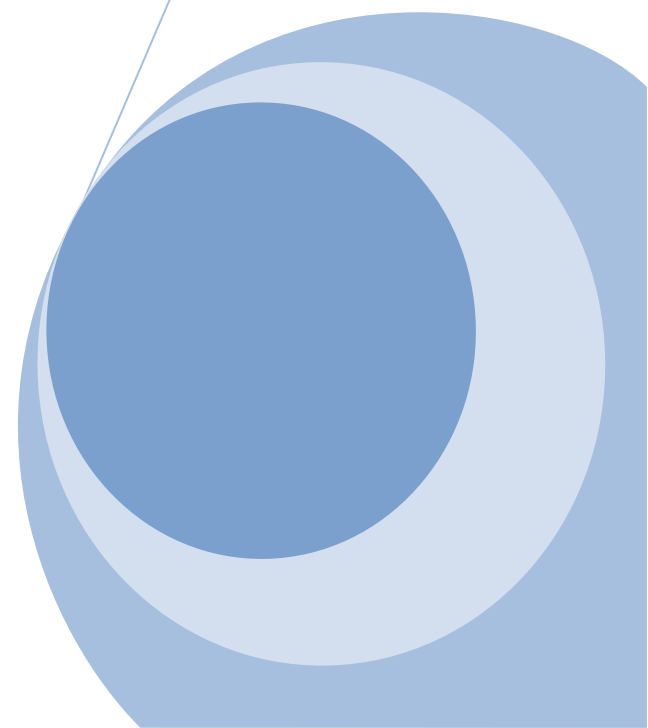


EWSolutions Master Data Management and Metadata Case Study

*Improving Capabilities in Master Data Management
and Metadata Management*

Master data management strategy and implementation, coupled with metadata management architecture and development, enabled a global energy company to realize significant benefits.

EWSolutions, Inc.
4/18/2017



Managing Master Data and Metadata: A Case Study in How EWSolutions Enabled a Global Energy Company's Data and Information Success

BP is one of the world's largest energy companies, providing its customers with fuel for transportation, energy for heat and light, retail services and petrochemicals products for everyday items. BP is a global company with revenue of \$285 billion operating exploration in 26 countries with 28, 500 service stations with 102,900 employees.

The company operates in four segments: Exploration and Production; Gas, Power, and Renewables; Refining and Marketing; and Petrochemicals. The Exploration and Production segment engages in crude oil and natural gas exploration, field development and production, management of crude oil and natural gas pipelines, processing and export terminals, and LNG processing facilities.

The company also develops, produces, and markets solar panels and wind farms. Its other activities include gas fired power generation projects. BP also engages in supplying, trading, refining, marketing, and transporting crude oil and petroleum products to wholesale and retail customers. The Petrochemicals segment produces chemicals and plastics through subsidiaries, joint ventures, and associated undertakings.

Given the global nature of its diverse business, market, and customer base, BP is faced with enormous data management challenges.



Global data challenges calls for enterprise master data strategy

In 2004, BP explored the need for master data solutions to provide centralized access to their various sets of master data (e.g., customers, suppliers, products) currently stored and managed independently across the BP enterprise. A key objective of this master data management effort was to minimize and eventually eliminate the problems associated with redundant master data, such as continually increasing costs to maintain this data and problems for decision makers caused by data inconsistencies.

Initially, [EWSolutions](http://www.ewsolutions.com) worked with BP to create an Enterprise Information Architecture Framework:

- Information Architecture – Goals/Principles/Value
- Governance Model
- Information Quality
- Information Lifecycle management
- Information Services

- Structured Data
 - Transactional
 - DW/BI
 - Master data
- Unstructured Data
- Information Models/Taxonomy
- Information Catalog / Metadata

Using this framework, the team developed a Master Data Management Strategy that included:

- Confirming and refining the objectives and guidelines for the overall initiative
- Establishing baseline rules for master data management
- Establishing rules for new applications
- Developing a master data governance model
- Creating job and skill descriptions
- Estimating high-level benefits
- Developing performance metrics
- Developing an a high-level enterprise model
- Identifying Master Data owners
- Reviewing and determining relevant Master Data standards

Additionally, [EWSolutions](#) performed a comprehensive assessment of the current state of metadata management at BP and made business and technical recommendations for the development and implementation of a managed metadata environment to support the organization's stated needs for context for its data and information. As part of the assessment, [EWSolutions](#) developed a Master Data Management Technology Review that included following:

- Defining the primary components of the master data technology architecture in order to segment and categorize tools and technology for review purposes
- Confirming BP's requirements and assign priorities for each technology component
- Conducting a market survey of master data management technologies
- Developing a short list of recommended products for each technology component
- Defining toolsets and usage scenarios

In a second phase, BP and EWSolutions created a master data profiling proof-of-concept and data quality strategy. The main points of this phase were:

- To develop initial requirements document for Data Profiling and Data Quality (DPQ)
- To capture project specific DPQ requirements
- To conduct proof-of-concept projects for DPQ tools and technologies
- To develop DPQ Metrics, process and procedures
- To finalize technology recommendation for DPQ

Using senior resources from [EWSolutions](#), BP was able to meet all the defined goals in the specified period.

[EWSolutions](#) consultants brought outstanding credentials and dedication to the partnership while also offering:

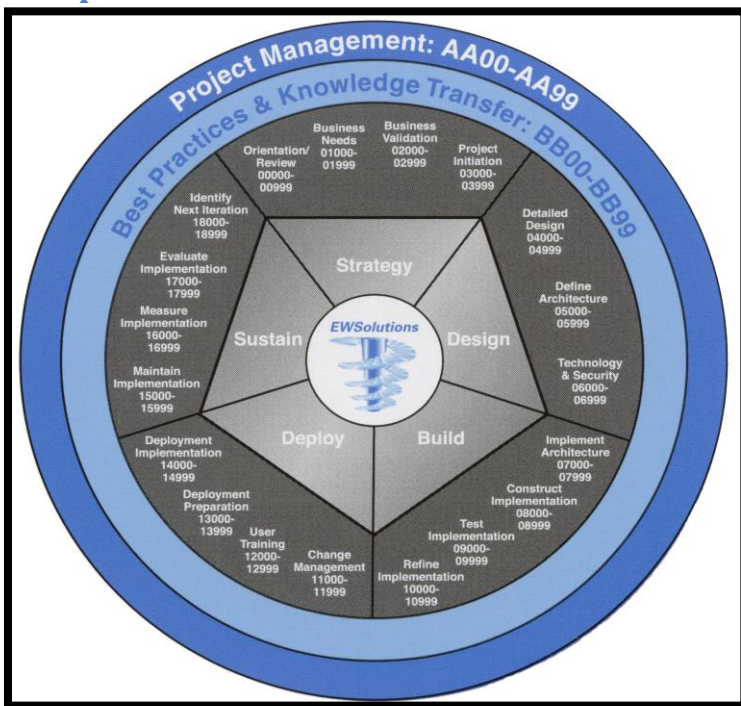
- Exceptional experience in all facets of enterprise data management assessment and implementation
- Exceptional experience in all areas of master data assessment, architecture, project management and data integration
- Exceptional experience in all areas of metadata strategy development, metadata tool assessment, technical metadata architecture (Managed Metadata Environment - MME), metadata project management and metadata integration

- Exceptional experience in the design and development of enterprise data governance programs, customized for an organization's unique culture and needs
- Sophisticated interpersonal communication skill for delivering knowledge transfer
- Thorough understanding of enterprise data management best practices and industry standards, especially in the areas of data management strategy, data governance and stewardship, data architecture, metadata management, master and reference data management, data warehousing and business intelligence, and the project management in these areas
- The invaluable ability to view the technology from the business person's perspective

Additionally, [EWSolutions](#) expertly guided BP in the use of its industry leading **M3sm** methodology for metadata management. The results of this methodology implementation included:

- Analysis of **M3sm** against current BP metadata management activities and practices
- Assessment of gaps between BP's metadata management practices and industry proven practices in **M3sm**
- Incorporation of **M3sm** stages, phases, activities, templates into an enterprise approach for managing metadata, especially for master and reference data
- Incorporation of new method into selected metadata management implementation projects, starting with the development of a managed metadata environment

Methodologies enable more rapid assessment, development and implementation through best practices



EWSolutions' M3sm methodology for Metadata Management is a highly customizable, iterative, and workflow-oriented methodology designed to help your organization achieve enterprise metadata management success effectively. With hundreds of fine-grained tasks with clear objectives, success factors, and responsible parties identified, **M3sm** enables the development of a managed metadata environment with the proper processes, people, and technologies.

The methodology is based on **EWSolutions'** consultants many years of helping clients successfully realize outstanding benefit from their metadata management efforts. **M3sm** underscores **EWSolutions'** numerous award-winning efforts and thought-leading practices and supports integration with Enterprise Information

Management (EIM), data governance, and data warehouse / business intelligence (DW/BI) efforts. **M3sm** is a self-sustaining, iterative, and customizable methodology that helps organizations to realize continuous return on investment (ROI) by identifying new business opportunities, improving efficiencies, and increased data quality through a metadata management program.

Methodology Critical Points:

With highly customizable task narratives, templates, and examples, **M3sm** allows any organization to fit the methodology to its efforts, not the other way around. The methodology adds value to a metadata program without adding unnecessary complexity or unjustified efforts.

An iterative methodology with overlapping phases and activities, **M3sm** helps an organization anticipate and reduce risks within and across phases, providing strong validation of scope and results, while efficiently utilizing all resources, including time, personnel, funds, and effort.

The **M3sm** workflow provides discipline and manageability to any metadata management program. Developing a managed metadata environment can be very complex – using the **M3sm** methodology breaks the effort into manageable, measurable tasks to know the current state, target state, and next steps. With its clear success criteria and best-practice estimates, the methodology helps an organization achieve discipline and increase visibility to assess progress and identify needed adjustments efficiently and effectively.

Significant Accomplishments Provide Continuing Progress

BP embarked on an extensive program in several areas, including implementation of its master data strategy, full data quality project planning and implementation, managed metadata environment (MME) strategy/planning/architecture/implementation, enterprise data architecture and modeling, and enterprise data governance. The organization continues its enterprise data management efforts.

[EWSolutions](#) provided sustained guidance and advice informed by industry standards and proven practices, and led / directed several foundational projects during a critical period for BP.

EWSolutions Overview

[EWSolutions](#) is comprised of superior strategic and tactical planning analysts who offer government and commercial clients innovative and authoritative solutions to assist with assessments / strategies in all areas of enterprise data / information management, technology implementation in metadata management, data warehousing (ETL, BI, data and text mining, etc.), business intelligence implementation, data governance program development and implementation, enterprise data management framework development and implementation, data migration planning, disaster and contingency planning, and strategic solutions for business/technology issues. The company's extensive client base spans the government and the health, life sciences, insurance, financial services, consumer products, retail, manufacturing, and high-tech industries. For more information on our strategic consulting services, high-value implementation services, methodologies, or world-class training call (630) 920-0005 or email us at Info@EWSolutions.com