BLUE OCEAN CORPORATIONS: "WHY THERE IS EVERYTHING NEW UNDER THE SUN"

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Abstract: A Blue Ocean Transformation is a meta-process that involves orchestration and leadership across a cluster of activities, resources, processes, and best practices to manage comprehensively and systemically, something that is strategically critical. They empower and make precise decisions about direction, align stakeholders, engender readiness for change, and increase agility for capturing value and for risk mitigation. We began by describing how new opportunities and challenges within the upstream industry have created an inflection point that requires a transformative approach to strategy and strategic management. Capturing and producing new oil and gas resources is complicated by increased competition, new technologies that open up unconventional plays, the rise of NOCs, large Independents and service companies. Meanwhile, a decrease in global geo-science and engineering talent pools, the need to manage post-Macondo risks, pressure toward alternative sources of energy, complicate short term as well as long term decisions. We have outlined the Blue Ocean Strategy Organizational Transformations Framework to show how it has evolved from a strategic model employed by high-tech companies to undergird agility in high-velocity markets, to a comprehensive strategic framework relevant for upstream oil and gas entities as they capture opportunities and manage risks in the changing business environment. They can sharpen strategic agility and are the key to seizing and profiting from opportunities in the new business environment and empower upstream E&P strategy.

Keywords: Blue Oceans, Upstream E&P (Exploration and Production), Object, Speed, Velocity, Strategy canvas, Organizational Transformations

Introduction

The Blue Ocean Strategy Framework was developed to enhance strategic agility in high-tech firms operating in high-velocity markets. A Blue Ocean Strategy is a dynamic meta-process that orchestrates a number of processes, and goes beyond best practices to manage the firm's strategic imperatives. For businesses in high-velocity markets, strategizing cannot be long-term because market and technological uncertainty require constant refocusing for the firm to remain relevant. Leaders make competition irrelevant by rapidly transforming their companies with Blue Oceans that support technological, organizational, operational, and business model innovations, i.e. organizational changes and transformations.

Today, the Blue Ocean Strategy framework is being used to capture opportunities and mitigate strategic risks in Oil and Gas Exploration and Production (E&P). Operational and general managers with key strategic decision-making responsibilities employ it to maintain sustainable value, to enhance safety and profitably, to increase reserves and production to meet the company's share of the world's energy needs, and to maintain or advance the company's competitive position. This paper describes how the Blue Ocean Strategy Framework can be adapted for Organizational Changes and Transformations employed to capture opportunities and meet the considerable challenges created by recent changes in the industry. To explore the contribution of the Blue Ocean Strategy Framework for E&P Organizational Transformations, we:

a. Describe the minutely detailed taxonomy of Organizational Transformations and establish a co- relation among all its elements for E&P major NOCs & IOCs.

b. Explicate the Dynamics of Blue Ocean Strategy Framework & tools for Organizational Changes & Transformations in E&P majors.

c. Describe how new opportunities and challenges within the upstream industry, have created an inflection point that requires a Dynamic Organizational Transformative approach to strategy and strategic management.

While demand for energy resources continues to increase, new technologies have opened unconventional plays and increased competition. Meanwhile, global geo-science and engineering talent pools have shrunk, and the reality and perception of environmental risk has increased for industry participants.

d. Demonstrate how the Blue Ocean Strategy Framework is relevant to today's E&P strategic and Organizational Transformations context, for Delphi Group Synthesized Relevant & Classified factors in upstream E&P industry.

e. Describe how the dynamics of Blue Ocean Strategy Framework & Instruments empower E&P giant NOCs & IOCs (Exxon, Reliance & ONGC) Organizational Transformations and draw comparative velocity of Organizational Transformations (with both magnitude & speed) with strategy canvas imperatives.

While we believe that the Blue Ocean Strategy Framework is relevant for strategic management in each of the three sectors of the oil and gas industry upstream, midstream, down-stream, and throughout the petroleum industry as a whole, our focus here is on upstream E&P. As this paper demonstrates, the need to create value and increase production, the very considerable economic potential created by new exploration opportunities, and the complexity of the challenges facing upstream strategists and managers require a new and more effective approach to strategic oversight and execution of Organizational Changes. To survive and prosper in this totally transforming high velocity business environment, firms need to develop and employ strong dynamic blue ocean frameworks for continually evolving fast paced Organizational Transformations.

Literature Review

In common English parlance, transformation is defined as a "change to another form or shape to metamorphose, to change in character or condition, to alter in function or nature" (Oxford English Dictionary, 1989). Management theorists, however, have viewed transformation of an organization, from multiple dimensions.

Organizational transformation is said to be a change in some core property of the organization (Tolbert & Hall, 2010), including a change in mission, core values, power, status, culture, structure, strategy, systems, procedures, interaction patterns, personnel and power distributions (Romanelli & Tushman, 1994; Tushman, Newman & Romanelli, 1986), organizational form (Forte et al, 2000), the current way of doing things in an organization (Nutt, 2004), vertical information flow direction, horizontal process designs and performance measures (Orgland & Von Krogh, 1998), culture, skills, teams, strategy-structure and reward system (Kilmann, 1995).

Organizational transformation also includes a change in organizational orientation (Greenwood & Hinings, 1996; Johnson, 1987; Miller 1982, 1990), employee behaviors like trust, cooperation, learning and innovation (Chakravarthy, 1996) or how the employees perceive, think and behave (Kilmann, 1995, Muzyka, Koning & Churchill, 1995).

Researchers also lay emphasis on the process of organizational transformation, which has been divided into two broad areas covering the speed of the change (e.g., Greenwood & Hinings, 1996; Kilmann, 1995;) and the extent of its impact (e.g., Greenwood & Hinings, 1996; Kilmann, 1995; Mintzberg & Westley, 1992).

Putting the literature together, one was able to identify three key components that are common to most definitions and, once put together, explain what organizational transformation is. Although many authors don't identify these components categorically, most definitions of organizational transformation in the existing literature, includes these.

These components are the *Object* of the transformation (what changes), the *Magnitude* of the Transformation (the extent of impact) and the *Speed* of the transformation (how fast the Change occurs).

The Object is the core of change during the transformation i.e. property or aspect or part of the organization that undergoes change. The Object could be one core property like the organization structure or may include a coherent assembly of the different parts of the organization including its strategy, culture, structure, values etc. This spread of how many parts / properties of the organization are impacted during / by the transformation, is determined by the Magnitude. In essence, the Magnitude decides the size and the scope of the Object. The third component of Speed, determines how quickly or even how slowly the Object undergoes change, thereby transforming the organization in turn. These three components, put together, explain what underlies an organizational transformation.

As mentioned earlier, the definitions and explanations of organizational transformation that exists in the literature do not categorically include the components as described above (Object, Magnitude and Speed). However, a closer look reveals the presence of one or more of these components in the definitions proposed by other authors. For instance, Guillart and Kelly (1995) describe transformation as an "orchestrated redesign of the genetic architecture of the corporation, achieved by working simultaneously – although at different speeds…" This definition captures the simultaneous (Magnitude) change in 'genetic architecture' (Object) of an organization, at varying Speeds. Another example is the definition given by Tushman, Newman and Romanelli (1986) - Transformation as the "Change in all or some (Magnitude) of mission, core values, power, status, structure, strategy, systems, procedures, interaction patterns, personnel (Object)" also captures the components of transformation. Thus, even if all the three components are not captured in the same definition, most definitions encapsulate one or more components of transformation.

Even though the existing literature does not dissect the definitions of organizational transformation, we believe that doing so and thus identifying the components would help in developing the literature on organizational transformation. The three components that are proposed here (Object, Magnitude and Speed) improve the understanding of the phenomenon of organizational transformation. The components (which are further broken down into characteristics in the next section) can be grouped together in different patterns to expand the territory of the types of transformation. These components (and characteristics) can be the building blocks for creating many other types of transformations and perhaps developing a new typology, as is my intention here.

Existing literature also delves into giving a nomenclature to the different types of transformations. The explanations to these types of transformations typically span across the three components specified above, and the names given include Turnaround (Mintzberg & Westley, 1992), Revitalization (Mintzberg & Westley, 1992; Chakravarthy, 1996; Gouillart & Kelly, 1995), Reorientation (Nadler & Tushman, 1989; Tushman & Romanelli, 1986), Recreation (Nadler & Tushman, 1989; Tushman & Romanelli, 1986), Reengineering (Ascari, Rock & Dutta, 1995; Hill & Collins, 2000; Muzyka, Koning & Churchill, 1995; Orgland & Von Krogh, 1998), Renewal (Gouillart & Kelly, 1995; Kilmann, 1995; Muzyka, Koning & Churchill, 1995), Reduction in size (Sutton & D'Aunno, 1989; Tushman & Romanelli, 1986), Radical new positioning (Gareis, 2010), Restructuring (Chakravarthy, 1996 ; Gouillart & Kelly, 1995; Muzyka, Koning & Churchill, 1995; Orgland & Von Krogh, 1998), Reframing (Gouillart & Kelly, 1995), Regeneration (Muzyka, Koning & Churchill, 1995) and Rejuvenation (Baden-Fuller & Stopford, 1994). While these nomenclatures go a distance in describing the different ways that organizational transformation works, we will be exploring them further later in the paper.

Components of Organizational Transformations:

We, thus, revert our attention to the three key components of organizational transformation to understand what comprises these components – Object, Magnitude and Speed. The following section explains in detail what these three components encompass.

Object. This being the core, a change in which brings about the transformation in the Organization has been said to include the following:

Table 1

Object Name	Significance	Proposed by
Strategy	• Encompasses activities that gain/ sustain competitive advantage • Includes decisions about the application of organizational resources and exchange of resources between the firm and environment • Overall , depicts the DIRECTION OF THE ORGANIZATION	Ascari , Rock and Dutta, 1995; Mintzberg and Westley,1992; Nadler and Tushman, 1989; Wischnevsky and Damanpour,2006
Organization	• Indicates the basic state of the firm • Overall , depicts the structure that turns strategy into action	Ascari, Rock & Dutta, 1995; Greenwood & Hinings,1996; Mintzberg,1979; Mintzberg & Westley,1992; Nadler & Tushman, 1989; Nutt,2004
Organizational Form	• Includes four different forms – Prospectors, Defenders, Analyzers and Reactors • Forms differ on distinct organizational competencies and response systems	Proposed by Miles et al, 1978 Adopted by Barnard , 1938; Forte et al, 2000; Miles & Snow, 1978; Selznick 1957
Type of Organization *Deep structure*	• Types include- Protected , Professional , Routinized, Buffeted and Proactive organizations • Types defined on internal capacity of the organization and responsiveness to the environment • A system of interrelated parts that define an organization • Outlines the organization's relationship with its environment • Includes culture, strategy, structure, power distributions and control systems	Nutt, 2004 Gersick,1991; Romanelli & Tushman , 1994; Tushman & Romanelli, 1986; Zald, 1970
Formal Systems	• Indicates formal grouping of resources, • Includes design of work units, communication channels, evolution policies and programs and HR management systems	Kilmann, 1995; Tushman & Romanelli, 1986
Informal Systems	• Captures how people behave in an organization • Consists of core values, beliefs norms, communication patterns, actual decision making and conflict resolution patterns	Kilmann, 1995; Tushman & Romanelli, 1986

While the above list tries to capture as many key parts of an organization, one would witness some overlap in the definition of some parts. We do not see these overlaps as an indicator to reduce the list. Our focus is clearly to develop a list that spans out much wider, explaining the Object in detail.

Magnitude. Determinant of the size of the Object and has been explained to the include the following:

▢▢*Revolutionary / Upheaval:* Covers the entire organization, where all units in the organization are closely interconnected. Signifies change 'of' the system and not 'in' the system and sometimes destabilizes the organization (Gersick, 1991; Greenwood & Hinings, 1996; Hill & Collins, 2000; Mintzberg & Westley, 1992; Romanelli & Tushman, 1994; Tushman & Romanelli, 1986)

▢▢*Non-revolutionary*: Indicates the independence of each unit of the organization, where each unit transforms itself independently in response to the same problem. The transformation is usually spread out over more than 2 years (Romanelli & Tushman, 1994; Tushman, Newman & Romanelli, 1986)

▢▢*Evolutionary*: Mainly draws from Darwin's model of evolution, where natural, gradual change and growth brings about a transformation in the organization. The change works within the established systems of the organization and does not destabilize the organization (Gersick, 1991; Gouillart & Kelly, 1995; Greenwood & Hinings, 1996; Hill & Collins, 2000; Miller & Friesen, 1984; Pettigrew 1985; 1987; Tushman, Newman & Romanelli, 1986) while revolutionary transformation is all encompassing, non-revolutionary and evolutionary transformation may or may not impact the entire organization. Furthermore, one should not confuse non-revolutionary transformation with evolutionary transformation. While

the latter lays emphasis on the natural and gradual change that may impact the entire organization, the former focuses on the independence in transformation of each unit of the organization (Tushman, Newman & Romanelli, 1986).

Speed. The speed at which the organization undergoes transformation can be classified under the following heads:

<div align="center">Table 2</div>

Speed	Significance	Proposed by
Gradual	- Slow and more adaptive form of change - Assumes organization can absorb any amount of change, if given in small doses	Gersick, 1991; Kilmann, 1995; Mintzberg & Westley, 1992; Pettigrew, 1985; 1987
Learning / Continuous	- Continuous, no specific time frame attached - May occur during the entire life or a relatively long period in the organization - Entrepreneurial organizations are a classic example	Gareis, 2010; Kilmann, 1995; Muzyka, Koning & Churchill, 1995; Schreogg & Noss, 2000
Radical	- Abrupt, fast moving and discontinuous change - Includes distinct episodes of change where a drastic shift takes place in the organization	Gould, 1971; Greenwood & Hinings, 1996; Mintzberg & Westley, 1992; Tushman, Newman & Romanelli, 1986
Periodic Bumps	- The organization's periods of stability interrupted by episodes of change - These episodes aim at bringing the organization back in sync with its environment	Mintzberg & Westley, 1992
Oscillating Shifts	- The organization oscillates between two different cycles - One cycle focuses the organization towards a strategy / theme and the other takes it away through experiments / innovation	Mintzberg & Westley, 1992
Life Cycle	- Patterns in the life of an organization - Include development, stability, adaptation, struggle, revolution and demise	Mintzberg & Westley, 1992
Regular Progress	- Orderly, planned / unplanned transformations during the - lifetime of the organization	Mintzberg & Westley, 1992

On classifying each component of Object, Magnitude and Speed into characteristics a conceptual framework emerges (Figure 1). One or more of these characteristics from under each component can come together to be seen in any case of organizational transformation.

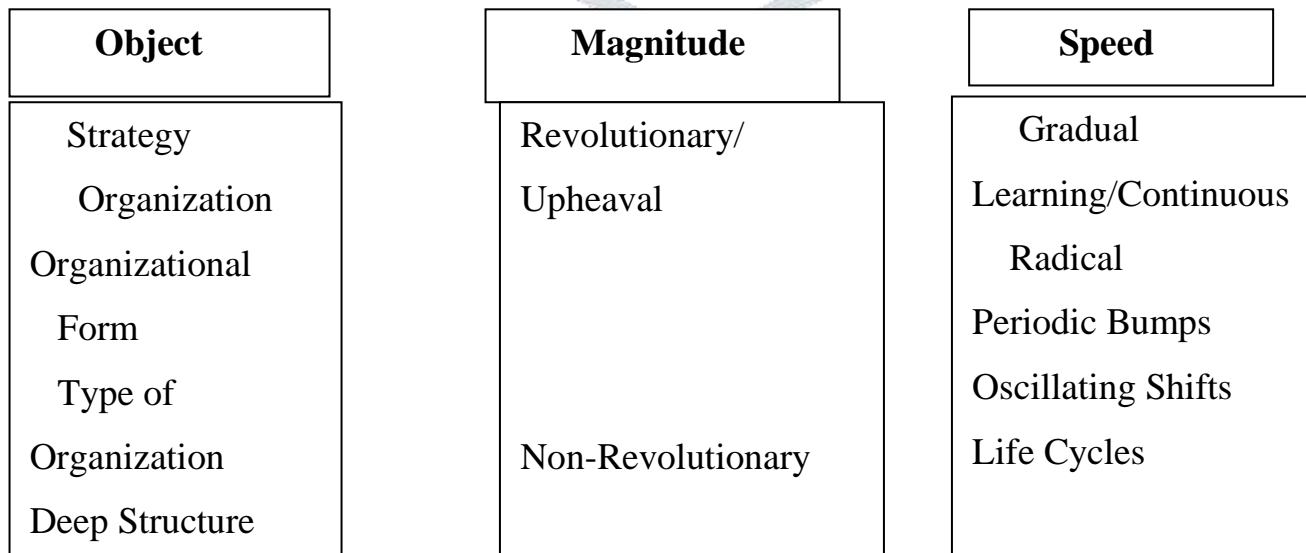| Object	Magnitude	Speed
Strategy Organization Organizational Form Type of Organization Deep Structure	Revolutionary/ Upheaval Non-Revolutionary	Gradual Learning/Continuous Radical Periodic Bumps Oscillating Shifts Life Cycles

Figure 1: Conceptual Framework of the components of organizational transformation

Blue Oceans

Imagine a market universe composed of two sorts of oceans: red oceans and blue oceans. Red oceans represent all the industries in existence today. This is the known market space. Blue oceans denote all the industries *not* in existence today. This is the unknown market space.

In the red oceans, industry boundaries are defined and accepted, and the competitive rules of the game are known. Here companies try to outperform their rivals to grab a greater share of existing demand. The dominant focus of strategy work over the past twenty-five years has been on competition-based red ocean strategies. As the market space of red oceans gets crowded, prospects for profits and growth are reduced. Products become commodities, and cutthroat competition turns the red ocean bloody. Hence we use the term "red" oceans. Blue oceans, in contrast, are defined by untapped market space, demand creation, and the opportunity for highly profitable growth. Although some blue oceans are created well beyond existing industry boundaries, most are created from within red oceans by expanding existing industry boundaries. In blue oceans, competition is irrelevant because the rules of the game are waiting to be set. The term "Blue Ocean" is an analogy to describe the wider potential of market space that is vast, deep, not yet explored.

A Re-constructionist View of Strategy

There are common characteristics across blue ocean creations. In sharp contrast to companies playing by traditional rules, the creators of blue oceans never used the competition as their benchmark. Instead they made it irrelevant by creating a leap in value for both buyers and the company itself. While competition-based red ocean strategy assumes that an industry's structural conditions are given and that firms are forced to compete within them, blue ocean strategy is based on the view that market boundaries and industry structure are not given and can be reconstructed by the actions and beliefs of industry players. We call this the *re-constructionist* view. In the red ocean, differentiation costs because firms compete with the same best-practice rule. According to this thesis, companies can either create greater value to customers at a higher cost or create reasonable value at a lower cost. In other words, strategy is essentially a choice between differentiation and low cost. In the re-constructionist world, however, the strategic aim is to create new rules of the game by breaking the existing value/cost trade-off and thereby creating a blue ocean. Recognizing that structure and market boundaries exist only in managers'

minds, practitioners who hold the re-constructionist view do not let existing market structures limit their thinking. To them, extra demand is out there, largely untapped. The crux of the problem is how to create it. This, in turn, requires a shift of attention from supply to demand, from a focus on competing to a focus on leaving the competition behind. It involves looking systematically across established boundaries of competition and reordering existing elements in different markets to reconstruct them into a new market space where a new level of demand is generated. In the re-constructionist view, there is scarcely any attractive or unattractive industry per se because the level of industry attractiveness can be altered through companies' conscientious efforts of reconstruction. As market structure is changed in the reconstruction process, so are the rules of the game. Competition in the old game is therefore rendered irrelevant. By stimulating the demand side of the economy, blue ocean strategy expands existing markets and creates new ones. The creation of blue oceans is about driving costs down while simultaneously driving value up for buyers. This is how a leap in value for both the company and its buyers is achieved. Because buyer value comes from the utility and price that the company offers to buyers and because the value to the company is generated from price and its cost structure, blue ocean strategy is achieved only when the whole system of the company's utility, price, and cost activities is properly aligned. It is this whole-system approach that makes the creation of blue oceans a sustainable strategy. Blue ocean strategy integrates the range of a firm's functional and operational activities. In this sense, blue ocean strategy is more than *innovation.* It is about *strategy* that embraces the entire system of a company's activities.

Blue Oceans in E&P Transformations: Perfect Industry Game Changers

We believe that the Blue Ocean Framework provides the leaders of upstream E&P firms a method to effectively and efficiently capture opportunities, create value, and mitigate risks through perfect industry game-changers in the turbulent times when industry faces a "strategic inflection point". At least five factors have triggered a climacteric for upstream entities; some have been building for decades, others are very recent. Only the confluence of several factors could bring about such a perfect storm of upheaval "Organizational Transformations" that has strategic implications for all producers: the national oil and gas companies, the super-majors, and the independents.

Increasing demand for oil and gas requires significantly increased production

Economists and strategists in most oil and gas companies regularly develop energy consumption scenarios. These provide projections on energy demand, over a 25-50 year period, broken down by resource (oil, gas, coal, nuclear, re-newables etc.). Most show a consistent pattern:

- Between 2000-2050, total worldwide energy consumption doubles
- Oil and gas production increases to meet demand through 2040, when production levels off and demand is increasingly met by biomass and other renewables.
- A significant portion of the increased demand originates from developing countries.
- A rampant worldwide urbanization is occurring, which will move the world's urban population well above the current 50%; this is likely to shape and increase future energy needs.

One measure investors use to judge the operating performance of an E&P company is the Reserve Replacement Ratio (RRR). The RRR measures the amount of proved reserves added to a company's reserve base during a given year relative to the amount of oil and gas produced. To sustain 2% production growth requires a 118% RRR. Most majors target year-over-year production growth over 3%. They envision continuing at that level or more each year for the next two decades to meet their share of the energy demand allocated to oil and gas. However, in 2012, the two largest American oil companies, Exxon and Chevron, reported RRRs of 115% and 112% respectively, while European competitors reported somewhat concerning RRRs: BP (77%); Shell (85%) and Total (93%).

Unconventionals: new technologies, new geographies, new processes, new opportunity and the need for ubiquitous learning

Given the increasing scarcity of relatively cheap conventional hydrocarbons, upstream companies are investing in Unconventional oil and gas to grow reserves and production (RRR). Unconventional operations focus on shale plays which yield natural gas, NGLs, gas condensates

and crude oil. Tight gas, coal bed methane, oil sands, and heavy oil are non-shale Unconventional resources. The move toward Unconventional requires the development and application of new technologies and new processes in new geographies. With Unconventional plays, managers confront both great opportunity and considerable challenge. This requires "Organizational Change", learning and a different set of managerial priorities. The development and application of cost effective fracking technologies, beginning first in the U.S., is a monumental game changer. In the last 15 years, horizontal drilling and hydraulic fracking have made large quantities of tight shale gas and oil reserves viable. Today over 60% of all new oil and gas wells are hydraulically fractured, employing over 2.5 million people worldwide, approximately 1 million in the US. US domestic gas reserves have tripled; China's by an order of magnitude. The International Energy Agency has projected that due to the recent tight oil boom, the US will surpass Saudi Arabia and Russia to become the world's largest oil producer by 2017-2020.

The rise of national oil and gas companies, large independents and service companies alongside the super-majors provides both competitive challenges and collaborative opportunities, increasing the complexity of strategic decisions

The rise of national oil and gas companies, large independents and service companies alongside the super-majors provides both competitive challenges, as well as collaborative possibilities. The characteristics and differences among these entities with regard to access to strategic focus, resources, technical and non-technical capabilities, experience with conventional megaprojects vs. unconventional resource plays, learning, agility, and responsiveness are well documented in the literature and are generally acknowledged throughout the industry. One example of such comparisons, consistent with the "Blue Ocean Transformations" framework, concerns recent research on "clock-speed". A large-scale study of "time-to-build" of oil and gas facilities worldwide (1996-2005) suggests that firms with faster "clock-speed" or intrinsic execution speed capabilities have a performance and valuation advantage. Firms in faster clock-speed industries are encouraged to design and assemble assets as well as their supply, distribution and alliance networks to gain a series of temporary competitive advantages. Exxon, Shell and Chevron are identified as firm-level "clock-speed" leaders in their set of 6 IOC super-majors; ENI, ONGC and Stat Oil in their set of 6 public-private partnerships (NOCs) using the proxies of workflow speed, improvement of risk and portfolio value accrual .

Managing the human resource strategy in its parts and interactions

A fundamental challenge for all Oil and Gas companies involves managing a cluster of human resource activities that provide enough people (capacity; recruitment; resourcing), who are doing the right things (technical competence; safety; learning and development), in the right role, with the right people (teams), in the right seat and place, at the right time (deployment), with the right supervision (management), all headed in the right direction (strategy and leadership). Deficiencies in the ways people are managed, alone and in their interactions, can undermine value creation, production, create disasters, and demolish a strategy.

- For the foreseeable future, capacity in E&P is challenged by a decreasing and aging geo-science talent pool. Given current trends, for the next 20 years, the supply of geoscientists will not meet the demand for geo-scientists.
- Traditional organizational support structures (HR; Learning and Development; Recruitment; Deployment) may not be aligned with the strategic requirements of the Ventures/Projects. In some companies, "The tail is wagging the dog!"
- There are often acute deficiencies related to learning and cross-generational mentoring, particularly related to capabilities for highly complex and high value ventures (e.g., Unconventionals).
- A large portion of a company's talent resources may be contractors who are (understandably) not properly aligned with the company's culture, processes and strategy.
- Deployment within the organization is not aligned with strategic priorities. Other priorities take precedence over getting the Ventures, with highest or potentially highest economic value, the human resources they need.
- Strategic investment decisions about what to drill need to be connected to an analysis of current organizational do-ability. A particular project or venture may have high-potential economic value, but may not be doable given the level of technical competencies or available human assets. Many firms do not ask the "do-ability" and "Organizational Transformations to achieve the do-ability status" question when making strategic decisions about investments.

A focus inside the organization alone as the context for resolving human resource challenges ignores systemic solutions available in the company's business ecosystem: partnerships with service companies, joint ventures, the use of contractors, etc. As we will explain, the Blue Ocean Strategic Organizational Transformations that empower people strategy lead to a better management of a cluster of activities inside and outside the organization that recruit, train, and retain the talent required to create value.

Managing health, safety, security and environmental risks throughout the business ecosystem (HSSE)

On April 20, 2010, an explosion and subsequent fire on the Deepwater Horizon semi-submersible Mobile Offshore Drilling Unit (MODU), killed 11 workers and injured 16 others. The unit was owned and operated by Transocean, which was drilling for BP in the Macondo Prospect oil field about 40 miles (60 km) southeast of the Louisiana coast. The explosion caused the Deepwater Horizon to burn and sink, triggering a massive offshore oil spill in the Gulf of Mexico. This environmental disaster is now considered the second largest in U.S. history, behind the Dust Bowl. Not only was the explosion disastrous for Transocean, BP and Cameron International, it also led to severe criticism of the oil and gas industry as a whole and curtailment of drilling operations in the Gulf of Mexico. Many factors contributed to the disaster. Together they indicate that the management of health, safety, security and environmental (HSSE) risks requires attention and asset orchestration activities not only throughout the organization but also in the wider business ecosystem. This kind of management task differs from other kinds of risk management, such as regulatory or compliance risk, where point-of risk solutions may be adequate. Since the origins of these risks are complex, since the impacts of these risks cross boundaries of the organization, involving partners to whom key operational activities are outsourced, and since the impacts of these risks simultaneously affect several drivers of economic value, not just for one company but for all E&P companies, a comprehensive, systemic, cultural and strategic organizational transformations approach around HSSE must be developed and applied by firms seeking longer term survival, growth, and prosperity.

Research Methodology:

The Delphi-Blue Ocean Organizational Transformations hybrid paradigm

Strategy development is a complex and uncertain process that identifies and evaluates alternatives for utilizing an organization's resources to achieve its mission (Li et al., 2002). Because of actual uncertainty and perceived ambiguity, the process of strategy development requires input from and cooperation of many organizational functions and DMs (Li et al., 2000; Mintzberg, 1994a.b; Eden, 1990; Porter, 1987). The hybrid Delphi-Blue Ocean Organizational Transformations is used here for getting Group synthesized and classified relevant factors.

The Delphi method was developed at the RAND Corporation to obtain the most reliable consensus of opinion from a group of knowledgeable individuals about an issue not subject to objective solution (Dalkey and Helmer, 1963). It is a structured group interaction that proceeds through multiple rounds of opinion collection and anonymous feedback. Although Delphi dates back to early 1950s, the most recognized description of the method was offered by Linstone and Turoff (1975). Fischer (1978), Schmidt (1997), Okoli and Pawloski (2004) and Keeney et al. (2006) also provide excellent reviews.

Each round in Delphi involves a written survey of the participants followed by feedback to them for each survey question. After seeing the results from the previous round, the participants are asked to reconsider their opinions. Generally, there is a convergence of opinions after three or four rounds, and a stabilized group opinion emerges. This group opinion may reflect agreement, disagreement or some of each. The optimum number of participants depends on the number needed to have a representative pooling of views (Ndour et al., 1992).
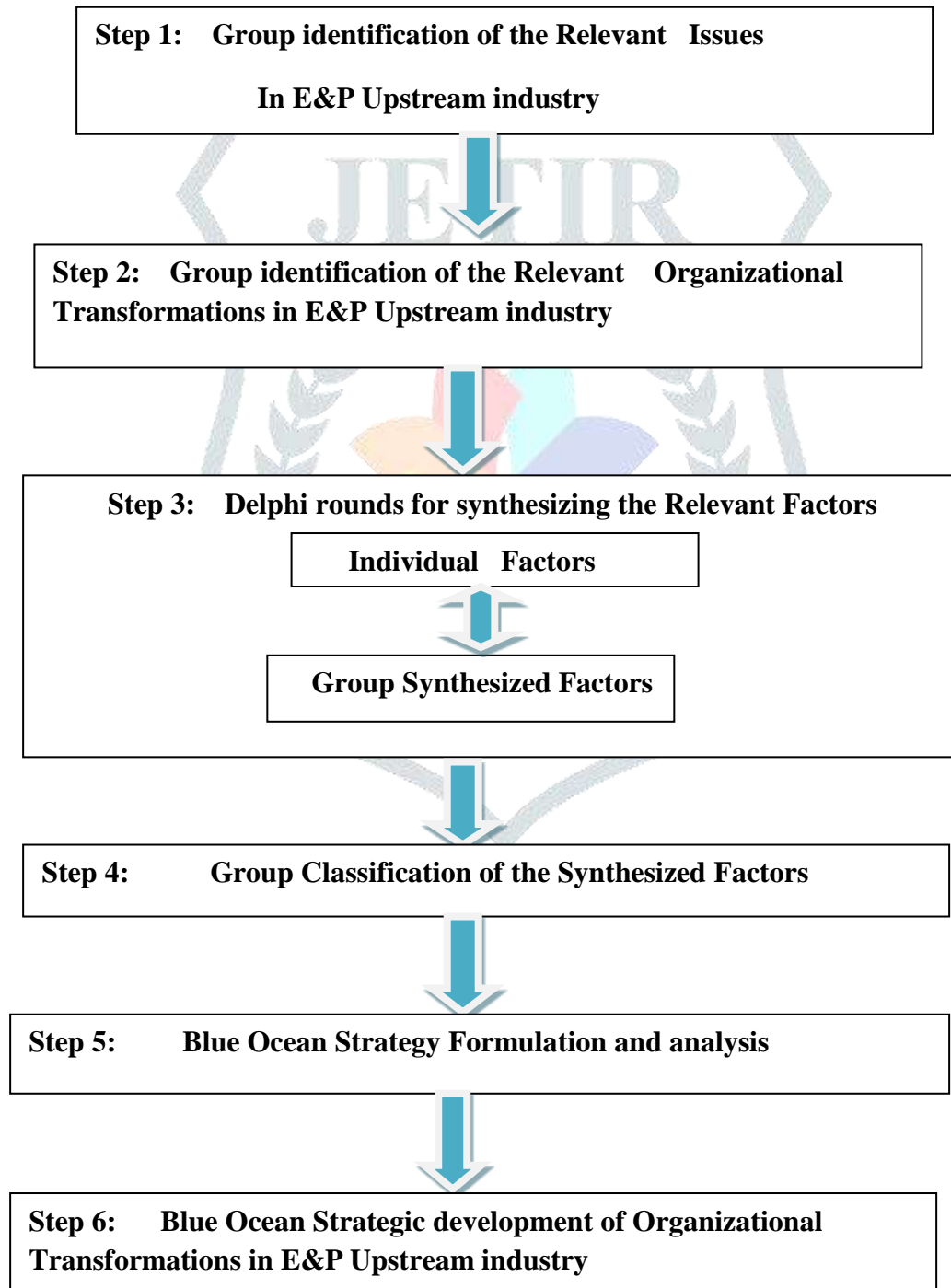

Figure2 The Delphi-Blue Ocean Organizational Transformations hybrid paradigm

Organizational Transformations Classified

Most organizations that tried to counter the slow economy by transforming themselves, transformed rapidly so as to be ready for an upswing in the environment, whenever it happened. This type of transformation can be called the *Quick-fixer*, since it rapidly fixes the problem at hand. Certain aspects, like quick, fast paced change, with relatively short term but clear focus, of this kind of transformation can also be found in restructuring (Chakravarthy, 1996; Orgland & Von Krogh, 1998) and turnaround (Mintzberg & Westley, 1992).

Furthermore, under next kind of transformation, a radical change impacts certain objects in the organization, but the differentiating factor is that this transformation starts with a revolution/upheaval in the organization and slowly tapers off as a non-revolutionary transformation. There is no clear line of difference between the revolutionary and the non revolutionary part of the transformation with the latter following the former usually. This type of transformation is named as the *Extender* and can be seen in comparison with reorientation (Nadler & Tushman, 1989).

Next transformation is Gradual and Learning based in Magnitude with Non-Revolutionary and Evolutionary speeds. The defining characteristic of this transformation is the impact it creates without destabilizing the organization and culling out the problems right from their roots. The impact of this transformation is felt on the organization for a long time since it cures of its fundamental problems. It is for this reason, that this type of transformation is named as the *Healer*. It holds close similarities to organizational renewal (Kilmann, 1995). The focus of this transformation is on building capabilities in people, behavior modification, foster a learning organization – characteristics that have been identified with organization renewal (Gouillart & Kelly, 1995; Muzyka, Koning and Churchill, 1995). Next one encapsulates transformations that happen gradually and at Evolutionary speed. These transformations, again, impact different Objects in the organization but bring about a slow change in them which seem like they are undergoing evolution. This type of transformation, which comes across as functioning in the regular course, is called the *Evolver*. This kind of a change has been classified as evolutionary in the literatures. However, the features of re-establishing link to the market, building market focus and inventing new businesses hint at some similarities with organizational revitalization (Gouillart & Kelly, 1995).

Next transformation is characterised by the radical and revolutionary change in strategy, organization or any other object, except formal systems. As described earlier, formal Systems essentially encompass the HR systems, policies and frameworks in an organization (Kilmann, 1995; Tushman & Romanelli, 1986). When a transformation affects any set of objects in an organization without bringing about a change in the HR systems and policies, it falls under this type of transformation. Since the change can impact any object in the organization, except the people, this type of transformation is named as the *Peripheral*. While none of the existing types of transformations captures this form of change encompassing everything except people processes – Muzyka, Koning and Churchill's (1995) perspective on Reengineering comes close to this type of transformation. According to them (Muzyka, Koning & Churchill, 1995), reengineering just focuses on improving efficiency in the existing product market opportunities and no more. There are organizations that transform themselves to counter the effects of an unfavorable economic scenario. On the other end of the spectrum, there are organizations that undergo transformations periodically. These episodes of transformations are not always prompted by an unfavorable environment. Rather internal changes in the organization (change in leadership, primarily) are seen to bring about such transformations more often. Overriding the reason, objects and magnitude, the transformations here are characterized by presence of Periodic Bumps. Due to the recurring nature of this type of transformation, it is named as the *Recurrent*. Because of the content of change, this type of transformation can be seen very similar to reorientation (Nadler & Tushman, 1989; Tushman & Romanelli, 1985). However, the distinguishing feature of" Recurrent" is not the content rather it is the frequency of change. It is because of this, that one cannot draw clear parallels to existing types of transformations.

Organizational form, proposed by Miles and Snow (1978), differentiates organizations in four classes based on distinct competencies and response systems. A conscious revolutionary change across Objects in the organization, including its Form that occur through periodic bumps is classified and named as the *Methodical*. This specific case of transformation can also be seen as the strategic turnaround (Mintzberg & Westley, 1992). We know that Strategy stands for the relationship of the organization with its environment, including the use of its resources (Mintzberg & Westley, 1992; Nadler & Tushman, 1989). Except Strategy, all the other Objects as mentioned in the conceptual framework operate inside the boundaries of the organization. The next transformation classified, brings about a change in the internal properties of the organization without changing its relationship / terms of exchange with its environment i.e. the Strategy. Furthermore, this transformation is also characterized by a learning based change that happens as the evolutions of the organization. This type transformation is named as the *Internal.*

This specific case of a juggernaut corporation can clearly be seen as regeneration of an organization where developing and empowering people, is a key aspect of a change (Muzyka, Koning & Churchill, 1995).

In the next transformation, the differentiating factor is not the number of Objects that undergo change, rather the fact that so many aspects of the organization change not by Upheaval or even at a breakneck speed. Instead, the transformation happens slowly, with Oscillating shifts between them and innovation as the organization go through evolution. The stability of the organization is not compromised during such a transformation, yet almost the entire organization is overhauled as a result of this transformation. Due to the natural outlook towards curing the organization through transformation, this type of transformation is named as the *Cultivator*. The type of transformation can be seen very similar to revitalization which brings about questioning existing and identifying and developing new competencies (Chakravarthy, 1996), reestablishing link to the market, building market focus and inventing new businesses (Gouillart & Kelly, 1995).

The nine types of transformations proposed are put together with existing descriptions of transformations available in the literature. This is presented in Table 3.

Table 3: Proposed Transformation and existing descriptions of Transformations:

Proposed Transformation	Existing Descriptions
Quick fixer	Restructuring (Chakravarthy, 1996; Orgland & Von Krogh, 1998) and Turnaround (Mintzberg & Westley, 1992)
Extender	Reorientation (Nadler & Tushman, 1989; Tushman & Romanelli, 1985)
Healer	Renewal (Gouillart & Kelly, 1995; Muzyka, Koning and

	Churchill, 1995)
Evolver	Revitalization (Gouillart & Kelly, 1995)
Peripheral	Reengineering (Muzyka, Koning & Churchill, 1995)
Recurrent	Reorientation (Nadler & Tushman, 1989; Tushman & Romanelli, 1985)
Methodical	Turnaround (Mintzberg & Westley, 1992)
Internal	Regeneration (Muzyka, Koning & Churchill, 1995)
Cultivator	Revitalization (Chakravarthy, 1996), (Gouillart & Kelly, 1995)

To summarize, the Quick-fixers bring about fast transformation in the organization to come in sync with their environment. The Extenders, on the other hand, bring in the transformation by a revolution by also let is ease off slowly part-by-part. The Healers treat the core of the problem through sustainable means not threatening the current existence of the organization. While Evolvers include transformation as a part of their growth journey, the Peripherals undertake transformations that impact everything except a change in the people and HR processes and policies. Transformation occurs through Periodic bumps as a part of both Recurrent and Methodical, but the Methodical carefully plan out a change in the Organizational Form by this transformation. When an organization transforms itself internally without disturbing the Strategy, it is classified as with the transformations called Internals. Finally, Cultivators are transformations that help an organization grow through the swings between its theme and innovation. These nine classified methods house the multiple embedded cases of Exxon, Reliance & ONGC that were analyzed IOCs (International Oil Company) and NOCs (National Oil Company).Figure 3 represents Blue Ocean Strategy instrument "Strategy Canvas" for the Magnitude & Speed of Objects, described in detail in Tables 1& 2 and literature review.

MAGNITUDE OF OBJECTS IN ORGANIZATIONAL TRANSFORMATIONS

OBJECT	[S]	[O]	[F]	[T]	[D]	[M]	[N]
EXXON	12	11	10	11	11	12	12
RELIANCE	8	7	6	9	8	9	10
ONGC	10	11	9	10	12	12	8
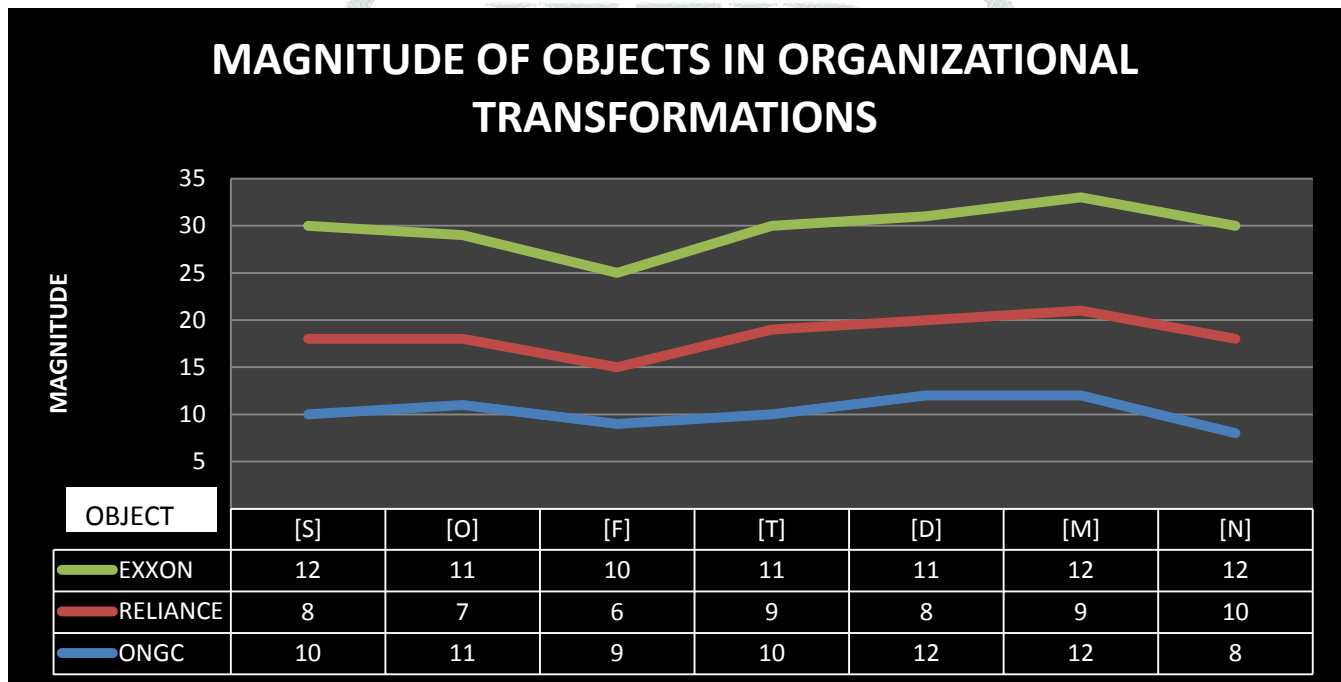
Figure 3 Magnitude of objects

Table 4

MAGNITUDE	VALUE	CODE
Revolutionary/Upheaval	>10	[U]
Non-revolutionary	10	[B]
Evolutionary	<10	[E]

OBJECT	[S]	[O]	[F]	[T]	[D]	[M]	[N]
EXXON	12[U]	11[U]	10[B]	11[U]	11[U]	12[U]	12[U]
RELIANCE	8 [E]	7 [E]	6 [E]	9[E]	8[E]	9[E]	10[B]
ONGC	10[B]	11[U]	9[E]	10[B]	12[U]	12[U]	8[E]
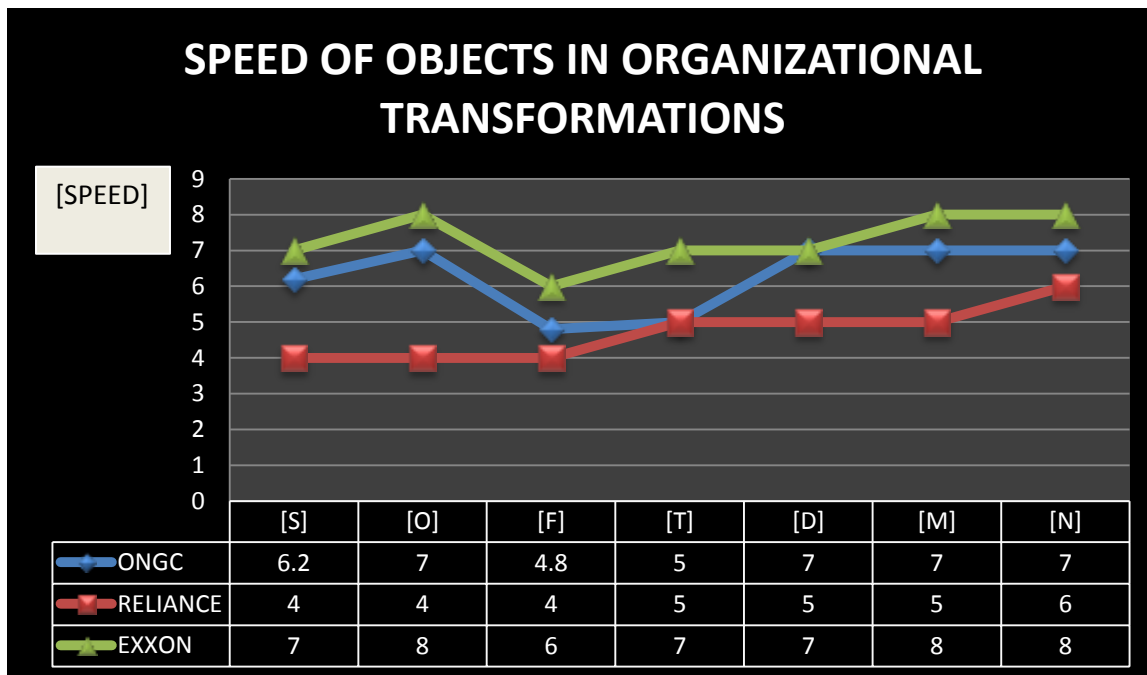
Figure4. Speed of objects

Table 5

SPEED	VALUE	CODE
Radical	8	[R]
Regular progress	7	[A]
Learning/Continuous	6	[L]
Gradual	5	[G]
Life cycles	4	[Y]
Oscillating shifts	2 to 3	[C]
Periodic bumps	1 to 2	[P]

Table 6   Speed: Value and Code

OBJECT	[S]	[O]	[F]	[T]	[D]	[M]	[N]
ONGC	6.2[L]	7[A]	4.8[G]	5[G]	7[A]	7[A]	7[A]
RELIANCE	4[Y]	4[Y]	4[Y]	5[G]	5[G]	5[G]	6[L]
EXXON	7[A]	8[R]	6[L]	7[A]	7[A]	8[R]	8[R]

Table7. Types of Organizational Transformations

S. No.	Type	Features
1.	Quick fixer	• Object: Change in strategy , organization and deep structure , among others • Magnitude: Revolutionary, all encompassing • Speed: Radical, fast paced
2.	Extender	• Object: Change in Strategy, Organization, Form and Deep Structure, among others • Magnitude: Revolutionary followed by Non-Revolutionary • Speed: Radical, fast paced
3.	Healer	• Object: Covers almost all properties of the organization • Magnitude: A mix of non-revolutionary and evolutionary • Speed: Slow but continuous, learning oriented
4.	Evolver	• Object: Change in Strategy, Organization, Form and Deep Structure, among other

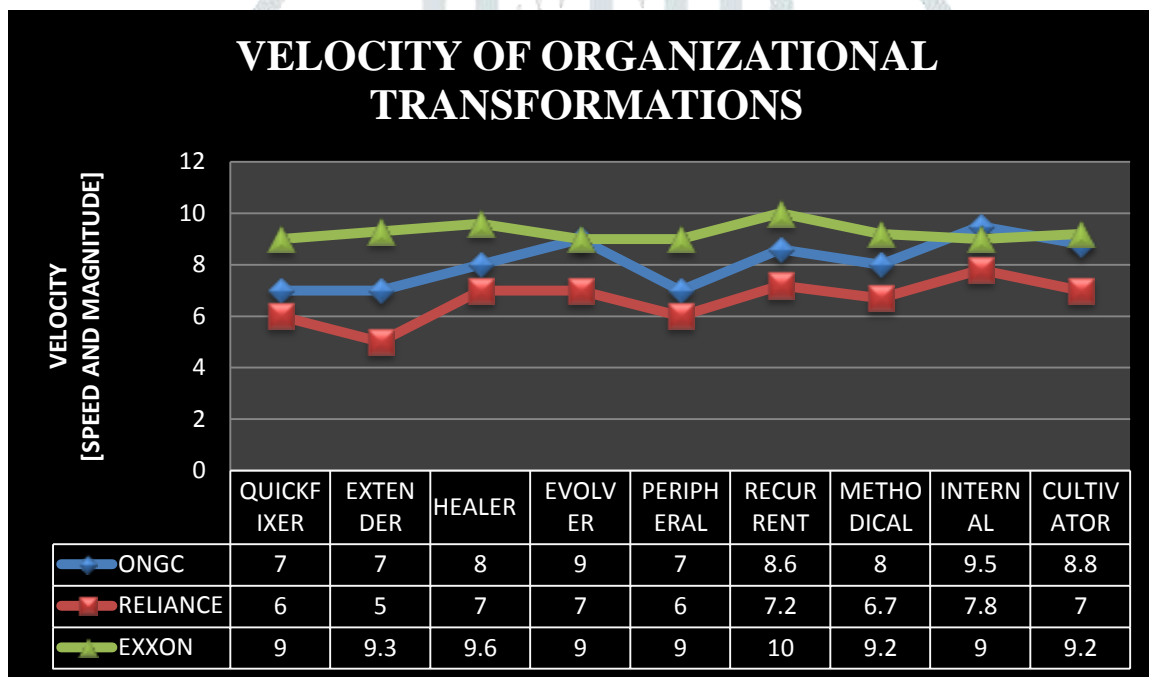|		
		• Magnitude: Evolutionary, as part of the organization's life path • Speed: Slow and gradual, incremental
5.	Peripheral	• Object: Any Object except Formal Systems could change • Magnitude: Revolutionary, all encompassing • Speed: Radical, fast paced
6.	Recurrent	• Object: Change in Strategy, organization, Deep Structure and Formal Systems, among others • Magnitude: Revolutionary, all encompassing • Speed: Periodically occuring, fast paced, radical change
7.	Methodical	• Object: Change in Strategy, Organization, Form and Deep Structure, among others • Magnitude: Revolutionary, all encompassing • Speed: Episodes of change that occur periodically
8.	Internal	• Object: Any Object, except Strategy could change • Magnitude: Evolutionary, as a part of the organization's life path • Speed: Continuous, learning oriented
9.	Cultivator	• Object: Covers almost all parts of the organization • Magnitude: Evolutionary, as a part of the organization's life path • Speed: Gradual, with oscillating cycles of converging to a theme and divergence with innovation

VELOCITY OF ORGANIZATIONAL TRANSFORMATIONS

	QUICKF IXER	EXTEN DER	HEALER	EVOLV ER	PERIPH ERAL	RECUR RENT	METHO DICAL	INTERN AL	CULTIV ATOR
ONGC	7	7	8	9	7	8.6	8	9.5	8.8
RELIANCE	6	5	7	7	6	7.2	6.7	7.8	7
EXXON	9	9.3	9.6	9	9	10	9.2	9	9.2

Figure5. Velocity of Organizational Transformations

Table 8

S.NO.	ORGANIZATIONAL CHANGES & TRANSFORMATIONS [Classified –Velocity based]	CODE	VALUE ONGC[O]	VALUE RELIANCE[R]	VALUE EXXON[E]
1.	Quick fixer	[Q]	7[O]	6[R]	9[E]
2.	Extender	[EX]	7[O]	5[R]	9.3[E]
3.	Healer	[H]	8[O]	7[R]	9.6[E]
4.	Evolver	[E]	9[O]	7[R]	9[E]
5.	Peripheral	[P]	7[O]	6[R]	9[E]
6.	Recurrent	[RE]	8.6[O]	7.2[R]	10[E]
7.	Methodical	[M]	8[O]	6.7[R]	9.2[E]
8.	Internal	[I]	9.5[O]	7.8[R]	9[E]
9.	Cultivator	[C]	8.8[O]	7[R]	9.2[E]

COMPARATIVE VELOCITY v/s ORGANIZATIONAL TRANSFORMATIONS

	OC 1	OC 2	OC 3	OC4	OC 5	OC 6	OC 7	OC 8	OC 9	OC 10	OC 11	OC12
EXXON	9	8.6	8	9.4	9	9.4	9.4	9.2	9.6	9	9.3	9
RELIANCE	6	5	5	5.5	4.7	5.6	6.6	7.8	7	6	6.5	6
ONGC	8	7.5	8.5	8.2	8.5	9	8	8.7	8.6	8.8	7.5	8.8

(Y-axis: COMPARATIVE VELOCITY [SPEED AND MAGNITUDE], scale 0 to 30)
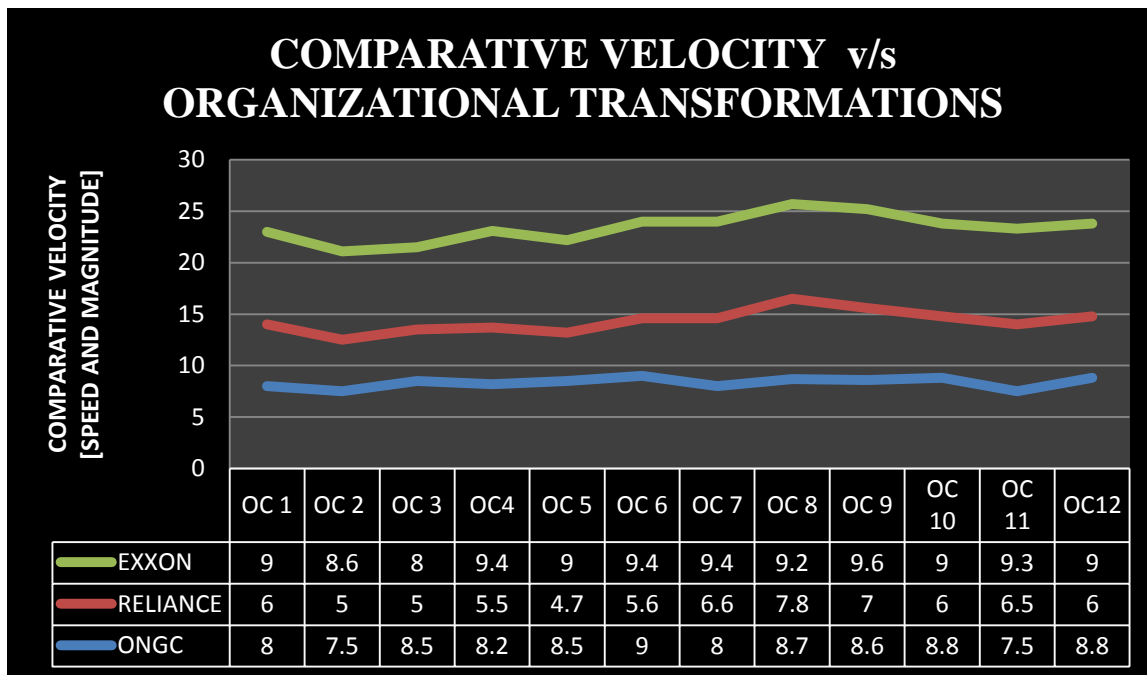
Figure6. Comparative Velocity v/s Organizational Transformations

Table 9

S.NO.	ORGANIZATION CHANGES AND TRANSFORMATIONS	CODE [OC]	VALUE EXXON [E]	VALUE RELIANCE [R]	VALUE ONGC [O]
1.	Technological Progress	OC1	9[E]	6[R]	8[O]
2.	Strategic Partnerships	OC2	8.6[E]	5[R]	7.5[O]
3.	Alternatives & Non-conventional	OC3	8[E]	5[R]	8.5[O]
4.	Improved explorations	OC4	9.4[E]	5.5[R]	8.2[O]
5.	Enhanced oil and gas recovery (EOR)	OC5	9[E]	4.7[R]	8.5[O]
6.	Minimizing environmental risks	OC6	9.4[E]	5.6[R]	9[O]
7.	Integrating HR, information , Technologies & work processes	OC7	9.4[E]	6.6[R]	8[O]
8.	Enhancing performance management	OC8	9.2[E]	7.8[R]	8.7[O]
9.	Managing enterprise-wide risk	OC9	9.6 [E]	7[R]	8.6[O]
10.	Focusing on operational excellence	OC10	9 [E]	6[R]	8.8[O]
11.	Increasing capacity through effective people	OC11	9.3[E]	6.5[R]	7.5[O]
12.	Designing adaptive Business model	OC12	9[E]	6[R]	8.8[O]

Conclusion

A Blue Ocean Transformation is a meta-process that involves orchestration and leadership across a cluster of activities, resources, processes, and best practices to manage comprehensively and systemically, something that is strategically critical. They empower and make precise decisions about direction, align stakeholders, engender readiness for change, and increase agility for capturing value and for risk mitigation. We began by describing how new opportunities and challenges within the upstream industry have created an inflection point that requires a transformative approach to strategy and strategic management. Capturing and producing new oil and gas resources is complicated by increased competition, new technologies that open up unconventional plays, the rise of NOCs, large Independents and service companies. Meanwhile, a decrease in global geo-science and engineering talent pools, the need to manage post-Macondo risks, pressure toward alternative sources of energy, complicate short term as well as long term decisions. We have outlined the Blue Ocean Strategy Organizational Transformations Framework to show how it has evolved from a strategic model employed by high-tech companies to undergird agility in high-velocity markets, to a comprehensive strategic framework relevant for upstream oil and gas entities as they capture opportunities and manage risks in the changing business environment. They can sharpen strategic agility and are the key to seizing and profiting from opportunities in the new business environment and empower upstream E&P strategy.

For at least the next two decades, the future of Oil and Gas will be defined foremost by the ecology of more challenging oil and gas sources. Companies must find new ways to progress technologies to supply the planet, especially the rising demand from emerging markets, with sustainable and affordable energy. The influences of governments world-wide in combination with other supply-side and demand-side challenges will all continue to impact the changing industry landscape. For most actors in the industry, future success will hinge on performance management, enterprise risk management, operational excellence, effective people management and business model adaptability. Underlying these success factors as a key enabler: the critical

Organizational Transformations with Blue Ocean Strategy & its dynamic tools and frameworks, (ERRC & Strategy Canvas), to develop and deploy strategic production and information technologies.To fully exploit new technologies as 2030 approaches, Oil and Gas leaders will have to make strategic R&D investments, and partner both within and beyond the industry for the high velocity organizational transformations, with an open innovative approach. Last but not the least, any organization (Here, Exxon, Reliance & ONGC embedded cases) is a mix of all nine classified transformations, differing in the magnitude, speed and hence velocity of different Objects of Organizational Transformations.

Limitations & Future Research

It was physically impossible to capture and record all the information about an episode of transformation. Thus, addition of further information may potentially change the characteristics of the transformations studied under this paper. As mentioned earlier in the paper, extant literature is marked with many types of organizational transformations. These transformations have been given different names but most of them describe the transformation in terms of the three components identified in this paper (Object, Magnitude and Speed). On the apparent level, there are some commonalities. Quick-fixer appears to be very close to Restructuring, which is essentially an organization's response to a crises by defining new structures, goals, values, mission etc (Chakravarthy, 1996 ; Orgland & Von Krogh, 1998) by redesigning the economic model and the firm's work architecture (Gouillart & Kelly, 1995). Similarly, Renewal which is defined as a continuous process of change and growth in a firm shares many common facets with Healer. The transformation as Renewal is led by overhauling the complete organization including the behavior of employees and the organization's culture (Gouillart & Kelly, 1995; Kilmann, 1995; Muzyka, Koning & Churchill, 1995). On the same lines, future research could focus on the drawing more parallels between the classified transformations proposed in this paper with those proposed in other literature. Furthermore, velocity of changes is so high in oil, gas and energy markets that results may vary within a short span of time. Hence, for the companies as well as the researchers, nothing is constant except "Change & Transformations", must say "Adaptation for the Survival of the Fittest, as Great Charles Darwin said".

Appendix 1: Coding pattern for the characteristics of transformation

OBJECT Code	SPEED Code	MAGNITUDE Code
Strategy (S)	Gradual (G)	Revolutionary /
Organization (O)	Learning/Continuous (L)	Upheaval (U)
Organizational form (F)	Radical (R)	Non-revolutionary (B)
Type of organization (T)	Periodic bumps (P)	Evolutionary (E)
Deep structure (D)	Oscillating shifts (C)	
Formal systems (M)	Life cycles (Y)	
Informal systems (N)	Regular progress (A)	

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