

Owner/Contractor Relationship in Unprecedented Times

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HSE Moment

■ School Bus Safety

- Flashing red light and extended stop arm is a reminder to stop for school buses
- Motorists approaching from either direction required to stop at least 10 feet from bus
- If divided road/highway only traffic moving in same direction needs to stop
- Start thinking process while still in the driveway backing out
- Watch for children walking or riding bicycles

Overview

- Unprecedented times in E&C industry
 - Capital Expenditures of IOC's and NOC's
 - Much larger projects
 - More complex projects in “frontier areas”
 - Need for resources to meet demand
 - Performance issues



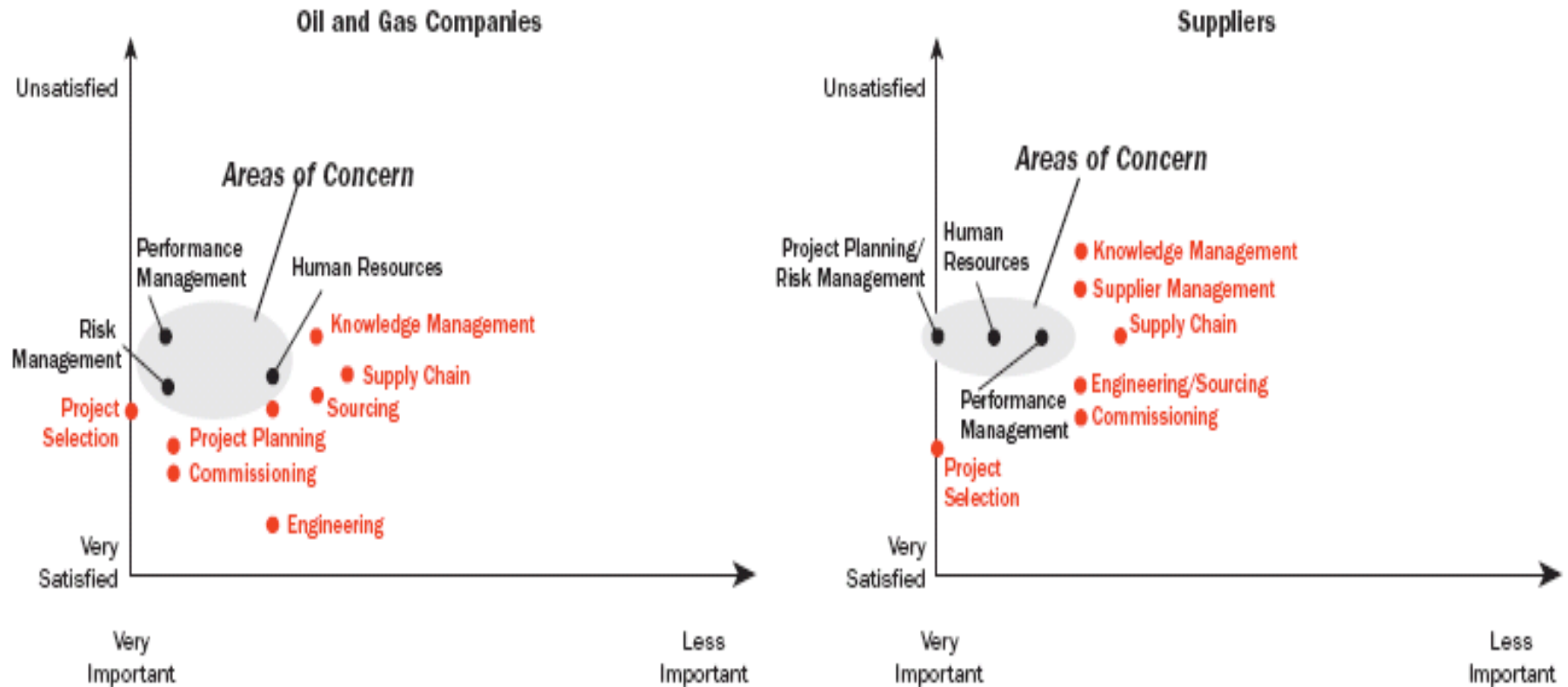
Overview

- In the past:
 - Large competitive bid slates
 - Contracting strategy set by owner – LS common
 - Contracting strategy cascaded down the supply chain
 - Selection dominated by commercial terms

Overview

- Today:
 - Contractors are all at maximum capacity and becoming more selective
 - Contractors are changing the risk profile
 - More teaming due to Mega projects
 - Owners establishing Alliances with Contractors and Suppliers
 - Team more important than commercials
 - Owners looking for robust systems to assist with / assure performance

Areas of Concern

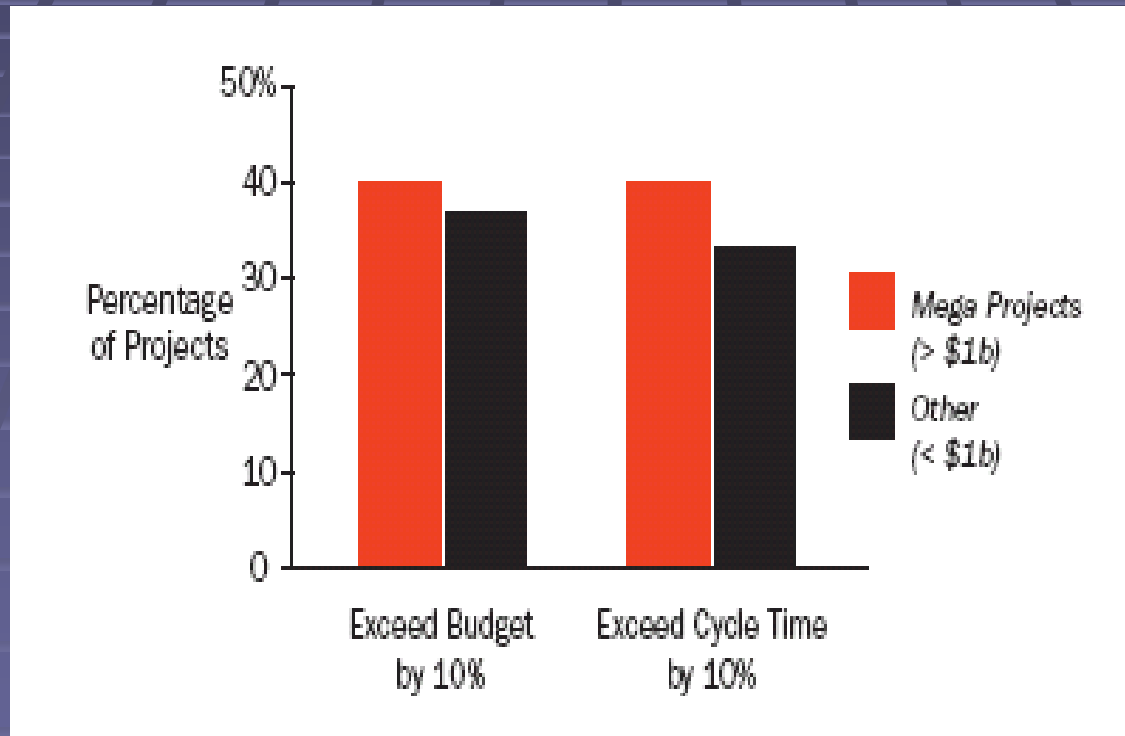


Source: Booz & Company

Project Performance



Project Performance



Source: Booz & Company

Project Performance

- Size, Complexity and Location of Projects
 - More projects are \$1b or greater
 - Harsh or Frontier areas
 - New Technologies



Project Performance

- Scope definition
 - CII study citing “scope definition” as single greatest source of poor efficiency in the overall interaction between Owner and Contractor
 - Projects have “gates” to be achieved prior to proceeding

Project Performance

- QAQC function/Engineering reviews
 - Application of TQM will improve outcome
 - Initiate at estimate phase
 - Allow for better project planning
 - A structured approach to handling critical complex sets of requirements
 - Needs to be elevated “higher” on the organization chart.

Project Performance

- Project teams
 - Key to effective and efficient execution of projects are teams that:
 - A – have worked together
 - B – worked on a similar projects/technologies
 - C – ideally just rolled off a similar assignment
 - Alliances allow for more consistent team



Project Performance

- Change Management, Schedule and Productivity
 - 3 fundamentals to executing a project are all relationship drivers
 - Managing the process of change and administering the change order process.
 - Productivity is a schedule driver and will be a determinant in the projects performance
 - Willingness of Owner to understand (and pay for) need for Administrative staff.

Risk Management



Risk Management

- “Megaprojects – bets are bigger, rewards are larger and risks are greater”. Booz & Company
- Issues related to Mega's
 - Multiple stakeholders
 - Joint Ventures with multiple Owners
 - Joint Ventures with multiple Contractors
 - Harsh or Frontier regions
 - Local requirements or Governments
 - Technologies

Risk Management

- Project risk assessment
 - Two risk assessments
 - First risk assessment is to review what it would take for contractor to execute the project
 - Second risk assessment is done upon award of the project and is jointly done by both the Owner and Contractor

Risk Management

- Risk Assessment
 - Typical sources – historical data, experience and expert insight. Brainstorming concept
 - Identify:
 - Risk
 - Existing controls
 - Likelihood and consequence of it occurring

Risk Management

- Risk Assessment
 - Determine Risk Treatment Plan
 - Accept the risk
 - Reduce likelihood of Occurrence
 - Reduce Consequence of Occurrence
 - Reduce both
 - Define action plan
 - Check risk severity after plan implemented

Risk Management

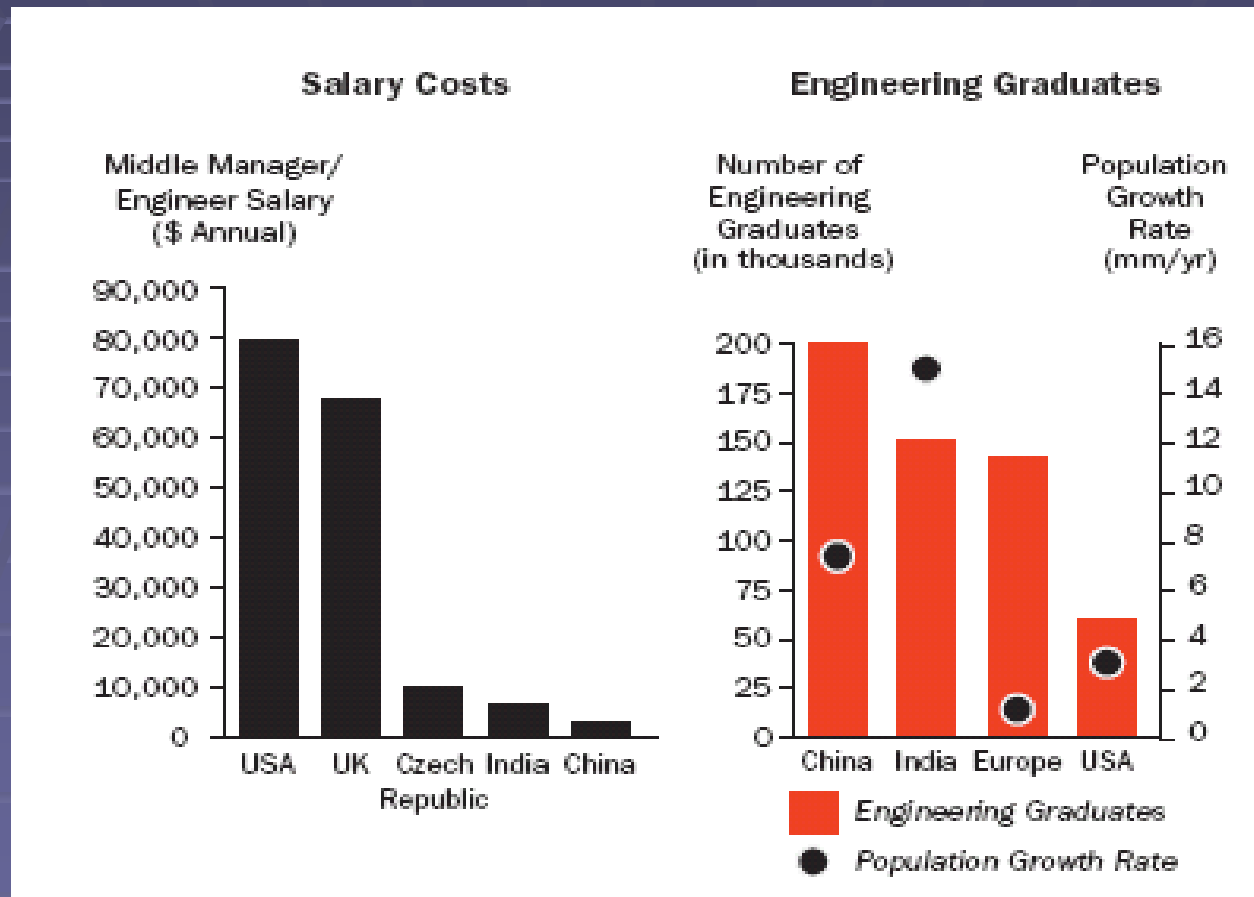
- Risk Assessment
 - Assign a responsible person who can impact/control risk
 - All actions should have a due date
 - Follow up
 - Reassess risks



Resources



Resources



Source: Booz & Company

Staffing

- Demographics of resources
 - “Graying” population
 - >25% of working population will reach retirement by 2010 resulting in a worker shortage of 10m. Source Bureau of Labor Statistics
 - By 2030 20% of population will be over 65
 - Average age of SPE members is over 45
 - SPE members under 40 has dropped to 25%
source: Society of Professional Engineers

Staffing

- Graduating engineers
 - Image problem for O&G industry
 - Negative connotation for those that are “environmentally friendly”
 - Cyclical nature of business



Staffing

- Generation Y Factor
 - Wants and desires are different than Boomers or GenX'ers
 - Importance of cutting edge technology
 - More interested in building resumes v. bank accounts
 - Want more challenging assignments and responsible positions
 - Attracted to companies with strong social responsibilities (active in local communities)
 - Capitalize on online social networking skills to encourage team collaboration and knowledge sharing
 - Importance of work life balance (shun OT culture)

Staffing

- Low cost / High Value / Resource centers
 - Evolution of foreign centers
 - Vertical versus horizontal work share
- Work Share as partial solution
 - Better utilization of global resources
- To be successful – both Owner and Contractor have to want to work share

Staffing

- Creativity is needed
 - Creative programs to hold/recruit professionals
 - College Internships
 - Graduate development organizations
 - Retirees
 - New Parents
 - Aggressive campaigns to recruit
 - Incentives for internal employees for referrals
 - All sources being utilized today
 - On the spot offers (conditional)
 - Alternate resources – non E&C Engineers
 - Military
 - Aerospace/Auto

Staffing

- Creativity Cont'd
 - Training programs
 - Include mentoring and formal rotation plans
 - Personal training commitment as recruitment selling point
 - Flexible work schedules
 - 9/80; 4/10's; flex hours; telecommuting
 - Family Friendly/Work Life Balance
 - Productivity measures v. hours worked
 - Recognition of elder care responsibilities of boomers
 - Shorter commutes
 - Work Life Balance
 - Environmental & Economic considerations

Conclusions

- Key Ingredient is alignment between Owner and Contractor
- Owners have begun to move Contractors further up their business chain to create business partnerships – needs to continue
- Contractors need to work with Owners to become more project integrators to tap global resources and supplier capabilities

Conclusions

- Owners have to be more open to less experienced staff – all can't have 30 years of experience
- Owners and Contractors need to be more flexible with work schedules
- Owners and Contractors need to be more open to virtual teams

Questions?