## 2014 CERN Spring Campus



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## Data Warehousing and Business Intelligence: Improve strategic decision making

Tuesday, 15 April 2014 09:00 (1 hour)

The growing business competence in an increasingly globalized world makes the analysis, the sales trends, the detection of potential barriers and the future forecast, some basic tools to survive in the market and to achieve the excellence in business. Organizations seeking to manage and improve performance often look for key performance indicators (KPIs) to measure their progress. These KPIs involve a measure and a target and they are usually analyzed by dimensions such as organization, personal, contract, product, and geography. Business Intelligence (BI) and Data Warehousing (DWH) are widely accepted as the key tools to build any decision-support system. The BI tools transform and present the data which is efficiently gathered and stored by the DWH. The data of an organization is commonly stored in one central place specifically design to be efficiently access, the DWH. This data is analyzed and transform into knowledge by the BI tool which enables the decision making process.

## **Summary**

The presentation will cover each of the components described before and how all the pieces are glued together to build a consistent decision support system. The talk is organized in three parts:

1.First, we review the general concepts of a Data Warehouse. This first part covers the most important topics of a DWH like the extraction, movement, and loading process (ETL), the dimensional model and the most common schemas used to store the data ( the star schema and the snowflake schema).

2. The second part is an introduction to the BI world. Some of the most important BI tools. Their benefits and how they are used to transform the data into knowledge will be the main subjects of this track.

3.Once all the concepts are explained, two real examples will be introduced. We will show how these components are used at CERN and how they can be applied to build a decision support system for an University. An example of a working dashboard for the University with their basic KPIs will be shown.

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