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Digitalizing upstream logistics as a key lever for assets economic resilience

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Abstract:

After 200 years of industrial activity, the Information Age is considered by most of the authors as the Third Industrial Revolution. Digital systems are changing and shaping the world's economy and how humans interact and communicate to each other.

Digitalization is improving the aggregate efficiency of most of the industrial processes making possible to maintain profitability under modern economic uncertainties.

Oil and Gas industry has been leading the evolution of technology since its birth, developing advance solutions to break the new Exploration and Production frontiers. In the Information Era this is not going to be different as digital solutions and data analysis tools are spread all over the sector, supporting the day to day management of operations and decision making processes.

The introduction of new digital technologies is enabling the sector to be more resilient, maximize the recovery of reserves, and moreover reduce the environmental impact of the operations.

Multiple examples can be found in the upstream business. Drilling engineers monitors downhole physical conditions and performance real time, reservoir engineers develops accurate 3D dynamic models interpreting enormous data bases of historical production, and production engineers evaluates massive production databases to decide which lifting system will maximize the productivity of the asset.

However, there is one discipline lagging behind on this digital revolution. Supply Chain and Logistics operation has been stagnant since the last decades. The transportation of goods and personnel is still being performed following the same manual processes and procedures with little digital tools supporting the operations. The gap and the improvement potential is so big that currently some of the major companies are starting to realize about the positive economic impact on taking this discipline one step forward.