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ALIGNING E&P ORGANIZATIONS TO MANAGE LARGE CAPITAL PROJECTS

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Introduction

Planning and executing large, high risk, capital projects in frontier areas means that E&P organizations have had to retool their project delivery systems. While many energy firms have started the development of more robust project management processes to support these high capital expenditure (CAPEX) projects, implementation of this new way of doing business is meeting limited success.

One in eight of all major offshore developments in the last decade is a disaster.

“Taking on the Cult of Mediocrity”, *Upstream*, 23 May 2003

Business leaders feel that they must effect change because of lack of predictability in delivering major E&P projects as evidenced by the above headline. This lack of predictability includes CAPEX overruns, late project completions, overly optimistic recoverable reserve estimates, etc.

By some estimates, 50% - 80% of enterprise level initiatives are deemed failures by organizations. How much stockholder's equity has been liquidated attempting to implement a new way of doing business yet meeting only limited success, if any at all?

Often company staff sees the “new” way of doing business as just one of another plethora of initiatives. How do you convince employees they need to change as well as remove the barriers within the firm that prevent the initiative from being successful?

Components of a Project Delivery System

Strategic

- Partner Relationship Management
- Local/Government Issues Management
- Project Execution Planning
- Scope Management
- Value Improving Practice Implementation
- Risk Management
- Contractor Management
- Team Alignment & Effectiveness
- Interface Management
- Communication Management

Tactical

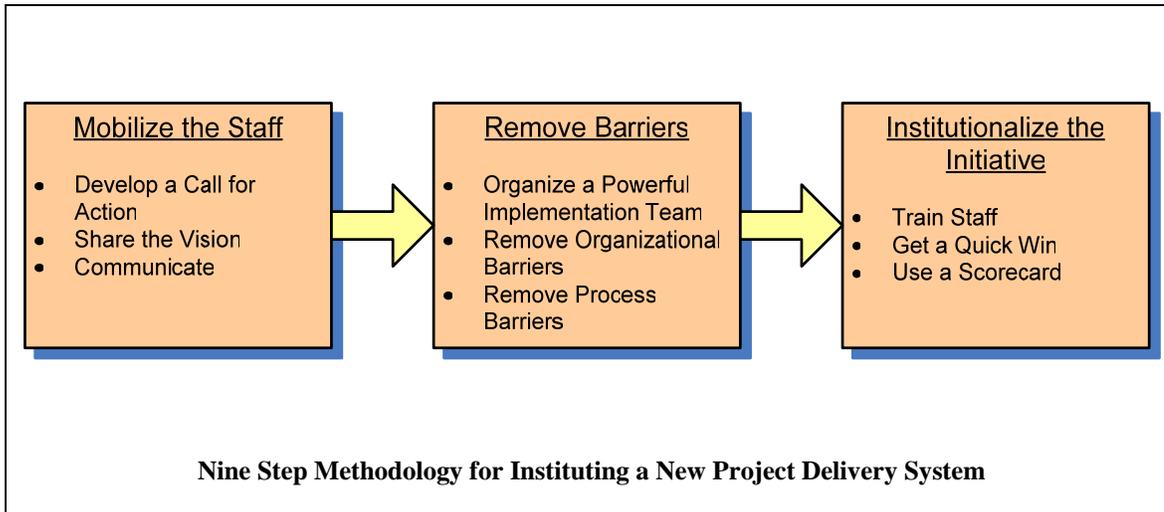
- Technology Management
- Design Management
- Procurement Management
- Construction Management
- Commissioning & Startup

Performance

- Safety/Health/Environmental Management
- Cost Management
- Schedule Management
- Quality Management
- Operability Management

The major obstacle to implementing a new project delivery system or project management processes (see sidebar) is the sheer inertia within the organization. People are accustomed to developing, planning, and exploiting opportunities in a particular way. Also, individuals often fear change for a variety of reasons. The firm, as well as its entire supporting infrastructure, is organized to sustain the old way of planning and executing projects. Infrastructure includes all systems associated with human resources, management information, business processes, support staff, etc. *Never underestimate the resistance to change within the firm.*

In this article we will apply a contemporary organizational change and behavioral model to a time proven 9 step methodology to facilitate success. The model addresses mobilizing the staff, removing barriers to change within the firm and finally institutionalizing the new way of planning and



executing projects to meet the challenges of the current capital environment. A summary of the model is depicted in the sidebar.

Mobilize the Staff

Step 1 – Call for Action

People resist change unless they see a need. The call for action, or establishing a sense of urgency, is critical for instituting the new project delivery system. How else to overcome inertia and complacency?

Staff personnel live and work within their own “cocoon” of company personnel and business processes. If they experience the same thing daily why should they think that anything has changed? So why should they change how they do their work? The call for action makes the case for change and moving staff out of their comfort zone.

To establish a sense of urgency, management must identify a looming crisis and communicate the risk of not addressing the problem. The crisis could be the loss of a major opportunity to a competitor, overrun of a major capital project, failure of a project to meet the expected production profile, etc. A crisis can also be developed by establishing a set of operating goals that are clearly impossible to meet with the old way of doing business. Management needs to make it clear that the old way of planning and executing projects is no longer acceptable.

Step 2 – Share the Vision or Where Are We Going?

Employees will not follow management unless they know where they are going. What will the new project delivery system look like? A vision should be a brief “elevator speech” that can be articulated in one to two minutes to the staff.

It must include a personal win for the employees. Many approaches overlook this, but employees must “buy” into the vision. This process is no different than buying a car, house, etc. There has to be value for the employee.

A vision is not the following:

- ❖ Reduce operating costs by 8%
- ❖ Increase reserves by 10% by 2008
- ❖ Company policy e.g. we treat all employees with respect, we work safely, etc.

An example of a vision for a new project delivery system is listed below:

- ❖ Our company will deliver 80% of all major capital projects within 10% of budget, schedule, and anticipated reserves: while realizing high internal/external customer satisfaction and creating tremendous career opportunities for our employees.

Step 3 – Communicate, Communicate & Communicate

Insufficient communication is the major reason initiatives fail. An axiom of advertising is the more air or face time, the better. People attend countless meetings, read their email, talk with their peers, interact with their families, surf the internet, etc. Our message needs to blow through all of that noise. Studies have shown that a typical enterprise initiative comprises only 0.5% of all information that employees receive during the course of the project.

This disadvantage can be overcome by using multiple channels to get out the message. Multiple channels include periodic emails, staff meetings, multimedia presentations, missives from the CEO, etc. The best form of communication is for management’s decisions and actions to be clearly aligned with the new way of planning and execution of projects. Just watch how quickly word will filter through the organization when an executive makes a decision, out of character for the individual, but congruent with the new initiative.

Remove the Barriers

Step 4 – Organize a Powerful Implementation Team to Manage the Effort

A strong team is needed to overcome resistance to change within the organization. A powerful coalition made up of leaders with positional as well as expert power within the organization is necessary. Initiatives fail because a lower level staff member or a focus group has been charged with implementing change.

The initiative for the new project delivery system must be driven from the top. The CEO, or an appropriate officer, charts a team led by a “power person” to manage the change. Team members should be individuals who are

acknowledged leaders in each department by virtue of their expertise, seniority, leadership position, etc.

The role of the implementation team will include developing the call to action, the vision, the communications plan, removing organizational and process barriers, etc. Their charge is to ensure that the initiative is successful.

People want to be associated with success and power; what better way than to have the face of the initiative represented by a strong team composed of leaders this has been chartered by the CEO.

Step 5 – Remove Organizational Barriers (people and HR systems)

Never underestimate the difficulty of change. The team charged with implementing the new way of planning and execution of projects faces an enterprise with an established set of project delivery processes and employee attitudes. There will always be those who are resistive to change because they are afraid or perceive it as a net loss for them personally.

Our firm often encounters organizational resistance as we help companies transition from a functional to a matrix organization that supports project teams for development of large, complex capital projects. Mid level or functional managers will most often resist change. These managers are key to the success or failure of the initiative as they are implementers of company policy. Individuals who impede change must be counseled and their support realized or the initiative will fail.

Human resources evaluation and compensation systems must also align with the new project delivery system. Project team members', as well as functional managers', goals and performance evaluations must align with project business objectives or individuals will focus on their internal department objectives.

Step 6 – Remove Work Process Barriers

Our initiative is like a seed planted in a thistle patch. If we don't clear the surrounding thistles the initiative will not survive. The same goes for change. One cannot expect to implement a new project delivery system within an organization without modifying the existing work processes. These existing business processes that support the old project delivery system will choke out the proposed changes unless they are modified.

Part of the challenge is that all of the business processes within a firm are highly interdependent; one can't change one without impacting the others. As we've said before, never underestimate the difficulty of change.

The implementation team must rapidly address these barriers. An excellent way to manage this is via a master issues list. Barriers are identified then addressed by the implementation

team.

Examples of work process barriers are:

- ❖ Lack of clear roles and responsibilities between functional managers and project team members
- ❖ Individual department objectives that conflict with project team objectives
- ❖ An ineffective issue resolution process

Institutionalize the Initiative

Step 7 – Train Staff

It goes without saying that the staff needs to understand the initiative and what it means to them and their work. The only way to do this is via training. Our experience is that individual-centric training is the most effective; focus on how the new project delivery system will facilitate the project team's work, how it can reduce confusion and stress around roles and responsibilities, how it creates more opportunities for the firm and the staff, etc.

Think again of purchasing a car. Does the salesman tell us that if we buy this car, he will make his monthly quota, which will allow him to pay the tuition for his child's private school and pay off his boat? No! The salesman focuses on what the car can do for us: the exceptional ride, the leather seats, the extended warranty, free maintenance, etc. Is it any wonder that staff tend to tune out training and see it as another "flavor of the month?"

Carefully prepared training that focuses on a win for the individual is a key component of institutionalizing the new project delivery system.

Step 8 – Get a Quick Win

Nothing succeeds like success. If people don't see or experience quick wins, the new way of planning and executing projects can lose momentum and grind to a halt. The change process is all about getting people to work, act, and think differently. The learning process typically entails listening, seeing, and finally doing. The "doing" is what actually establishes the new learning in the staff.

Quick wins will confirm that the initiative is worthwhile. These quick wins put non-supporters on notice that the initiative will succeed and that there are substantial benefits to the new way of planning and executing projects.

Quick wins also provide validation to management that the new project delivery system is working. Executive management wants tangible results and they won't wait two or three years. In addition, the long suffering implementation team needs a win to justify their hard work and persistence.

As an example, our firm worked with an energy equipment supplier installing a new project delivery system with all twenty components (see graphic). In lieu of waiting for development of all twenty components we first implemented

three of the most critical thereby seeing results in six months instead of one year.

Step 9 – Use a Scorecard

People excel at what is measured: if it doesn't get measured, the task will probably not get done. How does one determine success? Develop a set of metrics to measure how well the implementation plan is proceeding as well as how effective the new project delivery system is in delivering improved business results. The graphic below illustrates a sample scorecard.

Red-Yellow-Green Scorecard	
<u>Implementation Plan Metrics</u>	
Number of Key Personnel Trained	Yellow
Communication Plan Metrics (video tapes, memos, meetings, etc.)	Green
Percent of Projects Using New Project Delivery System	Green
Number of quick wins	Red
Implementation Team Alignment (Survey Results)	Yellow
<u>New Project Delivery System Effectiveness</u>	
Survey Results of Staff's Perception of New Project Delivery System	Yellow
Percent of Staff Performance Evaluations Aligned with the Initiative	Green
Capital Project Cycle Time	Red

Case Study

Here is how the system works in real life. Due to exceptional business, a build to order energy manufacturing firm experienced a substantial increase in orders. In addition, customers were insisting on faster delivery times even though the manufacturer's suppliers were extending their delivery times. The firm was severely stressed due to the large inflow of orders and a siloed organization that further exacerbated the problem. People were overworked and staff turnover had ramped up.

We worked with the firm to develop a phase gate approach such that each department had certain deliverables to provide before the entire order or project was allowed to proceed to the next phase: from sales, to engineering, to manufacturing, etc. This ensured that all of the departments' efforts were synchronized. The challenge was in getting the nearly 1000 people in the organization to adjust their work to

accommodate the new system.

The CEO was committed to the initiative and appointed a "power" executive to lead an implementation team. Selected team members were recognized leaders and influential in their respective department either due to position, seniority, or expertise.

The implementation team developed a call for action that focused on the need to work differently as the current system was neither sustainable nor scaleable. The message was well received because everyone realized something needed to change.

The team crafted a vision for the firm's future: a workplace where individuals had to work much less overtime, the work processes were fully planned and coordinated, there was not as much rework or confusion, the company enjoyed controlled growth, etc.

A detailed, multi-channel communications plan was implemented. Some of its components included the following:

- ❖ Firm-wide call to action and vision sharing
- ❖ CEO meetings with managers establishing expectations for the initiative
- ❖ Weekly updates from the implementation team
- ❖ Multimedia interviews with clients showing how the initiative will positively impact their firm and them individually
- ❖ Emails sharing the first and subsequent wins using the new phase gate approach. The emails included testimonials communicating how the initiative had facilitated individuals' work and how cycle time, rework, etc. had decreased

The team worked with major line managers to ensure that performance appraisals for all of the staff were aligned with the initiative.

A master issues list was developed and any legacy business processes that stymied the initiative were immediately addressed. All of the staff received training on the initiative commensurate with their position and skill set. The focal point of the training was not only on how the phase gate approach reduces rework and cycle time but how it makes their job easier and less stressful.

A "quick win" project was selected to use the new approach. Lessons learned and successes from the quick win were widely communicated. Finally a "red-yellow-green" scorecard was developed that measured progress of the implementation as well as success of the new project delivery system in helping teams meet project objectives.

Needless to say, the organization enjoyed a new project delivery system that supported the business goals and employees welcomed the clarity of the work processes, roles and responsibilities, etc.

Conclusion

Implementing a new project delivery system within an organization to meet business goals is never easy. Systems that support low risk, low CAPEX projects won't work for large capital projects. The challenge for the executive is mobilizing the firm, removing barriers and finally institutionalizing the new way of planning and execution of projects.

Never underestimate the resistance to change of a large enterprise comprised of individuals with vested interests in the existing system and business processes that support the status quo.

References

1. *Leading Change*, John P. Kotter, Harvard Business School Press, 1996
2. *The Five Dysfunctions of a Team: A Leadership Fable*, Patrick M. Lencioni, Wiley Company, 2002
3. *The Balanced Scorecard*, Robert S. Kaplan & David P. Norton, Harvard Business School Press, 1996
4. *Silos, Politics and Turf Wars*, Patrick M. Lencioni, Wiley Company, 2006

Authors

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