Improving Deepwater Project Outcomes through Enhanced Collaboration

A Presentation to the Marine Technology Society
by Cory Weinbel
Execution of DW Development Projects

Agenda

A. Why Collaboration on Projects?
B. Projects and Partners
C. What are the elements of Collaboration? How do we implement?
D. What are the Benefits of Collaboration?
E. Why can Collaboration be so Difficult?
F. So What Specifically Can We Do to Enhance Collaboration and Improve our Projects?
G. What I hope you will take-away...
It All Comes Down to People...

Decisions
Communications
Generation of Work Products

Nothing is accomplished without a Person interacting with...

Other individuals, Companies
Systems/processes
Technologies

Improving Project Execution Requires Improving Interactions Between People... which results in better use of Technology
Why Collaboration on Major Projects?

• Deep Water Oil & Gas Industry facing unprecedented difficulties
  – High Breakeven Costs
  – Reductions in CAPEX spending
  – Reduction in Personnel
    • loss of key technical capabilities
    • higher workload burden
  – Loss of contractors and equipment
  – Loss of Operating Companies!

• Deep Water Development Today
  – $6B to $12B total costs
  – 5 to 8 year appraisal and development time
  – According to IPA, ~65% of megaprojects fail

• Deep Water Oil & Gas Industry must **Change** to Survive and Thrive

• I believe Enhanced Collaboration is Central to this **Change**

“Plunging energy prices robbed the Texas economy of an estimated 60,000 jobs last year, as oil and gas companies put the brakes on production and slashed investment, throwing engineers and geologists out of work.”—10 March 2016 Howard Schneider, Reuters

Source: Rystad, published in CNN Money 23 Nov 2015
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Transforming an Industry—Collaboration is Key

Eight Critical Actions for Oil and Gas Companies

1. Technical standardization and de-averaging
   Choosing appropriate standards and limiting choices

2. Organizational right-sizing
   Optimizing head count and upgrading talent

3. Improved workforce efficiency
   Reducing administrative costs and bureaucracy

4. Supply-chain partnering and renegotiation
   Leveraging partnership opportunities and overhauling agreements

5. Maintenance optimization
   Rethinking schedules and policies

6. Optimization of aviation, trucking, and marine logistics
   Adjusting contracts and optimizing asset utilization

7. Greater cooperation with other industry players
   Cooperating with peers to reduce infrastructure and asset costs

8. Streamlining overhead, real estate, and support service costs
   Exercising greater discipline in—and thinking more strategically about—cost management

Source: Boston Consulting Group, January 2015, from “Killing the Complexity Monster in E&P.”
Enhanced Collaboration will directly impact this area

Source: Boston Consulting Group and Morgan Stanley joint report, June 2015, from “Big Oil: Toughen it Out, or Business Model Reboot?”
Today’s Deepwater Projects are Mega-Projects

- Infrastructure CAPEX of $1B to $5B
- Infrastructure Project Times of 3 to 6 years
- Complex and Technical
- Multiple key stakeholders
  - Partners/Owners
  - Contractors
  - Regulators

We forget sometimes that Mega Projects we work on are bigger than many companies (dollars managed)

These megaprojects are like pseudo-stand-alone companies, Special Purpose Enterprises.

These Projects often Blur organizational boundaries.
Projects and Partnership Fundamentals

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What is a Partnership?

• An association of two or more individuals or defined groups
• Partners agree to cooperate to advance their mutual interests

Why do we form a Partnership? (Pros)

• Share/Allocate Risk
• Share/Allocate Cost
• Combine Expertise or Experience
• Efficiency through duplication avoidance

Why are the risks in a Partnership? (Cons)

• Conflicts of Interest
• A best-for-Partnership decision may be at odds with individual organization’s interests
• Potential loss of autonomy
• Challenge of shared decision-making process
• Need for consensus
• Reputations Can be tied together in negative outcome
**Benefits of Collaboration**

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Focus on improving these Pros via **Enhanced Collaboration**

Focus on enhancing these Cons via **Enhanced Collaboration**
Collaboration is a recursive process where people or organizations *work together* in an intersection of *common goals by sharing knowledge, learning, and building consensus*. In collaboration processes, individuals or organizations create relationships.


"In the long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed."
— Charles Darwin
Elements of Collaboration

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Collaboration Capability

- Culture and Structure
  - Culture of Openness: 0.36
  - Structure of Decentralization: 0.16
  - Breadth of Collaboration in Strategic Planning: 0.06

- Collaborative Technology
  - Use of Collaborative Technology for Strategy Implementation: 0.16
  - Use of Collaborative Technology for Strategic Planning: 0.05

Performance

- Market Turbulence
- Collaboration Quality
- Strategic Orientation

Outcomes

- Quality: 36%
- Profitability: 16%
- Innovation
- Growth

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Elements of Collaboration

- **Recognition that People are the Key**
  - Enabling
  - Recognize and Reduce Barriers
  - Foster relationships
  - Build Trust

- **Common, new mission and goals created**
  - Visioning is a team sport

- **Effective and Open Communications**
  - Recognize and Satisfy Needs of Stakeholders

- **Functional Organization Structure**
  - No silos
  - Relationship-driven
Specific Example of Success

- **Jubilee, Offshore Ghana**
  - 120,000 BOPD FPSO
  - Infrastructure CAPEX of ~$2.4B including leased FPSO
  - Discovery to First Oil, 3-1/2 years
  - Sanction to First Oil, 2-1/2 years

- **Truly Integrated and Enabled Project Team**
  - All 3 Partners Represented
  - Key Contractors Seamlessly Connected with Project Team
  - Autonomous and Responsible Project Team
Good Signs of Recent Industry Collaboration

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Ripped from the Headlines...

Offshore Standardization, Collaboration Are Keys To Reduce Costs

Harry Brekelmans, Royal Dutch Shell, OTC 2016: “Companies must jettison that baggage by working much closer together instead of the typical back-and-forth financial disputes between oil and gas producers and the services contractors — hand-shaking instead of arm-wrestling.”

Collaboration takes industry to new technical highs, greater depths

EPC giants, classification societies sign offshore engineering standardization agreement

Analysis suggests increase in offshore industry collaboration

An analysis conducted by Oil & Gas UK and Deloitte suggests that offshore industry collaboration between operators and supply chain companies is on the up…
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Industry View of Collaboration Value

- OTC 2016 Panel...Examples of Enhanced Collaboration Ideas

Increasing Reserve Access
Through Co-developments and Partnerships

- Stronger collaborations among Operators
  - Improving capital efficiency through better planning developments of hub
  - Partnering in efforts to explore and develop new fields
  - Optimized location for a central hub

- Examples:
  - Independence Hub - Enterprise Group (Anadarko, Dominion, Kogas, Devon Energy)
  - Keathley Canyon - BP, Chevron
  - Delta House Co-development - BP, Chevron
  - OTC 2016 Panel: Energizing Worldwide Oil and Gas Deepwater Developments, OTC-27317-MS

Financing of Hubs by 3rd Party Hosts
“Hub-and-spoke” approach

- Allows for upside potential for project owners and Operators in deep field development
- Cash flow - upfront capital requirements are deferred for 1st Oil and Gas
- Hub and spoke model often applied to Floating Production Systems
- Can be expanded to SURF systems

Sharing Services
Synergies reduce cost and risk for parties at the field/basin

- Encourages strategic alignment between Operators, promoting additional collaboration opportunities
- Streamlines Service Supplier availability, eliminates schedule inefficiencies resulting in reduced wait/ down times
- Service facilities/costs shared between Operator and Service Providers across the same geographic region
  - Rig Sharing with use of Rig Pools
  - Supply vessels, helicopters, and supply bases
  - Multi-purpose construction vessels

Source: OTC 2016 Panel: Energizing Worldwide Oil and Gas Deepwater Developments, OTC-27317-MS
OTC 2016 Audience Poll Results...

If Operator’s collaborated more effectively, how much more cost savings could be delivered?

- 31% A. 10%
- 47% B. 20%
- 22% C. 40%

Source: OTC 2016 Panel: Energizing Worldwide Oil and Gas Deepwater Developments, OTC-27317-MS
The Issues Surrounding Collaboration

- We have examples of Collaboration’s benefits to executing our deepwater projects...
- We intuitively know Collaboration is beneficial...
- If Collaboration is so Beneficial, Why Isn’t it Practiced by All?
  - It takes Trust and Open/Plentiful Communication
  - Sometimes it is the Company culture or systems, not the people, that inhibit Collaboration.
  - Old leadership and compensation models don’t necessarily promote Collaboration
  - It requires Buy-In from all Stakeholders
Recap of the Deepwater Project Collaboration Issues

- Deepwater Projects are MegaProjects
- Partnerships Formed to spread risk and costs (the start of Collaboration)
- Using the Collective Experience and Talents of All Stakeholders...
  - Should assure the best resources are applied to problem
  - Should avoid duplication of efforts
- Creating a Project Organization focused on Trust and Communication
  - Should avoid second-guessing
  - Should ensure fast decision-making and execution
  - Should result in a “team-environment”
  - Should lead to safest execution
- So How Do We Get There?
Wear your Project Hat, Not your Company Hat!

- Put the Project First
- If the Project is Successful, The Companies are Successful

Be Project Focused!
Leave your Company Hat at the Door

“When a cowboy wears it, it is a cowboy hat.”
Next...Address Stakeholder Project Issues

➢ How do we balance...
  ➢ keeping Stakeholders informed
  ➢ accepting Stakeholder feedback/input
  ➢ Executing Huge Projects safely in the fastest most cost efficient manner?

➢ What do Stakeholders Need/Want from the Partnership?
  ➢ Operator (Execute Project Safely and Successfully)
    • Financial support for Project
    • Fresh ideas and different perspectives from non-op partners
    • Limited distractions/work interruptions
    • Limited interactions at infrequent meetings
    • Limited resources spent updating partners
  ➢ Non-Op Partners
    • Regular updates on cost and progress
    • A clear understanding of workscopes and challenges/risks
    • The capability for their ideas to be heard and considered
Weinbel Model Deepwater Development (current)

Execution of DW Development Projects

Owners’ Sphere of Influence

Operator’s Sphere of Influence

Operator

Company A

Company B

Project Team

Contractor 1
Contractor 2

IPT Member
Project Manager

Exploration

Appraisal

Development

Operations

Non-Op Partner Interaction
Execution of DW Development Projects

Current General Model Deepwater Development

**DW Project Phases**

<table>
<thead>
<tr>
<th>Party</th>
<th>Exploration Participation Level</th>
<th>Appraisal Participation Level</th>
<th>Development Participation Level</th>
<th>Operations Participation Level</th>
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<tr>
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Potential Areas for Enhancement

Input and Participation by Parties
# Execution of DW Development Projects

## Current General Model Deepwater Development

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### Potential Areas for Enhancement

- Output to various Parties
Alignment of Partners—Sharing/Communicating

What Partners Need

- Regular monthly updates
  - Costs
  - Schedules
  - Key Tasks and Milestones (ongoing, achieved, upcoming)
- The ability to attend internal workshops and key technical meetings
  - To absorb and understand key technical issues
  - To offer insight from prior experience where applicable
  - To offer an additional idea when appropriate
  - To Achieve alignment within Partnership

Provides information Partners need to inform executive management and investors and provide their own assessment and align with Operator

Avoids later “Second-Guessing” by Non-Op Partners
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Weinbel Model Deepwater Development (revised)
Specific Ideas on Enhancing Collaboration

- Create a Owners’ Project Steering Team comprised of 1 to 2 representatives from each partner meeting regularly (quarterly?)
- Once every month (2nd half of month), non-op partners meet with Operator Project Personnel for cost, schedule, and key technical assessment update.
- Allocate a shared office for non-op partners on the Project Floor
- Invite/include Non-Op partners to key technical workshops

Benefits

- Stakeholders involved in key decisions before they are made (buy-in)
- Best ideas input no matter whey they come from
- All Stakeholders well-informed
- Alignment and Speed on Decisions
- Limited duplication of effort
Industry Survival Requires Collaboration

- We’re all in this together
- We can’t afford to execute projects without working together

Collaboration has clear benefits to Deepwater Projects

- Optimized resource utilization
- Costs minimized
- Maximum Project Execution Speed
- Partner Alignment

Project Collaboration will take Cultural Change...Hard!
Project Collaboration will take some Organizational Changes
If practiced correctly, Collaboration should benefit ALL Stakeholders

It All Comes Down to People

Thank You!