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.

PHASE 1 (CRAWL)

Become Comfortable with BI

- Executive dash
- 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

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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. If you selected reporting-only or dashboard-only solutions in the early phases of BI, 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 –** 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.

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- **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."

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, email 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.

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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 BI so that anyone can tap, swipe, and zoom to find and explore relevant data

- Production reporting with SAP Crystal Reports software for pixel-perfect, interactive reports

- Drillable dashboards to monitor performance with SAP Crystal Dashboard Design software

- 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.

Summary

A well-executed BI 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 and sharing, please visit **www.crystalreports.com**

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