

„Implementation of the BI solution is another important step for our future development. That depends on understanding the development and operation of all ISIC territories and cannot do without relevant data and information support, which will aid our strategic and operational decision-making on all levels of our organization. The BI implemented by Orchitech Solutions is such support and it fully met our expectations.“

Hans Timmermans, IT manager of ISIC Global Office

1. Customer

ISIC Global Office is the central representative of the international non-profit organization ISIC, whose regional members issue the ISIC student cards. The association was founded in 1953 and its cards are used by more than 4.5 million students in 120 countries all over the world. The ISIC ID cards grant their holders a wide variety of benefits in culture, entertainment, sports, travel and other areas.

2. Requirements

ISIC Global Office has decided to extract the maximum from their data, which is located in their information systems (CRM, Benefit Manager and others). To fully utilize this data, it was necessary to design their connections and a user-friendly interface. The requirement of ISIC Global Office was a Business Intelligence system, which would connect various, without the need to include the administrators of the individual systems.

Basic functionality requirements:

- **Time-based and geographical (country, organization) reports and analyses of business trends and results**
 - Connecting data from the system Benefit Manager 2, CCDB 2 and the www.isic.org web.
 - Correlation between ISIC cards (issued, new, revoked etc.) and active benefits
- **Authentication and setting up rights – use of already existing identities**
 - Use of already existing user names and passwords
 - Definition of rights according to existing roles and assignments

3. Solution and Project

In the beginning of the BI implementation project, it was necessary to determine the platforms and the project's concept. Even though BI allows working with many data sources, combining these sources is not always simple. Additionally, working with multiple databases can have a negative impact on their performance. It was therefore necessary to choose suitable products, which would be able to manage processing of various data over individual systems and then present this data.

Out of several possible solutions, Orchitech Solutions chose the open-source product JasperSoft, which is the current BI standard for mid-sized companies. The platform Talend Open Studio was the chosen to carry out the systems integration. This platform manages not only the integration of individual systems, but also extracting, transforming and loading data (so-called ETL processes).

The standard approach in these projects is to use a central data warehouse. The warehouse stores data from individual systems, which must be first transformed into a format that is suitable for processing with the use of BI tools (the so-called analytical cube). As ISIC Global Office did not possess such a warehouse, it was necessary to build it first.

Upon selecting the products and approaches to the BI implementation, the project was divided into several stages:

•**Analysis and design**

- Identification of data sources
- Definition of monitored trends
- Design of standards for reporting and analyses
- Design of data warehouse structures

•**Implementation**

- Implementation of ETL processes
- Integration of databases into the central data warehouse (including special data types)
- Creation of OLAP cubes (one large cube and 13 additional views of this cube)

•**Operation and Support**

- Preparation of production environment
- Integration and acceptance testing
- Transition to the production environment
- Operation Support

The aforementioned stages cannot be pictured as individual steps, but rather an iterative cycle, which focuses on a few data sources and their connections at a time. This way, Orchitech Solutions has achieved a gradual integration of all data. This approach was also fully in accordance with SCRUM methodology, which this project utilized.

4. Results and Benefits of the Solution

The BI implementation project for ISIC Global Office was a considerably difficult one, and it required much effort from both the supplier and the customer. However, the benefits of the solution are proportionate to the energy spent and they meet the customer's expectations. The customer gained an ideal information support for their future strategic decision-making.

The main benefits of the BI solution and its implementation for ISIC Global Office are:

•**Efficient connection of various data sources**

- Central data warehouse
- External ETL processes
- Independence from individual systems, their data sources and support

•**Technologically advanced reporting and analytical tools**

- Simple and user-friendly interface
- Access from anywhere via web browser
- Overview of business data with a few clicks
- Dimensional data selection (drill-down)
- Report generation in many formats, including graphical outputs
- Planning of reports and their distribution via e-mail
- Management of user rights and roles

•**Support and extensibility**

- Open-source products with large communities
- Module-based, easy to extend solution
- Readiness for integration with other systems and applications

5. Project Summary

Realization:	Analysis and Design: November 2011 Implementation: December 2011 Launch: February 2012
Database:	PostgreSQL
BI solutions:	Jaspersoft BI Suite v4 •open source •java Talend Open Studio •open source •java
Scope:	Tens of users in ISIC Global Office, who manage the data of more than 150 organizations all over the world (tens of millions of ISIC cards, hundreds of thousands of benefits etc.)