

EXTENDING BUSINESS INTELLIGENCE CURRICULA WITH DASHBOARD DESIGN

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1. Motivation

It is a well known fact that the fate of an organization largely depends on its managers' ability to make the right decisions. In the last decades an evolutionary line of tools has been developed to support the decision making process. Management Information Systems have been deployed, that collect decision-relevant data. In the beginning they provided static lists that were generated in batch runs, today sophisticated Business Intelligence (BI) tools allow for real-time drill down into operational and strategic information as well new ways of analyzing the data. While the acquisition, cleansing and distribution of data are supported by the new generation of tools quite well, there is still need to focus on "the last mile" to the user: visualization of the results. Most tools have means to represent data, but only few of them offer a suitable tool for easily creating visualizations that aggregate all the information in one spot and allow interaction with the data through a visual interface. While it might look like yet-another BI front end solution, dashboards facilitate the interaction with the data and offer a direct feedback channel to the user, that allows to interactively explore the data and its relation. Something that has the potential to change the way managers derive their decisions. Due to these developments, we present this curriculum to motivate the extension of traditional BI curricula by dashboard design. In spite of the fact that current dashboard tools often require no coding and are promoted to be end user tools, designing dashboards that really do increase user productivity in decision situations still remains an expert activity and should be taught as part of a comprehensive BI curriculum.

2. Learning objective

Learning objective of this teaching module is to

- understand capabilities and limitations of dashboards for data visualization and decision support,
- understand and be able to apply the various steps of the dashboard development process, from requirements analysis up to physical implementation and its relation to the overall BI process,
- understand the importance of HCI aspects in the design of dashboard applications.

3. Curriculum details

Table 1. Curriculum details	
Target audience	Graduate Information Systems students
Business problem	Students are in the role of a sales assistant of a company producing bikes. One of the company's objectives is to reach a profit margin increase of 15 percent for all product lines. A business intelligence application is required that allows for a simulation of the profit margin that depends on three major factors (sales volume, discount granted, and costs of goods sold).
Hands-on IT-skills component	Design and implementation of a dashboard for sales simulation, using the dashboarding software SAP Business Objects Xcelsius 2008