

Let us speak about “change management” in the Oil & Gas Industry

In spite of spectacular results in terms of safety and environment, major technological breakthroughs giving access to increasingly complex geological objects, despite an orchestrated effort to increase the critical mass of women and to encourage local potential from producing countries, the Oil & Gas industry still suffers of an outdated image that it has not shaken off from the golden sixties: that of an unsafe, environmentally damaging, selfish and low-tech industry unable to offer the younger generation a varied career path of promotion and lateral moves with options to help balance professional and personal life. In the 2010 ranking¹, the world's most attractive employer was Google. Microsoft was 7th and Coca Cola 8th whereas the first Oil & Gas Company comes in only at the...40th place.

Creating a stimulating environment means fighting against the status quo which develops a feeling of complacency. New opportunities, new directions and an optimum level of risk may be achieved only through a continuous process of creative and constructive change.

Change management as a “win-win game”

"The future torments us; the past holds us back, this is why the present escapes us" ². Time "the fourth dimension" constantly appears as the main tragedy of human nature. Who has not dreamed of being able to change the past and predict the future to make the present more pleasant? Even if "future is written nowhere"³ it represents "our essential and vital identity when the past is our dead identity"⁴.

Changes in human behavior and culture are always much more difficult to embrace than changes in technology. Since the collapse of the Berlin wall in 1989, the breakthrough of the emerging countries and the globalization of the economy, the fear of change is particularly obvious in OECD countries still using (particularly in Europe) a socio-economic model issued from the bipolar and relatively comfortable world, which prevailed until the end of the eighties.

Without undermining the valuable past experience of the baby boomers, attracting young graduates requires that the Oil & Gas industry develop a "vision for change". A message that is easy to understand but so difficult to introduce into the entrepreneurial culture of IOC and NOC that are steadfastly keeping to the mindset of the golden sixties. Because change cannot be forced: it needs to be wanted, chosen and positively received.

To unlock the "door of change", change itself needs to generate personal benefits, an individual level of satisfaction and to maximize the level of happiness in the short and long term. In a working environment, this means achieving maximize job satisfaction. A corporate culture that strives to increase job satisfaction through change will have the best chance of achieving a higher level of commitment to innovative change. The final result will be improved productivity for both the individual and the Company⁵. Change becomes a real "win-win game". Increasing satisfaction arising from the commitment to change and the resulting increase in productivity is supported by four pillars⁶ that are briefly described below:

- ✓ People can only tolerate what they **trust**. Change can only be implemented in a fully trusted environment where open leaders admit their mistakes and weaknesses and do not portray a

¹ Universum (2010)

² Gustave Flaubert

³ Michel Poniastowski (1978) "L'avenir n'est écrit nulle part"

⁴ André Gide (1935) « Les nouvelles nourritures »

⁵ A productive person is a happy person (K.R. Evans)

⁶ K.R. Evans (1989) "Energy: the critical (human) resource" Petroleum Society of CIM. Paper 89-40-21

virtual image of being infallible. It is only when people believe in the ability of staff and peers to promote change that they will adhere to it.

- ✓ The second pillar of change management is **vision**. A lack of consistent vision will result in confusion and rapidly, in frustration (i.e. the opposite of motivation) which will impede energy and enthusiasm. For a vision to be accepted, the leader needs first to be convinced himself. For the vision to become collectively consistent, he then needs finding the common thread linking each individual's goals and aspirations so that each person can see the possibility of achieving their own hopes and desires in the proposed change.
- ✓ The third one is **focus**. In line with the general vision, bringing about change requires the energy of each individual to be focused on specific, innovative goals. Focusing on goals gives each employee responsibility in the change, which in turn will strongly influence his enthusiasm. A lack of clear focus can have disastrous results and even lead to the sabotage of orders from above.
- ✓ The final pillar supporting change is **recognition**. Though recognition is a complex matter because each person has different desires and priorities, a successful recognition system relies on the fact that employees feel their ideas are listened to and that their involvement is encouraged. Management must also take the time to get to know their team and understand their needs.

Shale oil & gas outside the US as an example of change management

Unconventional resources represent an unexpected opportunity for change management in Oil & Gas Companies.

While deployed in a favorable context (good knowledge of subsurface, mining law, rig market and services, cultural heritage), the outstanding success of shale Oil & Gas in the US, its unprecedented growth in terms of production and the number of jobs created may encourage NOC and IOC to reproduce the experience elsewhere. Despite a number of negative signals which are purely cyclical (collapse of gas and oil prices) or more structural (nationalization of Repsol in Argentina, dogmatic opposition in several European countries), this revolution is for the Oil & Gas industry, which was condemned to inexorable decline, a real opportunity to regain a foothold in a changing world. However, this requires that Oil & Gas industry leaders, experts from government agencies and the academic world to confirm by the consistency⁷ of what they say, do and decide, that the development of such resources is credible in terms of its economic sustainability⁸ and its environmental and social acceptability. This **trust** is a prerequisite to convincing governments to develop a favorable regulatory framework and persuading the highest potential employees to "*join the adventure*". In particular, it requires committed, accountable, transparent and assumed communication on plausible and acceptable development schemes.

Exporting unconventional resources outside US and complying with economic and acceptability goals starts with the "*trial and error*" model. Such a **vision** is based on three key challenges. The first aims to better identify sweet spots⁹ to "*aim straight*", and avoid drilling a significant part of unproductive wells off target. The second challenge is based on the need to drill, fracture and connect thousands of wells as quickly as possible to compensate for the sharp decline rate, ensure exported production and

⁷ RFF report 2013 "*Pathway to dialogue. What expert say about environmental risks of shale gas development*" Resources for the future

⁸ <http://petrole.blog.lemonde.fr/2011/06/30/bulle-de-gaz-de-schiste-aux-etats-unis/>
<http://www.journaldelenvironnement.net/article/la-bulle-des-gaz-de-schiste-va-t-elle-exploser,23859>
<http://www.voltairenet.org/article177781.html>

⁹ See Chapter II Paragraph 6.2.1

maintain a target production plateau for as long as possible. Fulfilling this "*number and time*" constraint from an economic standpoint requires a perfectly planned, flexible factory process. The third challenge is acceptability, as such large on-shore developments need to be received positively by stakeholders, particularly in regions where population is quite dense. Compared with a conventional development acceptability becomes a pre-requisite here and needs to be examined in detail in the early stages of exploration and appraisal.

Though the US shale Oil & Gas boom is not a result of any major breakthrough (horizontal drilling and hydraulic fracturing based on a "*trial and error*" model), behind the three challenges lie many technological, business, environmental and new social issues. Managing them properly requires change, boldness and imagination, together with innovative positions, and career incentives as well as original organizations that encourage cross-functionality. **Focusing** on the role of each discipline should boost the accountability and enthusiasm of personnel in core business and support functions. Beyond the key role played by Geochemists, Geologists, Geophysicists and Reservoir Engineers responsible for maximizing ultimate recovery, Geomechanics, which in the past has often been relegated to a secondary role as the "*designer and manufacturer*" of the reservoir, is becoming a critical discipline. Exploration and appraisal becomes a "*4G process*". The drilling & completion discipline will also undergo fundamental changes. While maintaining safety and environmental excellence, it should adapt its "*software*" to cost-effective factory drilling and fracturing. A complete turnaround in terms of mindset, when you consider that each offshore well is designed as a single piece. The asset manager, who steers the "*factory drilling, fracturing and connecting*", will rely on the planning, logistics and Contract & Procurement functions whose responsibilities will considerably increase. Given the importance of acceptability issues, which in many cases appear as the first killing factor, Sustainable Development disciplines, which were often consigned to the end of the chain "*when everything was already decided*" are now required to act very early on in the process. Being accepted also means communicate wisely, appropriately and transparently. Unconventional resources and its attendant issues also give information technology a strategic position: geo-localization becomes essential for mapping sweet spots, placing wells properly and limiting nuisance and operational risks thanks to improved management of surface activities. Remote Operation Center enables both data and all the skills required to be centralized and shared in real time to take rapid and efficient decisions.

The key to this change is definitely "*cross functionality*": the cross-functionality of skills but also shared decisions based on common KPI. In this context, the open space concept takes on its full meaning, not in terms of saving money, but in the spirit and atmosphere of collective accountability. Encouraging cross-functionality in this way will require the human resources department to question secular policies that are definitely under threat but still very popular among baby boomers who remained rooted in their convictions.

The contradictory debate on shale Oil & Gas, with daily coverage in the US and European media and the proliferation of workshops, congresses and symposia around the world is already in itself a type of **recognition**. However the path to the recognition of unconventional resources will not be all plain sailing, from both an external perspective with a media and political machine breathing "*hot and cold*" every day, and an internal one, where the upheaval in skills and organization will certainly meet strong resistance to change. However, in the light of new IOC organizations (specific management of unconventional resources at Shell and Statoil, outsourcing of unconventional resources in ExxonMobil after the acquisition of XTO for 41G\$¹⁰) this change is underway.

¹⁰ <http://www.lefigaro.fr/societes/2009/12/14/04015-20091214ARTFIG00527-exxon-rachete-xto-energy-pour-41-milliards-de-dollars-.php>