

Business Intelligence. De-mystified.

Business Intelligence (BI)

Even the name of this technology concept is sexy: you don't need to be a tech genius to understand the concept and, let's face it, intelligence IS hot.

Yet not everyone knows the secrets behind this mysterious Business Intelligence. What is it really? Apart from the sexy name, does it have anything useful to offer?

What is Business Intelligence?

Business Intelligence is a term to describe the technologies and applications used to gather, store, and analyze information about your business. This information, which includes historical, current, and predictive data, helps you make better business decisions by giving you a deeper understanding of your situation. Modern and advanced BI applications, like the one that is built-into Comarch ALTUM, give users the ability to quickly perform complex analyses, and forecasting.

Before we analyze the functionalities of Business Intelligence applications, let's discuss why so many companies use BI. Why is this feature described as a "must have" by IT decision makers when they invest in new software products?



Why do companies need Business Intelligence?

People need to know themselves well to grow and develop; the same is true for companies. A company's knowledge of itself is one of its most valuable assets. Just think about the number of reports that you request weekly or even daily. It is estimated that a modern manager makes more decisions in one day than a medieval king did in his entire lifetime! So naturally, companies want to be sure that they have the right information to give their employees so that these daily decisions are good ones.

To ensure that they have the data they need, large organizations have complete departments whose sole raison d'être is data analysis and report preparation. Other organizations may have teams dedicated to report preparation within their Accounting and IT departments. One of problems with having these reports generated by people is the length of time employees need to wait for reports.

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The process for requesting an analysis may look something like this: request report-> wait for someone to work on it -> receive -> ask for changes -> wait some more -> accept the report and realize that you'd like to drill-down further into some of the information ->request new report-> and the cycle begins again.

Let's take a look at a typical experience that leads a company to decide they need to have Business Intelligence tools:

1. Rising competition forces the company to make more and more business decisions on the strategic and operational level. To minimize the risk of making the wrong decisions, the organization realizes it needs to examine data on results from actions taken in the past.
2. Using management software, the company tracks and documents each transaction, giving them access to data that can later be analyzed.
3. The company has mounds of data, but unfortunately cannot analyze the data without programming knowledge. So the company hires people with these skills or the process is outsourced.
4. Ever-increasing demand for more and more complicated analyses soon creates bottlenecks and blocks information flow inside the company. As a result, data analysis departments are overloaded and the company's informational requirements are fulfilled late or not fulfilled at all.
5. Because of this back-up, knowledge becomes a scarce commodity available to top management only.
6. Realizing that employees of many different levels and departments within the company make decisions on a daily basis and that they need access to information to make good decisions, the company investigates Business Intelligence tools

The Technology behind BI

For many users, the greatest thing about Business Intelligence applications is that they allow you to quickly and easily create even the most complicated reports and analyses. To make data easily accessible, most BI tools use advanced database solutions called data warehouses. To explain this process, we'll use an example analysis that every company needs – multilevel margin calculation (Profit and Loss Statement).

OLAP – Analysis without BI

Creating a Profit and Loss Statement requires a large amount of data. First of all, you need to get all of the sales information including products, values, and quantities and then you need to gather purchase costs.

If you have an ERP system, it may seem like this information should be easy to attain. However, the situation becomes more complicated if - for example - you are using many different sales channels or selling through a chain of stores. Many organizations use multiple applications to record their sales processes: one application for CRM, an ERP system to handle sales from the HQ, POS (Point of Sale) to manage retail transactions and – finally – the eCommerce suite to register transactions in company's web-shop. Trying to get all the information together from four different sources is not impossible, but it requires you to

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run a query on all of the different databases, clean the results, and integrate it manually into a spreadsheet. Without Business Intelligence, even if you have access to pre-defined queries, you will not be able to change them or delve deeper into them without programming skills. These types of basic queries are created using Online Transaction Processing (OLTP) – which can only create relatively standardized and simple analyses, returning a few records at a time.

To create or change a report ,an IT person (if you are lucky enough to have an IT person who knows how) must write a SQL (Structured Query Language) query to return the specific result you want. SQL is a programming language for querying databases. Most business people who are not programmers are unfamiliar with it. Since most employees and managers have no knowledge of SQL, dedicated departments or people need to be assigned to create the reports and analyses the company needs.

Another disadvantage to creating reports without Business Intelligence is that OLTP databases are designed to maximize the data input, not necessarily the output. This makes it extremely hard for OLTP databases to return information if the query is not a standard one. So if your programmer wrote a query to try and find out how many red items you have sold to customers targeted with your spring promotion, who are located in Chicago and Milwaukee, you will be waiting for ages for the output.

And keep in mind, we are only talking about the Profit and Loss report in our example, think how complicated this process becomes for Financial reports that need data about more complicated figures such as indirect and overhead costs.

Ultimately, running these complicated queries every month using such a slow and manually intensive process does not work for most companies, which is why so many of them use Business Intelligence tools for their reports and analyses.

OLAP – Reporting WITH BI

So what happens when we create reports using the Business Intelligence tools? As discussed, one of the problems with standard reporting using OLTP is that it takes too long to run the database query. However, many Business Intelligence applications, including Comarch ALTUM, create



reports using a different type of technology called OLAP (Online Analytical processing) which makes queries based on a data warehouse. The data warehouse is a dedicated database with a structure that is optimized for query performance. A data warehouse configured for OLAP has a multi-dimensional model which allows users to make

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intricate analytical queries with a rapid execution time. So you won't be waiting forever for your report.

In short, the reason why OLAP technology can create reports so much quicker than OLTP is because the data is structured into cubes. Grouping the data this way allows the system to create a report, even a complicated one without summarizing the entire database. With OLAP, the reports you create can be as simple as comparing two columns of data or as complex as comparing data between 2 financial quarters for 20 regional areas with 1000 products.

BI and Comarch ALTUM

In our example of the Profit and Loss Statement, we explained how complicated the process can get when companies use many different sales channels or sell through a chain of stores. The data needed for the report is usually located within several different software applications. The process is simplified with Comarch ALTUM because the system contains modules for eCommerce, POS, loyalty and CRM so the data from all the areas of your business is already collected into one place; there is no need for data integration.

Comarch ALTUM simplifies report creation so that regular employee as well as managers can easily access the data they need. You will have the ability to access pre-made reports, and easily create new reports or modify parameters of existing ones.

With the Business Intelligence tool in Comarch ALTUM:

- Analyses are made available to all decision makers in the company regardless of their position and technology skills
- Reports are fast, reliable and simple to use
- Sensitive data is kept secure when you set-up User Rights within the system

Comarch ALTUM has built-in Business Intelligence capabilities which allow you to create and modify reports by dragging and dropping the data.

Because the BI module translates database terms into business English, all you need to do to prepare an analysis is to drag data elements (for example:



customer and revenue for a specific time period) to your report to instantly create a table, chart, graph or map. No SQL knowledge or programming skills are required.

In Comarch ALTUM, once you create and save a report, you can update it with refreshed data with



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one click. The System will automatically create a new report with updated data for the current period.

“Through 2012, more than 35 per cent of the top 5,000 global companies will regularly fail to make insightful decisions about significant changes in their business and markets.”

–Gartner Inc.

collecting large amounts of data that you don't have the ability to completely analyze without a team of programmers.

Comarch ALTUM has built-in Business Intelligence tools that support decision making on each level of the company's hierarchy, delivering easy to understand, out-of-the-box reports and allowing complex, multi-dimensional data analysis. Business Intelligence reports are accessible to all employees, so you can base your business on knowledge and stop repeating past mistakes.

Conclusion

You cannot make decisions without information. Unfortunately, lack of resources and access to data often means that for many companies even the most important choices are made without access to sufficient information. Without Business Intelligence capabilities, an ERP system is simply

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