



to bring you world class  
Business Information Solutions

## PPDM User Group Meeting

**Date:** Mar 9<sup>th</sup> – 10<sup>th</sup>, 2010

**Location:** Hess Conference Center

# PPDM as an Enabler for Upstream Asset Management Solutions

Jess B. Kozman, Principal Consultant, CL Tech  
Kandy Lukats, President & CEO, 3-GiG



*Helping You Organize Your Proprietary Business Information*

# The Problem

## Workflows:

Planning/Budget

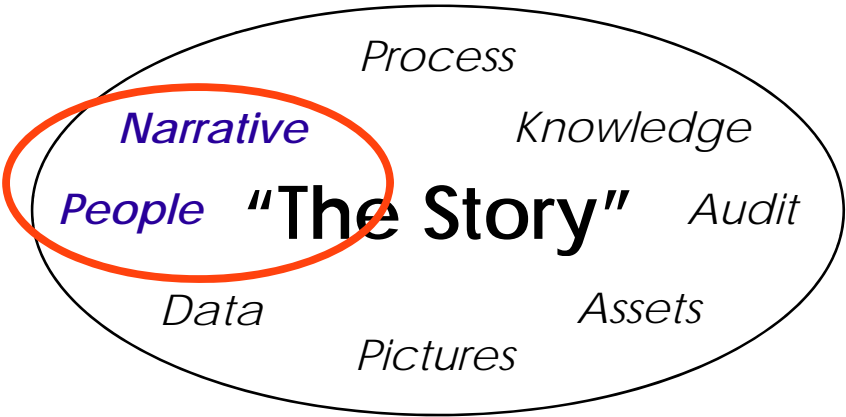
EOY Reserves

Capital Review

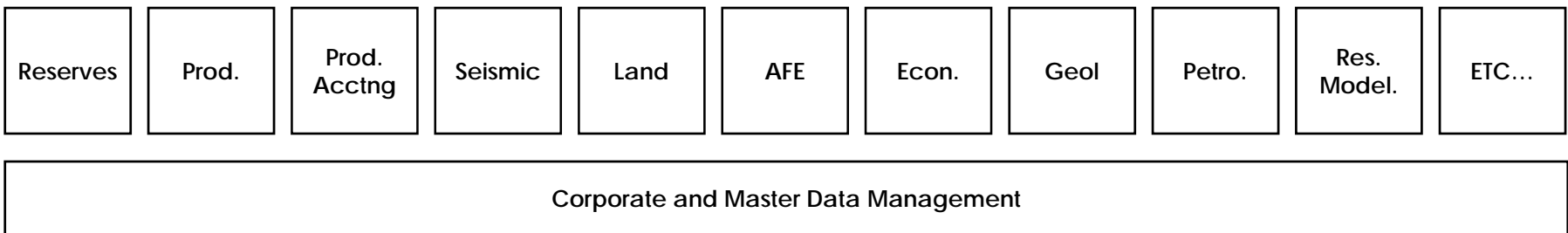
Peer Review

Asset management

## Components:



## Information:



# The Goals

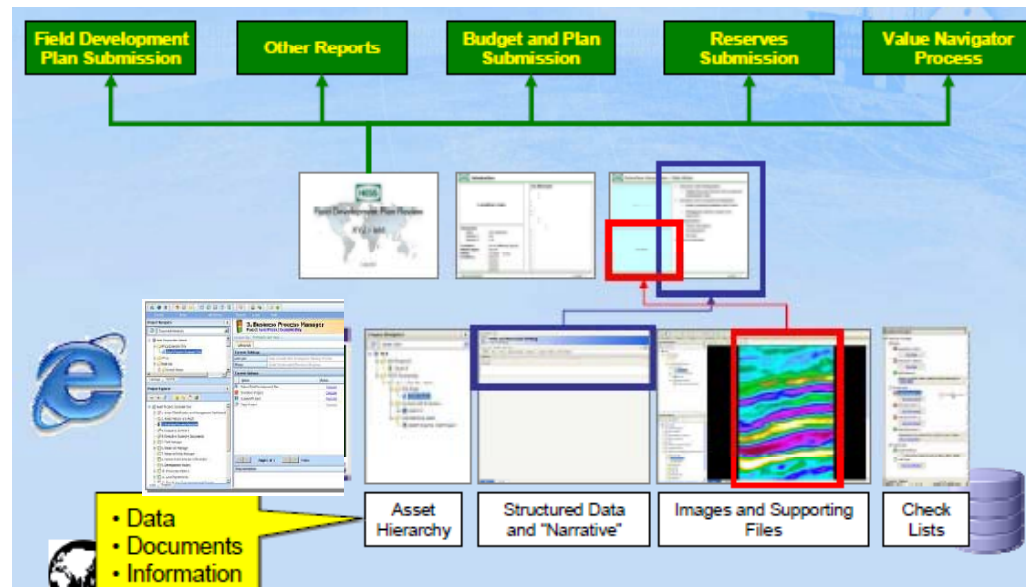
*Reduce Duplication*

*Centralize*

*Increase Efficiency*

*Standardize*

## The Solution: An Asset Management System



# How to Clients Describe the Problem?

## Case Study #1

Nobody could find anything

Constant demand for the same information

No “record” of what was used to support an AFE

Management had no “line of sight”

Technical services had no “line of sight”

Drilling disconnected from planning process

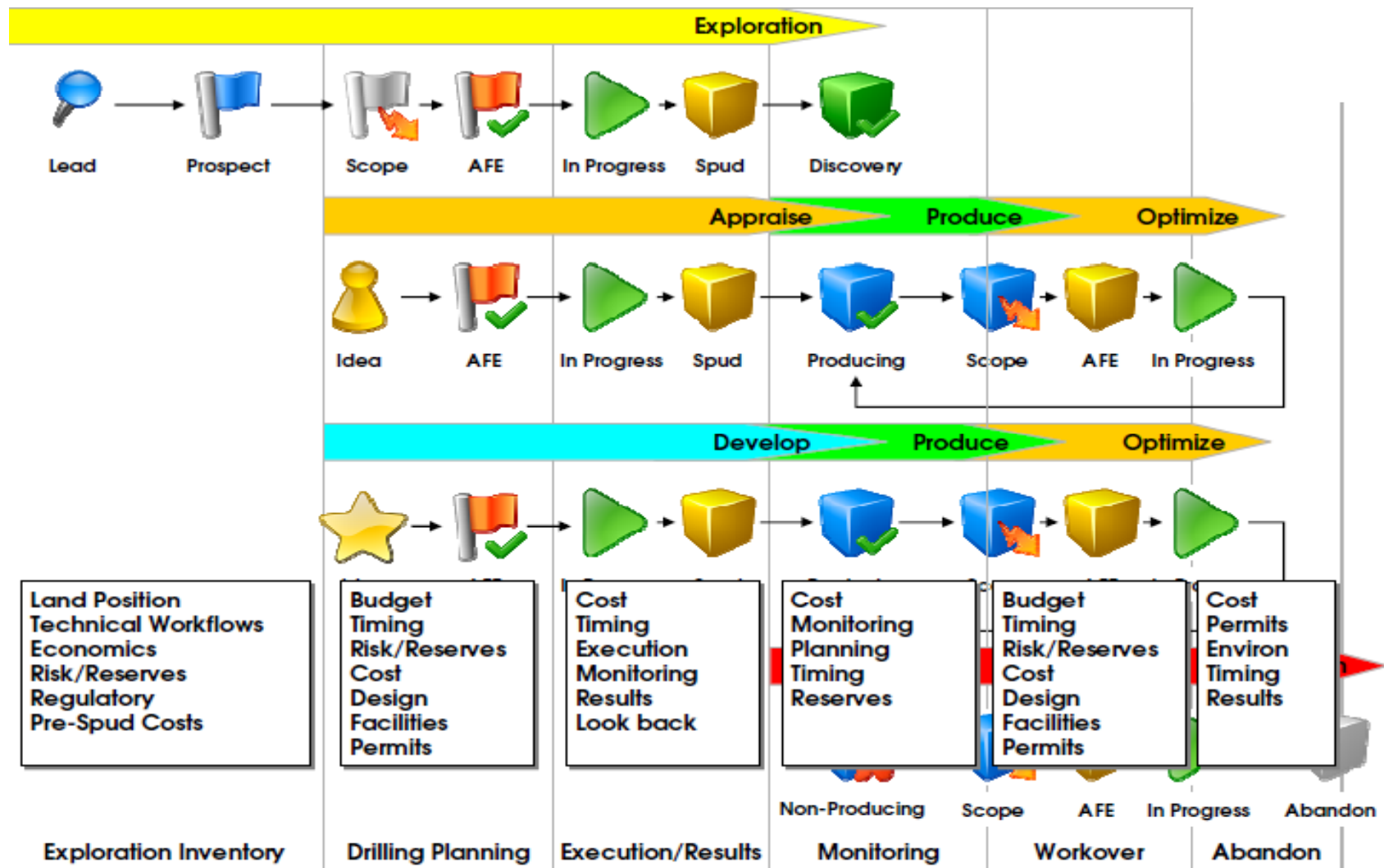
No way to capture ideas from the beginning

Lost knowledge of behind pipe opportunities

No standards to meet management needs

# The Process:

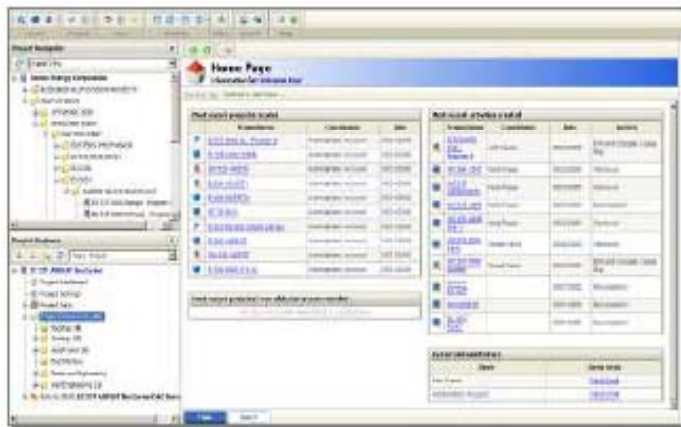
## Case Study #1



# The Solution: Case Study #1

The Asset:  
The Portfolio:  
The Process:

The Well  
GOM Shelf  
Drilling & Well Work Planning



***“Line of Sight” between Drilling & Planning***

***Capture lost knowledge from behind pipe opportunities***

***“Workflow and Document Management Wrapper” around PPDM***

***Enforce standards***



# How do Clients Describe the Problem?

## Case Study #2

East Texas Asset – tight gas play

Data is a mess

Petra and Geolog databases a mess

Ground up interpretation never done

Too many interpreters - no consistency

Previous reserves workflows undocumented

Many studies never captured

Knowledge lost

No knowledge of what is good or clean data

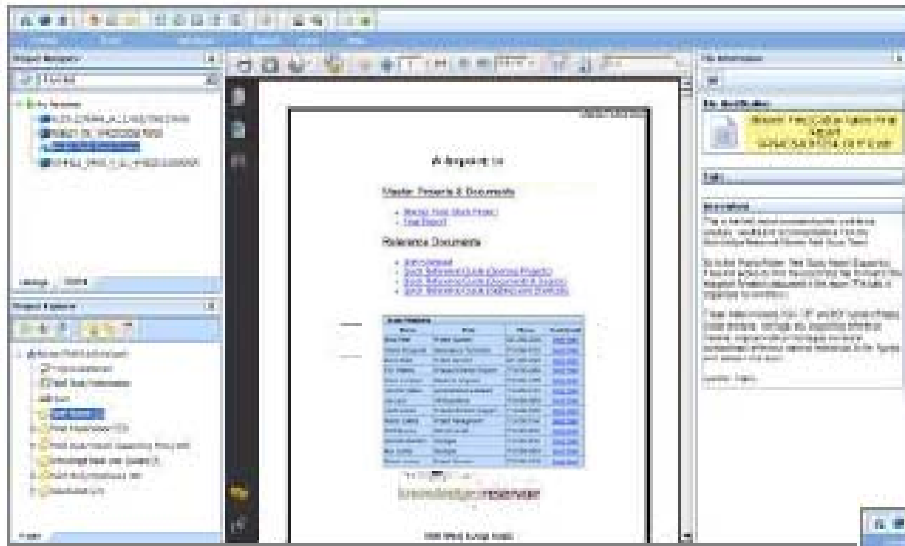
No knowledge of what data supports field management

Too many version of the same information

# The Solution: Case Study #2

The Asset:  
The Portfolio:  
The Process:

The Field  
Blocker Field, East Texas  
Volumetrics and Reserves

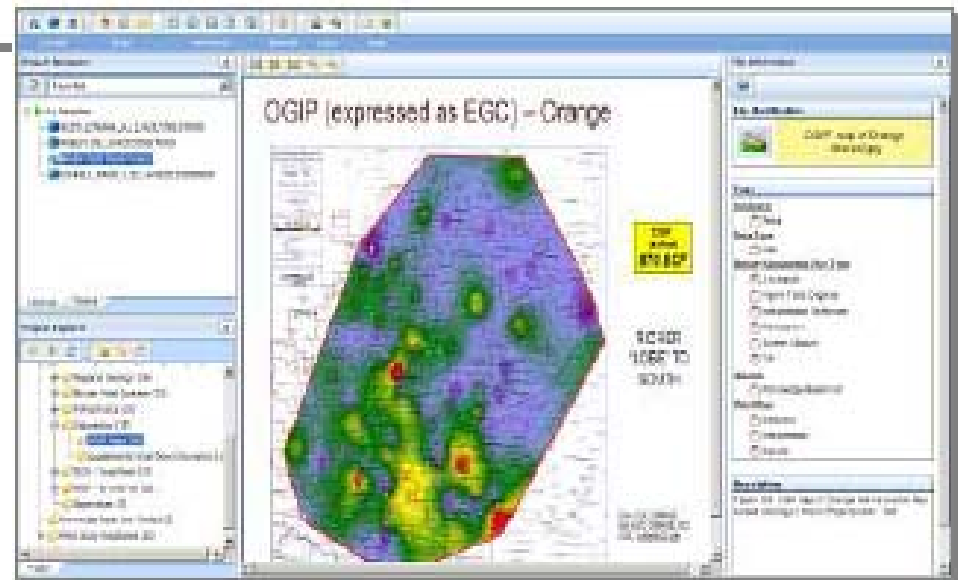


*Searches by  
organizational hierarchy*

*Filter by data elements  
used in the workflows*

*PPDM back end and  
workflow application*

*Inventory and delivery of  
field study results*





# The Solution: Case Study #2

The Asset:  
The Portfolio:  
The Process:

The Field  
Blocker Field, East Texas  
Volumetrics and Reserves

The screenshot displays the Prospect Director 2.2 web application interface. The main content area shows a list of files for the 'Blocker Field Study Project' under the 'Petrophysics' category. A 'Processing Request...' dialog box is overlaid on the file list. The right sidebar contains 'File Information', 'File Identification', 'Tags', 'Source', and 'Description' sections. The 'Team' button in the 'Project Explorer' is circled in red, and the 'Workflow' section in the 'Source' sidebar is also circled in red.

Project	Type	Category	Size
ND Cross plot example neutron normalization B...	.tif	Processing and Editing	1.85 MB
Log_Name_Conventions.xls	.xls	Supplemental Workflow Information	19.44 KB
Composite plot show intra taylor washout alle...	.tif	Processing and Editing	644.25 KB
Computed log plot for buckles quality WARE G...	.tif	Reservoir Quality Analysis	846.61 KB
blocker_basemap.pdf	.pdf	Base Map	558.64 KB
Histogram regional core porosity.tif	.tif	Reservoir Property Analysis	876.94 KB
Composite log plot showing calculated porosit...	.tif	Reservoir Property Analysis	792.19 KB
PWELL results Facimage per...	.tif	Reservoir Property Analysis	8.29 KB
ND crossplot for core descri...	.tif	Reservoir Property Analysis	4.80 KB
Core porosity compaction co...	.tif	Reservoir Property Analysis	8.00 KB
Composite log showing Mass...	.tif	Reservoir Property Analysis	448.97 KB
ND Crossplot good hole poygon Allen lenora G...	.tif	Processing and Editing	678.47 KB
ND Crossplot results good hole poygon Allen I...	.tif	Processing and Editing	13.93 KB
Petrophysics Workflow Methodology.ZIP	.ZIP	Supplemental Workflow Information	866.94 KB
Histogram of core grain density for four wells.tif	.tif	Reservoir Property Analysis	1.64 MB
Density histogram field and Bath a 5 massve a...	.tif	Processing and Editing	166.86 KB
PWELL Crossplot Facimage predicted versus ...	.tif	Reservoir Property Analysis	457.20 KB
Composite log predicted to core lithofacies and...	.tif	Reservoir Property Analysis	110.72 MB
compositelogplots.zip	.zip	Computed/Composite Logs	189.71 MB
Computed LAS files.zip	.zip	Computed/Composite Logs	1.19 MB
Pickett Plot water saturation george A and B ...	.tif	Reservoir Property Analysis	

Page 1 of 2 (29 items)

# How do Clients Describe the Problem?

## Case Study #3

No single source of the truth for the field development plan

Inefficiency in the asset teams to document the plan

Huge duplication of effort to provide information up

No easy way to share knowledge between the assets

No way to create a life of field story over time

Same information duplicated in multiple places

No way to bring new people up to speed quickly

Inconsistencies in the plans through the year

No line of sight for management

Business systems disconnected from the “thinking”

# The Process:

## Case Study #3

### Enterprise Asset Management

Portfolio Management

Budget & Planning

Reserves Booking

Value Navigation

### Asset Development Planning

Exploration

Appraisal

Development

Production

Asset A

Plan

Technical Work

Asset B

Plan

Technical Work

Asset C

Plan

Technical Work

Asset D

Plan

Technical Work

### Supporting Technology

Drilling



Production



Scheduling



Economics



AFE's



Seismic



Well Files



GIS



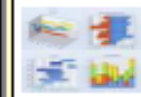
Doc. Mgmt



Portfolio



Dashboard



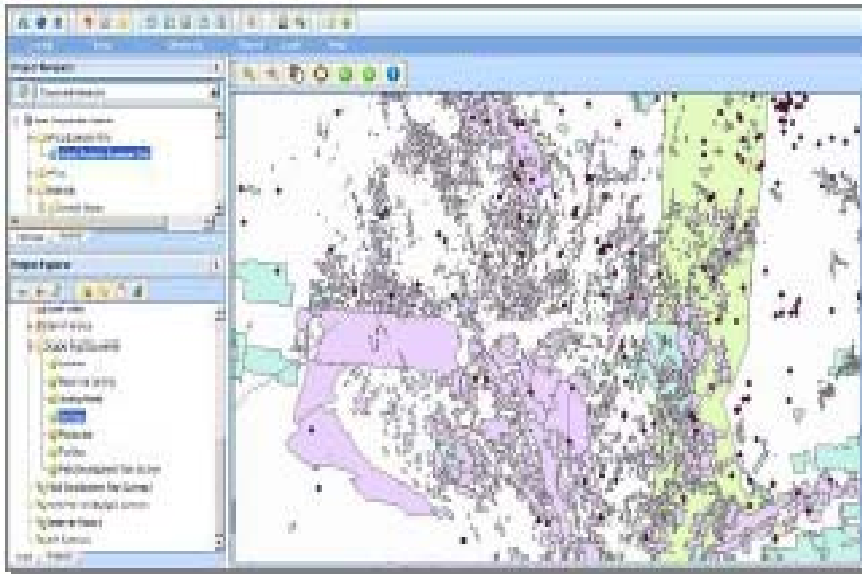
Land



## The Solution: Case Study #3

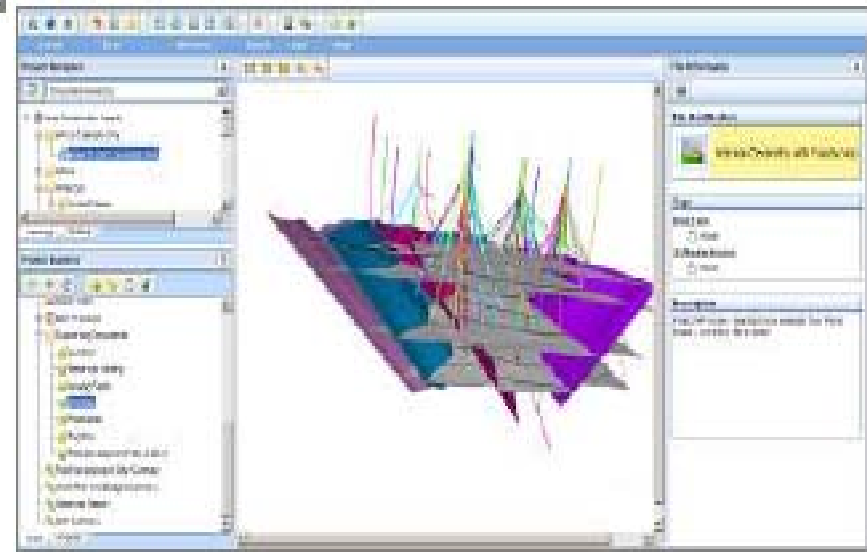
The Asset:  
The Portfolio:  
The Process:

Fields and Field Groups  
Global  
Field Development & Budget

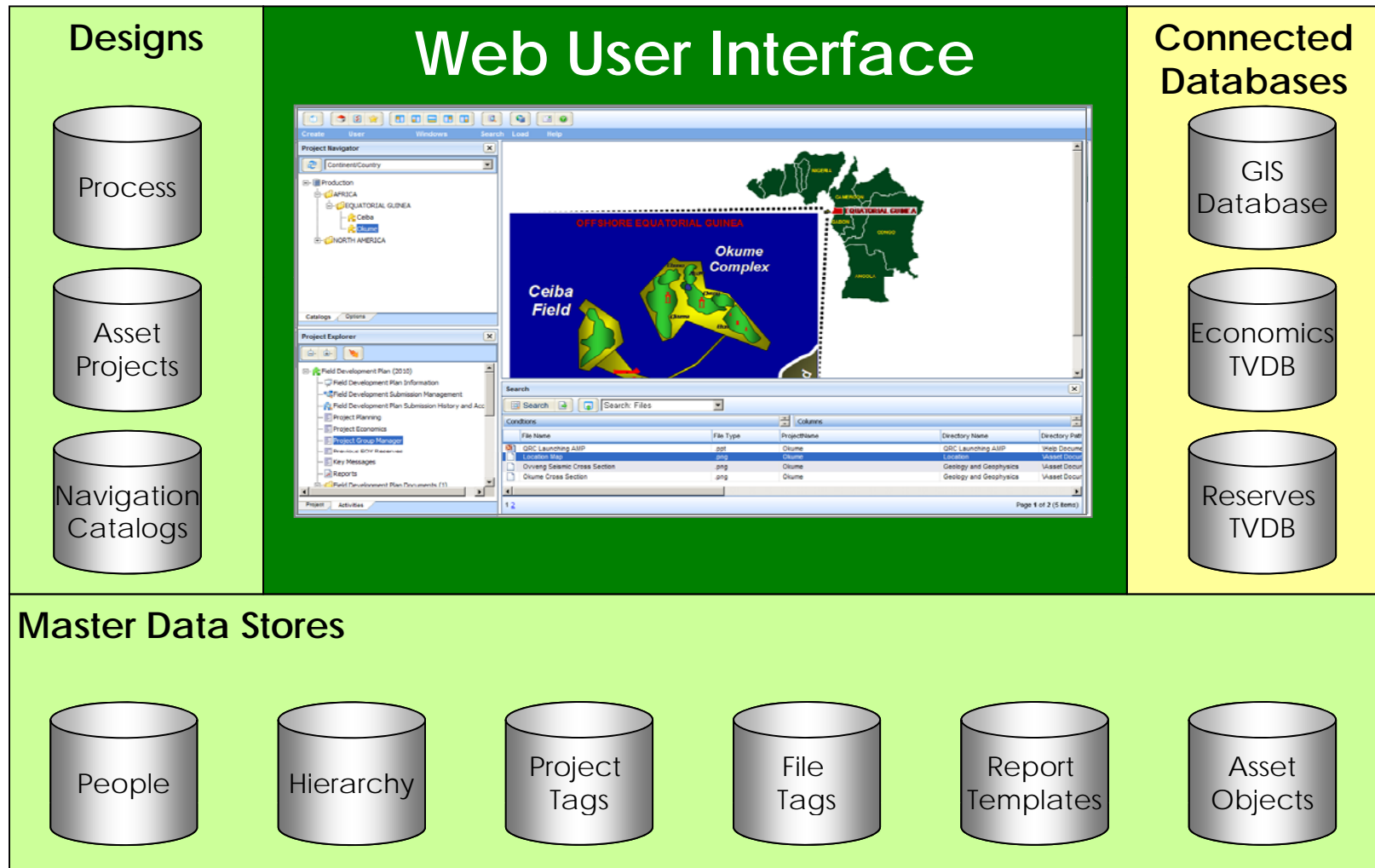


## Summarize, report, aggregate and collate

## Leverage existing PPDM investment

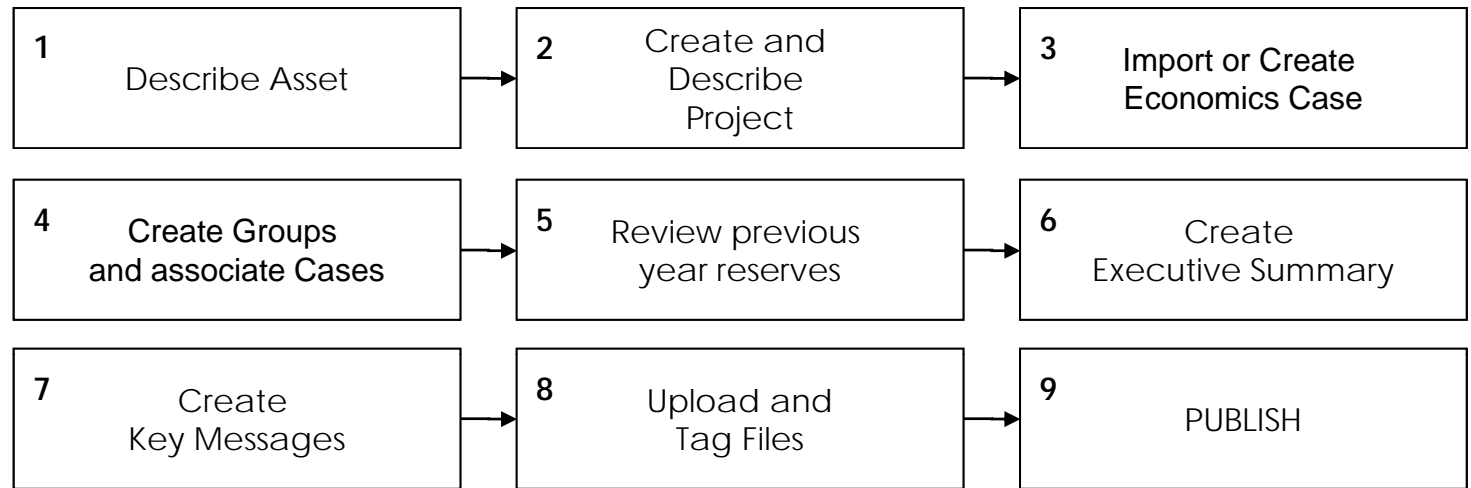


# Configurable Solution Features

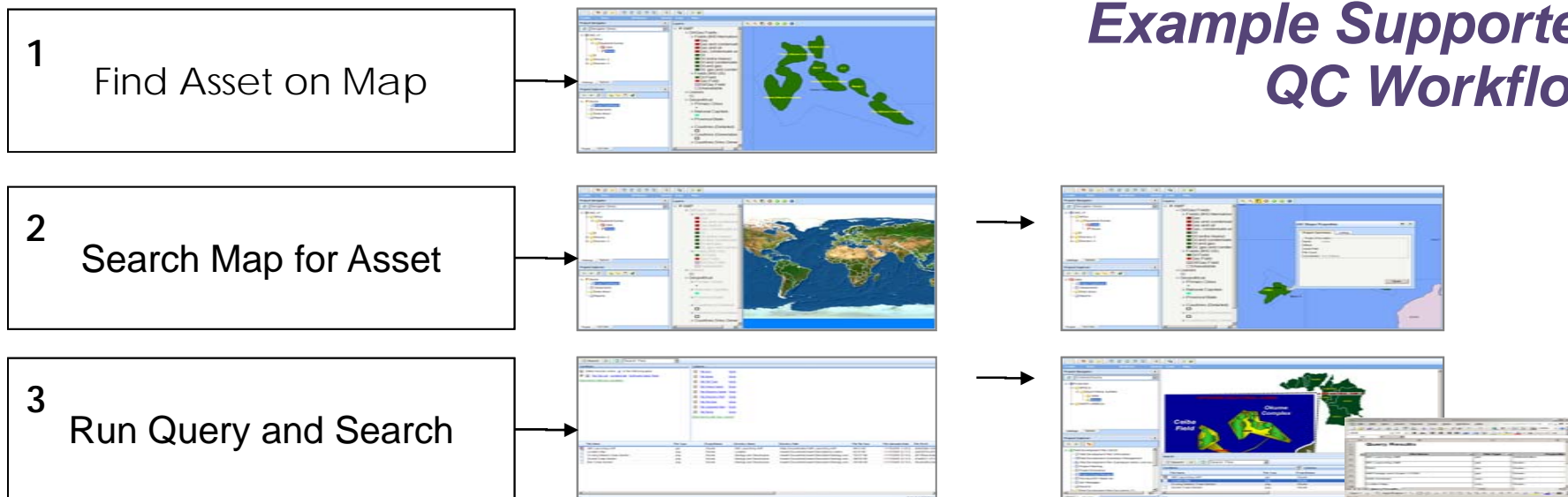


# Example Workflows

## *High Level Asset Team Workflow*



## *Example Supported QC Workflow*



# The Prize

- PPDM data model complemented by process and document management and role-based user interface
- Efficient and configurable access to:
  - Project data
  - Documents
  - Images
  - Knowledge repositories
  - Narratives
  - Personnel meta-data
  - Corporate process audit trails
  - Taxonomies
- Repeatable and adaptable model
- Execution at a fraction of expense allocated for in-house development



# PPDM as an Enabler: A Solution for Upstream Asset Management

