GIS Integration of EP-Data repositories in OMV Exploration and Production

PUG, Houston, TX, 2010

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Agenda

- OMV E&P - Vision - Mission
- Motivation for GIS integration
- Challenges in data integration
- Information Lifecycle Management
- Integration Approach
- Examples for GIS integration
- Next steps
OMV

- Exploration & Production
- Refining & Marketing incl. Petrochemicals
- Gas & Power
Growth Story

1956
Start of the international filling station business (Hungaria)

1960
1968
Start of the international E&P business with the first international venture (Libya)

1969
1970
1985
1996
2004
2005
2006

OMV and IPIC acquire 100% of Borealis; OMV sells 50% AMI stake to IPIC
Integration of PCD into Borealis; Interest of 25% in Borealis (IOB 50%)

2003
1999
1994
1995
2006

Takeover of production in 1999
Import of refineries, 45%
Greater petrochemical capacity in 2004

2006

Acquisition of 34% of Petrol Ofisi from Dogan Holding
Foundation of the OMV Future Energy Fund
Set up of electrical power business
OMV Exploration & Production
Worldwide activities
Vision - Mission
Vision and Mission

Motivation

OMV E&P Strategy

Information Systems - Mission

E&P IS strongly supports business growth of OMV E&P through high quality information services driven by business needs

MDM – Vision

“Maximize the value of all E&P staff by providing a standard working environment which allows entitled users in any location to have fast and secure access to data and information of known quality.”

Program

Project Portfolio
Challenges in Data Integration
The key challenge in (E&P) Data Management
The key challenge in (E&P) Data Management
The key challenge in (E&P) Data Management

xplore | Appraise | Develop | Produce | Abandon

Business Applications / Information Portals

Business Processes

Structured Data (MDS) | Spatial Data (GIS) | Unstructured Data (eDMS)

Data Layer

Application DataBase FlatFiles

Data

(MDS) (GIS) (eDMS)

Data Infrastructure

Data

(MDS) (GIS) (eDMS)
Information Management Framework

Business Applications / Information Portals

MDS  GIS  eDMS
Information Management Framework

Business Applications / Information Portals

Structured Data (MIS)

Spatial Data (GIS)

Unstructured Data (eDMS)

Business Processes

Presentation Layer

Business Layer

Data Layer

Systems Layer

Information Management Framework

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Information Lifecycle Management

- Acquire
- Validate
- Store
- Modify
- Publish
- Distribute

External data sources

Data Entry

Data Quality Check Process

Data Quality Assurance Process

Monitor

Entitlements

E&P Community

Data retrieval
Information Lifecycle Management

Acquire Validate Store Modify Publish Distribute

External data sources

Acquire Store Manage content Reuse

Data Entry Data Quality Check Process Data Quality Assurance Process Data retrieval

DATA is an ASSET
Approach – Project Methodology
In order to avoid this situation

- Business Requirement Analysis
Business Requirement Analysis

- Business Requirement Analysis
- Business Case / Benefit description
- Business Process Review
- Review associated standards and procedures
- Technology Design
- Implementation
Business Process Review

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As-Is Acreage Process (1/2)
The current process of how EP-INT-ST collect information from Branch Offices to produce the Quarterly Acreage Report
Review Standards and procedures

- Business Requirement Analysis
- Business Case / Benefit description
- Business Process Review
- Review associated standards and procedures
- Technology Design
- Implementation
Integration Example: GIS - MDS
Information Management Framework

Structured  Spatial
Information Management Framework

Structured  Spatial
Information Management Framework

Structured  Spatial
Information Management Framework

Structured  Spatial
Example GIS - eDMS
Information Management Framework

Spatial

Unstructured
GIS – eDMS: Business Requirements

- Query the eDMS through an GIS frontend.

- **No changes** to the existing GIS and eDMS
  - No changes to the existing workflows
  - No additional metadata fields
  - No structural changes

- Published **documents** must be found immediately.

- Implementation:
  - Well related documents
  - Next Step: other data domains (Blocks, Seismic, etc.)
GIS and eDMS linkage @ OMV E&P

- ArcSDE
- ArcIMS
- MDS
- UWI during "Create Well" function
- Creation of Well related FCs
- casual GIS users (WebGIS)
- eDMS users
GIS and eDMS linkage @ OMV E&P

- Creation of Well related FCs
- Creation of Well related FCs
- UWI during „Create Well“ function

- ArcSDE
- ArcIMS
- PlaceLynx
- eDMS
- eDMS
- PlaceLynx
- casual GIS users (WebGIS)
- eDMS users

MDS

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Information Management Framework

Spatial  Unstructured
Information Management Framework

- Spatial
- Unstructured
GIS – eDMS: Business Benefits

- **Daily Reports** (Drilling Report, Production Reports, etc)
- **Scanned logs** along a seismic line
- **Fast access** to documents **without** “spelling” name
  - -> **query** the GIS
- **WebRouting** GIS Service with tagged facilities documents
- **Find geological studies within an area**
Example GIS – Data Quality Management Process
Data Quality Check: GIS and OpenSpirit
Data QC with GIS and OpenSpirit

G&G Projects

Region 1

Region 2

Region 3
Data QC with GIS and OpenSpirit
Integration so far

So far we could integrate

- GIS with our structure data repository (MDS)
- GIS with our document management system
- In addition, we can use GIS during the data cleaning and quality monitoring process.
Next Step: Production reporting
Next Step: integration of WebGIS inside MDS DataPortal
Next Step: integration of WebGIS inside MDS Data Portal
Still a lot to do

Forecast

Carpe DM!

Today