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# Data Warehouse & Business Intelligence Fundamentals

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# **Data Warehouse & Business Intelligence Fundamentals**

## **Course Scope**

- DW Concept
- DW Architecture
- DW Data Modeling
- Data Integration
- Gathering and Analyzing Requirements
- Business Intelligence
- Deployment, Support and Maintenance

# **Gathering & Analyzing Business Requirements (DW/BI Specifics)**

- Preplanning
- Gathering Business Requirements
- Conducting Data-Centric Interviews
- Analyzing Requirements
- Documentation & Follow-Up
- Project Work

# Preplanning 1/3

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- Choose the forum
  - Business users - decision makers, subject area experts
  - Data experts - IT gurus, source system experts
- Select a primary technique for gathering requirements
  - Surveys / questionnaires – limited response from contributors, not from management, static / no drill-down, usually delayed in the time
  - Interviews – meeting with one/two participants, require lots of individual participation, can go into details, easier to schedule
  - Facilitated sessions – may reduce the time to gather requirements, more difficult to schedule, encourage brainstorming
  - Hybrid approach – interview for details, facilitation to bring the group to consensus

# Preplanning 2/3

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- Identify and prepare the Requirements Team
  - Lead Interviewer – ask open-ended questions
  - Interview scribe – take notes, prepare meeting minutes
  - Additional observers – to listen, to gain experience
- Approach the sessions with right mindset
  - Do your homework in advance – research available sources, documents
  - Prepare list of questions – just to lead you
  - Remember your role
  - Don't presume that you already know it all
  - More listen than speak!
  - Rule of thumb – “Never assume – always ask!”

# Preplanning 3/3

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- Select Representatives
  - Select business people to represent horizontal breadth across the organization – common data, vocabulary, core business functions
  - Select business people to represent vertically the organization – from executive, through middle management, power users – cover strategic, tactical and operational levels
- Schedule meetings
  - 1h for individual meetings
  - 1.5h for small groups
  - 0,5h between meetings for debriefing
  - 3-4 meetings a day maximum

# Gathering Business Requirements

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- Introduction
  - Short project / interview objectives
  - Easy start – job responsibilities, organizational chart
- Structured questioning
  - What users do, why they do it - implicitly
  - What are the key performance metrics – they talk about processes and facts without us asking those questions directly
  - Types of analyses – ad-hoc, standardized; ask for copies;
  - Non-functional requirements – interface, performance, etc.
- Final wrap-up
  - Ask what is the success criteria for the project
  - Summary of the meeting and “Thanks!”
  - Next steps and user involvement

# Conducting Data-Centric Interviews

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- Evaluate the feasibility of supporting the business needs
- Assess that the necessary core data exists
- Roughly count the source systems / tables / rows
- High-level estimate the data integration needed
- Understand data – entities with their grains, relationships, attributes
- Understand how data is changed over the time



# Analyzing Requirements

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- Prepare common view of all business processes
- Group requirements to functional and non-functional
- Describe source systems functionalities and their data models

# Documentation & Follow-up

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- Debrief
  - All on the same page
  - Review notes, fill-in any gaps while the interview is still fresh in your memory
- Document each individual interview
- Prepare a Consolidated Findings document
  - Executive summary
  - Process used, participants involved
  - Requirements findings – all business processes, their results, current limitations, potential benefits and impact
- Wrap-up presentation and prioritization
- Next steps

# Project Work

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- Today
  - DWH model draft
  - Clarify all open questions
- Next steps
  - Create CBS data model in a database
  - Upload all the provided data
  - Check that all data is uploaded correctly