

CASE STUDY

CNH Industrial

Implementation of Business Intelligence solutions for development and modernization of reporting and analysis operations in various areas of a company's activity.

Implemented solutions:

IBM (DataStage Cognos), Oracle

Solution's subcontractors:

JCommerce SA, LGBS Polska Sp. z o.o.

Work on commission:

Reply S.p.A.

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Client

CNH Industrial is an agricultural and construction equipment industry. The company' scope includes integrated engineering, manufacturing, marketing and distribution of equipment on five continents. Their operations are organized into three business segments: agricultural equipment, construction equipment and financial services.

Situation before the implementation

Due to the implementation of new IT systems a need to create an unified reporting platform appeared. The platform has to integrate data from all sources – these which have already existed and also new sources. The technical limitation caused the fact that reporting was made manually or simple reports were made by means of MS Access tool. Insufficiently detailed and less believable analysis were provided, which made process of taking decisions more difficult to conduct.

Solution

The architecture of the solution consists of:

- Thematic data warehouses (Data Marts), which were optimized in respect of reporting from every field of business
- Data model
- Reports and analysis
- Process of obtaining data (ETL), which allows optimal replenishing of Data Marts. Process is divided into two stages:

Stage I: Replenishment of tables from middle STAGE by transactional data

Stage II: Data transfer from the I level to appropriate structures of warehouses

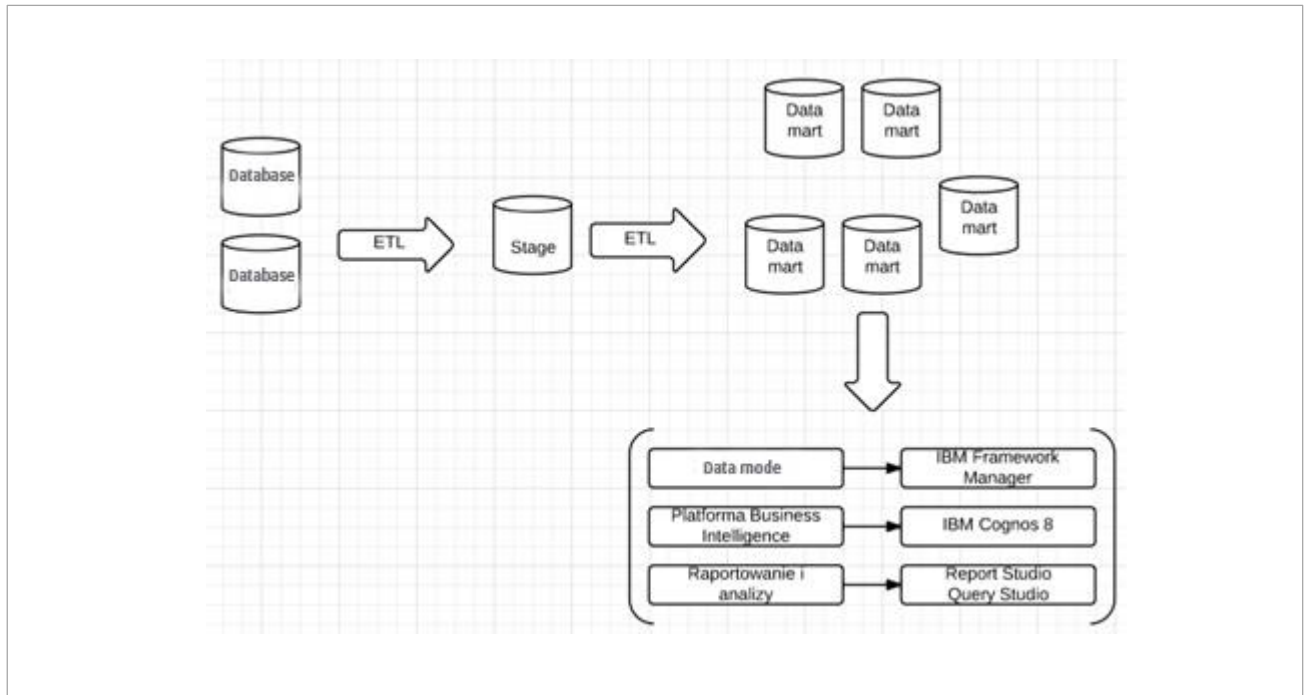
Implemented solutions were made for reporting and analysis from different fields of business like:

- Sales
- Warehouse management
- Evidence of trucks
- Reporting calls

- Planning of loading
- Use of components
- Orders
- Quality controls
- Vehicle painting

The implemented system allows:

- Quick and easy preparation of reports about company's operations
- Wider access of business information
- Data analysis support process by the means of marking significant information
- Visualization of data on graphs
- Exporting data to obtain multiform options
- Ease of reports' distribution and possibility to manage data transfer
- Successful searching and analysing of huge sets of data
- Data comparison
- Data filtering
- Ad-hoc reporting



Scheme 1. Architecture of solution

Used technologies

- Oracle 11g database server
- IBM WebSphere DataStage and QualityStage Designer (ETL)
- IBM WebSphere DataStage and QualityStage Director (Administration ETL)
- Cognos Connection – Business Intelligence portal allowing for availability of list reports and analyses, access to reporting tools
- Cognos Report Studio available through the web browser, allowing for:
 - Working on different templates and with multiple queries
 - Advanced filtering
 - Aggregation and disaggregation of data
 - Adding new calculations
 - Advance filtering of data in regard to the user’s parameters
 - Scheduling and distribution of reports to users
 - Modification of the report using personally-written JavaScript code

After the detailed analysis of the requirements, a series of simple and advanced reports were created in the Report Studio tool.

- Cognos Query Studio available via a web browser, allowing for:
 - Selection of one or more dimensions
 - Aggregation and disaggregation of data
 - Sorting and grouping of data
 - Advance filtering of data in regard to the user's parameters

The tool allows user to create quick ad-hoc reports.

- ERwin Data Modeller – a tool for designing logical and physical layers of the model. Designed set of thematic layers can be used in a modelling tool.
- Framework Manager – application that allows to build frameworks, which are used in reports. It lets the user to:
 - Create multidimensional models of data
 - Implement multilingualism of models
 - Filter data on the model stage
 - Create business presentation layer, which makes the work easier for the user.

Business benefits

- Comparison of available products in the company
- Listing of available parts without future planned usage
- Planning the usage of materials and tracking production
- Monitoring expected delivery
- Calculation of delays and unfinished tasks
- Monitoring suppliers
- Quality assurance of product's components
- Reporting difficulties or problems

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