Chapter LI
Rapid Virtual Enterprising to Manage Complex and High-Risk Assets

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ABSTRACT
Operational enterprising is gradually emerging as a new solution to manage offshore assets on the Norwegian Continental Shelf (NCS). This is seen as an inevitable step-change with respect to obvious commercial challenges in the immediate future, and thus has become an integral component in the new efficiency leap of oil and gas (O&G) production business. This rapid enterprising solution in principal is based on the use of advanced ICT solutions, and active integration of technical disciplines, experts, and organizations to establish Smart assets. This would eventually allow the offshore assets to be supported and managed on a 24/7 online real-time basis irrespective of the geographical location. It has already begun to break the conventional organizational barriers and has brought an explosive growth in the use of advanced technologies. Current rapid enterprising practice on NCS exemplifies the usability of robust technologies blended with innovative organizational solutions as new frontiers in search of commercial excellence.

INTRODUCTION
Decentralization of various business activities and the rapid growth in the use of advanced ICT solutions have perhaps induced the greatest commercial impact in the present industrial environment (Dyer, 2000; Hosni & Khalil, 2004; Lipnack & Stamps, 1997; Wang, Heng, & Chau, 2006). As the commercial operations around industrial assets get more decentralized the emergence of new organizational forms is inevitable compelling conventional organizations to reconsider their formal command-and-control based architecture. Subsequently, important dimensions that apply to business-to-business (B2B) transactions have also been taken up for continuous discussions and revisions. The current trend by far insists on smarter B2B solutions to manage business activities in a relatively more open commercial landscape where trust, relationships, equal op-
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portunity partnerships, win-win solutions, and so forth, have a specific role play for sustainable competitive advantage. However, the need to open up the commercial landscape to enable joint efforts to realize a common objective has been challenged, on the other hand, by unknown risk factors. It implies that while traditional organizations are subjected to a wave of integration effort through some form of fusion of tasks and responsibilities, an acceptable level of security, reliability, dependability, and so forth, are also demanded within the new organizational models.

In the constant search for novel solutions, to retain commercially critical operations secure and intact, many organizations today are more and more inclined to enhance their technology-based capabilities. Among various forms of technologies available, integrated information platforms, Web-based networking solutions, mobile technologies (such as smart phones), portable video communication devices, and so forth, have already become the technologies of the decade. An effective and efficient use of them has a substantial potential to facilitate not only the establishment of new form of organizations but also to enhance connectivity and interactivity among those who are jointly engaged in managing commercial activities on a daily basis. In fact advanced online communication technologies (OCTs) have contributed much in setting a new basis and an informal standard for commercial operations allowing the gradual formation of a very dynamic virtual environment.

This chapter briefly elaborates on the rapid enterprising that is emerging on the Norwegian Continental Shelf (NCS) as a new organizational form to manage offshore oil and gas (O&G) production assets. Since it has been deemed as an integral and an inevitable component in the new efficiency leap, in the presence of new commercial risks yet with substantial value creation potential, the new setting has drawn Norwegian currency (NOK) billions of investments from Norwegian O&G industry for developmental work. It has already begun to break the conventional organizational barriers and has brought an explosive growth in the use of advanced ICT solutions, reflecting the usability of new frontiers in search of commercial excellence.

BACKGROUND

The report number 38 (2003-2004) to the Norwegian Parliament on the petroleum activities on the Norwegian Continental Shelf (NCS) directly addressed and underlined that there is a critical need for an immediate long-term development scenario to reduce the risk and to improve value creation. The main focus has been on reducing operating costs and improving recovery efficiency, and other simultaneous positive impacts, for instance on health and safety. Subsequently, NCS today has stepped into a completely new integrated scenario to manage offshore oil & gas (O&G) production assets. This new scenario is termed Integrated E-Operations (OLF, 2003), and is dedicated to establish Smart offshore assets based on advanced ICT solutions, technology-embedded support centres, integrated operational networks, and collaborative partnerships. The re-engineering process that has gradually gathered momentum, slowly commenced its early activities in the year 2005 and is expected to be in fully functional operational status towards 2015 or so.

Interestingly, in this context, it has become very clear that the conventional work practices, organizational forms, B2B operational landscape, and so forth, pose considerable challenges to the dedicated change process. However, at the same time, the organizational effects of new technologies have also been more apparent with explicit indications that formal boundaries and limits for interorganizational exchanges and transactions need to be re-evaluated for effective use of the potential presented particularly by the online communication and data management technologies (OCDMTs). In fact, this has induced a clear