# Make the Most of Your Data with Business Intelligence Portals

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The purpose of a business intelligence portal is to provide teams with easy and efficient access to data that can help them make more informed decisions and, therefore, improve their job performance and organizational success.

In this article, you'll learn about business intelligence portals, find out what makes a good portal, and discover how to create and implement a portal that will work for your company.

#### What Is Business Intelligence?

Business intelligence (BI) is using and analyzing data to provide historical, current, and predictive views of how the business operates or could operate.

BI often gives people the ability to create reports, view and analyze analytics, and mine data. Companies frequently use both internal and external data to make decisions about things like pricing, product position, and strategic planning. Having easy access to data and the ability to create reports with specific data sets can lead to better operational planning.

Data intelligence is an evolving field. At one point, only management and business analysts used business intelligence for companies they contracted with. Today, companies themselves are using it.

"Data is everything," says Mark Hensley, Marketing Operations Manager at Liferay, a software manufacturer. Liferay's products allow companies to create digital experiences on web, mobile, and connected devices. "BI has come a long way. It used to be highly focused on showing the now, why, and what. Today, it is more progressive and predictive, in that it can tell you, 'If we do this, here's what you can expect," he explains.



#### What Is a Business Intelligence Portal?

A business intelligence portal is a tool that you can use to store all of a company's data so that those who need to access to it can and will be able to use the data in any way necessary. A BI portal is basically a centralized repository for data analyzing and reporting tools. The portals are often web-based and give people a way to visualize data and spot trends in a format that's far easier to view and leverage than the original data.

"[A business intelligence portal] is an interactive portal that connects all of your data content. You don't always have time to find all of the information you need," says Zoe Hagfeldt, Marketing and Account Manager for Metric Insights, a data portal company based in San Francisco. "[BI portals] give you all your metrics in a single portal."

Business intelligence utilizes several different kinds of data:

- **Enterprise Data**: This is data people in an organization share, usually across departments or locations.
- Structured Data: This kind of data is highly organized, usually in a database or spreadsheet. It is easily searchable and predictable. The data fields can be related to other data fields with the same structure. Structured data is easy to upload, extract, load, store, query, and analyze.



- **Semi-Structured Data**: This data is somewhat organized and contains tags or markers to separate elements, but does not conform to data models in typical relational databases. It is more difficult to search.
- Unstructured Data: This type of data contains items that are not organized and stored in predictable columns or rows. It can include emails, documents, presentations, PDFs, images, and videos.

Structure and organization are critical to business intelligence because it's essential for a company to have access to all data, not just the easily searchable information.

Once logged into the secure business intelligence portal, the user can access data specific to their job function. The goal is to give users within a workplace access to data from multiple sources, so they can query any data and produce any reports they need. Allowing people to help themselves to the data they need can save both companies and users time and money. With a well-functioning BI portal, the IT department doesn't have to develop and run complex queries for every individual request.

The portal itself is often a primary access point for data warehouse and business intelligence applications. It can eliminate the need for business executives and others to launch separate platforms to get reports from departments like human resources or accounting.

Business intelligence portals can do the following:

- Integrate querying, reporting, OLAP (online analytical processing), data mining, and data warehousing
- Contain analytics tools
- Provide security, storage, and delivery of data

The systems are often expandable and can contain robust features, depending on the company's needs.

## What Is Competitive Intelligence?

Competitive intelligence uses data to gather, analyze, and disseminate information about a company's competitors. By contrast, business intelligence uses and analyzes mostly internal data for the purpose of looking at business processes. Both support decision making, and business intelligence often includes competitive intelligence.

## What Is Enterprise Information Management?

Enterprise information management (EIM) often includes business intelligence. EIM specializes in seeking the best use of information within an organization. It combines enterprise content management (ECM), business process management (BPM), customer experience management (CEM), and business intelligence (BI) into one field.

EIM uses both structured and unstructured information to evaluate the management and performance of an entire company. EIM increases a company's efficiency and transparency by including information that crosses organizational and technological boundaries.

Business intelligence is an important component of an enterprise management system.

#### The History of Business Intelligence

Companies have always kept records and executives have always used that information to make decisions about their company's future. As technology has evolved, so has the storage and use of data in the business community.

In 1958, IBM researcher Hans Peter Luhn used the term "business intelligence" to convey "the ability to apprehend the interrelationships of presented facts in such a way as to guide action toward a desired goal."

Decision support systems first began to rise to popularity in the 1960s, continuing to expand their influence throughout the 1980s. In 1989, a published report by Howard Dresner used the phrase business intelligence as an umbrella term to talk about utilizing a fact-based support system of concepts and methods in order to improve decision making in business.

The use of the term business intelligence became widespread in the 1990s. The phrase combined the use of the terms management information system (MIS) from the 1970s and decision support system (DSS) and executive information system (EIS) from the 1980s.

# **How to Apply Business Intelligence**

Most companies want to grow and obtain more business. In order to do so, they need to possess information about themselves as well as about the general business landscape.

Business intelligence can help with many aspects of that analysis:

• **Measuring Performance**: Data reports can show performance metrics and how they relate to progress toward business goals. A system can be proactive and alert users if a certain threshold or goal is reached.

- **Analyzing Analytics**: Using technology and statistics, business intelligence can help gain insight into data. BI can help identify past trends and predict the future. Data mining and statistical analysis can help companies understand things like sales, the effectiveness of marketing campaigns, and more.
- Visualizing Data and Reports: Business intelligence portals can interpret raw data from multiple sources and present it in a format that is easier to read and manipulate, often through visualizations.
- **Collaboration**: Once the information is available, different departments and even different companies can use that data to reach a common goal.
- **Knowledge Management**: Using the data, a company can create strategies to leverage and share the information.

Business intelligence portals can help in all of these areas by providing rapid, relevant, and accurate information that allows you to make informed decisions about your company.

Working in the data business since the early 2000s, Hensley has witnessed the industry's evolution. He explains that while databases used to be independent from business intelligence, that's no longer the case. This integration has helped businesses make better decisions.

"Nowadays, portals have a full integration with business intelligence. It's just there and it works. It's quicker decision making," Hensley says. "In order to make any changes in operations, strategies, or tactics, you need data. Without data, we're kind of flying blind in the decision-making process."

#### **Key Features of a Business Intelligence Portal**

The specific functions of your BI portal will vary depending on your needs, but any strong portal will share the following characteristics:

- **Ease of Use**: Most BI portals are easy to use and navigate, often including familiar drag and drop functionality. Many also include a help feature.
- **Security**: A login is required, often a single sign-on within a company. Once logged in, a user will find specific information related to the user's job description and responsibilities.
- **Data Transformation**: The data displayed in the portal should be timely, reliable, and accurate. Users can then transform this data into useful and meaningful reports and favorite those reports to use again.

• **Compliance with Standards**: Portals need to adhere to government and company standards and policies. This can include privacy regulations.

In addition to the above recommendations, Hensley also suggests a thought-out workflow system. "There needs to be an approval system and a checks and balances system to make sure people are doing what they should," he recommends. This system will ensure the portal is functioning properly and creating the proper results and reports.

Artificial intelligence (AI) and machine learning can also be part of business intelligence portals because they can suggest additional information for end users. For example, if a user creates a report about sales data for a particular product, AI could recommend an inventory report for that same product based on the user's job with the company. "It can help with suggestions for the end users," Hensley says.

Many portals have the ability to detect anomalies within the data and alert users. "A strong portal will have an integrated analytics indicator built into it," Hensley says. "Your system should be smart enough to alert you to situations where something is different from the norm."

Hagfeldt also emphasizes *push intelligence*, a learning approach in which an authority figure tells learners what and how much they need to learn. "We can push information to you. If something is going wrong, you can be alerted to it right away," she says.

Hagfeldt also recommends the following:

- · Connectivity to multiple data sources and BI tools
- Dynamic search functionality, so users can easily find what's important to them
- A certification process when content is published, so users can trust the data
- A distribution method, so users can receive critical content without having to log into the portal (e.g., email/mobile)

## What to Do before Implementing a Business Intelligence Portal

For many companies, the benefits of a business intelligence portal can be substantial. Smaller entities, however, don't require all the robust features some portals offer; for these organizations, something simple with a few available data sources and reports may be sufficient.

Before embarking on the journey to create a portal, discuss the overall vision and ideas with key leaders within the company. Discuss the relative need for a BI portal, and gauge their level of commitment to creating one. See what features they want and need, and encourage departmental conversations about what reports and features others might be looking for.

Hagfeldt has some additional suggestions about planning for the creation and implementation of a BI portal:

- Catalog all the content you have today.
- Analyze what is and isn't important.
- Enrich the important content to provide additional value (e.g., automate uncovering exceptions and anomalies).
- Organize content by user groups to ensure they only get the content that's relevant to them.

"Make sure what you're looking to do is in line with where you want to go as a business," Hensley suggests. "Getting [departments like marketing and sales] in alignment with IT is very important if you want to grow your business."

You should also discuss how you will measure the success of the portal. Will there be reports about how people are using the system? Will other sources of data disappear so people will be forced to use the portal? Discuss what usage levels are necessary to justify costs.

"Explain the why and the value of why you're going through the project," Liferay's Hensley emphasizes. Including end users in the planning process and making them understand the value of the system and what it will do will help with buy-in. "They know the good and they know the bad because day in and day out, they're using the system."

A BI portal is only as good as the data that feeds into it. Take a look at the quality of your data. Is it structured, unstructured, or a combination? A data profile can help you identify the content, consistency, and structure of your data.

"It's cheaper to clean up the data before implementing a portal," Hensley notes. He uses what he calls the one to 100 rule. It might cost \$1 to clean up data before going into the system, \$10 to clean it up once in the system, and \$100 once that data impacts a sale or leads to an unhappy customer. "A lot of organizations treat the management of data as an afterthought, which leads to problems," he says.

For example, make sure databases record items in the same manner. If one spells out state names while another uses the two-letter postal codes, a database will treat them as two different entities (for example, it won't realize that "FL" is the same as "Florida"). The same goes for cities ("St. Petersburg" versus "Saint Petersburg"). Data discrepancies like that could lead to incorrect sales figures or reports.

"Part of a portal is coming up with a data dictionary," Hensley adds. "That's where things go wrong — [when you don't have] a governance of the data." The dictionary should include common vocabulary and style. In the previous example, state and city would be included in a dictionary, as would definitions of common terms. Hensley explains one example of a company that did not have one definition of a "customer" — some people said a customer was a single person, another thought it was a company, yet another considered it anyone with a current subscription but not a past one, etc. Different definitions can lead to confusion and inaccurate data.

Here are some other items to consider when planning a business intelligence portal:

- Will the company's databases talk to each other and feed into the new portal?
- Will existing data and applications migrate to a new system?
- Does there need to be a data or equipment upgrade before creating the portal?
- Who will maintain the business intelligence portal and update the data?
- Do your technology and IT departments have the staffing and skills to support and maintain a system?
- Who will answer help calls?

Hensley also recommends implementing a form of version control. If the system updates and something goes wrong, it's best to have a process in place to revert back to the previous version.

#### **Designing a Business Intelligence Portal**

There are numerous firms that build business intelligence portals for companies. Each one is different, but whether you choose to use an external vendor or create a portal in house, there are some functions to keep in mind when designing and implementing the portal.

Since the portals are often web-based, utilize current web design trends and functions that people are familiar with, and customize the look and feel of the portal to match your organization's branding. Regardless of the features you choose to include, the most important thing is that your portal is easy to use. If it's difficult to use, people will avoid it.

A business intelligence portal should be the following:

• **Usable**: It should be easy for a user to find what they need. The navigation should be simple and easy to understand. A single sign-on can make it easier for staff members to access and use, as they won't have to remember a login for a specific system.

- **Clean**: A portal should be easy to understand and employ clear, simple, non-technical language. (Remember, the portal should be geared to the general users, not the developers.)
- **Content Rich**: There should be a wide range of content and functionality in order to meet the needs of various employees. Customize the portal to each particular job function, so employees can easily find what they're seeking without having to sift through content that doesn't apply to them.
- **Current**: The data and reports must be updated regularly.
- **Interactive**: The user should be able to reach out to someone for help and feel listened to. The portal can also be a space to collaborate and share reports.
- **Value Oriented**: The user should feel that the portal is a valuable company tool, not a burden.

Creating value for the user is key. "You can make your portal your own. It's like your own personalized home page," Hagfeldt points out. "If each user can create their own home page, they will be able to dig into what content really matters to them and get rid of all the noise they don't need to be focusing on," she says.

#### Implementing a Business Intelligence Portal

Having an exceptional business intelligence portal isn't worth anything to your company unless employees use it. It's up to the company leaders and those who designed the portal to demonstrate its value to other employees. Don't make people figure it out on their own.

When it's ready to roll out, have a few employees test it and see if they understand it. Do the functions work? Does the portal have everything they need and want? Take their feedback and implement suggestions before continuing to roll out the portal to the entire company.

From there, teach employees how to use the portal and how it will make their work lives easier. Show them how they can collaborate with others by sharing and commenting on reports that they find valuable. Provide training and support, and allow for feedback.

Companies implementing a portal need to build excitement for it, Hagfeldt explains. "If you bring on this tool and don't get people using it immediately, it's a mistake," she says.

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