

**Abstract Title: Blockchain Technology in Oil & Gas Sector**

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Blockchain is changing the near future of Oil and Gas supply chain. The technology behind cryptocurrency is evolving in the industry, and it's becoming a reality. In the presentation/paper, a mixed of methodologies were used including analysis of the literature, expertise, practices, workshops to assess Blockchain business requirements for KIPIC and all of its integrated petroleum industries including al-zour refinery, petrochemical factory and LNG (liquefied natural gas).

A Blockchain is a digitized, decentralized, public ledger of all cryptocurrency transactions. Originally developed as the accounting method for the virtual currency Bitcoin, Blockchains – which use what's known as distributed ledger technology (DLT) – are appearing in a variety of commercial applications today. The Blockchain database is shared across millions of computers simultaneously, with the public, and data stored remains incorruptible. This is done through breaking down data in records into fragments which is then stored in multiple server locations. While the database is decentralized, and all economic transactions are accounted for and authenticated at every touch point, known as 'nodes.' Data can only be altered when there is an agreement among a majority of these nodes. This agreement ensures that records cannot be hacked or violated – and any change in the record is automatically made public across the entire network. Oil and gas market, with their ever-growing concern to struggle with price fluctuations, has found an innovative technology in Blockchain which can now meet the acceptable margin of costs. The energy sector can potentially benefit from the supply chain, purchase orders, payment invoices and validation of documents before the final delivery of goods. All these can be managed through the ledger which gets updated in real time and is synchronized across all platforms in no time. Supply chain, proof of origin, managing the assets can be done without the need of a central intermediary.

In conclusion, Blockchain has the potential to revolutionaries the entire oil and gas industry, many companies in the region are testing the technology into their system or assisting the business requirements as in the case of KIPIC.