Knowledge management platform: A tailor-made solution to emerging knowledge challenges for oil and gas industry

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Summary
Today, the oil and gas industry faces numerous critical business challenges including fluctuating oil prices, rising capital costs, fierce competition for resources, aging workforce, increased regulations and growing demand for sustainable development. ONGC is no exception. To surmount these challenges it requires performance enhancement in the risky and expensive mega projects, developing user-populated knowledge bases, reducing capital and operating overheads, improving utilization and up time, and successful market positioning that enables company to compete in global market.

Through Knowledge Management (KM), organizations seek to acquire or create potentially useful knowledge and to make it available to those who can use it at a time and place that is appropriate for them to achieve maximum effective usage in order to positively influence organizational performance.

Gyanodyan, the Knowledge Management platform of ONGC is an initiative in this direction which was launched a year ago for ushering into a new paradigm of knowledge sharing and collaboration. While discussing the challenges faced during the development and companywide implementation of the KM platform, the paper highlights the likely benefits that can be reaped from such a system, once it is fully adopted.

Introduction
In a knowledge based economy, knowledge is the only self-renewable resource for the organisations engaged in knowledge intensive E&P business activities. If managed properly, it helps overcome the operating cost pressures that are driving the need for greater productivity, thereby pushing oil and gas companies to leverage technical knowledge in order to maintain safe, efficient, and reliable operations while boosting innovation and profitability. Knowledge inventory is as invaluable for ONGC as its primary target Oil and Gas.

The industry must counter significant challenges in its quest to find and repurpose decades of valuable knowledge:

**Knowledge lost in various dispersed media:** Finding it and accessing the stored knowledge in repositories scattered across an organization is a difficult job. Yet this knowledge is critical in an increasingly complex environment, where information from past projects is often buried in decades-old, non-integrated systems. In fact, geoscientists and engineers can spend 40% or more of their time searching for answers across the enterprise instead of solving problems.

**Knowledge loss due to an aging workforce:** KM is based on the premise that, just as human beings are unable to draw on the full potential of their brains, organizations are generally not able to fully utilize the knowledge that they possess. Nearly 75% of the oil and gas workforce is 50 years of age or older and roughly 50% of oil and gas technical workforce will be eligible for retirement in the next few years. Upon retiring, these geoscientists and engineers take decades of domain knowledge with them. Companies are struggling to address the knowledge and experience gap created by an aging workforce, layoffs and acquisitions and to quickly knowledge-enable the next generation of geoscientists and engineers.

Against this backdrop ONGC Management decided to embark on a knowledge management journey with companywide implementation of Gyanodyan, the knowledge management platform of ONGC utilizing state-of-the-art technologies and domain expertise of implementing Indian partner.

Development and Implementation
The processes of KM involve knowledge acquisition, creation, refinement, storage, transfer, sharing, and utilization. The KM function in the organization operates
these processes, develops methodologies and systems to support them, and motivates people to participate in them. With the objective of prioritizing the prime motives for implementation of KM and accordingly customizing the design of the portal, 26 KM Workshops involving over 2000 employees, were conducted across ONGC during pre-launch phase. This is perhaps the largest Discovery - Baseline Survey and Change Management exercise carried out in ONGC.

The launch of Gyanodyan marked the culmination of sustained efforts to bring in a tool that could be the game changer for knowledge assimilation and dissemination in ONGC.

Features and Modules of Gyanodyan

Gyanodyan has all essential components to form a complete KM platform for bringing People, Process and Technology together. It has the potential to encourage knowledge seeking and knowledge sharing behavior among colleagues. Some of the modules are illustrated in fig 1 to 4.

Figure 1: Login Page of Gyanodyan

Figure 2: Home Page of Gyanodyan

Figure 3: ONGCpedia: the cutting edge bringing in dynamic knowledge

ONGCpedia allows users to publish technical articles, relevant to ONGC.
Figure 4: A typical Knowledge Repository filtered and distilled

Knowledge Repository is WorkCentre wise repository of organizational knowledge in the form of documents, case studies, workflows, research papers and SoPs. The documents loaded are tagged for easy search.

Figure 5: Lessons Learned for sharing success ad failure stories

Lessons Learned is oriented towards capturing the vast and significant experiential knowledge of ONGCians acquired during various assignments, projects and operations. Learnings from success and failures are elucidated in this module.

Figure 6: Knowledge Networks for turning conversations into collaborations

Knowledge Networks forms groups of people on the basis of WorkCentre and domains for collaborating and sharing. This is a powerful social media tool to enhance productivity through communication and interaction.

Figure 7: Social Knowledgebase for technically expressing yourself

Social Knowledgebase includes features like knowledge diaries, action trackers, e-cabinet and knowledge forums giving individuals an opportunity to express themselves. Creative minds are sharing their ideas, experiences and knowledge with others.
Post Launch Activities

Since the companywide launch of Gyanodyan, the Team KM has been relentlessly working towards realizing the full potential of Gyanodyan and has completed necessary groundwork for capturing both tacit and explicit knowledge of ONGC employees for its effective use in the organization. Over the last one year, more than 800 executives have been trained across ONGC on Gyanodyan under train-the-trainer concept, so that they can proliferate the use of the platform in their respective work centres. With the system firmly in place, along with all its paraphernalia, Gyanodyan is now at the cusp of fruition. It’s upon all geoscientists and engineers to see how quickly the organisation reaps the benefits of this transformational platform.

Challenges

The biggest challenge in implementing knowledge management in any organization is changing the mindset of the people for which change management sessions were organized across ONGC; but this is not a one time job and has to be carried out on sustained basis. Change management is to motivate the people for adoption, buy in of KM concepts and develop knowledge sharing culture within the organization. Despite persistent efforts during past one year, the user base of Gyanodyan is increasing slowly. Therefore, to make this Top Driven initiative quickly
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successful, it should not be left as a voluntary activity. Mechanisms should be instituted to promote and monitor the usage of the platform at each WorkCentre and making the Heads of the units accountable through HR interventions.

The KM Nodal Officers at each WorkCentre, nominated by their Heads of the units, are coordinating KM activities on part-time basis over and above their regular assignments. They need to be made accountable and incentivized through appropriate reward and recognition systems.

Current Focus and Thrust Areas

Branding and promotional exercises for content enrichment and enhancing users’ engagement are being carried out using ONGCReports, the information portal of ONGC and ONGC Mail. It is noteworthy that thousands of documents such as Technical articles, Lessons Learned, Research papers, Standard Operating Procedures (SoP), Workflows, Manuals, Technical designs, etc., have been uploaded for quick retrieval in Gyanodyan, but considering the large size of potential user base of the platform, more actions need to be initiated for its faster and effective use. Although the usage of the platform is gradually increasing, the current focus on enhancing visibility, content enrichment and strengthening users’ engagement, entails an aggressive approach for quickly moving to higher levels of maturity. The extensive use of Gyanodyan will help meet the objectives:

1. To bring the knowledge developed during last 60 years, which is fragmented and geographically dispersed, to one single platform, accessible to all ONGC employees anywhere anytime.
2. To capture the experiential knowledge of superannuating employees so that the situations of reinvention-of-the-wheel can be avoided.

Way Forward

Taking Gyanodyan to a higher level of maturity for reaping full benefits of the system. At people level, knowledge culture is to be embedded into all employees. At process level, KM processes are to be integrated into business processes, which would enable creation of new knowledge on a regular basis. At leadership level, leaders need to fully realize business value of KM and manage the business using knowledge as a strategic asset. The overall goals of KM are the leveraging and improvement of the organization’s knowledge assets to effectuate better knowledge practices, improved organizational behaviors, better decisions and improved organizational performance.

Conclusion

With the system firmly in place, along with all its paraphernalia, Gyanodyan is now at the cusp of fruition. It is upon all employees to see how quickly the individuals as well as the organisation, can reap the benefits of this transformational platform. Each of the trained workforce in every WorkCenter, in tandem with the nominated KM Nodal Officer, is now a veritable change agent, ready to propagate the broad ethos behind Gyanodyan and accelerate its use at all levels within their sphere of influence. Besides saving time and facilitating informed decision making, effective use of Gyanodyan will raise productivity and efficiency; and reduce risks, design & planning errors and operating costs. Moreover, it will also bring contemporary work practices in ONGC.

References

Internal reports of ONGC.

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