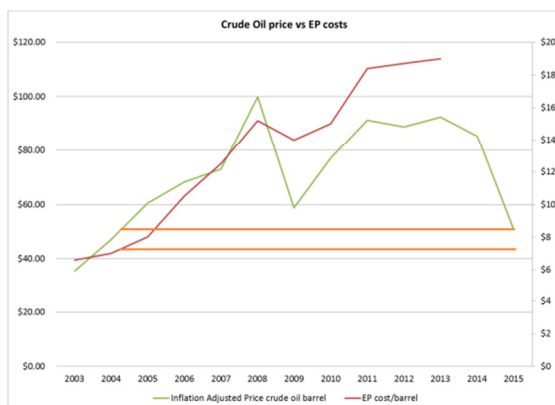


Viability of the Offshore Oil and Gas Industry around 50 UD\$ / barrel. (Part 3 of 3).

(Written by Tomas HULDT, MSc in Mechanical Engineering, with 20+ years of project management and engineering experience of which 12+ years in the Offshore Oil and Gas Industry, with a keen interest in Lean solutions)

“Making the offshore oil and gas E&P competitive again”

- How do you make the Offshore Oil and Gas Industry competitive again? The simple answer is of course that E&P costs need to come down.
- By how much do the Offshore E&P costs need to be reduced if Offshore Oil and Gas Industry can pretend to be competitive again? The simple answer is to the level of 2004 so basically by 50% to 60%!
- Can a reduction of 50% be done? Yes of course, the industry has functioned at those E&P cost levels!



- Can the 50% cost reductions be made easily? No, it will require a lot of sacrifices and therefore a lot of explanation.
- Can the cost reductions be achieved rapidly? Yes – if the top management of all actors along the Offshore Oil and Gas Industry value stream makes it a priority to restore trust and to

transform their processes into effective and efficient ones (with a no “holy cows” attitude).

- How come the cost reductions can be achieved rapidly? The simple answer is that the Offshore E&P industry CAPEX is an environment of projects so transformation and improvement (resulting in cost reductions) can be implemented at the next project start.

The reasons behind the increase in costs are multiple, but the result is that the whole value stream has been burdened by activities and measures that have been added to the processes in order to overcome problems of trust. Before the processes can be improved, the trust issue needs to be solved.

When was the trust lost?



Some of the negative aspects that emerged during the overheated market:

- Lack of experienced personnel – this affected the capability core of credibility.
- “Milk the client” attitude on claims – this affected the intent core of credibility.
- Taking on projects for which the contractor did not have the explicit experience or knowledge – this affected all four cores.

These negative sides were allowed take place because of a lack of substitutability and a very strong dependence from the client on the contractors (mainly due to lack of availability and time constraint).

During the credit crunch the costs might have come down more had it not been for the Deepwater Horizon disaster. When the Deepwater Horizon disaster occurred, it basically wiped out any trust that might have existed between companies in the industry. This led to tighter contractual T&Cs, increased QA QC activities, increased inspections, increased client project teams at the contractors.

Prior to the disaster, the suppliers used by a contractor were typically being qualified:

- technically by a technical assessment made by the appropriate contractor's technical authority,
- quality assurance wise by an audit, where one of the contractor's quality assurance engineers ensured that the quality system in place at the supplier was adequate, and functioning,
- project management wise by a "non-critical" order to ensure that the supplier delivers what, how and when the contractor wants (i.e. delivering results and thereby building trust).

Upon the successful completion of such a process the supplier was deemed qualified for specific products. All new orders placed with an approved supplier was a basis for positive and negative feedback on supplier's performance (resulting in the supplier retaining his qualification, being put on special monitoring or having his qualification rescinded). Once the scope of work was defined, negotiations focused mainly on delivery time and costs.



After the Deepwater Horizon disaster all suppliers were to be qualified anew. Additional and intrusive measures were being enforced by the clients, which were then also applied on the next level in the supply chain.

If we look at the QA/QC side of this, then a substantial amount of effort was put at qualifying all the subcontractors and suppliers during the FEED phase (this is probably good) by the contractor and sometimes the client. Prior to awarding a contract or placing an order, an equal effort was put into repeating this qualification process. During the execution of the supplier's order, further audits were made. Inspection witnessing activities increased which often included a client representative, sometimes a client QC, sometimes a client technical authority, the same amount of personnel from the contractor, the same amount of personnel from the supplier, a third party for the certifying authority sometimes a third party for a compliance authority. As explained in Part 2 of this series of paper, almost all of this witnessing is non-added value work, some of which is necessary non-added value work but most of it is just plain waste.

If we look at the contractual/financial side, back to back contracts became the norm under the pretense that this helps to reduce gaps in risks. This is unfortunately not correct, and even less so the further upstream in the supply chain you move. What was

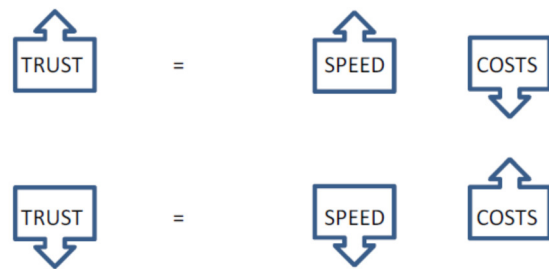
experienced was a lot of effort being spent on trying to impose the terms and conditions of the client contract onto the suppliers of the main contractor’s subcontractors. When you know that the contractual negotiations between the main client and the main contractor often takes 6 to 12 months (if not much longer) and that the main contractor then has a few (order of magnitude tens) sub-contractors, and some EPC sub-contractors have many (order of magnitude hundreds) suppliers and that with each order the terms and conditions had to be enforced, then it is not difficult to envision a lack of resources in procurement, in contracts management and in legal. The consequence of this has been that the focus has been diverted from technical and functional quality to contractual compliance at sub-contractor level but also at supplier level. In effect this means that engineering and technical workforce have been diverted from what they were initially employed to do, i.e. making sure that the products deliver a performance in line with specification. Instead this workforce has been “forced” into activities that are more administrative and contractual than technical. When the existing workforce has not been able to handle this type of administrative and contractual work, then recruitment of contractual engineers, risk engineers, legal counsels, HSSE engineers and QA engineers has been the adopted solution. The end result of this has been among other negative aspects increased delivery times, increased costs, poor relations, turnover etc... without reducing the risk or improving product quality.

The real motivation for a supplier to perform well is pride in their work, obtaining good financial results on the order and more importantly being awarded orders in the future; imposing a performance bond on a

supplier you are frequently working is just counter-productive and costly.

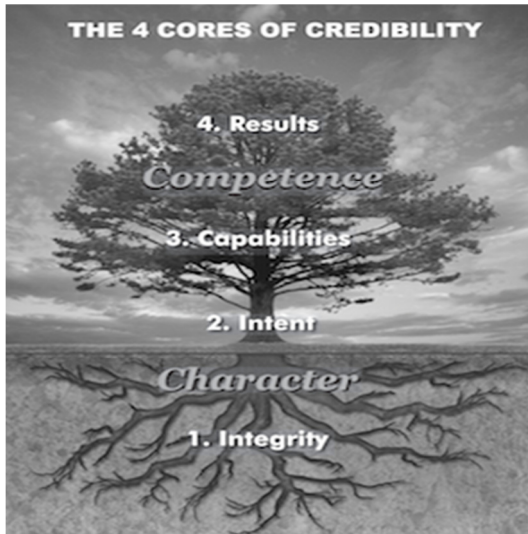
In summary: trust was initially eroded by wrong behaviors during the overheated market, it was wiped out by a “rogue” incident and now distrust has been firmly anchored by contractual T&Cs.

- Why do we need to restore trust? The answer can be found in the results of various management research papers showing that when trust increases then cost decreases and speed increases, and inversely when trust decreases then cost increases and speed decreases.



Before we can address the trust issue it might be good to look the nature of the animal.

- What is trust? In his book “THE SPEED OF TRUST” Mr. Stephen M. R. Covey, presents a model for credibility (from which trust is derived) which is built on 4 cores: integrity, intent, capability and result. It is a very interesting model because you can apply it to physical persons and organizations alike.



- Integrity is made of: Honesty, Congruency (acting in accordance with values), Humility (concerned with what is right not in being right), Courage (doing the right thing even when difficult).
- Intent is made of: Motive (why you do what you do), Agenda (what you are actively seeking), Behavior (how and what you do).
- Capabilities is made of: Talents (what we do naturally well), Attitude (how we perceive things – this is reflected in our behavior), Skills (things we have learnt to do well), Knowledge (what you know and learn), Style (unique way of doing things).
- Results is made of: Past results (what you have proven you can do), Current results (what you are contributing right now), Potential results (anticipation of your future results).

How can you restore trust in the Client – Contractor – Sub-contractor – Suppliers relationships? First and foremost the parties need to realize that there is a trust issue and that this represents a problem for all. Once the leaders have taken that onboard, they need to address the trust issue and start to work on it personally, within their own organizations and in the relationships

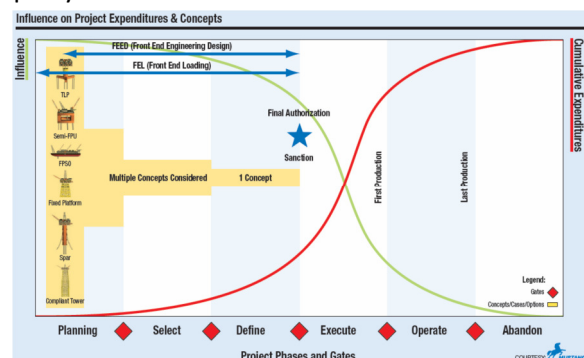
between the different parties (in that order). The only way to work on improving trust is to adopt behaviors that enhance trust. Mr. Stephen M.R. Covey lists the following 13 behaviors as high trust behaviors:

1. Talk Straight (with tact)
2. Demonstrate Respect
3. Create Transparency
4. Right Wrongs
5. Show Loyalty
6. Deliver Results
7. Get Better
8. Confront Reality
9. Clarify Expectations
10. Practice Accountability
11. Listen First
12. Keep Commitments
13. Extend Trust

How do you decrease the costs?

“There is nothing quite so useless, as doing with great efficiency, something that should not be done at all” – Peter Drucker

Once trust is increasing between parties, efforts to remove non-added value activities, procedures and processes can truly start. The result will be dramatically reduced costs. The best time to start this type of effort in a field development project is somewhere between the “Select” and “Define” phases because this is when the picture is getting clearer for the client on who is going to be the main contractors and sub-contractors. If all parties can agree at that point on how to run the project then reporting, documentation, third party certification etc... can be harmonized.



Conclusion:

- The cost level that we have today in the Offshore Oil & Gas E&P is blocked at a high level because of a lack of trust. By adequately addressing the trust issue you remove what is blocking the potential of a true reduction in costs. A 50% reduction in costs is not unrealistic.
- Once the trust issue is removed, a value stream mapping exercise of the field development project's value stream can take place with efficacy. After analysis, all non-added value activities, procedures, processes along the field development project's value stream can be addressed (across all parties – Client/Operator – Main Contractors – Sub-Contractors – Suppliers/Vendors).
- This is one of those rare occasions where the possibility to influence positively on all three parameters (Quality – Delivery Time – Costs) of the QDC triangle exists – it would be a shame if the leaders in this Industry do not seize it.