

**Williams**

## Process and Knowledge Management at Williams E&P

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 Manager of Business Processes  
 Exploration and Production  
 Williams

October 4, 2007

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### Topics for Discussion

- Williams at a Glance
- History
- Project Management
  - Operational
  - Business Improvement
- Knowledge Management

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### Williams Today

- Williams has 4,450 employees in 27 states
- Major offices are in Denver, Houston, Salt Lake City and Tulsa
- Williams ranked No. 211 on the most recent Fortune 500
- 100 years in business



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## Focused on Natural Gas Production



- Williams is the 12<sup>th</sup> largest natural gas producer in U.S.
- Developed almost 5,000 new natural gas wells over the past 3 years
- 99% drilling success rate
- We produce enough natural gas in 1 day to meet the energy needs of 4 million homes



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## Project Management - Operational



- Three basic E&P operational types of projects
  - Drilling
  - Pipeline
  - Facilities
- Tools used by Project Managers vary, depending on type of project
- Fundamental project management practices
  - Weekly drilling meetings
  - Drilling schedules
  - Other forms of communication
  - Resource management
- Project plans/summaries are required for some non-routine types of projects when authorization of expenditure process is completed

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## Non-routine projects



- Require risk evaluation prior to project approval using a risk evaluation form
- Require project summary or project plan depending on level of project
- Require notification to environmental, health and safety groups
- Specific project forms are completed and maintained in system
- Approval of financial commitment for project also includes approval of project methodology

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## Project Plan Summary – Non routine projects Williams

E&P Project Plan Summary		Date Plan Updated	Budgeted Date
Project Manager:		Project Start Date	Actual Date
Business Affected:		Complete Date	Overall Status
Project Name:		Included AFE #	On Track

PROJECT DESCRIPTION	CURRENT STATUS	RISKS IDENTIFIED	RISK MITIGATIONS

MANAGEMENT OF CHANGE		RESOURCES (Subcontractors)	
No document was submitted. (Changes to the project scope, design/functional processes, personnel assignments or activities that are not in kind and affect operational integrity or feasibility)		Initial number of resources needed for this project:	
		# Williams employees	# Contractors
Change:	TYPE SUBMIT:	Resource Review:	TYPE
Change:	TYPE SUBMIT:	Resource Review:	TYPE
Change:	TYPE SUBMIT:	Resource Review:	TYPE
Major Milestones / Key Activities	Date	Comments	Status
PLAN			On Track

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## Project Management Approach – Business Process Implementation Williams

- Business improvement prioritized by Sr. Management
- Priorities:
  - Compliance
  - Practical/cost effective for business
  - Non-disruptive to operations
- Management System Framework (E&PWAY) implementation top priority for 2007
- Fundamental project management is applied as processes are improved/implemented
- Knowledge Management/Records Management are integrated

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## E&P Business Goal – Move to More Process Focused Business Unit Williams

The diagram illustrates a progression from functional-based to process-based organizations. It shows four stages: Functional-based, Process-thinking, Process-focused, and Process-based. A diamond marker indicates the current state is between Functional-based and Process-thinking. A star marker indicates the benchmark is between Process-thinking and Process-focused.

**Functional-based organizations**

- Hierarchical in practice
- Manage people who perform vertical process activities.
- Difficult to respond to rapidly changing markets and customer needs.

**Process-thinking organizations**

- Conceptualize groups of activities as processes
- Seek to understand how processes work together to take inputs and produce products & services for profit
- Leads to the development of definitions and documentation of processes
- Does not invoke action to integrate people and the business.

**Process-focused organizations**

- Integrate design & manage end-to-end customer-driven processes that are tied to functional activities and goals.
- Focus for management shifts from hierarchical to horizontal management.
- Takes action to integrate process-thinking with the organizational structures (functions), business objectives, and people that drive changes in work and causes behaviors to change.

**Process-based organizations (Process Centric)**

- Reorganize & manage completely around processes with an end-to-end focus on work flow that creates value for the customer.
- Functional activities are embedded in the processes.
- A senior executive is responsible for the inter-enterprise process.
- Organize work starting at the customer interface to final service or product delivery.

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**E&P Business Process Focus** 

**Optimize process performance across E&P**

- Focus on ways to leverage common processes while meeting asset specific needs
- Enable effective business decisions by improving management reporting
- Provide effective central support for E&P's de-centralized Asset Teams
- Provide a central repository for knowledge sharing
- Single point for process coordination for E&P
- Ensure common technology platform for consistency while honoring geographic/functional needs

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**Seven Common Tenets of Business Process Management** 

1. Strategy is aligned with business objectives.
2. Enterprise process model provides a "value chain" view of core processes.
3. Measures are in place to assess process performance and maturity.
4. Leadership is engaged.
5. Change management approaches (e.g., training, knowledge transfer, learning) are incorporated.
6. Enabling technology supports and automates efforts.
7. Process improvement methodologies facilitate the transition from design to execution to transformation.

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**E&P Process Structure** 

**Align for Consistency**  
**Support People Closest to the Well**



**Process Owners** – Establish a Executive/Leader As Owner of Critical E&P Processes

**E&P Process Teams** – Process Owner, Process Managers, Performers, Key Subject Matter Experts

**Process Support Team** – E&P Process Leader, IT Bus. Partner, E&A Business Partner, HR Business Partner, Chg. Mgmt. (other dedicated resources, e.g. Process Analyst, and Centralized Roles to Support Process Owners)

**E&P Process Governance Council** – E&P Sr. Mgt Team, Designated Executive Sponsor

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## Business Process Management Methodology

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- BPM focuses on 4 different areas of a process: Define and Design, Document, Measure, & Maintain, Sustain, and Improve
- Manage implementation of a process as a project

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## Balance People, Process, Enabled by Technology

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- Successful business management considers people, processes and technology
- Technology enables the process and the people
- Change management critical to success
- Dedicated team ensures ongoing improvements

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## Business Process Management Approach

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### Focus - Three Levels of Performance

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### Williams Process Model

Based on American Productivity & Quality Center (APQC)

- Framework that serves as a high level industry neutral enterprise model
- Allows organizations to see activities from a cross-industry process viewpoint

**OPERATING PROCESSES**

- 1.0 Develop Vision and Strategy
- 2.0 Design and Develop Products and Services
- 3.0 Market and Sell Products and Services
- 4.0 Deliver Products and Services
- 5.0 Manage Customer Service

**MANAGEMENT AND SUPPORT PROCESSES**

- 6.0 Develop and Manage Human Capital
- 7.0 Manage Information Technology and Knowledge
- 8.0 Manage Financial Resources
- 9.0 Acquire, Construct and Manage Property
- 10.0 Manage Environmental Health and Safety
- 11.0 Manage External Relationships
- 12.0 Manage Improvement and Change

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### Process Model

**OPERATIONAL**

- 2.0 Design/Develop Markets, Products & Services
- 3.0 Market & Sell
- 4.0 Produce & Deliver
- 5.0 Invoice & Manage Customers

**ENABLING**

- 1.0 Develop Vision & Strategy
- 6.0 Develop & Manage Human Resources
- 7.0 Manage Information Resources & Tech.
- 8.0 Manage Financial Resources
- 9.0 Manage Physical Infrastructure
- 10.0 Manage Environmental, Health & Safety
- 11.0 Manage Legal, Regulatory and Compliance
- 12.0 Manage Improvement & Change

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### Knowledge Management

Effective process management includes knowledge management

- Definition**
  - Knowledge management (KM) is the intentional design of processes, behaviors, and tools that connect people to people and people to information to consistently provide the right information to the right people at the right time in the right context in order to achieve individual and organizational goals and objectives.

*KM is a journey of continuous improvement treating knowledge as an asset.*

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**Knowledge Management Benefits** 

- **Information and knowledge benefits**
  - Retrieving vital information faster
  - Gaining access to expertise
  - Having information accessible in one place
- **Intermediate benefits**
  - Minimizing duplication
  - Sharing knowledge across groups
  - Getting new hires or transitioned employees up to speed faster
- **Organizational benefits**
  - Reducing costs
  - Increasing productivity
- **Customer and stakeholder benefits**
  - Better products and services
  - Higher quality

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**E&P Approach to KM** 

- **Two primary access points via E&P website**
  - Knowledge Repository: Access to Goals, Policy, Process, Procedures and Measures.
  - E&PWAY: One source for documentation needed by E&P employees to implement E&PWAY
- **Organized**
  - By process, based on Process Model
  - By role, where possible
- **Approach**
  - Apply process management methodology/framework
  - Apply records management as processes are rolled out, e.g. develop file structure, etc.

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**Business Process/Knowledge Management Repository File Structure** 

-----File Plan-----

This is the folder structure that is under each process (example: EP\_4.1.1 Procurement)

- 01\_Policies
- 02\_Standards
- 03\_Process\_Summary
- 04\_Process\_Maps
- 05\_Approvals
- 06\_Procedures
- 07\_Supporting\_Documentation
- 08\_Risk\_Control\_Documents
- 09\_Proof\_of\_Control
- 10\_Test Documents
- 11\_Scorecards
- 12\_Projects

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**Sharepoint Technology – Initial Implementation 4<sup>th</sup> Quarter** **Williams.**

1. Initiator of MOC form accesses form from E&PWAY Site
2. Users will access completed forms by Asset/Team/E&P

The screenshot shows the 'mye&p' website interface. At the top, there are navigation tabs: REPORTS, SERVICE CENTER, KNOWLEDGE REPOSITORY, and E&PWAY. Below this is a search bar and a 'Home | Site' link. The main content area is titled 'My E&PWAY' and features a grid of tool categories: E (Engagement Employees, Leaders & Relationships), P (Production / Operations), W (Working Practices, Contractors), A (Accident Prevention), and Y (Yearly Review). Each category has a 'Standard OHS, OSH, WHM' link and a corresponding 'Tools' link. Below the grid, there are sections for 'Common Processes' and 'Emergency Response Plans'. The footer includes the text 'Property of The Williams Companies, Inc. May Not Be Reproduced Without Written Permission' and the number '22'.

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**Questions?** **Williams.**

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