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Digital Transformation: After the Big Data, What Next?

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Abstract

Our definition of 'The Big Data' is the ability of having all the data set at the point of decision-making. Several documented research shows that less than 5% of all the data acquired in the oil and gas industry are actually utilised. Despite these challenges most operating assets, still keep acquiring more data and creating data-load that are never utilised or put into use. This paper aims to demonstrate the reason(s) why we have this data-load and instigate a solution path in managing this challenge for value realisation.

Data is a corporate asset in any organisation but the default 'silo' work culture in most operating asset makes it difficult to get the relevant insight from these data. Organisation must be deliberate in creating the right data architecture from the data process domain through into the distributed control system, into the data historian, then within the data platform and the visualization realm and finally into the workflow domain. It is at the workflow domain that we get the 'game-changer' otherwise called value. This is the differentiating factor in delivering the 'Big Data' into the space of benefit realisation. This was what was achieved in a field in Niger Delta and has been shared compared to global best practice.

The documented result from this case study showed that any data architecture should be framed to address asset business need, right from the data process domain function through to the data historian into the workflow level where the business objective is addressed. Data must be application-centric accounting for scalability, accessibility, security and business performance.

Assets need to be clear on why they are acquiring data and not just continuous acquisition of more data with the resultant effect of data-load without answering the question; what next after data acquisition? This paper provides the answer of what next after data acquisition and serves as a quick reference tool for similar challenge elsewhere, not limited to the oil and gas industry.