Web and Data Warehouse technology combined in a pharmaceutical decision support system

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SPSInfoquest
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Introducing
JRF & SPSInfoquest
Introducing JRF

Johnson & Johnson

Professional

Pharmaceutical

Diagnostics

Consumer

Production-Marketing

R & D

Janssen-Cilag

Ortho-McNeall

Centocor

...

JRF

PRI

Centocor
Introducing JRF

- Established in 1953
- 5 products on the WHO list of “Essential Drugs” (~200), more than any other company.
- Part of the Johnson & Johnson group since 1961
- More than 80 new medicines
Introducing SPSInfoquest

- Provider of Business Intelligence Systems
  Particular focus in
  - Customer Relationship Management
  - Supply Chain Management
  - Clinical Research

Supported by expert teams in
- Data Warehousing
- Data Mining
- Web enablement
Introducing SPSInfoquest

• Founded in 1982
• Over 80 permanent SAS consultants
• Offices in UK, B, AUS
• Quality partner
Definitions & Objectives
Definitions

- Indication: potential usage of a medicine (e.g. this or that type of cancer)
- Project: combination of tests that will indicate whether a medicine can indeed be used for a particular indication
- Portfolio: combination of current projects
Objectives

- Reporting tool
  - Financial and status information on the development of a new medicine
    - History
    - Budget definition
    - Various financial and status metrics
    - Costs depending a decision
Objectives

• What if analysis
  ❚ Scenarios
    • Definition of extra, fake, projects based on
      – A change in an existing project
      – Something totally new
  ❚ Definition of various portfolio’s
    • Depending on user interest
    • Combining official projects with scenario’s
Objectives

- Up-to-date information
- Worldwide availability
- Strong graphical user interface
  - Both for management and analysts
Project Definition
Project Definition

- Technology Selected
- Partners
- Risks
Technology Selected

- **Inflow**
  - Warehouse Administrator
    - Oracle connectivity
    - Flexibility
    - Stability of company
  - **Outflow - web**
    - AppDev Studio
      - Build advanced graphical screens
Partners

- ISO HCG: Business consultants, User interface prototype
- Gitek: Application testing
- SAS: General consulting
Known Project Risks

- Due date
- High visibility
- State of the art tools
- Data quality is of prime importance
- ...

JRF Compass @ SEUGI 19
Tools & Techniques
Project Overview
Dimensional Modeling

- Specifically for decision support data modeling
- Is quite intuitive for non-technical
- Data focussed
- Based on a foundation of business and E-R modeling
- Less normalization is applied
Star Schema Example

Clinical trial information

Year/month

Clinical trials cost items

Project information

Hierarchy information

Product data

Milestone data
Demo
Lessons Learned
Lessons learned (1)

• Deadlines
  ◦ Dropped technical design
  ◦ Not enough time spent on data quality issues
  ◦ Failure to exploit all features of SWA or MDDB

• Data Quality from source systems (gigo)

• Buy-in of users & management
Lessons Learned (2)

- Team definition
  - Find capable persons on short notice
  - Resulted in large team, not easy to manage
    - Part time
    - Off-site work
    - ...
Lessons Learned (3)

- State of the art technology
  - Learning curve
  - Necessary tools not supported by NCS
  - Integration with existing standards
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More technical details ...

Using SAS, JAVA and WebAF to deliver business intelligence in pharmaceuticals

Industries knowledge centre

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