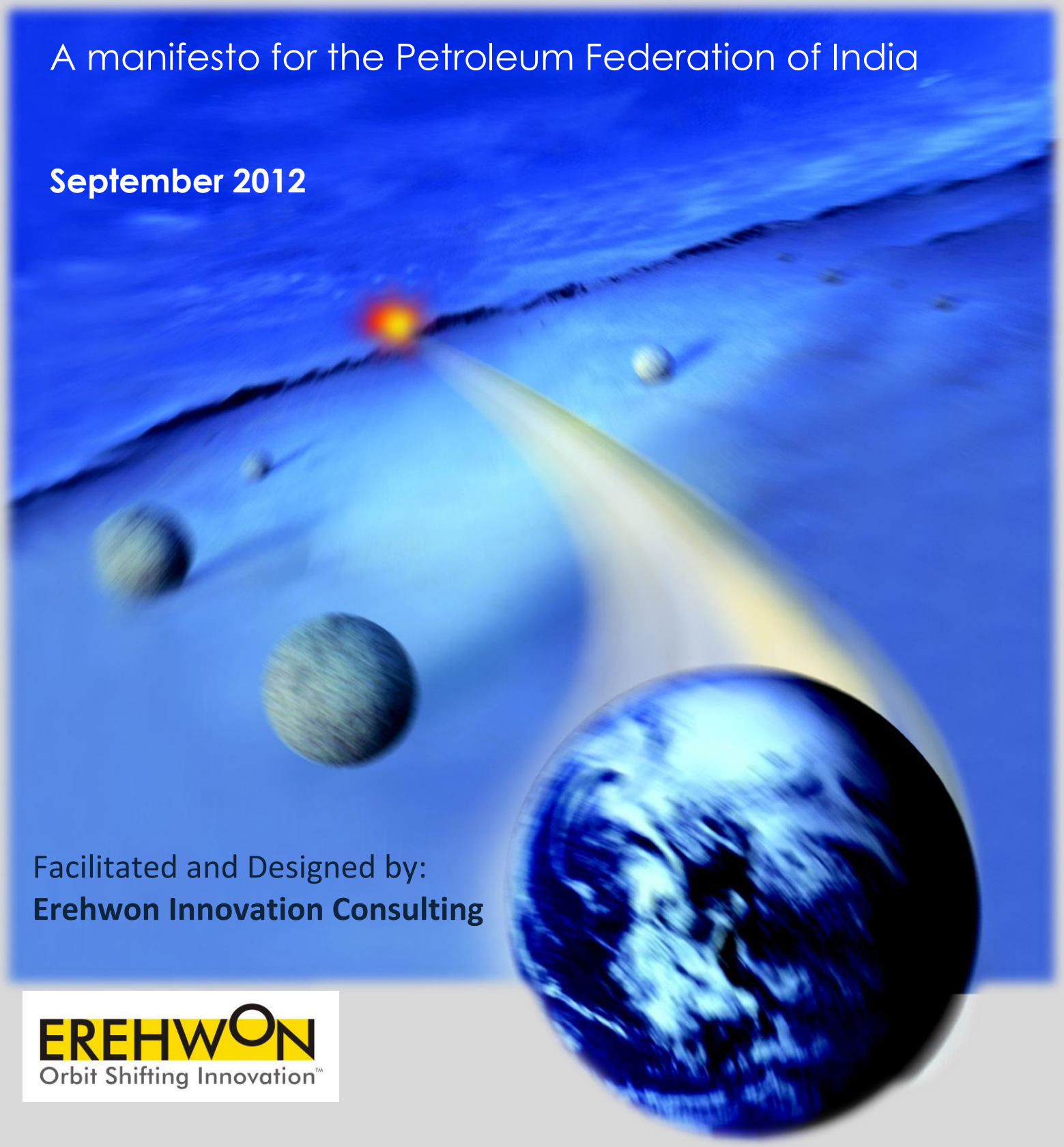
PETROFED

Accelerating ‘Orbit Shifting Innovation ™’ in the Oil and Gas Sector in INDIA

A manifesto for the Petroleum Federation of India

September 2012



Facilitated and Designed by:
Erehwon Innovation Consulting

EREHWON
Orbit Shifting Innovation™

Preface

India needs to leapfrog the Development curve. The Oil and Gas Sector needs to find transformative solutions to strengthen India's energy security.

The need for India, and specifically the Oil and Gas sector, is to drive not just incremental improvement but quantum leaps. And, to do this, what is needed to be deployed is 'Orbit Shifting Innovation ™'.

Innovation must be for India what Quality was for Japan – the transforming agent.

'Orbit Shifting Innovation' is a globally pioneering methodology and developed by a proudly Indian firm EREHWON INNOVATION CONSULTING.

In partnership with PETROFED, an 'Orbit Shifting Innovation' survey was conducted across all Oil and Gas Sector companies.

The 'survey findings' synthesized in this document are not intended to be evaluative or judgmental. This document is more like a *manifesto*, a **call for Innovative action**. It aims to provoke and inspire the sector to uplift Innovation. It further provides insight into 'What key shifts are needed to accelerate Innovation.' And it finally proposes a 4-Track 'Orbit Shifting Innovation' strategy and roadmap to uplift and accelerate Innovation across the sector.

I look forward to seeing India's Oil and Gas Sector becoming the Global Innovation thought and action leader.

Rajiv Narang
Chairman & Managing Director
Erehwon Innovation Consulting

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Orbit Shifting Innovation to Transform India's Development and Growth

Innovation in India - At a Tipping Point

In India, Innovation is at a 'tipping point'. As a country, we are rapidly moving away from 'India the Follower' to 'India the Innovator'.

The last decade has seen a very powerful emergence of Business Innovation in India - Innovators like Bharti (Airtel) and Aravind Eye Hospital have gone beyond meeting to *beating* global benchmarks.

The Tata Group has led the way in Product Innovation with 'The NANO' and 'The Edge' – the slimmest water resistant watch in the world.

Aravind Eye Hospital in cataract surgery and EMRI in Emergency Services have created Process Innovations that are a new global benchmark.

Bharti (Airtel) has become a global reference point with its Business Model Innovation - 'The Minutes Factory'. It is now the lowest cost producer of minutes in the world.

Going beyond TQM, Titan Industries has activated 'Orbit Shifting Innovation ™' to transform operations. While implementing TQM, we learnt from and adopted the Japanese templates. In-making Orbit Shifting Innovation happen on the shopfloor, Titan has pioneered a new approach.

The last decade has also seen the emergence of Entrepreneurial organizations that have lost the fear of giants. Entrepreneurs like Nirma, Cavinkare, Marico, Sukam and Paras have shown they can out innovate the giants in their own industries.

And on the other hand, Multinationals like GE, Microsoft, Unilever and now Pepsi have adopted 'Reverse Innovation – Innovating in India for the world'.

There is a huge movement towards Inclusive Innovation – 'Innovation for Inclusive Growth'. Organizations like ITC-IBD have lead the way with 'Process and Business Model Innovation – E-Choupal,' demonstrating how a WIN-WIN Business Model Innovation can positively impact people at the bottom of the pyramid.

In another landmark Innovation in Malara, Tata Chemicals and TERI have innovated to transform a 20 acre dump of Soda ash into living green vegetation, that too by using saline water (no fresh water). This sets a new reference for Inclusive Innovation that positively impacts the planet.

The public sector has also come through, with Innovations in the technology - denied sectors like Space and Nuclear. As a reference, DIHAR (Defence Institute of High Altitude Research) has created an ecosystem innovation that has enabled the socio-economic development of Ladakh.

All these are lighthouses of Innovation – they demonstrate that transformative innovation can and does happen across sectors.

But the reality is that this is happening only in Pockets: These Innovators are still islands; we need to build Orbit Shifting Innovation into a Movement!

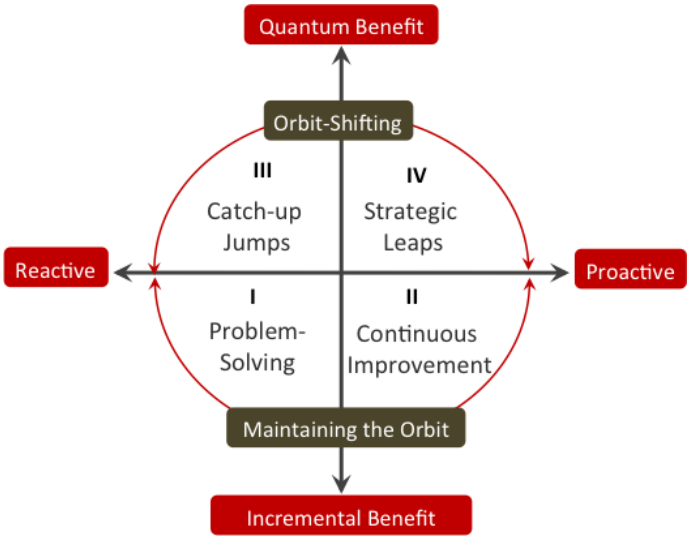
And to do this, we will have to go beyond a very personality centric approach to innovation – we will need to find ways to make transformative innovation happen by design; we will need to institutionalize it.

The creative challenge:
Business Model Innovation in IT and then the Telecom sector has created a leapfrog in the development curve of India. Now we are looking forward to the Oil and Gas sector to pioneer Technology, Process and Business Model Innovation to leapfrog India's Energy Gap, that too in an environmentally sustainable manner.

Nature of Innovation and Need for India: Orbit Shifting

Definitely a large number of organizations are pursuing innovation in the country. Innovation has become a strong buzzword and in most organizations it is also a part of key goals.

While we've had various successes in India, in most industries and sectors, study after study shows that the majority of Indian innovation continues to be incremental in nature.



Map innovation using this 4-zone model. Both Zones I and II result in incremental benefits: the typical steady step, progressive improvement. Since it does not radically change the environment or the approach, the innovation here is largely **Orbit-maintaining Innovation.**

Innovation in Zones III and IV focuses on making quantum jumps and not incremental improvements. Thus focus here is transformation. It results in the creation of new futures and new possibilities, fundamentally altering or breaking all that previously existed.

This is **Orbit Shifting Innovation**.

The approach in Orbit-maintaining is to:	The approach in Orbit Shifting is to:
Define the gap between 'where we are' and 'where we want to be'. ↓ Identify the root causes for the gap. ↓ Generate ideas to eliminate/minimize each gap.	Take on a Quantum Challenge (a quantum jump over the existing status), an out of the box challenge beyond industry know-how. ↓ Work back from the challenge and Breakthrough Mental Model Boundaries. ↓ Go beyond, do zero based thinking and solve unsolved problems to achieve the quantum jump.

Orbit Shifting Innovation happens when an area that needs transformation meets an innovator with the will and the desire to create, and not follow history. At the heart of an Orbit Shifting innovation is the breakthrough that creates a new orbit and achieves a transformative impact. Orbit Shifting Innovations that created a transformation have not just happened in Silicon valley or in the US; they have happened across countries, in the developed and developing world.

These are Orbit Shifting Innovations that:

Transformed Healthcare:

1. Driven by the aspiration to eliminate 'needless blindness' Aravind Eye Hospital transformed the cataract (eye) surgery process. Its surgeons are now 10 times as productive as the global benchmark with the same quality. This made cataract surgery affordable to millions.
2. Life-straw, a breakthrough out of Switzerland that purifies water as you drink, enabling the person to drink from almost any water source. This is currently enabling millions across Africa to access pure water and minimize dreaded water borne diseases.
3. One World Health: Out of the U.S., has created a breakthrough business model to treat neglected diseases with shelved innovations of pharma companies. The world's first non-profit pharma company.

Transformed Communication and Finance Accessibility:

4. Emerging from the Philippines, Smart Telecom's 'Pre-paid Mobile card' triggered a revolution that has made mobile telephony accessible to millions across Asia.
6. M-Pesa from Safari.com has enabled millions in Kenya, Africa to get on SMS-operated 'mobile account' even before they had a bank account.

Transformed Cities:

7. The transformation of Surat was made from being plague-ridden to the second cleanest city in India, and
8. The Community Policing Model brought down the crime rate to 50% in Tiruchirapalli.

At the heart of each of these innovations is a seismic shift: rather than begin with a business idea, they started with a transformative challenge at the scale of a country, community, society or even a business.

Yes, India does have its share of Orbit Shifting Innovations in an Aravind Eye Hospital or a Trichy Police or in the transformation of Surat. And there are many more that haven't been mentioned here.

But these are not enough.

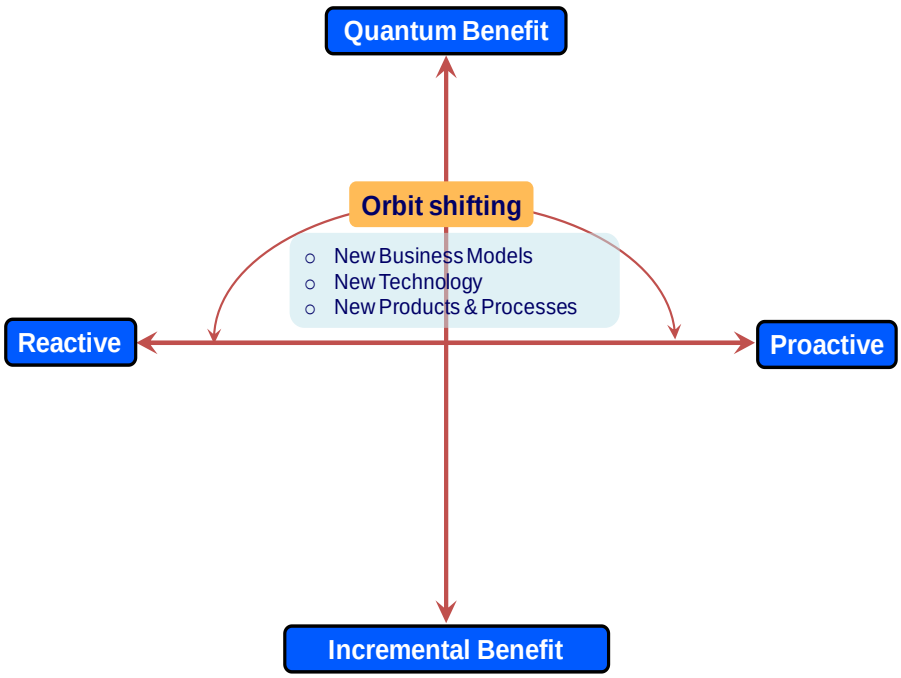
Besides these Orbit Shifting Innovations being merely in pockets, the nature of India's challenges are big and complex. And they sit in various human development areas, at an ecosystem level.

While the TQM-led incremental improvement drive has its advantages, and has had a great positive impact on enhancing manufacturing effectiveness, it is clearly not enough to find solutions for these complex development challenges, across sectors.

If each challenge were to merely follow the incremental route, or the development curve of the western nations, it would take decades to catch up. Incidentally, western nations are also facing their own challenges of stagnating growth and economic models that seem to be trapped in the previous century; they too are seeking fresh and revolutionary approaches.

The nature of innovation that is needed for India is Orbit Shifting. Innovations that:

- will create a transformative impact.
- are not 'niche in scope and size' but 'large scale'.
- do not compromise the future for today – are solutions that are India positive and planet positive.
- positively engage and enroll the Ecosystem at multiple levels – organization, industry and socio-political levels.



The Need:

*The Innovation Movement that India and the Oil & Gas sector needs is an **institutionalized, pioneering drive to make Orbit Shifting Innovation happen** - wide ranging quantum innovations from technology to process to product to business models.*

2

The 'Orbit Shifting Innovation' Study for PetroFed

The Context - Breaking through Limiting Mindsets

Most leaders know that Orbit Shifting Innovation is essential for India, and they aspire for it too.

But what makes it so difficult?

Mindset Gravity

Take a look at the following enemies of innovation identified by BCG and BusinessWeek in their top 20 innovators survey published in BusinessWeek:

1. Lengthy development times,
2. Lack of coordination,
3. Risk averse culture,
4. Limited customer insight,
5. Poor idea selection,
6. Inadequate measurement tools,
7. Dearth of ideas,
8. Marketing or communication failure.

Are these the real enemies? Will a conscious attempt to overcome these hurdles accelerate Orbit Shifting innovation? Not really. These are really symptoms rather than causes. And an attempt to deal with them at a behavioral level by putting in place structures and practices often tends to failure.

Erehwon recognizes that it is **MINDSET GRAVITY** that holds organization leadership from making Orbit Shifting Innovation happen.

The blocks that people experience are really manifestations of something deeper - a **MINDSET**. The heart of innovation is really about freeing people to pursue the new. Most people are not stuck because they want to be stuck or because structures limit them or because there's no reward mechanism. Most people are stuck because their mindsets block them. They have come to perceive 'reality' in a certain manner and this more than anything else limits them from innovating.

Mindsets is also the reason why, for centuries, no one could run the mile under 4 minutes. But when Roger Bannister did it for the first time, in the week following that 2 more ran the mile under 4 minutes and in the 6 months post Bannister's run, no less than 18 people ran the mile under 4 minutes. Training methods and equipment didn't improve overnight. It's just that a mindset shifted from 'impossible to possible'.

In almost every book or survey on innovation, this critical mindset shift is lost sight of. To tinker at the behavior level is akin to tinkering at an athlete or football team's training level without simultaneously working with his mindset. The irony is that athletes have known for a long time that it's predominantly a 'mind' game and the best coaches cause a shift at the mindset level NOT at the tactical or strategic level.

And yet when it comes to organizations, we're strangely stuck at the behavior modification level alone.

In case after case we find people innovating with no pre-existing competencies. Instead when mindsets shift, innovations happen.

Breaking through Legacy Mindsets

In established industries, mindsets are old and rigid and stronger. These legacy mindsets cut across all players in the industry leading to a disease of sameness. Everything, from products, packaging and promotions to advertising, looks the same.

Innovating in a legacy industry requires the courage to challenge and go beyond well-entrenched paradigms. This is very difficult in a hierarchical culture like India's.

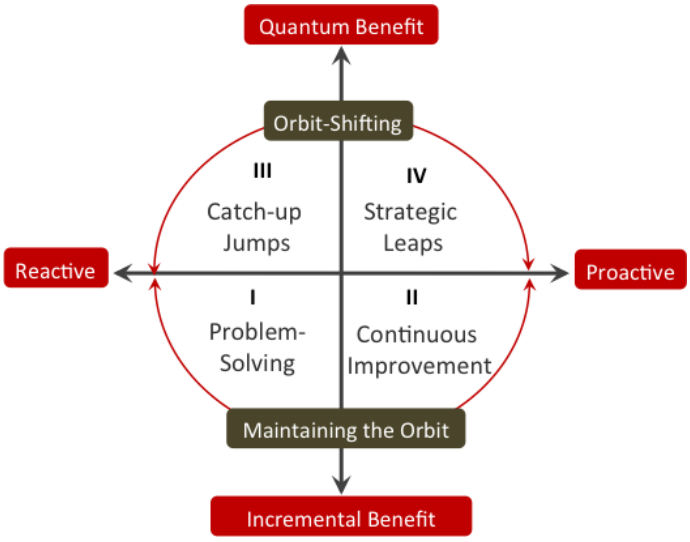
Take the 1000-plus-year-old newspaper industry. Legacy mindsets in an old and established industry like this are huge, like the belief that it takes years to establish a leadership position. However, Dainik Bhaskar became market leader from Day 1! A radical marketing strategy led them to become leaders on Day 1 in every city in Rajasthan, Chandigarh, Haryana and Gujarat.

The India R&D of MicoBosch broke through the industry mindset when they challenged the 'Development trend of Diesel engines'. Rather than follow the technology trend and move to the Common Rail Platform which could meet Euro 3 & 4 norms, they challenged it and found a way to innovate in the older technology to make it live up to Euro 3 & 4 norms.

Titan Industries challenged the industry norm set by the Swiss which said 'The slimmest watch and water resistant? Impossible, you can't have both.' It did not take a change of team at Titan. The same team did the impossible – The Edge became a reality. If this mindset shift hadn't happened, they would have simply 'replicated' & 'reverse engineered' global trends.

There are enough studies that show why Indian innovation tends to be incremental. They also suggest ways out in terms of structures and practices. But really structures and practices are surfacial.

An organization may have a certain limiting mindset so that no matter how many structures and practices one puts in, the impact tends towards the mediocre in terms of innovation.



We've spoken to and worked with a number of people who have made remarkable innovations happen. And at no time did any of them mention 'structures' and practices as blocks to innovation. ***In every case they spoke of 'beliefs' as limits and barriers to innovation. In no instance has someone been motivated by an external reward to innovate. In each case it was a personal trigger or itch or insight that has led to radical innovations. And sure, the rewards follow.***

Proactive Orbit Shifting innovation needs mindset shifts more than processes and structures.

4 Key Attitudes critical for Orbit Shifting Innovation

We see the following **Attitudes** as core drivers for Orbit Shifting Innovation. We consider them to be thresholds, because each threshold requires extraordinary focus and energy, else the innovation impact is likely to be diluted.

(1) The attitude towards Orbit Shifting: Willingness to confront and overcome the industry gravity and take an Orbit Shifting Innovation challenges.

(2) The attitude towards the Unknown and Growth: The leadership willingness to move out of the comfort zone and pursue 'out of the box challenges' rather than settle for incremental ones. This is coupled with a willingness to openly question and challenge established ways of thinking and working.

(3) The attitude towards Insights: Willingness to recognize that insight rather than an idea is the fuel for breakthroughs. The willingness to beyond 'in the room meetings and brainstorming' – to seek insights across domains and industries and join to new dots.

(4) The attitude towards Executing the New: an inclination and capability to execute the breakthrough in a manner that it grows the breakthrough rather than allow it to get diluted by existing ways of working.

This includes the capacity to co-evolve and co-own the solution within and outside, a capacity to collaborate at the highest level.

NOTE: The mindsets required for each of these are illustrated in the diagnostics section.

The Orbit Shift Innovation Survey

The Orbit Shift Innovation Survey by Erehwon, in partnership with Petrofed, is a study of the 'current state of innovation' across the Oil and Gas organizations in India with a focus on finding ways to ***'accelerate and uplift the innovation'*** in the sector.

The survey is a set of 46 questions (factors) structured around the 4 attitudes that are the Core Drivers for Orbit Shift Innovation:

- Attitude towards Orbit Shifting
- Attitude towards the Unknown and Growth
- Attitude towards Insights
- Attitude towards Executing the New

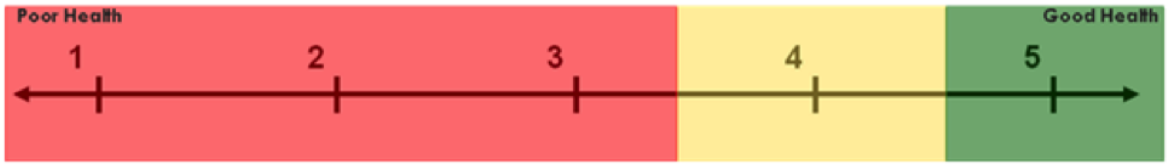
The key purpose is to help **accelerate Orbit Shifting Innovation in the Oil and Gas sector** move it to the Next Gear.

The survey will trigger the leadership in the sector to:

1. Reflect and acknowledge:
   a. What are current forces that help Orbit Shifting Innovation, that can be leveraged?
   b. What are current forces that are hindering, and therefore are obstacles that need to be overcome?
2. Recognize the key shifts needed to activate and institute 'Orbit Shifting Innovations' across the sectoral companies.
3. Understand a roadmap to unleash and accelerate Orbit Shifting Innovation Initiatives.

The survey was responded to by 844 participants from across 27 organizations/entities in the Oil and Gas sector in India.

The findings are plotted along a 5-point scale and sense the Innovation Health in the sector:



A RED score is a clear indication that this factor is an obstacle for Orbit Shifting Innovation. It will be the GRAVITY that blocks creation and execution of an Orbit Shifting Innovation.

A GREEN score strongly endorses that the factor is a helping factor.

Whereas an ORANGE score indicates the degree to which the factor is beginning to move from a hindering to becoming a helping factor. A high score in the ORANGE indicates that the

factor is a Tipping Point – A bit more focus here can move it to GREEN and make a dramatic impact on an Orbit Shifting Innovation journey.

[NOTE: The Orbit Shifting Innovation Survey is a proprietary tool of Erehwon Innovation Consulting, developed in-house using first-hand insight and research, and on-the-ground experiences of making Orbit Shifting Innovation happen in organizations. This is a proactive survey intended to identify the 'current state of innovation' in any organization/sector.]

A manifesto, and not a statistical survey report

The findings of this study are presented as a **manifesto** and not the usual 'survey report'. Most survey reports are impersonal and share the status quo. Reports merely inform they don't trigger action. The intent of this manifesto is to share ideas, and create restlessness for change. We don't want to report on why innovations don't happen. We are more eager to move the agenda and make it happen.

In this manifesto, you will not find the usual rigorous quantitative analysis with standardized, benchmarked data and bar charts. Innovation is an aspiration, a direction, and not a defined destination. And it's about unleashing the people's potential that already exists and is just lying untapped.

So what you will get is not merely the findings about innovation in the sector, but an expert diagnosis by a team of the most senior Orbit Shift Innovation consultants at Erehwon.

This manifesto brings alive:

1. What is essential for Orbit Shifting Innovation?
2. The Diagnosis:
    a. What are current forces that help Orbit Shifting Innovation, that can be leveraged?
    b. What are current forces that are hindering, and therefore are obstacles that need to be overcome?
3. The Recommendations for accelerating the nature and pace of innovation in the sector:
    a. What are the key shifts needed to activate and institute Orbit Shifting Innovations?
    b. What can be a roadmap to unleash and accelerate Orbit Shifting Innovation Initiatives across the sector?

*This is not an evaluative document; it is not a judgment. It **is a proactive and 'progressive' manifesto** intended to bring realization and help craft a refreshingly new path forward in the sector.*

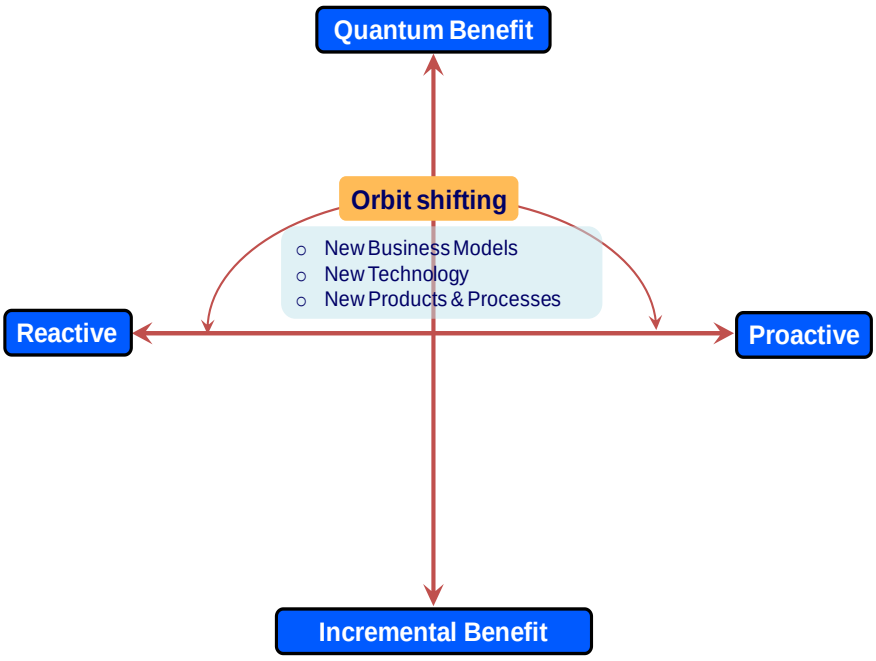
3

Making 'Orbit Shifting Innovation' Happen: The Diagnostic and Recommendations

Section 1: Attitude towards Orbit Shifting

The attitude towards Orbit Shifting in an organization or sector primarily shows up in:

- The kind of Belief and Focus on Innovation and
- The Impact experienced.



India's development challenges are big. Even more so with the Oil and Gas sector given that Energy Security is an overwhelming need. The sector needs breakthroughs; it needs transformative solutions that are sustainable. It is just not enough to 'tinker', or 'improve' for better efficiencies because doing that would only 'maintain' the current state.

The aspiration of a number of leaders across the sector too is to create breakthrough innovations that will transform India's energy security and create a new path for the world.

Quantum and not incremental innovation is not just the need, it is an imperative for the Oil and Gas sector.

What stands out in the findings from the survey is that the current nature of Innovation across the sector is dominantly 'incrementalist'.

Most of the innovations that have happened are not transformative at an industry level, they are largely incremental.

Most of the innovations that have happened in the organization over the last 3 years are:

	1	2	3	4	5
	Micro improvements even from our viewpoint.	Incremental from our viewpoint.	Big from our viewpoint, but incremental from the organization's viewpoint.	Big from organization's viewpoint, but incremental from the industry's viewpoint.	Big from the industry's viewpoint.
Resp %	57			30	13

And while there may be several innovation projects being pursued, the intent of them, the current innovation agenda, is also dominantly incremental.

Most of our current innovation projects are focused on:

	1	2	3	4	5
	Tactical and incremental improvements.				Creating radical and game-changing impact.
Resp %	65			12	23

On the positive side the number of industry level game changing projects has improved but what is very worrying is that there is '**high degree of dilution in execution'** in the innovation initiatives.

Degree of dilution: Most innovative initiatives:

	1	2	3	4	5
	Lose steam. They die out quietly.	A lot of dilution takes place. Are implemented much below par.	Dilution gets reduced, but the initiative is run like an activity that needs to be done.	No dilution takes place. Initiatives are implemented with as much conviction as they were conceived.	Initiatives keep improving and becoming better as most people willingly add value to them.
Resp %	55			28	16

As a result of being Incrementalist, the image of the Indian Oil and Gas sector is seen by most respondents as that of **a Follower on the global stage – a laggard.**

The Developed World perceives the India Oil and Gas sector as:

	1	2	3	4	5
	A Follower				A Pioneer
Resp %	66			13	21

The sector on the whole really seems preoccupied with doing more of the same.

For example, it's a fact that the Nano or for that matter the IT sector has put India on the global map, but not the Oil and Gas sector.

Though most respondents perceived their own organization to be a pioneer with reference to the Indian Oil and Gas sector! This seems like a fascinating paradox.

In the 'India Oil and Gas sector', our organization is perceived as:

	1	2	3	4	5
	A Follower				A Pioneer
Resp %	29			1	70

But essentially, if the impact is low and merely incremental, it raises the questions:

- *What is the current innovation focus FOR?*
- *What is the reference point for innovation?*
- *Are we pioneers but in a 'pack of followers'?*

With the above data, it is very evident that:

The first key shift needed is to **REDEFINE** innovation and move the innovation agenda from **'Incremental Innovation'** to **'Quantum Innovation'**

<u>And Incremental innovation needs to be termed *improvement* and not Innovation.</u>

Let us now look at what is keeping us at an incremental level. To move Innovation into the Next Gear and to make Quantum Innovation happen:

- *'What are current helping forces that can be leveraged?'* and
- *'What are hindering forces and therefore obstacles that need to be overcome?'*

Helping: High Management Focus and Belief

When we see the data from our Orbit Shifting Innovation survey, we find that the Management's Focus on Innovation is HIGH.

– **Importance of Innovation – it is deemed essential.**

In our organization, the dominant attitude towards innovation is:

	1	2	3	4	5
	Innovation is desirable but not essential.				Innovation is essential and important.
Resp %	37			15	48

– **Innovation is in Action – it is a part of Goals.**

To what extent does your organization demonstrate belief in Innovation?

	1	2	3	4	5
	Not demonstrated at all. Its only talk, no action.	We talk about it, but don't clearly understand what needs to be done.	Random projects and training programs done.	There are visible methods and practices to enable innovation.	There is a deep belief in innovation. It is a part of our defined goals.
Resp %	30			39	31

What is also encouraging is that the top management's focus on acknowledging and recognizing innovations and innovators is increasing.

– **There is encouragement and acknowledgement.**

To what extent do we acknowledge innovators and innovations?

	1	2	3	4	5
	Worth and contribution is usually belittled. → People feel dejected.	Worth and contribution is usually not recognized. → People feel taken for granted.	Worth and contribution is recognized in some defined platforms. → Acknowledgment is more like a ritual.	Worth and contribution is usually recognized and acknowledged. → Acknowledgment is generous and spontaneous.	Worth and contribution is always recognized and appreciated, in public and private. → Active celebration of innovations and innovators.
Resp %	44			31	25

And also their nature and speed of decision-making definitely aids innovation.

– **Decision-making is Purpose focused and In-time.**

The nature of decisions of the Top Management are:

	1	2	3	4	5
	Based on the comfort of individuals and less on the purpose.				Are purpose-back.
Resp %	37			21	42

What is nature of the speed of decision making by Top Management?

	1	2	3	4	5
	Decisions keep hanging (months on end) – leads to loss of market opportunity.				Decisions get taken effectively and on time – market opportunities are maximized.
Resp %	45			21	34

Helping: Visible People Readiness

Besides the Management's focus and belief, what is also promising is that an increasing number of people *'look forward to Innovation'* and are *'willing to take on innovation challenges*.'

– **People are looking forward to Innovation.**

What is the dominant attitude towards innovation? Most people:

	1	1	1	1	1
	Are cynical about innovation.	Do not look forward to innovation.	Are indifferent about innovation.	Look forward to being part of an innovation initiative.	Are energized and excited about innovation. Feel it is an opportunity for the organization and in career enhancement.
Resp %	25			52	23

– **There is high willingness to take on new challenges.**

What is people's readiness to take on new challenges?

	1	2	3	4	5
	Resist new challenges.	Are indifferent to new challenges.	Take on new challenges reluctantly because it is expected.	Are open and willing to take on new challenges when given.	Are excited about new challenges and seek them actively.
Resp %	38			50	12

Further most people do feel prepared with skills to take on Innovation.

– **People feel prepared with skills.**

How 'prepared' are we for innovation?

	1	2	3	4	5
	We are not prepared at all for taking on innovative projects.				We are prepared with the skills and the resources to take on innovation projects.
Resp %	37			16	46

While most people acknowledge that there is shortage of good talent across the sector, quite a good number of them did see positive growth.

– **While there is shortage of good talent, however increasingly people see growth paths.**

Talent Management: What is the Quality of people in the organization?

	1	2	3	4	5
	Shortage of good people.		Sufficient talent exists, but need to attract more.		Abundance of talent.
Resp %	60			16	24

What is the growth potential for new people who join the organization?

	1	2	3	4	5
	Unable to see new opportunities for growth, hence leave the organization.		Though they are unhappy, they do not leave as the comfort promised here is better than outside.		They see potential and are able to chart out extraordinary growth paths for themselves and for the organization.
Resp %	50			25	25

Diagnosis

The Sector is very clearly at a tipping point. Overall, the high management belief and focus on innovation is extremely heartening. The degree of this is surprising considering that it has been more the private sector than the public sector that has embraced innovation far more.

People are feeling ready, and are pointing out that the environment is enabling enough, atleast they don't sense a deterrent. Further they acknowledge that the nature of innovation is incremental and that we are boxing ourselves in. So there is a very evident desire to go beyond the current.

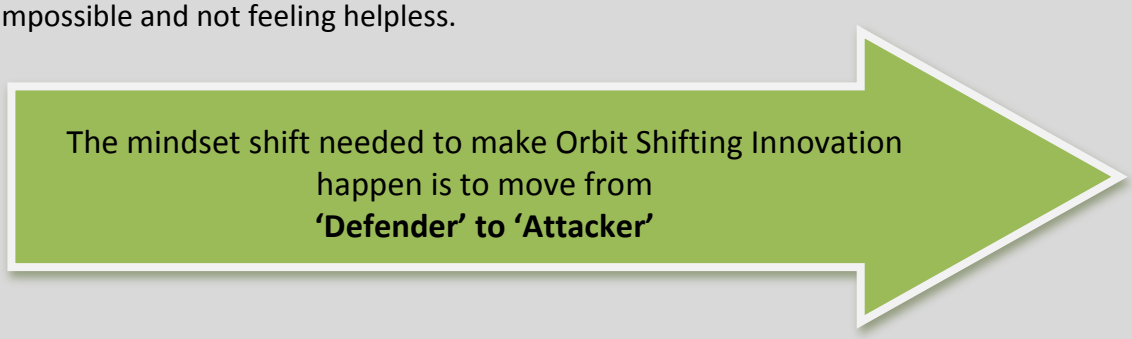
While the score may not be ideal (that is, the highest in the green zone), it indicates that the seeds for innovation are sown.

This is something that can strongly be LEVERAGED. The factors above are a huge positive, the extent of which we don't find in most organizations, even in organizations in the private sector.

However, what is also equally clear is that while the management focus and belief in Innovation is high, they are focused on Incremental Innovation. And people readiness is also high, but for Incremental Innovation.

So besides ensuring the overall shift in organizational focus from Incremental to Quantum innovation, there is a need for a MINDSET SHIFT.

Making quantum innovation begins with people feeling the desire and the drive to go after the impossible and not feeling helpless.



What do individuals/organizations with an Attacker mindset do? They:

- Are restless and have a deep desire to create history.
- Thrive in pursuing the unknown and keep looking for the next big challenge.
- Almost always start with a quantum challenge and commit to it by burning their bridges.

The ambition of the organizations and leadership cannot be to merely aim to catch up. The ambition has to be to leapfrog. To beat and not just meet benchmarks. This is clearly the sector's need and India's challenge.

It's this attacker mindset that moved Tata Chemicals to take on the Orbit Shifting challenge of 'Transforming a 20 acre soda ash dump' rather than merely moving the dump to another site.

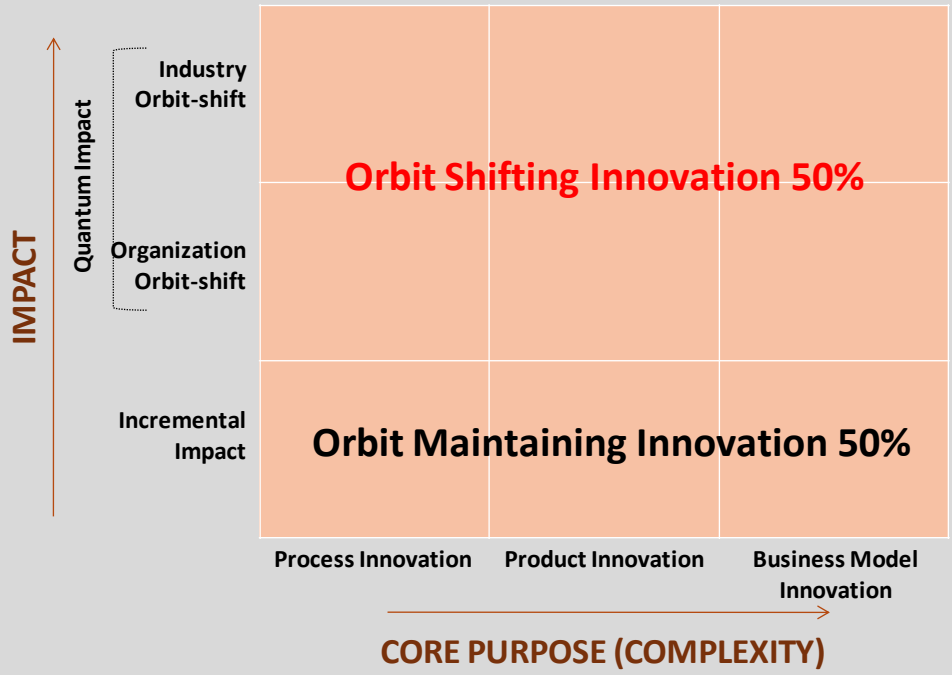
Also our experience tells us that the same people can do it. There is no need to recruit new which is the usual approach most organizations consider in bringing in change ('Bring in new blood' is the oft-used phrase). The same team made the NANO happen, it did not take a change of teams. In our experience, across industries, the same teams when well guided have made Orbit Shifting innovation happen.

Here too, the same people, the same teams can make Orbit Shifting Innovation happen – people are just waiting to be inspired, unleashed, and have their innovative capacity transformed. Even if the number of change-ready people may seem small, having 25-30% of such people is enough to initiate an Orbit Shifting journey and create transformative impact.

Recommendations

(1) The first critical step for the top leadership is to **REDEFINE the Innovation Agenda**, and move it from **Incremental Innovation → Quantum Innovation.** (Incremental innovation needs to be termed *improvement* and not innovation.)

(2) To move The Innovation Drive into the next gear, the management needs to start by **REFRAMING the Innovation Portfolio and REDEFINING the Innovation Goals**. A minimum 50% of the Organization the people resources need to focus on 'Game Changing Innovation' projects and not incremental improvement.



The Orbit Shifting projects need to span across process, product and business model innovation. They can be at two levels:

- Organization Orbit Shift: Quantum challenges and
- Industry Orbit Shift: Game-Changers.

(3) Each organization in the sector should **institute an annual rhythm of identifying and resourcing Orbit Shifting projects alongwith Orbit-maintaining projects** – both at organization and department level.

For example, make the slimmest water resistant watch in the world is an 'Industry Orbit Shift' challenge at organizational level whereas 'Double the speed of watch assembly' is an Organizational Orbit Shift challenge at the Department level.

(4) Further the Game Changing Innovation projects must be resourced with **dedicated teams** and not just part time CFT's (cross functional teams).
Note: Refer Section on Attitude towards Executing the New for more details on the same.

(5) Embed the mindset shift from Defender to **Attacker** by making it an Organizational Value and then seed it through conscious interventions. What truly helps is encouraging individuals (all individuals) to take on a creative challenge of their own, in their spheres of control, and remove escape buttons. And to make this into an ongoing people process.

Section 2: Attitude Towards the Unknown and Growth

The attitude towards the unknown and growth manifests in:

- The degree of risk-taking – not settling, but willingness to wade in ambiguity and step out of own comfort zones
- The degree of openness in challenging the status quo, at a personal level, organizational level, industry level, and even country/cultural level

One of the reasons why organizations settle for incremental innovation is that most leaders and teams have a tendency to settle into an orbit that works, that is reasonably successful, that is fairly predictable and one that minimizes uncertainties.

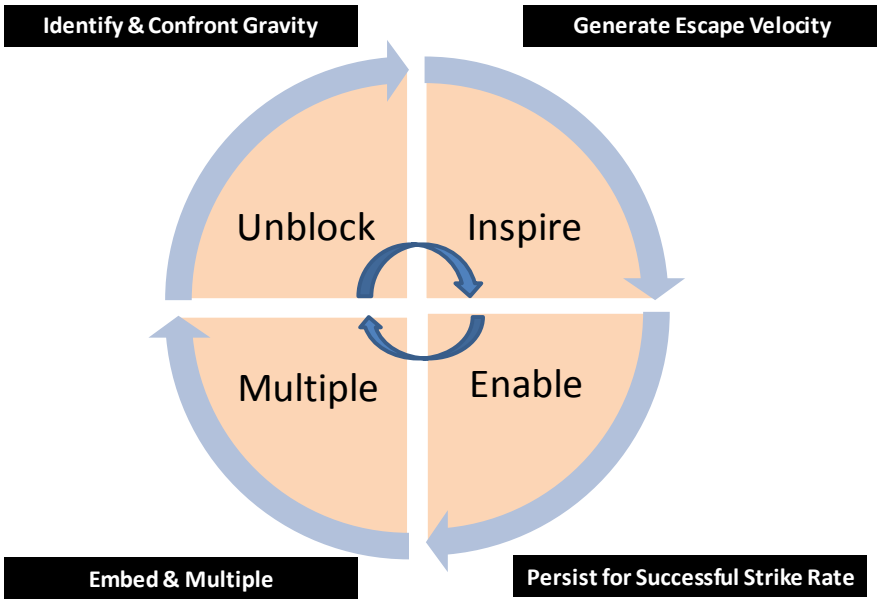
The more settled an orbit, the greater the desire to cling to it – the greater is the accumulation of gravity – gravity that will prevent a move into the next orbit.

Traditional methods of stimulating innovation like introducing new ways of Ideation or building diversity usually fail to overcome such deep rooted GRAVITY. Which is why even if there are enough innovation attempts and initiatives, the impact is not significant.

To move the innovation and growth drive into the next orbit, organization leaders need to breakthrough gravity and generate escape velocity.

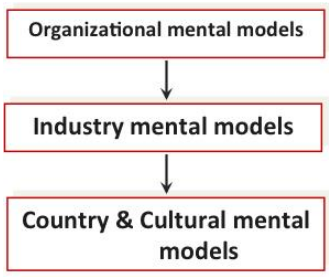
They need to:

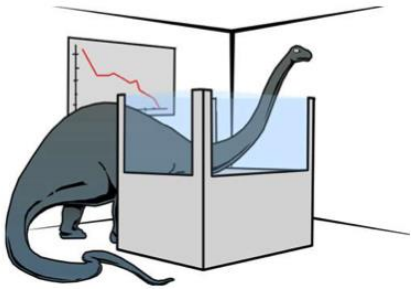
- Examine how people approach the unknown and personal growth,
- Unblock their teams by identifying and breaking through mental model boundaries,
- Inspire them to make the impossible, possible,
- Enable them to solve unsolved problems, and
- Ongoingly Multiply methods and initiatives that sustain Orbit Shifting Innovation.



Challenging mental model boundaries:

Mental Models reside in the minds of leadership and domain experts. To come up with an Orbit Shifting Innovation idea/solution the organization has to be able to first uncover and then challenge the existing 'Mental Model Boundaries'.





Only by going beyond them will ideas for Game-changing, Orbit Shifting Innovation emerge. This calls for a high order of openness –an organization culture that supports questioning of even the deepest and most entrenched industry norms.

To enable 'Challenging of Mental Model Boundaries' to happen, accessibility of Top Management is the starting point.

Helping: Ease of Access of Top Management

The survey has brought out clearly that across the Oil & Gas Sector, **the Accessibility of top management is high**. This is a very positive, helping force.

What is the ease with which Top Management can be accessed?

	1	2	3	4	5
	Very difficult to access, not available most of the time.		Can access by taking prior appointment and fixing a date and time.		Can access directly by picking up the phone/walking over, with no bureaucracy.
Resp %	41			22	37

Hindering: Low degree of actual 'challenging'

– However, while top management is accessible, **their viewpoint cannot be questioned or challenged. Most people have learned to stay within their comfort zones.**

In case of disagreement with the boss, most people will go with:

	1	2	3	4	5
	What is agreeable to the boss.				What is good for the organization / purpose.
Resp %	63			9	27

What is most people's attitude towards rules and regulations? Most people:

	1	2	3	4	5
	Strictly adhere to rules and regulations.	Are comfortable following without questioning.	Question rules to get answers – look for certainty and reassurance.	Question rules to leverage them for new possibilities, in current areas.	Question rules to influence their re-designing and create new possibilities in all areas.
Resp %	71			21	8

What is the extent of risk-taking in the organization?

	1	2	3	4	5
	Culturally risk averse.	Want to take risk, but don't act on it.	Take risks for small and safe projects only.	Occasionally risks are taken even for large projects.	Appetite for risk taking is high across all kinds of projects.
Resp %	54			34	12

Diagnosis

Most people focus on maintaining the status quo, because it is comfortable. People are by and large keen to grow, be part of new experiences, get promoted too of course, and hence would like to take on new challenges.

But more often than not, they hesitate to fully commit to a radically new initiative either because they fear the unknown or are very settled in current ways of working or are just completely under-confident of succeeding with the new initiative.

The biggest barrier for Orbit Shifting Innovation is not the fear of commercial risk; it is the fear of personal risk. The most common manifestation of staying in the comfort zone shows up as **Self-protect**. This is very personal, very individual.

What this is pointing to is that 'Self-protect' is the dominant cultural mindset with which people across the sector, engage with Innovation.

A Self-Protect mindset reflects in people's hesitation to take on Quantum Challenges – only incremental challenges are safe. It also shows a hesitation to question and challenge an established viewpoint. And this can happen in the most brilliant of people, the looking for security and not rocking the boat, where *Performance = Not Failing.*

Its only when individuals and organizations are willing to go beyond this self-protection mindset, and take risks, does Orbit Shifting happen.

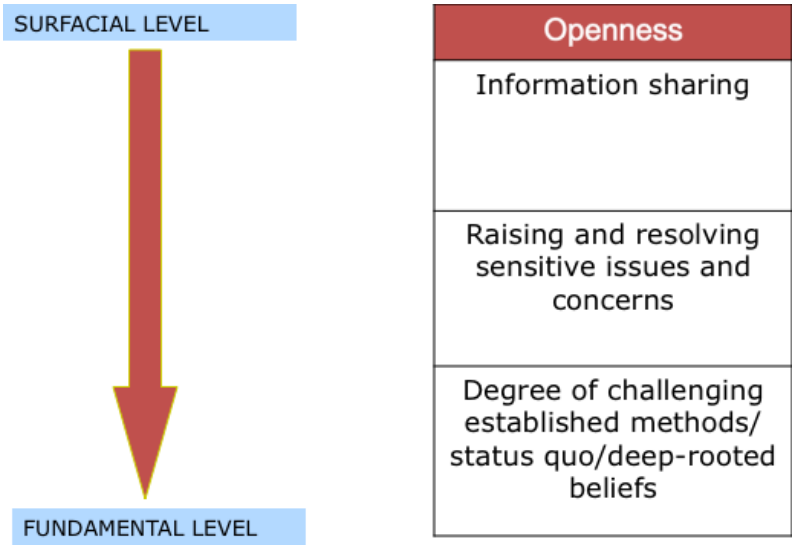
For instance, in the pump industry, Kirloskar Brothers (a small Rs.500 crore company in 2005, and in barely 3 years, becoming a Rs.2000 crore company) could make such a shift happen

because they were willing and brave to on global giants for the mega Sardar Sarovar water project in Gujarat, not holding back thinking they were too small.

Similarly, the Bosch India team that produced the breakthrough PF-45 pump would not have produced the breakthrough if they had not stepped beyond the belief - that they didn't have the capability and must hence only 'applicate' Bosch Germany's products.

In the Oil and Gas sector, the survey throws up the advantage that 'People's readiness for Innovation' is high. But it is still self-protecting – the readiness is for incremental innovation, not for 'Quantum Innovation'.

Further, while top management is accessible and is promoting innovation too, they are likely to be doing so at an *activity level*. And deeper dialogues, where sensitive issues can be raised and existing paradigms can be challenged, are not allowed or encouraged.



People's readiness to innovate is at an activity level too. The readiness is not yet for the completely unknown (beyond the comfort zone).

For Orbit Shift Innovation to happen, it is critical that Openness, of both management and people, be at a FUNDAMENTAL level.

Else it's merely about keeping each other happy and managing perceptions.

In highly regulated environments people easily settle to Conforming. People are at the core of innovation. They either block it, often unconsciously, or open up to it and support it to happen. If there is absence of being able to challenge, at all levels, it is an **intrinsic conformance mindset.**

The primary shift needed will be for individuals across levels to move from
'Self protect'/Conform to 'Self risk'.

Recommendation

(1) There is a need to build a sense of positive dissatisfaction that makes it alright to challenge at different levels, from boss to regulators. Moving people from conformance to challenging, Self-protect to Self-risk is about inspiring them, jolting and provoking them, and enabling them to commit and pursue an Orbit Shifting journey through to success.

Embed the mindset shift from Self-protect/Conform to Self-risk by making it an Organizational Value and then seed it through conscious mental model TRANSFORMATION interventions, which work at 3 levels:

Mindsets: Recognize and Shift
Practices: Design and Execute
Tools and Techniques: Learn and Apply

(2) The habit of diplomacy, looking up to hierarchy, not challenging, staying in the comfort zone of organizational and industry norms can only be broken through by deep transformation till the regular habit that gets seeded in the DNA of the organization.

What will help is a rhythm/practice that gives *people 'the skill and the license to challenge'.* We need to **INSTITUTIONALIZE 'Breakthrough Dialogue'** as a regular rhythm/practice for encouraging and embedding 'Challenging of Mental Model Boundaries.' This is an ongoing dialogue that creates a platform whereby the fundamentals are questioned by design.

Fundamentals like:
What are our established Industry norms, sacred truths/ sacred sequences, which we refuse to question?
What are our Favourite impossibles?
'Where are we saying not to the customer?
Where are we repeatedly hitting the wall of diminishing returns? Why?

(3) A big Innovation Gravity for top leadership in Indian organizations is the deeply embedded cultural mindset of *'Risk aversion'* and *'Avoid Failure'*. Today's dominant organization culture makes heroes of people who *'under-promise and over-achieve'.*

Successful Innovators don't avoid Risk, they actively De-risk. *Innovators like Ratan Tata publically burnt the bridge, by announcing the NANO even before the project had taken*

off. And one pioneering award category in the TATA innovation awards is called 'DARE TO FAIL': the message is clear - the group is promoting a culture where 'Daring to Fail' is more important than 'Failing to Dare'.

So the first key recommendation is to **TRANSFORM the acknowledgement and reward system**. Redefine: Who do we see as heroes? Who do we reward? What can we do to distinguish between those who take risks and those who follow the comfortable path?

(4) Most people who have an intent to innovate succeed because of their own passion and initiative. These are our various entrepreneurs who manage to take their own ideas through to extraordinary success. Most of the time, they are lone rangers who go on to create organizations built around the core idea or theme that they have conceived and the employees in their organizations are effective implementers.

When a sector has to innovate, it is not enough for individuals (or leaders) to be entrepreneurial. Or even for employees to have merely mastered the art of day-to-day problem solving. Specially not for the scale of challenges that India and the Oil and Gas sector have to so after. Just 'jugaad' is no more enough.

For Orbit Shifting to happen, a more fundamental innovate capacity has to be built by design across a larger volume of people in the sector. The advantage we have already is the high willingness of people to innovate. What is essential is to transform the innovation capacity such that it fuels the creation of new and quantum value, the way Titan industries has done across functions.

What is needed is breakthrough thinking that enables **BREAKING THROUGH MENTAL MODEL BOUNDARIES to be seeded as a core capacity in people** so that they can take on and succeed with the unknown.

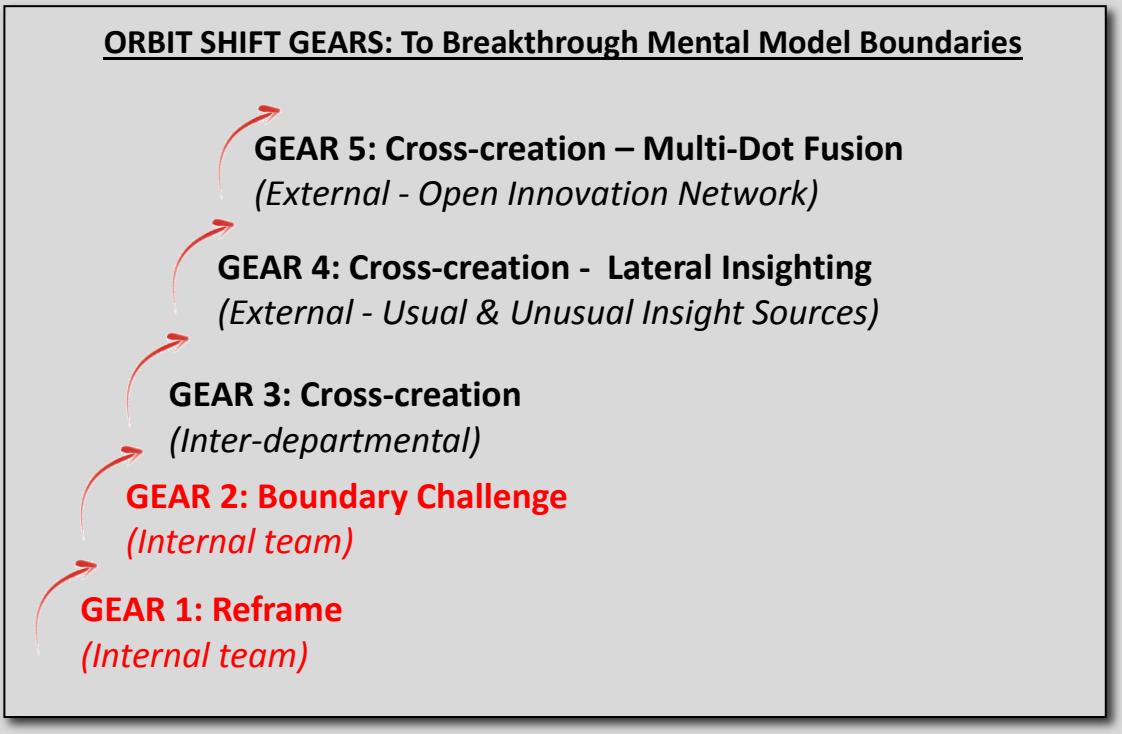
Most organizations search for breakthrough ideas through brainstorming and 'Out of the box' idea generation sessions. But when generating ideas, they usually remain stuck in the established frames and mental models and just play around at an idea-level. To generate breakthroughs for transformative impact, one needs to be able to discover newer windows (frames of thinking) and even more fundamentally rethink mental models.

Lifestraw broke through the mental model of the water purifying industry by creating the straw that 'purifies as you drink'. You can drink from anywhere and it purifies it.

An 'Out of the box' idea is not likely to standout or convert into significant breakthroughs if the underlying Frame and Mental Model remain the same. The challenge therefore is

to identify the existing frame or mental model and make a shift at that level.

The Erehwon 5 gear model for breakthroughs goes beyond traditional brainstorming and 'Out of the box' thinking sessions.



Enabling people to apply Gear 1 and Gear 2, helps them recognize and challenge current mental models. Which then opens the doors to new opportunity spaces.

Section 3: Attitude toward Insights

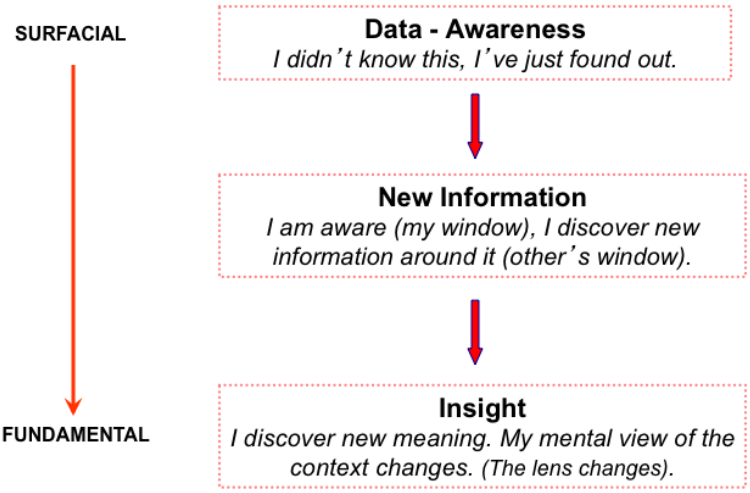
Insighting is all about going beyond own team's thinking and leverage sources from outside to discover new innovation opportunities, and solve unsolved problems in the industry. Insights are *critical* for Orbit Shifting – a breakthrough insight shatters your own mental model lens of how you perceive your own market / industry, and hence opens up a big opportunity or solution.

The attitude towards Insights shows up in:

- Degree of first-hand engagement with the outside
- Extent of genuine discovery rather than validation
- The nature of insight sources – the more unusual and lateral the better

Organizations that practice Insulated Ideation – where they believe sitting in their meeting room and working inside their R&D labs is enough, don't create breakthroughs and even if they do, it is later than needed.

Some organizations do realize the importance of 'OUT-IN', of engaging with the market outside. But they end up outsourcing this, going OUT to market research agencies, or purchasing published industry reports, or at best commissioning specific industry studies by consulting agencies. These at best can give new information, but rarely do they give unique insights.



For example, banks with the best minds could not come up with what Mohammed Yunus of Grameen bank did, which is that the biggest collateral for people is not their assets, but actually their social credibility. If he had not discovered this insight, (a mental model breakthrough), then the Micro-Credit industry would not have been born!

Drawing on new market insight, GE in India has created Mac 400 – a portable ECG. This will make ECG accessible and affordable to thousands. GE would never have done this if they had continued to work product forward. They discovered and worked back from the unique needs of the India market.

Insights come through personal immersion. So the first principle is for management and innovation teams to STEP OUT, personally (not outsource), and go out on what we call a **First-hand Insight Expedition**.

The second is to ensure that the mindset while going out is one of **genuine DISCOVERY**. Most people do go out, and want to learn new, but unconsciously they end up self-projecting and confirming what they already knew. So a first-hand insight expedition (intended for discovery) becomes a first-hand reassurance expedition and sometimes a mere inspection parade!

The third is to be clear about who are we meeting? *Meeting the same people and thinking the same way is unlikely to generate a new insight!*

Orbit Shifting Innovation will need organization leadership and the innovation project teams to step out and engage with totally new market and knowledge insight sources.

Only by joining dots across industries and across domains will they be able to come up with radical new opportunities or new ways to solve the unsolved problems.

Aravind Eye Hospital got its inspiration from McDonald's to transform its eye surgery process.

NASA had invested 24 years in trying to solve the SOLAR FLARE problems. After 24 years, they had managed to identify a 4 hr window with 50% accuracy. They posted the problem on an Open Innovation network and it was solved in 6 weeks! The winner from New Hamshore found a solution that improved solar flare predictability from 4 hrs with 50% accuracy to 8 hrs with 85% predictability.

John O' Sullivan, a radio astronomer leveraged his work in astronomy, two decades earlier; of removing distortion in intergalactic radiation to create the best form of transferring pockets of data in Wireless LAN. This became the standard that liberated the computer from being a desktop to the mobile laptop.

The survey in the Oil and Gas sector shows that what is helping is that the management does step out to explore new opportunities. And their investment of time in first-hand market engagement and looking for unique opportunities is increasing.

Helping: High Degree of Engagement with the Outside

- **The top management does invest a good part of its time in exploring opportunities for the future.**

Most of the Top Management time goes in:

	1	2	3	4	5
	Resolving conflicts.	Fire fighting, dealing with operational problems.	Managing and sustaining the status quo.	Adding value to how we work today, making improvements.	Exploring opportunities for the future.
Resp %	37			39	24

– **And first-hand engagement with the market is high.**

To what extent do we go outside the industry for new ideas and insights?

	1	2	3	4	5
	Never	Rarely	Sometimes	Often	Regularly
Resp %	58			31	11

To what extent does the Top Management go out for first-hand engagement and interaction with the market / customers?

	1	2	3	4	5
	Never	Rarely	Sometimes	Often	Regularly
Resp %	45			37	18

– **And while looking for new opportunities, the focus on looking to serve unique market needs is becoming higher.**

How do we identify new growth opportunities?

	1	2	3	4	5
	It is random and ad-hoc.		We look at the big players in the industry and we adopt what they are doing.		We look for new opportunities based on the unique needs of our market.
Resp %	46			19	35

Hindering: Looking for the new but filtering with an older lens (validating)

However, what is becoming a barrier is that while engaging with the market, the top management is **dominantly in a 'Validate' mindset and not in a 'Discovery mindset'**.

When meeting customers, consumers, and the industry, most people go in to:

	1	2	3	4	5
	Validate / Confirm what they are doing.		Get feedback to improve what they are doing.		Deliberately discover new possibilities they would never have thought of otherwise.
Resp %	68			18	14

– **The impact noticed is that most organization strategies continue to be largely INWARD LOOKING – INSIDE OUT.**

The way we work is:

	1	2	3	4	5
	Inside-out: Make a strategy internally based on our experience.		Make a strategy internally first and then seek feedback from the market.		Largely outside-in: Proactively seek market and consumer insights to make strategy.
Resp %	65			16	19

What stands out is that the sector's *willingness and openness to look for new insights across industries and domains is low.*

How do we treat ideas other industries and other knowledge sources that are not conventional?

	1	2	3	4	5
	Dismiss them saying not relevant to us.	Entertain them politely but do our own thing.	Accept them but implement partially.	Accept them and implement completely.	Accept them, and build on them – could lead to a breakthrough idea.
Resp %	62			16	23

And further the sector's ability to solve unsolved problems is not as high as a Game Changing sector needs to be. Very clearly lateral insighting as an approach to solve unsolved problems is inadequate.

While there is the search for new insights,

Our ability to solve Unsolved problems:

	1	2	3	4	5
	There are too many unsolved problems. We have not managed to fix them.	.	We try some new solutions once in a while using our own experience and knowledge of the leaders, but the problems come back after a while.	.	We consciously look for new insights because we realize that if the problems are long unsolved its because we are using the same old ways of thinking.
Resp %	43			22	36

The overall impact noticed by most respondents is that we are **late in picking up 'signals of change in the market and our approach to Innovation is largely reactive'**.

What is our speed of picking up 'signals of change' from the market?

	1	2	3	4	5
	Don't pick up 'signals of change' proactively. Usually end up in crisis management.		Pick up 'signals of change' just in time to initiate action.		Pick up 'signals of change' much in advance to plan out a proactive strategy.
Resp %	63			16	21

In our organization, the dominant attitude towards innovation is:

	1	2	3	4	5
	Reactive - Everybody is doing it and if we don't join in we will be left behind.				Proactive – Value of it is clear and we want to lead in it.
Resp %	42			28	30

Diagnosis

There seems to be a healthy amount of 'going out' by the leaders in the sector. This is a great first step to identifying new opportunities. The active engagement with the outside must be sustained.

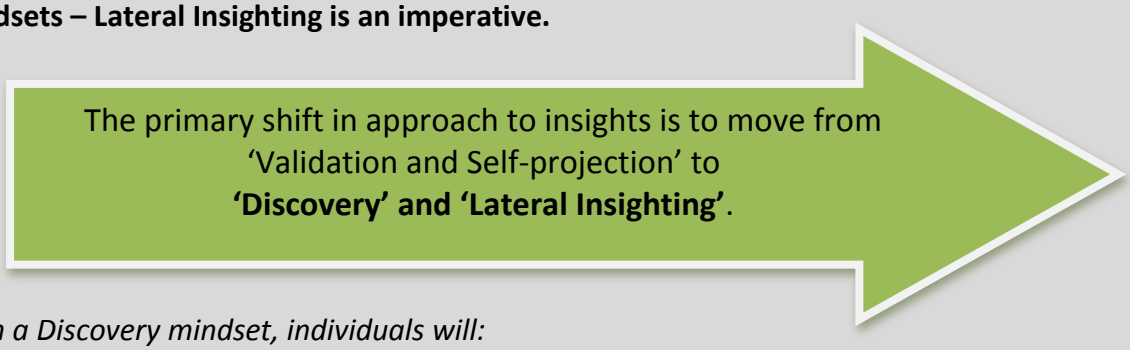
But it is important to ask:

- *Going out for what?*
- *With what intent?*
- *With what lens?*

Engagement with customers and the industry has to help lead to 'game-changing' opportunities and insights.

And what is needed is to get people from different domains to attack the problem with a new lens. What is needed is Lateral Insighting.

The Oil and Gas sector is faced with a number of unsolved problems and saturated mindsets – Lateral Insighting is an imperative.



With a Discovery mindset, individuals will:

- Be genuinely 'Outside in'; seek to discover other worlds and how they connect with own.
- Be Curious-explorative-learner: Look out for new value instead of '*same as.*'
- View events and experiences in the market as 'hints' and 'clues' for new opportunities rather than be oblivious or indifferent or avoiding of them.

Recommendation

(1) Recognize that breaking through mental model boundaries could lead to the discovery of new high leverage opportunity areas and radical insights. But in high-gravity sectors, or stuck sectors, using merely Gear 1 and Gear 2 may not lead to identifying radically new opportunity areas or insights and it is essential to shift to a higher gear.
Gears 3, 4, and 5 help in this.

ORBIT SHIFT GEARS: To Breakthrough Mental Model Boundaries

GEAR 5: Cross-creation – Multi-Dot Fusion
(External - Open Innovation Network)

GEAR 4: Cross-creation - Lateral Insighting
(External - Usual & Unusual Insight Sources)

GEAR 3: Cross-creation
(Inter-departmental)

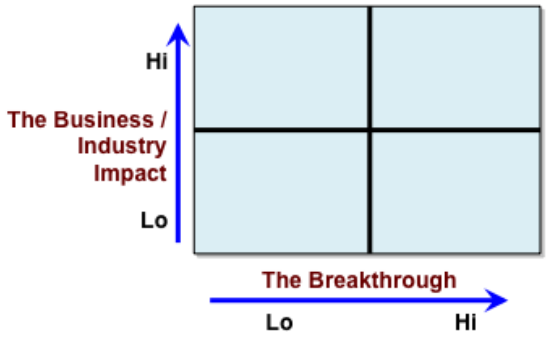
GEAR 2: Boundary Challenge
(Internal team)

GEAR 1: Reframe
(Internal team)

For the Oil and Gas sector, it is recommended that the **capacities of lateral insighting and multi-dot fusion be built** in the leadership and the innovation teams. This must include embedding 'Discovery' and 'Lateral Insighting' mindsets as organizational values.

(2) The second recommendation is that identified leaders of innovation teams be Technopreneurs. Orbit Shifting projects need to be led by Technopreneurs and not domain experts. Domain experts have a tendency to get locked into their mental models and are often not open to cross industry insight.

Technopreneurs don't focus on merely on Inventing; they innovate by joining dots across industries. They are capable of leveraging all that is available to make breakthroughs and business/industry impact happen, rather than be trapped in merely technology inventions and discoveries.



Section 4: Attitude towards Executing the New

Big ideas don't get killed, they get diluted.

The attitude towards executing the new manifests in:

- The extent of ownership and collaboration between departments and with stakeholders
- The extent of willingness to experiment
- The focus and ability to combat dilution

The first big contributor to poor execution of the new is **silos between departments**.

To execute a new idea the innovation team inevitably needs the expertise of other functions or other experts who have usually not been involved so far. What is an exciting opportunity for the innovation team appears like a headache (yet another task) to the other functions. The innovation team is up against a hardened silo battlefield.

This will not be an open / explicit or even conscious war (though that can be there too). It shows up in very subtle ways. For example, in loyalty towards own department. This gets taken to various lengths. You will notice that even accepting a weakness of the function/department in public is seen as bad. You are not supposed to accept an inadequacy or mistake in public.

Or it will show up in how much can one extend one's own thinking and process to accommodate a new breakthrough -- The Fit-in Syndrome:

At the heart of these silos battles are functional comfort zones. Most functional experts when confronted with a NEW Orbit Shifting idea respond from a place of '*What we know and therefore what we can do or can't do'* rather than asking *'What is really needed*?'

At Titan during the manufacture of the Edge, tussle between departments almost cost them the success. As a team member says, "We used to have big fights and arguments when people would come up and say 'I want to increase the clearance by 50 microns or so. Assembly used to say: I cannot assemble, manufacturing used to say: I cannot manufacture. Each time somebody or the other would say they were not able to work with these tolerances and ask us to increase the tolerances. We had to go and convince people, constantly reminding them that this is the Edge watch, it's not like any other watch".

When R K Srivastava of Kirloskar Brothers bid for the Sardar Sarovar Pumping Station tender, the biggest resistance came not externally but from within. The finance department raised major objections. In their lens a company with an annual turnover of Rs. 300 crore simply did not bid for a Rs. 500 crore project. It was way out of its league. But Srivastava managed to overcome those objections and today Kirloskar Brothers is a Rs. 2,000 crore company.

In the Mental Model of a siloed functional expert anything that lies outside the comfort zone is not doable. All parts of the Orbit Shifting Innovation that lie outside the 'current knowhow are either termed impractical or will take a long time, many years. So they start debating and asking the innovators to '*Adjust the Innovation to suit their current capability'*. This adjustment will inevitably mean compromising some feature of the Innovation. Faced with a scenario of '*either adjust to our competence or wait a long time'* inevitably forces the Innovator to make a compromise. He settles for less. A series of such compromises end up in a diluted outcome.

The second is **getting stuck with over analysis or perfection** and not going out and growing the possibility.

Most management members get stuck in seeking perfect analysis and reports that justify the return on investment. Their perspective is '*How can we invest in this further if we don't feel confident?*' And innovation teams on the other hand, get trapped in making perfect presentations trying to prove the return on investment as accurately as possible. Though they are frustrated and saying *'They want to know the sales trajectory. How is that possible when it is a new game we are proposing? They say show the business and we will invest, and we say without resources we cannot.'*

It all becomes a game of impressing and seeking approval, without even stepping out to experiment with the possibility.

What is essential here is not about 'Seeing if it works' but consistently asking 'How to make it work'.

Doing this is what made Sivakumar of ITC succeed with the e-Choupal and make it the breakthrough that it is today. 'It's important to share the dream, the possibility, so that when you go to the field, it feels like a pilgrimage, because you have lit a fire in everyone's heart.' It's what he did with the various entities who were essential for the success of his venture:
With farmers → they are able to feel the value that choupal brings to their lives, how fundamental power has changed hands where it is now a farmer who can demand a price (and therefore respect) rather than be helpless in the hand of the middle man.
With the middlemen → they are not cut out of the system, but they are key contributors and beneficiaries of the new system.
With the Board → Not seeking permission from the Board, but being equal and engaging them consistently to excite them and catch their imagination and influence them (not merely through numbers but by bringing alive the possibility)
With employees → branding the transformation – 'project symphony' and having everybody in the organization contribute to growing the venture rather than being top-down.

The third big contributor is **giving up too soon**, and settling for dilution in the face of obstacles. Dilution is 'less than' versus 'greater than'.

The dilution of an idea from concept to realization is often substantial. An Orbit Shifting Innovation is usually beset with problems not only at the idea generation stage, but more so during the implementation stage, when the rubber actually hits the road. Entrenched consumer mindsets, lack of information and beliefs, and regulatory policies are likely to dilute the breakthrough concept.

So an innovator has to use '**creative combat**' as a conscious way to fight dilution, to ensure that every obstacle is treated like an opportunity to maximize.

When Shantha Biotech successfully created an indigenous Hepatitis B vaccine, it was merely the first step. To ensure it reached the people who needed it, the team had to put in great developmental effort to bring down the retail price to Rs.50 a dose (the then retail price per dose was about Rs.750). When it came to Go-to-Market, they hit not so much a wall as a mountain range. The existing pharma distribution system simply refused to take it up. The price would have to increase to at least Rs.500 before they'd accept it. The Champion, Varaprasad Reddy, refused to allow dilution. If the existing distribution and Go-to-Market system didn't take it up, he'd simply create an alternate system. He came up with vaccination camps and millions of 'customers' came directly to his camps to get vaccinated at Rs.50 a dose. Once he did this in city after city and demonstrated his ability to reach large masses of 'customers' directly, the pharma distribution chain capitulated and agreed to stock his vaccine at whatever rate he proposed. And globally the prices of vaccines crashed to Rs.35 a dose; and in India, Hepatitis B vaccinations rose from 85,000 per annum to 85 million per annum, saving a tremendous number of lives!

From the survey, Executing the New is emerging as a big area of concern.

Hindering: Poor Cross-functional Collaboration

Firstly, what is showing up as a big concern, and hence hindering Orbit Shifting, is the presence of the siloed battlefield. This shows up in:

- Leaders' attitudes towards other departments
- Extent of integration of the top team
- Extent of contributing to other teams
- Clarity on innovation accountability

– **Cross-functional Fragmentation is High.**

What is the attitude of most leaders towards other departments?

	1	2	3	4	5
	Derogatory - Continuously brings into focus what is not okay about other businesses / departments.	Indifferent - Pre-occupied with only what own business / department needs to do.	Transactional - Instruct the team to work with other businesses / departments in areas that are defined and mandated.	Inclusive - Remind the team to seek contribution from other businesses / departments.	Collaborative - Consistently involve other businesses / departments while planning and decision making.
Resp %	44			27	29

How integrated is the Top Management team?

	1	2	3	4	5
	Team fragmented. Everyone has different views on most issues.		There is some integration in the team. There is an agreement on the purpose and direction.		Team is completely integrated. There is fundamental alignment and belief on both the purpose and direction.
Resp %	49			18	33

– **Fragmentation is visible in the attitude of people in Cross-functional Teams (Its Loyalty to the function).**

In a cross-functional team, most people's first loyalty is towards:

	1	2	3	4	5
	Own Department. Hence focused on own priorities and are indifferent to others.				The Purpose of the Project. Proactively contribute even at organization level.
Resp %	53			14	33

Innovation ownership and accountability is:

	1	2	3	4	5
	Vague and unclear.				Clearly defined with consequences.
Resp %	50			19	31

Hindering: Poor experimenting

– The second essential aspect for executing the new – experimentation is poor too. **Willingness to experiment is Low.**

Willingness to experiment: Top Management mostly:

	1	2	3	4	5
	Discourages experimentation.	Is indifferent to experimentation.	Encourages experimentation but on safe areas only.	Encourages experimentation in some new areas.	Encourages experimentation in all new areas.
Resp %	48			38	15

What is the Top Management's attitude to failure?

	1	2	3	4	5
	People get zero tolerance for failure – Blamed immediately.				Willing to accept failure, as long as there is learning from it.
Resp %	45			16	38

Hindering: Disabling Engagement in Reviews

- **The promise is in the rigor of innovation reviews, which is improving. In fact it is at a tipping point.**

What is the rigor with which innovation initiatives are reviewed?

	1	2	3	4	5
	Never reviewed.	Rarely reviewed.	Sometimes reviewed depending on the leader's interest.	Often reviewed with formal follow through actions.	Innovation reviews are part of the management's agenda consistently.
Resp %	42			32	26

However the engagement in the review process has to change to enable Orbit Shifting innovation ideas.

- **The engagement is currently mere evaluative rather than enabling.**

And teams in the reviews are likely to be 'presenting' for 'getting approval', rather than bringing alive the power of the possibilities.

Executing the new is also hindered by the degree of openness that top management has to new ideas.

- **The experience currently is one of low openness to new ideas.**

When a new idea / initiative comes up, the first tendency of the Top Management is to:

	1	2	3	4	5
	Be closed to new ideas and possibilities.		Demand economic viability and feasibility (ROI) for every new idea.		Open to listening and exploring radically new possibilities.
Resp %	61			13	26

– **There is also the experience of lesser involvement and hence co-ownership of Innovation Goals.**

Involvement: How are goals, decisions, plans arrived at?

	1	2	3	4	5
	People are told, No choice given.	People are told, Feedback invited, No significant impact.	People are told, Feedback is sought, Some changes made.	Intent shared, Contribution sought from people, Integrated into final goal/decision/plan.	Intent shared, All aspects of Goal/decision/plan are co-created.
Resp %	46			38	16

For Orbit Shifting challenges, the co-ownership of innovation goals needs to be much higher.

All of which leads to Dilution.

How frequently does an idea get diluted when it is handed over from one department to another?

	1	2	3	4	5
	It always gets diluted: Every department compromises a little, so the idea ends up being incremental in impact.				It is never diluted: Every department adds significant value so it becomes bigger in impact.
Resp %	55			17	27

When faced with obstacles in implementing an innovation, we usually:

	1	2	3	4	5
	Compromise and settle for the lesser solution.				Find ways to overcome obstacles and never settle for less.
Resp %	46			20	34

Diagnosis

Overall, the attitude towards executing the new has to really shift in the Oil and Gas sector for Orbit Shifting Innovation to happen.

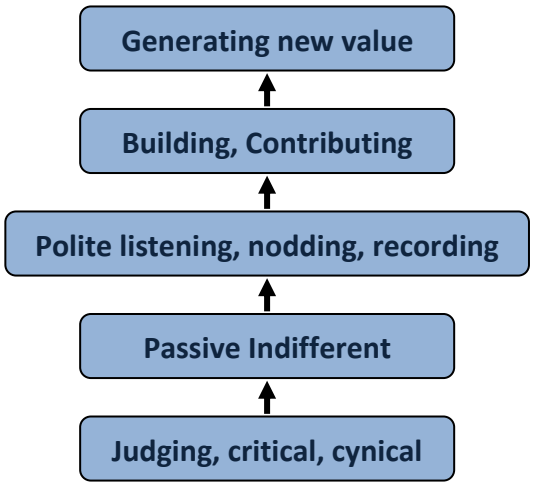
The first big shift needed is to transform engagement between departments and ensure enrolment of all parties including stakeholders.

The primary shift in attitude towards executing the new is to move from 'Compartmentalized' to **'Collaborative'**.

Successful innovation is not just about being able to come with breakthrough propositions it is equally about being able to enroll key implementers, gatekeepers, stakeholders and build ownership.

The levels of engagement model gives a clear picture of where all the key parties need to be, so they can be active part of the journey.

A conscious focus is need to uplift key engagement and ownership through a battery of influencing and integration practices –so that all are more contributive and generative and not passive or worse adversarial towards the new propositions/initiatives.



The Principle: 'Excite the heart and tip the mind'.

The second key shift in attitude towards executing the new is to move from 'Compromise' to **'Combat Dilution'**.

This must be visible in:

- A product innovation must be followed through with an in-market versioning (experimentation) approach: to figure out how to make it work in real market conditions.

- The belief that the first big idea is not enough, second and third level innovations will be needed to execute the innovation. The team has to keep the innovation lens switched on throughout the journey.
- When the going gets tough, consciously seeking creative solutions never dilute.
- The teams focus is never on 'if-then' but always 'how and how else' confronted with 'the impossible' their reaction is 'how else'.

The Principle: Never settle for less!

As mountaineer Todd Skinner said *"You cannot lower the mountain so you must raise yourself. The mountain remains unalterable. You cannot decrease its size or adjust its geology. You can't turn back the storms or add substance to thin air. The only thing malleable in this equation is your resolve. Your perception of the challenge can be shifted from uncertainty to resolution and from apprehension to action. Always adjust the mind to what is possible, do not adjust what is possible to the mind".*

Recommendation

(1) The first important recommendation towards successful 'executing of the new' is to **INSTITUTIONALIZE a Co-Creation process at critical junctures of the entire Orbit Shifting journey**. There are 3 important Co-creation points:

a. When 'Innovation Goals' are being defined: co-create across levels.

b. When there are long unsolved problems and its essential to reframe the problem and challenge mental models to find newer solutions: co-create across functions.

c. Growing the breakthrough from concept to realization:

i. From 'Breakthrough possibility' to 'Shared dream': co-create across stakeholders,

ii. From 'Breakthrough Possibility to a 'Detailed Venture'
Which includes co-creating the venture with the key cross-functional interdependencies.

(2) The second recommendation is to **encourage and accelerate experimentation**, by empowering teams with an experimentation budget and dedicated prototype labs. What also helps is a network of partners who can partner the experimentation.

(3) If Dilution has to be minimized, part time cross-functional teams can't run Orbit Shifting Innovation projects. The recommendation is to ensure **appropriate resourcing of Orbit Shifting Projects**, as per the nature and level of the challenge:

- An Industry Orbit Shift project will need a 100% dedicated core team of 2-3 managers.
- An Organizational Orbit Shift will need a dedicated project leader along with a part time cross-functional team dedicated to commit 30% of its time on the Innovation project.

- An Orbit-maintaining Innovation, on the other hand can be managed by a part time cross-functional team.

The principle is to matching the team with the nature of challenge because 'spare people in spare time don't create history'!

(4) The other part of minimizing Dilution is to enhance focus and enable the Orbit Shifting Innovation projects in a progressive way. The biggest innovation Gravity is the mindset of TOP LEADERSHIP that manages Innovation in the same way as they manage performance - by imposing 'goals' and then 'generating execution pressure.' Innovation needs the team and the organization to venture into the unknown – a world where ambiguous and unanswered questions outnumber the knowns. This performance pressure is what causes the teams to give up too soon or bring down a mega possibility to a pale shadow of its original powerful avatar!

So a most critical step to enable Orbit Shifting Innovation is to **TRANSFORM the REVIEW process**. It is recommended that the leadership create a TWIN-TRACK review process. Where orbit-maintaining goals are reviewed differently from Orbit Shifting goals. If this distinction is not made, there is the danger of reviewing Orbit Shifting from a current performance mindset, which will discourage people from even taking up quantum challenges.

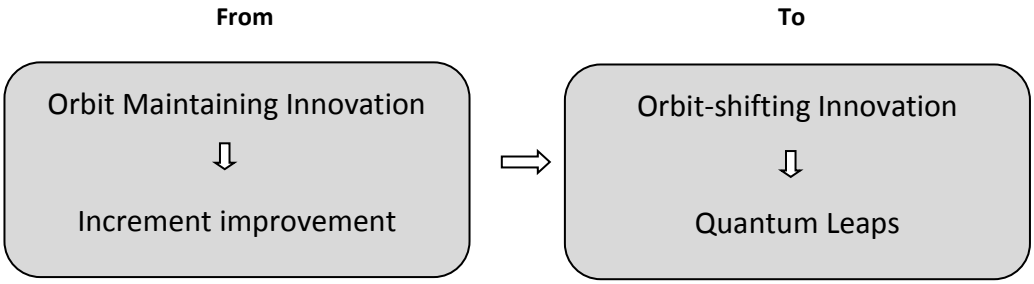
And within this review, ensure there is a tangible recognition of cross-functional contribution.

(5) Embed the mindsets Collaborative and Combat Dilution by them Organizational Values and then seeding them through conscious interventions.

4

Accelerating the Innovation Journey: Proposed Strategy and Roadmap

As the survey highlights the management's focus on Innovation is high, people are ready, and they look forward to Innovation with a positive sense of anticipation. The need, the challenge in the front of Oil and Gas sector is to move the degree of Innovation from Incremental to Quantum.



Key Mindset Shifts

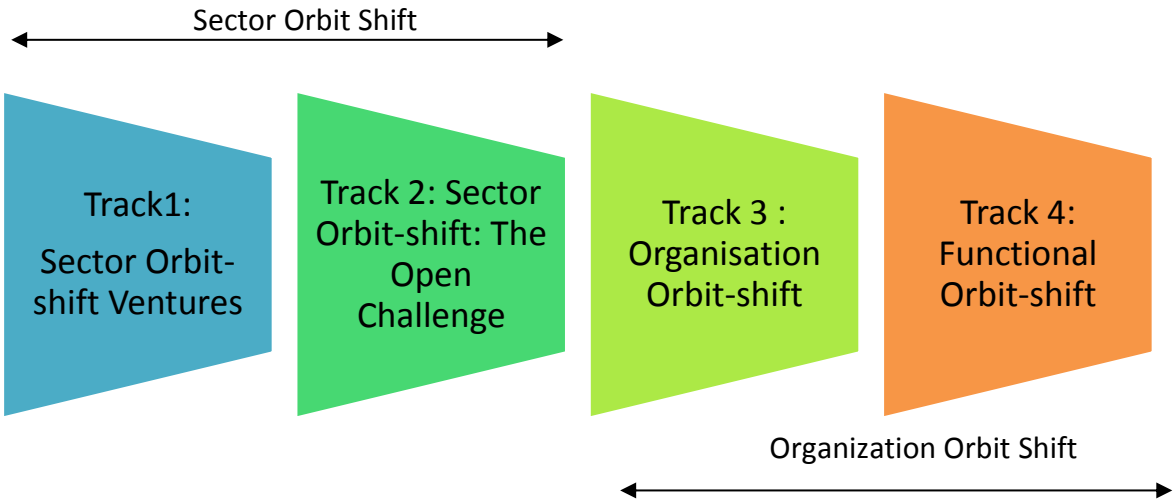
The survey brings to the fore 6 key shifts needed to accelerate Orbit Shifting Innovation:

Attitudes	FROM → TO
Attitude towards Orbit Shifting	Incremental/ Orbit Maintaining → **Quantum / Orbit Shifting**
	Defender → **Attacker**
Attitude towards the 'Unknown and Growth'	Self-protect/Conform → **Self-risk**
Attitude towards Insights	Validation and Self-projection → **Discovery and Lateral Insighting**
Attitude towards Executing the New	Compartmentalized → **Collaborative**
	Compromise → **Combat Dilution**

The 4-Track Orbit Shifting Strategy

We recommend a 4-Track Orbit Shifting Strategy to be adopted and activated across the sector.

To lead and create a transformative impact, the sector needs to pursue two ORBIT SHIFT Tracks at the sector level and two ORBIT SHIFT Tracks at the organizational level.



Tracks 1 and 2 will spearhead 'Orbit Shifting Innovation' at the **sector** level while tracks 3 and 4 will accelerate 'Orbit Shifting Innovation' at the **organization** level.

Each track is triggered by and focused on an Orbit Shifting challenge. The reality is that most 'Orbit Shifting Innovations' didn't start with an out-of-the-box idea. They started with an out-of-the-box challenge, an Orbit Shifting challenge.

It takes an Orbit Shifting challenge to create the escape velocity needed to breakthrough gravity and the result is an out-of-the-box idea.

One Orbit Shifting challenge that truly created escape velocity was the 'Ansari X Prize'. The Ansari X Prize was a 10 million $ cash award to the first team that:

- Privately finances, builds and launches a spaceship capable of carrying 3 people to 100 km,
- Returns safely to Earth, and
- Repeats the launch with the same ship within 2 weeks.

What was Orbit Shifting about the Ansari X prize challenge was that the spaceship development and launch had to be funded privately. Upto this point, all space ventures had been government funded (across the world). Further it had to have the demonstrated

capability to carry three people and repeat the journey within two weeks - seeding the potential of space tourism. This Orbit Shifting challenge created the escape velocity - 26 teams went after it. Collectively, teams spent more than 100 million dollars to find the solution. Eight years and countless prototypes later, a winner emerged. 'Space One' successfully completed two flights in September-October 2004.

The winning of Ansari X Prize liberated Space Travel and launched an Orbit Shifting idea – **Space Tourism**. Richard Branson has bought over Space One. It is now called Virgin Galactic and the first tourists are set to go to space in our life time.

Just the right trigger was created where ideas - met technology, met funding, met action… and today, spaceflight is in our grasp.

What the Ansari X prize demonstrates very clearly is that an out-of-the-box challenge, or what we call an Orbit Shifting challenge, ignites the otherwise dormant minds and a very different order of ideas emerge, **not ideas steeped in incrementalism, but ideas that make the impossible, Possible.**

While **Tracks 1 and 2** will be led by an **Ansari X Prize like challenge, Track 3 'Orbit Shift Innovation' challenges** will be more like:

- The Nano – a 1 lakh car.
- Make the slimmest water resistant watch in the world.
- A Rs. 50/- hepatitis B vaccine.

These challenges are Orbit Shifting at an Organization level.

And **Track 4 'Orbit Shift Innovation' challenges** will be like:

- Double the efficiency of the assembly line.
- Triple the productivity of the 'hook embossing tool'.

These are also Orbit Shifting challenges but can be pursued at a Department level.

Two Orbit Shifting tracks at the sector level and further two at the organization level will unleash and tremendously accelerate innovation.

In Track 1: A dedicated team drawn from across companies – THE ORBIT SHIFT VENTURE team, will pursue an Orbit Shifting challenge. This dedicated team of 5-6 members will need to be on full time deputation for the project: 18-24months. They will need to be empowered with Funds and equipped with Orbit Shifting skills to enhance the success rate.

Track 2: The challenge here will be similar in format to the Ansari X Prize – It will be an open challenge to be attacked by teams working across all sector companies. It can even be thrown open to teams from outside the sector too.

Breakthroughs emerging from Tracks 1 & 2 will aim to leapfrog the entire sector and will be shared across all sector organizations.

Orbit Shift Council: A sector Orbit Shift Council will need to be structured to review, facilitate and guide Tracks 1 & 2. The council needs to be composed of 3 thought leaders, 2 from within the sector and 1 from outside.

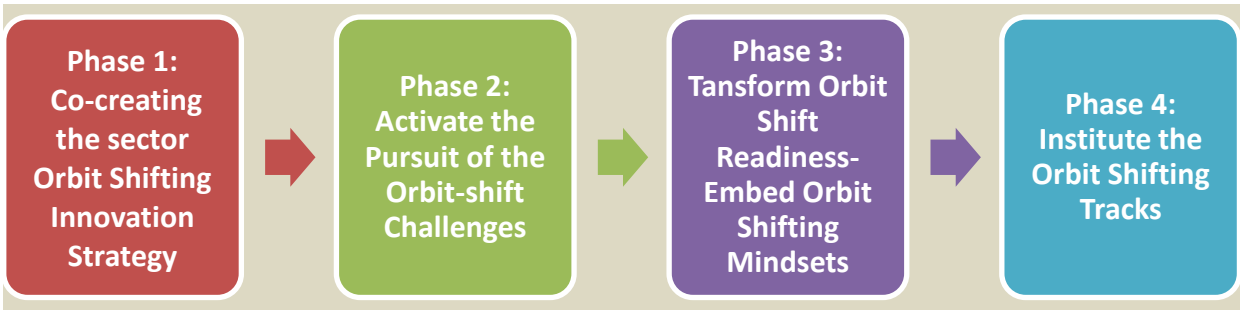
Tracks 3 & 4: will accelerate Orbit Shifting at the Organization level. Each organization needs to build an annual rhythm of identifying and pursuing Orbit Shifting challenges- at the organization and department level.

A Track 3 Orbit Shift challenge will need a dedicated core team of 2-3 members and an extended team - part-time cross-functional team of 5-6 members.

A Track 4 challenge at a department level needs a dedicated team leader with a cross-functional team of 4-6 members, structured to invest 30% of their time for the project.

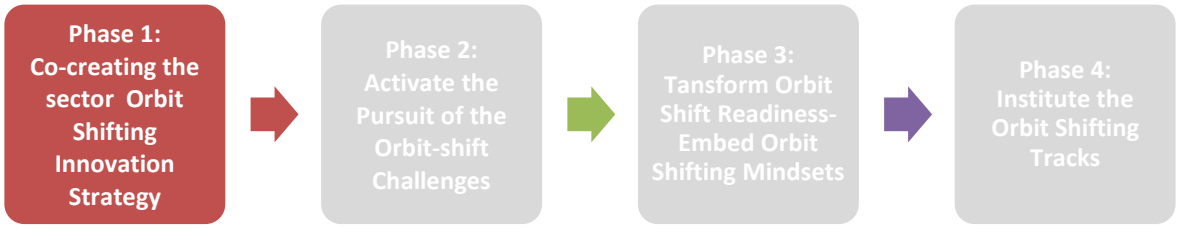
All four Tracks when pursued at their best can lead to a 75% success rate and this can be truly transformative.

The 'Orbit Shifting Innovation' Roadmap



The Orbit Shifting Strategy needs to get activated and embedded in a phased roadmap. The first Phase will co-create and build co-ownership of the 4-Track Orbit Shifting Strategy. The second Phase will activate the Orbit Shift challenges along all four Tracks. The third Phase will focus on embedding the 5 key mindset shifts across the sector, building readiness for Orbit-shifting Innovation. And, Phase 4 aims to institutionalize the Orbit-Shift Strategy into a Sectoral and Organizational process.

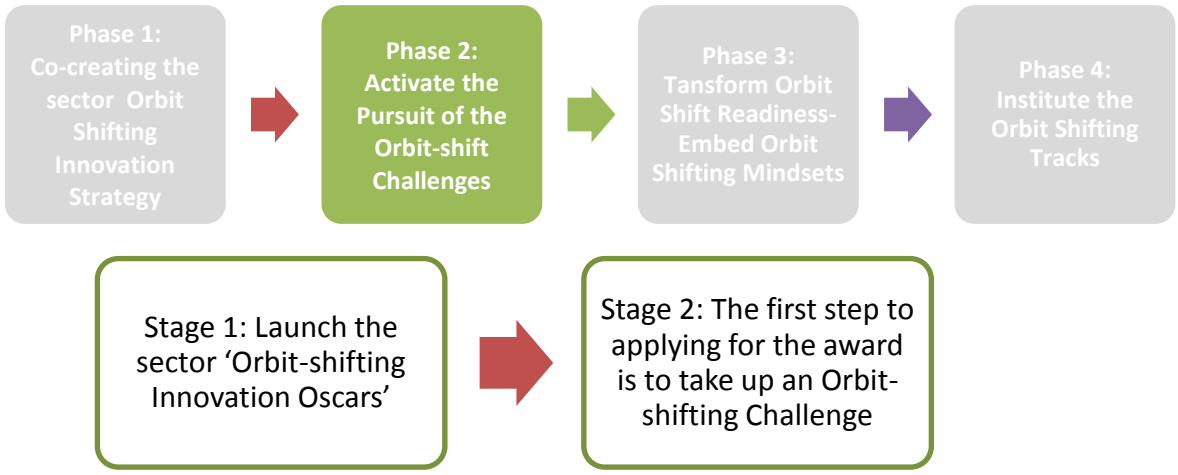
Phase 1: Co-creating the sector 'Orbit Shifting Innovation' Strategy



The key sector leadership group needs to be brought together into an intense roundtable meet to:

- Breakthrough mental model boundaries
- Co-create the 4 Track Orbit Shifting strategy to uplift and accelerate innovation
- Identify the Orbit Shift keystones: High leverage areas where a small shift can create a transformative impact
- Identify and adopt the first Track1 and Track 2 challenges.
- Agree upon the constitution of the sector ORBIT SHIFT Council.

Phase 2: Activate the Pursuit of the Orbit Shift Challenges



Stage 1: Launch the sector 'Orbit Shifting Innovation Oscars'

It is best to launch the 4 Track Orbit Shifting Strategy with the Announcement of a Sector wide 'Orbit Shifting Innovation' Award referred to as the 'Orbit Shifting Innovation Oscars'.

The Orbit Shifting Innovation award will:

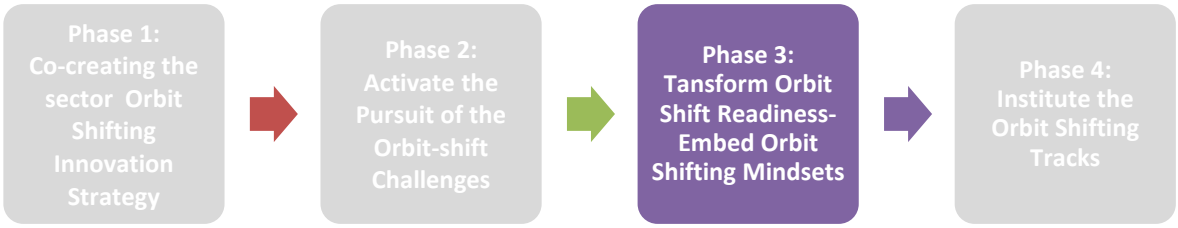
- Be the ultimate innovation award to recognize the orbit shift champions across all 4 Tracks -not only those that succeeded, but especially those who '*Dared but Failed*'.
- Build these innovators into the new legends across the sector through a book publication to be done every two years –for all 4 Tracks.

- Inspire people to take on and pursue an Orbit Shift – '**make the desire to create and not follow history'** kind of legacy creating recognition more motivating than even a cash award.

Stage 2: The first step to applying for the award is to take up an Orbit Shifting challenge

Orbit Shifting challenges will have been launched when each participating organization has:
- Adopted 2-3 Orbit Shifting challenges in both Track 3 and 4.
- Enrolled a team to pursue them, and
- Built the teams' capability to pursue the challenges.

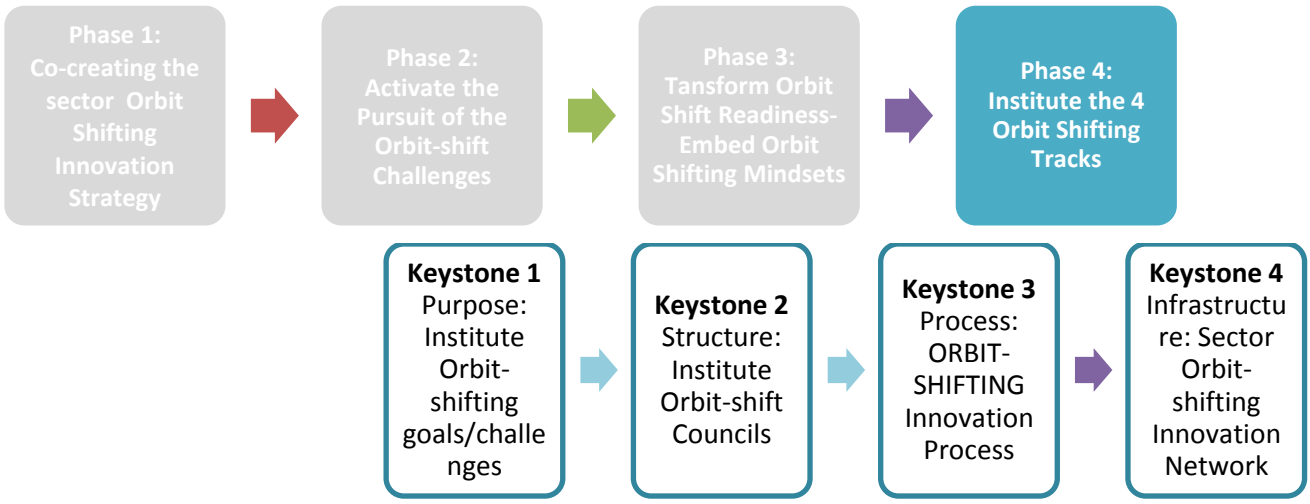
Phase 3: Transform Readiness for Orbit Shifting Innovation - Embed Orbit Shifting Mindsets



All organizations need to embed the 6 key mindset shifts in the form of core Orbit Shift values that everyone is expected to think and work with - first with the leadership and then with the entire workforce.

Attitudes	FROM →	**TO**
Attitude towards Orbit Shifting	Incremental/ Orbit Maintaining →	**Quantum / Orbit Shifting**
	Defender →	**Attacker**
Attitude towards the 'Unknown and Growth'	Self-protect/Conform →	**Self-risk**
Attitude towards Insights	Validation and Self-projection →	**Discovery and Lateral Insighting**
Attitude towards Executing the New	Compartmentalized →	**Collaborative**
	Compromise →	**Combat Dilution**

Phase 4: Institute the 4 Orbit Shifting Tracks



Having experienced all four Tracks for 18-24 months, the sector organizations should be now ready to institutionalize.

To institutionalize 'Orbit Shifting Innovation' across the sector the keystones are:

Keystone 1: Purpose: Institute Orbit Shifting Goals/challenges
All participating organizations institute a process - a twin-track process of annual goal setting where each manager has a 3+ 1 goal combination: 3 Orbit-maintaining goals + 1 Orbit Shifting goal.

Keystone 2: Structure: Institute Orbit Shift Councils
A sector and organization panel of 3 thought leaders to **Review and Guide** the Track 1 & 2 and Track 3 & 4 Orbit Shift challenges respectively.

Keystone 3: Process: Orbit Shifting Innovation Process
The sector companies will need to adopt an Innovation process that can guide teams through an Orbit Shifting journey *'From conceiving an Idea to In-market Success'*.
This is essential to transform the sector's capacity to innovate.

Keystone 4: Infrastructure: Sector Orbit Shifting Innovation Network
To enhance the innovation capacity of the Orbit Shift champions the sector will need to create an Orbit Shifting network of domain and lateral experts – a network that will enable them to join dots across industries and domains and solve the unsolved problems.

All four Phases need to be a fast moving 3-year roadmap. Anything longer runs the risk of getting decimated by GRAVITY.

Appendix A – Erehwon's Experience and Expertise

Based out of India, working in Asia Pacific and Europe, Erehwon Innovation Consulting is now among the world's leading innovation consulting firms. Erehwon has 20 years of cutting-edge experience in being able to instill innovation in the most legacy driven and unresponsive environments – across the industries, countries and cultures.

Over the last 20 years, Erehwon has extensively researched and worked in the areas of Innovation and Innovation Leadership, thus pioneering a unique approach - 'Orbit Shifting Innovation™' to making innovation happen in organizations - through interventions, which could need consulting, facilitating and training. The outcome is usually a new orbit, which infuses new aspirations, new energy, a new approach and new directions.

We do it through interventions – which could need consulting, facilitating and training. The outcome is usually a new orbit, which infuses new aspirations, new energy, a new approach and new directions.

Erehwon's uniqueness is its ability to go beyond the superficial to uncover and to intervene at the mindset level. Specifically:

- Design to enable orbit shifts at business, organization and leadership levels and to facilitate organization transform interventions.
- Enable organizations to build and institutionalize an innovative culture.
- Facilitate and coach leaders towards transforming their mindsets and practices to unleash new energy and initiatives
- Work with the strategy, business unit heads and functional heads to create breakthrough strategies, products, services and processes by applying 'Orbit Shifting Innovation™'.
- Enable organizations to discover new business models to penetrate under-served markets.

Clients include such diverse companies Europe and US: Borealis, Kanbay, Nokia, Novartis Unilever; Asia Pacific: Bank of America, British American Tobacco, Cable & Wireless, Motorola, Unilever; India: APC, Baush & Lomb, Bharti, ESPN, Dr. Reddy's, Hewlett Packard, IBM, Honeywell, Ingersoll Rand, Intel, Oracle, ITC, International Flavors & Fragrances, Marico Industries, Max New York Life, Mahindra & Mahindra, Wipro, UB – Spirits Division.

Erehwon Experience: Industry

- Facilitated over **300 Breakthrough Innovation Projects** across industries like Telecom, Auto, FMCG, Consumer Durables, Finance, Utility and Commodities. Facilitated Strategic and Game Changing Innovation projects for organizations like Unilever, Mahindra FES, Honeywell, Logica, Wipro, Novartis, NDPL. Enabled organizations like Mahindra Auto and Marico to embed Innovation into the design of the organization.
- **Facilitated 'groups of companies, including SME's together** to activate and accelerate Innovation.

Erehwon Experience: Education

- Erehwon has prototyped an 'Applied Innovation' course with leading Management Institutes. It is now ready to be scaled across the country.

Erehwon Experience: Seeding Innovation in India

- Erehwon designed and executed the first 'Innovation for India' Awards focusing on recognizing and multiplying Business Innovation, Social Innovation and Innovation in Public Services.
- Erehwon pioneered the 'Innovation in India' research in the year 2001. The insights from this research were published in the book 'Making Quantum Innovation Happen… How the 11 Indians did the Impossible'? This book has sold over a lakh copies, many organizations have used it to inspire their people to adopt and pursue Innovation.

Appendix B – Orbit Shifting Innovation Survey Data

1. To what extent does your organization demonstrate belief in Innovation?

	1	2	3	4	5
	Not demonstrated at all. Its only talk, no action.	We talk about it, but don't clearly understand what needs to be done.	Random projects and training programs done.	There are visible methods and practices to enable innovation.	There is a deep belief in innovation. It is a part of our defined goals.
Resp Count	250			328	265
Resp %	30			39	31

2. What is the dominant attitude towards innovation? Most people:

	1	**1**	**1**	**1**	**1**
	Are cynical about innovation.	Do not look forward to innovation.	Are indifferent about innovation.	Look forward to being part of an innovation initiative.	Are energized and excited about innovation. Feel it is an opportunity for the organization and in career enhancement.
Resp Count	212			441	190
Resp %	25			52	23

3. Most of the innovations that have happened in the organization <u>over the last 3 years are</u>:

	1	2	3	4	5
	Micro improvements even from our viewpoint.	Incremental from our viewpoint.	Big from our viewpoint, but incremental from the organization's viewpoint.	Big from organization's viewpoint, but incremental from the industry's viewpoint.	Big from the industry's viewpoint.
Resp Count	477			253	107
Resp %	57			30	13

4. Most of our <u>current innovation projects</u> are focused on:

	1	2	3	4	5
	Tactical and incremental improvements.				Creating radical and game-changing impact.
Resp Count	541			101	190
Resp %	65			12	23

5. What is the rigor with which innovation initiatives are reviewed?

	1	2	3	4	5
	Never reviewed.	Rarely reviewed.	Sometimes reviewed depending on the leader's interest.	Often reviewed with formal follow through actions.	Innovation reviews are part of the management's agenda consistently.
Resp Count	348			270	221
Resp %	42			32	26

6. How 'prepared' are we for innovation?

	1	2	3	4	5
	We are not prepared at all for taking on innovative projects.				We are prepared with the skills and the resources to take on innovation projects.
Resp Count	313			137	388
Resp %	37			16	46

7a. In our organization, the dominant attitude towards innovation is:

	1	2	3	4	5
	Innovation is desirable but not essential.				Innovation is essential and important.
Resp Count	312			128	401
Resp %	37			15	48

7b. In our organization, the dominant attitude towards innovation is:

	1	2	3	4	5
	Reactive - Everybody is doing it and if we don't join in we will be left behind.				Proactive – Value of it is clear and we want to lead in it.
Resp Count	339			224	247
Resp %	42			28	30

8. Most of the Top Management time goes in:

	1	2	3	4	5
	Resolving conflicts.	Fire fighting, dealing with operational problems.	Managing and sustaining the status quo.	Adding value to how we work today, making improvements.	Exploring opportunities for the future.
Resp Count	311			328	201
Resp %	37			39	24

9. To what extent do we acknowledge innovators and innovations?

	1	2	3	4	5
	Worth and contribution is usually belittled. → People feel dejected.	Worth and contribution is usually not recognized. → People feel taken for granted.	Worth and contribution is recognized in some defined platforms. → Acknowledgment is more like a ritual.	Worth and contribution is usually recognized and acknowledged. → Acknowledgment is generous and spontaneous.	Worth and contribution is always recognized and appreciated, in public and private. → Active celebration of innovations and innovators.
Resp Count	364			262	213
Resp %	44			31	25

10. In the 'India Oil and Gas sector', our organization is perceived as:

	1	2	3	4	5
	A Follower				A Pioneer
Resp Count	171			3	412
Resp %	29			1	70

11. The Developed World perceives the India Oil and Gas sector as:

	1	2	3	4	5
	A Follower				A Pioneer
Resp Count	549			110	179
Resp %	66			13	21

12. What is the freedom to innovate?

	1	2	3	4	5
	We have limited ourselves so much that we do not innovate even where we can.				We have created wide innovation spaces for ourselves and innovate freely.
Resp Count	371			178	292
Resp %	44			21	35

13. What is the extent of risk-taking in the organization?

	1	2	3	4	5
	Culturally risk averse.	Want to take risk, but don't act on it.	Take risks for small and safe projects only.	Occasionally risks are taken even for large projects.	Appetite for risk taking is high across all kinds of projects.
Resp Count	451			284	105
Resp %	54			34	12

14. What is most people's attitude towards rules and regulations? Most people:

	1	2	3	4	5
	Strictly adhere to rules and regulations.	Are comfortable following without questioning.	Question rules to get answers – look for certainty and reassurance.	Question rules to leverage them for new possibilities, in current areas.	Question rules to influence their re-designing and create new possibilities in all areas.
Resp Count	596			177	65
Resp %	71			21	8

15. What is the degree of positive influence we have with Regulators (policy and rule making bodies) in our industry?

	1	2	3	4	5
	They dismiss our inputs most of the time.	They are indifferent to our inputs most of the time.	They see our inputs as one of the many from the industry.	They welcome our inputs when we give them.	They respect us and reach out proactively to us for our inputs.
Resp Count	387			316	124
Resp %	47			38	15

16. What is people's willingness to voice their disagreements with authority? Most people:

	1	2	3	4	5
	Never voice disagreements.	Voice disagreements in private to peers.	Voice disagreements carefully only on safe topics but only in defined platforms.	Voice disagreements openly on safe topics at all times, whether or not there is a defined platform.	Are comfortable in raising disagreements on all issues openly, any time, with anybody.
Resp Count	603			139	93
Resp %	72			17	11

17. What is people's readiness to take on new challenges?

	1	2	3	4	5
	Resist new challenges.	Are indifferent to new challenges.	Take on new challenges reluctantly because it is expected.	Are open and willing to take on new challenges when given.	Are excited about new challenges and seek them actively.
Resp Count	317			419	97
Resp %	38			50	12

18. What is the kind of freedom most people usually experience in their work?

	1	2	3	4	5
	No freedom at all. Everything is controlled by the leader.	Minimal freedom. Leader delegates in some operational areas.	Some freedom. Leader delegates in all operational areas.	Good freedom. Leader delegates in some strategic areas as well.	Great freedom. Leader gives end-to-end responsibility by delegating completely.
Resp Count	305			425	105
Resp %	37			51	13

19. Willingness to experiment: Top Management mostly:

	1	2	3	4	5
	Discourages experimentation.	Is indifferent to experimentation.	Encourages experimentation but on safe areas only.	Encourages experimentation in some new areas.	Encourages experimentation in all new areas.
Resp Count	400			317	221
Resp %	48			38	15

20. In the current environment, I feel:

	1	2	3	4	5
	Threatened. Therefore avoid all risks.		Tolerated. Therefore cautiously venture out at times.		Empowered. Therefore comfortable in taking risks.
Resp Count	428			185	223
Resp %	51			22	27

21. What is the Top Management's attitude to failure?

	1	2	3	4	5
	People get zero tolerance for failure – Blamed immediately.				Willing to accept failure, as long as there is learning from it.
Resp Count	375			137	318
Resp %	45			16	38

22. In case of disagreement with the boss, most people will go with:

	1	2	3	4	5
	What is agreeable to the boss.				What is good for the organization / purpose.
Resp Count	531			77	230
Resp %	63			9	27

23. When a new idea / initiative comes up, the first tendency of the Top Management is to:

	1	2	3	4	5
	Be closed to new ideas and possibilities.		Demand economic viability and feasibility (ROI) for every new idea.		Open to listening and exploring radically new possibilities.
Resp Count	508			113	215
Resp %	61			13	26

24. To what extent does the Top Management go out for first-hand engagement and interaction with the market / customers?

	1	2	3	4	5
	Never	Rarely	Sometimes	Often	Regularly
Resp Count	372			311	150
Resp %	45			37	18

25. The way we work is:

	1	2	3	4	5
	Inside-out: Make a strategy internally based on our experience.		Make a strategy internally first and then seek feedback from the market.		Largely outside-in: Proactively seek market and consumer insights to make strategy.
Resp Count	539			135	157
Resp %	65			16	19

26. What is our speed of picking up 'signals of change' from the market?

	1	2	3	4	5
	Don't pick up 'signals of change' proactively. Usually end up in crisis management.		Pick up 'signals of change' just in time to initiate action.		Pick up 'signals of change' much in advance to plan out a proactive strategy.
Resp Count	523			138	173
Resp %	63			16	21

27. How do we identify new growth opportunities?

	1	2	3	4	5
	It is random and ad-hoc.		We look at the big players in the industry and we adopt what they are doing.		We look for new opportunities based on the unique needs of our market.
Resp Count	383			158	293
Resp %	46			19	35

28. Our ability to solve Unsolved problems:

	1	2	3	4	5
	There are too many unsolved problems. We have not managed to fix them.	.	We try some new solutions once in a while using our own experience and knowledge of the leaders, but the problems come back after a while.	.	We consciously look for new insights because we realize that if the problems are long unsolved its because we are using the same old ways of thinking.
Resp Count	349			182	303
Resp %	43			22	36

29. When meeting customers, consumers, and the industry, most people go in to:

	1	2	3	4	5
	Validate / Confirm what they are doing.		Get feedback to improve what they are doing.		Deliberately discover new possibilities they would never have thought of otherwise.
Resp Count	565			145	118
Resp %	68			18	14

30. To what extent do we go outside the industry for new ideas and insights?

	1	2	3	4	5
	Never	Rarely	Sometimes	Often	Regularly
Resp Count	484			262	87
Resp %	58			31	11

31. How do we treat ideas other industries and other knowledge sources that are not conventional?

	1	2	3	4	5
	Dismiss them saying not relevant to us.	Entertain them politely but do our own thing.	Accept them but implement partially.	Accept them and implement completely.	Accept them, and build on them – could lead to a breakthrough idea.
Resp Count	508			132	193
Resp %	62			16	23

32. When people from one department are presented with an idea from another department, they:

	1	2	3	4	5
	Just continue with what they are doing. They don't really care about other's ideas.	Deliver the minimum expected, but usually less than expectations.	Deliver upto stated expectations. No more, no less.	Constantly go beyond expectations by adding to the idea.	Demonstrate extraordinary ownership to make the idea bigger.
Resp Count	473			279	75
Resp %	57			34	9

33. What is the ease with which Top Management can be accessed?

	1	2	3	4	5
	Very difficult to access, not available most of the time.		Can access by taking prior appointment and fixing a date and time.		Can access directly by picking up the phone/walking over, with no bureaucracy.
Resp Count	336			185	312
Resp %	41			22	37

34. What is the attitude of most leaders towards other departments?

	1	2	3	4	5
	Derogatory - Continuously brings into focus what is not okay about other businesses / departments.	Indifferent - Pre-occupied with only what own business / department needs to do.	Transactional - Instruct the team to work with other businesses / departments in areas that are defined and mandated.	Inclusive - Remind the team to seek contribution from other businesses / departments.	Collaborative - Consistently involve other businesses / departments while planning and decision making.
Resp Count	364			226	242
Resp %	44			27	29

35. How effective are cross-functional teams?

	1	2	3	4	5
	There are hardly any such teams operating.	Such teams are few and they come together because of 'compulsion'; hence not very effective.	These teams are there in critical areas and they perform reasonably effectively.	Such teams are becoming more common and they add value to the project.	There are many such teams and they come together with a passion towards the organizational purpose.
Resp Count	446			240	148
Resp %	53			29	18

36. In a cross-functional team, most people's first loyalty is towards:

	1	2	3	4	5
	Own Department. Focused on own priorities and are indifferent to others.				The Purpose of the Project. Proactively contribute even at organization level.
Resp Count	438			119	277
Resp %	53			14	33

37. Involvement: How are goals, decisions, plans arrived at?

	1	2	3	4	5
	People are told, No choice given.	People are told, Feedback invited, No significant impact.	People are told, Feedback is sought, Some changes made.	Intent shared, Contribution sought from people, Integrated into final goal/decision/plan.	Intent shared, All aspects of Goal/decision/plan are co-created.
Resp Count	381			316	134
Resp %	46			38	16

38. Talent Management: What is the Quality of people in the organization?

	1	2	3	4	5
	Shortage of good people.		Sufficient talent exists, but need to attract more.		Abundance of talent.
Resp Count	505			131	202
Resp %	60			16	24

39. How integrated is the Top Management team?

	1	2	3	4	5
	Team fragmented. Everyone has different views on most issues.		There is some integration in the team. There is an agreement on the purpose and direction.		Team is completely integrated. There is fundamental alignment and belief on both the purpose and direction.
Resp Count	407			149	277
Resp %	49			18	33

40. What is the growth potential for new people who join the organization?

	1	2	3	4	5
	Unable to see new opportunities for growth, hence leave the organization.		Though they are unhappy, they do not leave as the comfort promised here is better than outside.		They see potential and are able to chart out extraordinary growth paths for themselves and for the organization.
Resp Count	416			208	210
Resp %	50			25	25

41. Degree of dilution: Most innovative initiatives:

	1	2	3	4	5
	Lose steam. They die out quietly.	A lot of dilution takes place. Are implemented much below par.	Dilution gets reduced, but the initiative is run like an activity that needs to be done.	No dilution takes place. Initiatives are implemented with as much conviction as they were conceived.	Initiatives keep improving and becoming better as most people willingly add value to them.
Resp Count	461			237	138
Resp %	55			28	16

42. How frequently does an idea get diluted when it is handed over from one department to another?

	1	2	3	4	5
	It always gets diluted: Every department compromises a little, so the idea ends up being incremental in impact.				It is never diluted: Every department adds significant value so it becomes bigger in impact.
Resp Count	461			148	225
Resp %	55			17	27

43. Innovation ownership and accountability is:

	1	2	3	4	5
	Vague and unclear.				Clearly defined with consequences.
Resp Count	423			156	259
Resp %	50			19	31

44. When faced with obstacles in implementing an innovation, we usually:

	1	2	3	4	5
	Compromise and settle for the lesser solution.				Find ways to overcome obstacles and never settle for less.
Resp Count	379			168	279
Resp %	46			20	34

45. The nature of decisions of the Top Management are:

	1	2	3	4	5
	Based on the comfort of individuals and less on the purpose.				Are purpose-back.
Resp Count	93	61	156	176	345
Resp %	11	7	19	21	42

46. What is nature of the speed of decision making by Top Management?

	1	2	3	4	5
	Decisions keep hanging (months on end) – leads to loss of market opportunity.				Decisions get taken effectively and on time – market opportunities are maximized.
Resp Count	122	69	182	179	286
Resp %	15	8	22	21	34

A manifesto for the **Petroleum Federation of India**

Facilitated and Designed by **Erehwon Innovation Consulting**

To know more about EREHWON
http://www.erehwonconsulting.com
info@erehwonconsulting.com
Tel: +91 80 40535000