CH05 - Information Architecture

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Introduction to Information Architecture

Introduction to Information Architecture:

- Information architecture (IA) provides a framework defining the business context necessary for building successful BI solutions.
- It combines processes, standards, people, and tools to establish information as a corporate asset.

Data Integration Framework (DIF)

Data Integration Framework (DIF):

- The DIF is crucial for transforming enterprise data into information for tactical and strategic use.
- DIF components include data preparation, franchising, BI and analytics, data management, and metadata management.
- It is a blueprint ensuring data is consistent, conformed, comprehensive, clean, and current.

Key Components of DIF

Key Components of DIF:

- **Processes and Standards**: Ensuring data consistency, accuracy, integrity, and validity.
- **Resources and Skills**: Proper use of tools and successful implementation of architecture.
- **Tools**: Assisting in the creation, deployment, management, and expansion of the framework.

Questions Guiding IA

Questions Guiding IA:

- **What**: Business processes, types of analytics needed, decisions affected.
- **Who**: Access for employees, customers, suppliers, and other stakeholders.
- **Where**: Location of data, integration points, consumption in analytical applications.
- **Why**: Business and technical requirements for BI solutions.

Data Flow in DIF

Data Flow in DIF:

- Data is gathered from various sources, transformed using business rules and technical conversions, staged in databases, and made available for reporting and analysis.
- Data moves from creation (source systems) to transformation (integration), to storage (data warehouses), and finally to consumption (data marts and BI applications).

Operational vs. Analytical BI

Operational vs. Analytical BI:

- **Operational BI**: Focused on real-time or near-time data for immediate tactical decisions.
- **Analytical BI**: Involves historical data analysis for strategic decisions, trend analysis, and performance metrics.

Master Data Management (MDM)

Master Data Management (MDM):

- MDM ensures the consistency and accuracy of key business entities across the enterprise.
- Critical for maintaining data quality and providing a single view of critical data.

Balancing DW and Application-Specific Reporting

Balancing DW and Application-Specific Reporting:

- Shifting all reporting to a Data Warehouse (DW) is not always practical; a balanced approach is recommended.
- Blending application-specific and DW BI environments ensures consistent information and avoids redundant data sourcing.

Summary

This chapter emphasizes the importance of a structured information architecture to effectively transform data into actionable business insights. The DIF and MDM are key components, ensuring data integrity and consistency across the organization.

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Q&A