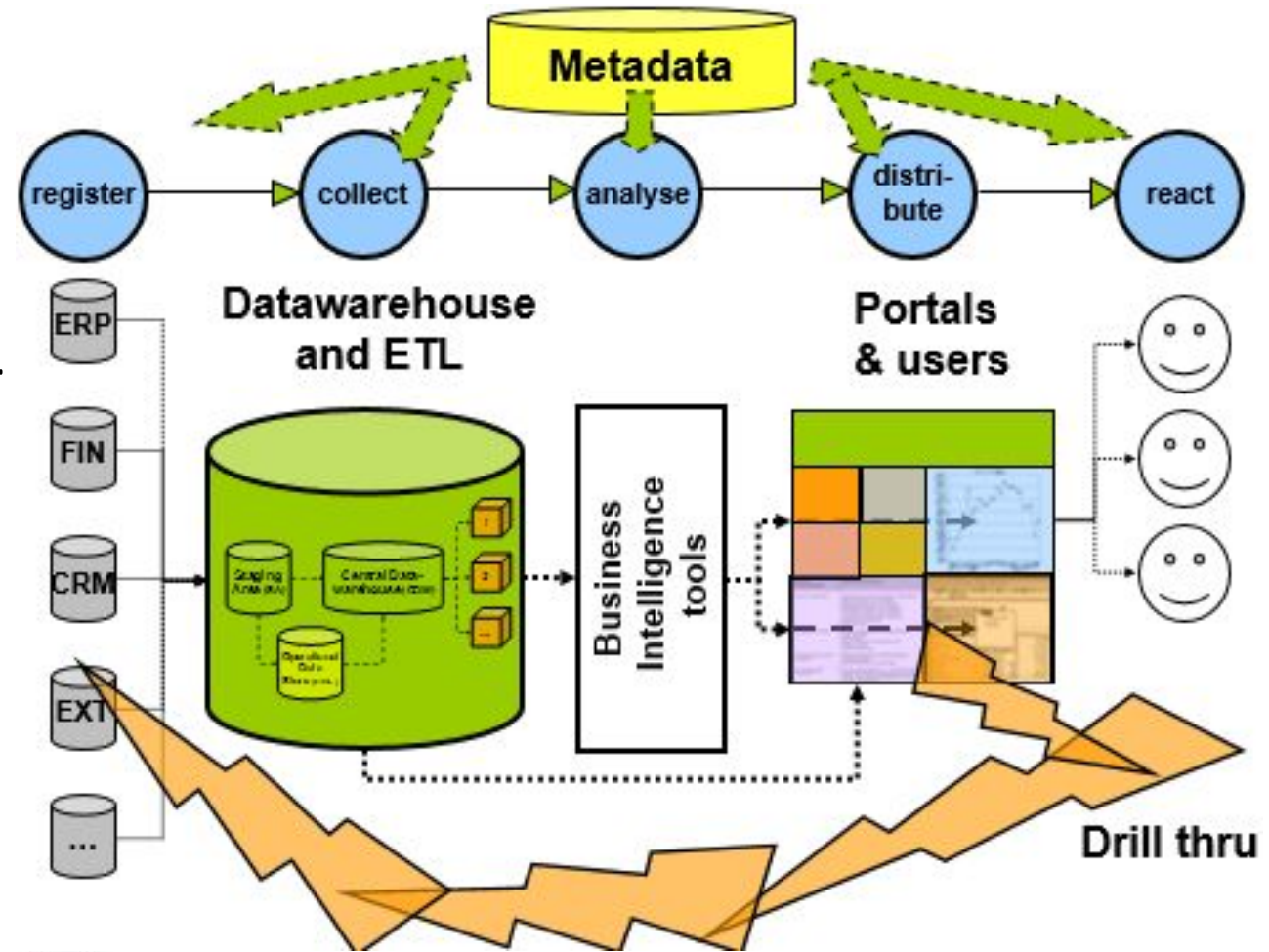# Business intelligence system

Finance 18.551

Companies need Business Intelligence systems in order to bring the right information to the right person, at the right time and in the right format. What are the major components of Business Intelligence systems? How do you design them and what determines their success?

The major components of a BI system

The major components of a Business Intelligence system are:

✔ **A data warehouse:** this is used for storing enterprise data that is cleansed and integrated. By using ETL tools.

✔ **Business Intelligence tools:** these tools are used for reporting, creating dashboards and thorough analysis of the data.

✔ **Users with the right skills:** people do need specific skills to be able to analyze the information and taking the right decisions.

How do you design Business Intelligence systems?

✔ First, you need to define the roles in your organization for example account manager or sales director. And discuss and define what information and insights they need in order to take better decisions. Based on the roles and insights, you need to design a proper Business Intelligence architecture.

✔ Finally, you are then ready to build the Business Intelligence system. By extracting data from your source systems, cleansing and combining it in a data warehouse suitable for reliable reporting. Then you need to create cubes (aggregates), reports and dashboards.
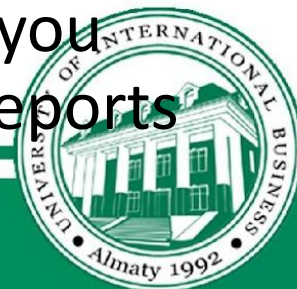
What determines their success?

Let's first define Business Intelligence success: people working on all organizational levels and in different disciplines making more profit with relevant insights. By doing it better than yesterday and performing better than your competitors.

Having Business Intelligence systems in place does not guarantee success. Though they are key in doing Business Intelligence efficiently. To be successful with Business Intelligence systems you need to:

✔ Provide the right insights to your employees in the right format at the right time;

✔ Have data of outstanding quality;

✔ Use information purposely for analysis, action and process improvement;

✔ Evaluate and adjust norms and targets on a regular basis;

✔ Discuss new insights with your colleagues thoroughly.

"Soft" factors are essential to achieving BI success

Despite the reputation of business intelligence as a set of technology driven toys designed for management and analysts, the list of critical success factors is headed up almost exclusively by "soft" factors, like culture, behaviour and leadership. Whilst this is not new there are still many organizations and individuals that appear to believe that better (financial) decisions and improved performance are the direct result of implementing modern Business Intelligence systems;

A few examples as illustration:

✔ *"Integration of technology and people leads to the best decisions"*

✔ *"From information to insight. Quick, complete and with high and fast ROI"*

✔ *"Turn data into dollars"*

Oversimplification of the BI process

Whilst this is indeed the heart of BI, it is a gross oversimplification of the process which is required to make it effective, and does immense damage to the image of BI as a whole. This type of publicity creates overinflated expectations and is probably one of the main reason why so much BI software remains, unused, of the shelf. BI is not a button that you can just press for better results, its not just technology it's a process, possibly even a set of beliefs
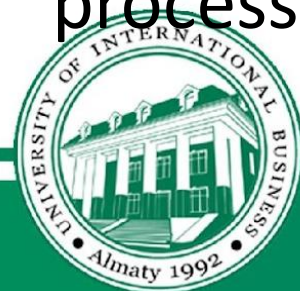
Recently, a senior manager remarked, *"I now understand that it takes a lot of perseverance to get Business Intelligence of the ground"*. In fact she was totally shocked by the amount of resistance created by the Business Intelligence initiative.