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The impact of fast track approach in the offshore projects

08th April 2016

AGENDA

1. PROGER SPA
2. The changing of the market environment in the Oil&Gas
3. The actual issue of Project Execution
4. Fast Track approach
5. Fast Track application example

PROGER SPA: AN INTEGRATED APPROACH

Proger is an Italian firm that offers a wide range of services, managing all phases of a project from feasibility *studies, Basic Design and FEED*, *Detailed Engineering and procurement*, through the *construction, commissioning and start-up of the facilities*.

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CHALLENGES OF THE OIL&GAS

More than ever the Oil&Gas is suffering the influence of the global market, geopolitical issue and the remote location of the reservoir

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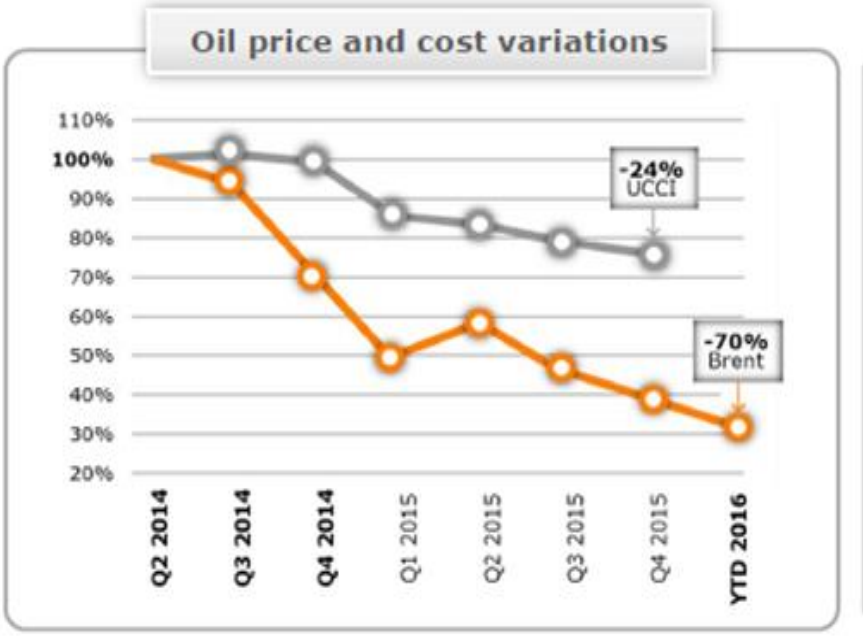
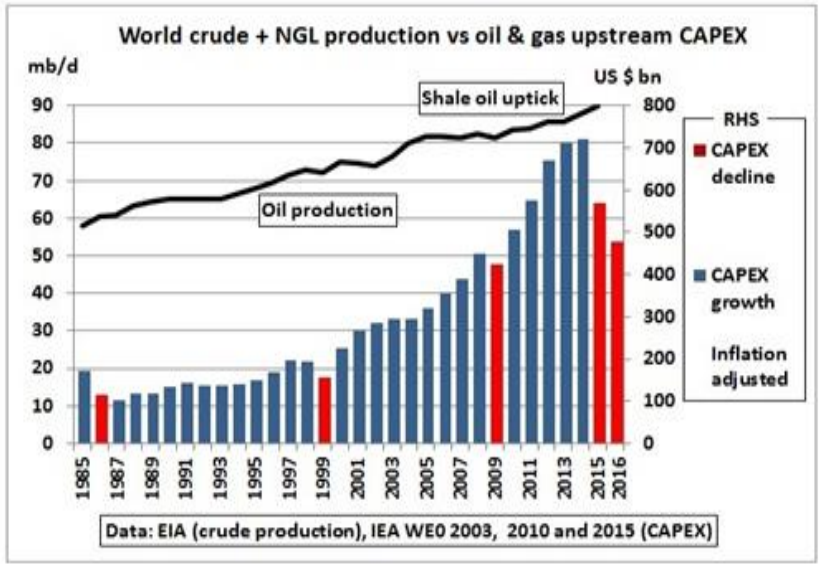
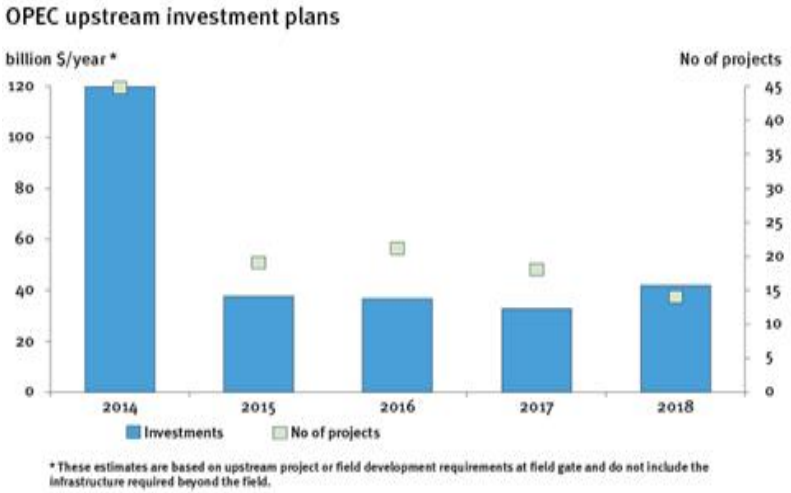
ECONOMIC CONSTRAINTS OF OIL&GAS MARKET



Oil Price lowering



Capex Reduction



Need to revise the cost structure of the execution of a project

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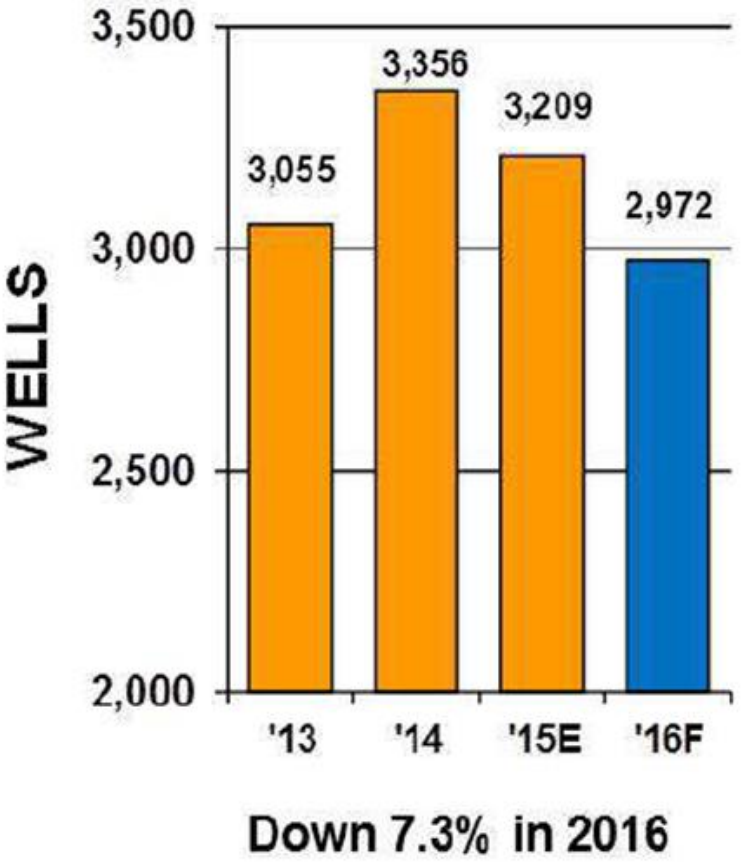
WORLD OFFSHORE FORECAST

Image: Maersk Drilling



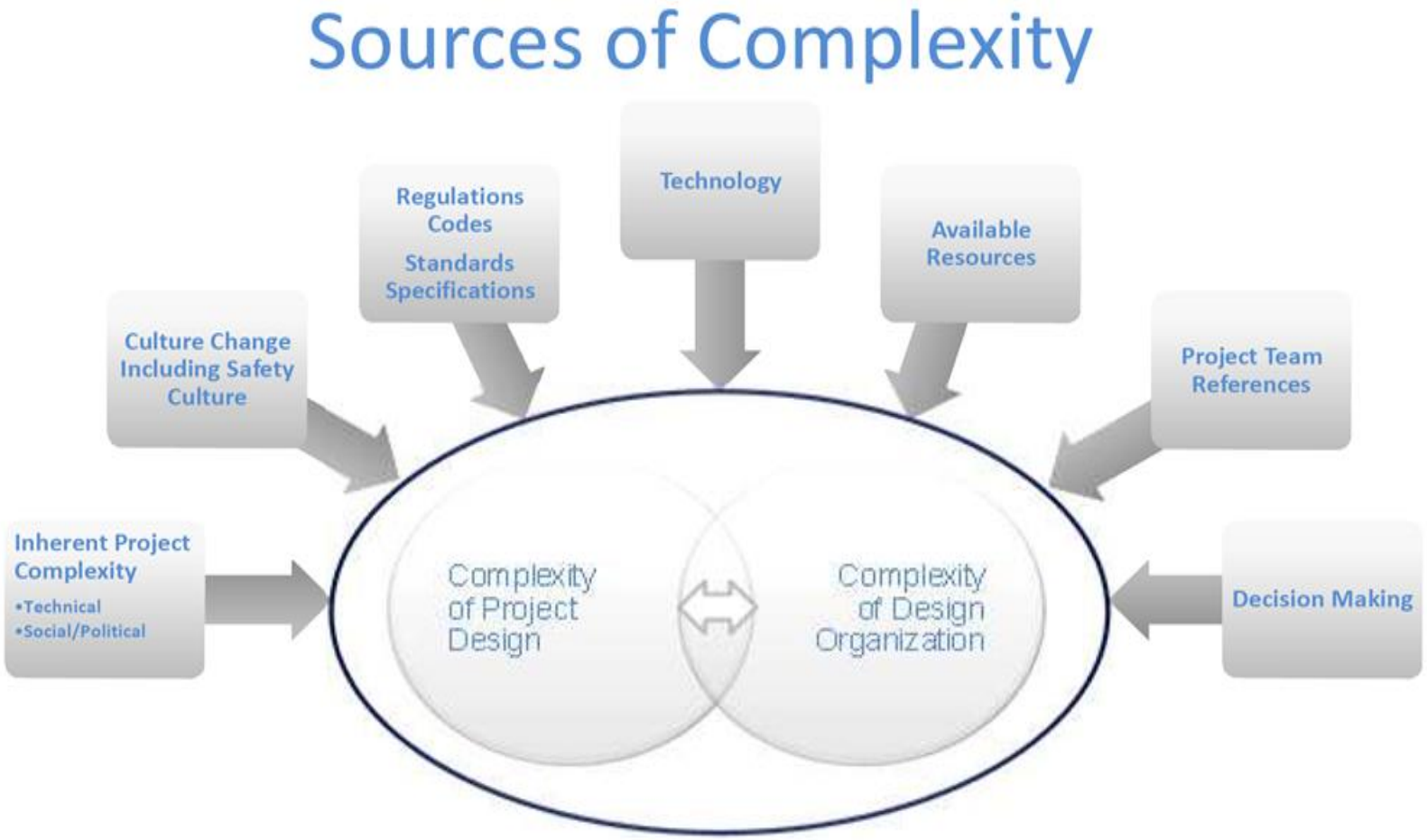
Source World Oil – Feb 2016)

Offshore spending, representing about 20% of global upstream spending, should decline 20-25% in 2016

(source Oil & Gas Financial Journal - dec- 2015)

DIFFICULTIES IN THE START UP AND DEVELOPMENT OF A NEW OIL&GAS FIELD

The development of a project is becoming more and more difficult



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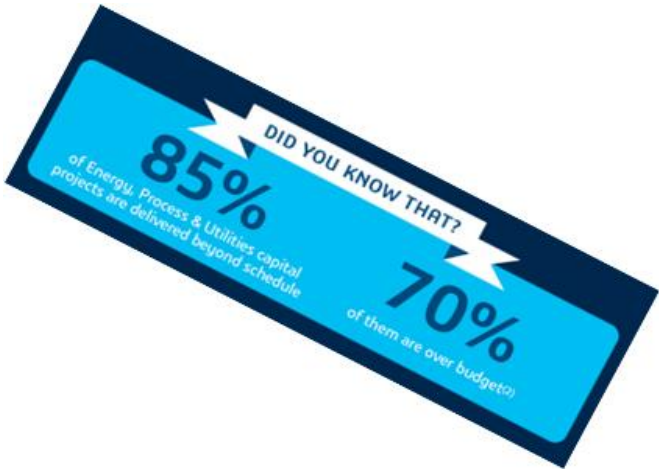
PROJECT MANAGEMENT ISSUE

Large Scale Projects (LSP) face **significant cost and schedule overruns** due to their significant *size*, *complexity*, and often *aggressive compressed schedule*.

- **IPA**
  - "Mega Projects executed around the world have a failure rate of 65%..." IPA
- **E&Y**
  - 64% of Oil/Gas Mega Projects suffered Cost overruns
  - 73% of Oil/Gas Mega Projects suffered Delays
- **PMI**
  - "...2/3 of projects fail to meet their goals… and 17% fail outright..."



(*) Flyvbjerg, B. 2014. What you should know about megaprojects and why: An overview. Project Management Journal, 45(2), 6–19.

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THE ISSUE

How can **oil companies** deal with these ***new challenges*** and at the same time continue to meet the *growing demand for hydrocarbons worldwide*?

Challenges

- cost–savings,
- improve performance & efficiency
- competitive innovation
- value growth

A POSSIBLE SOLUTION

Enable a collaborative business framework between company & contractor

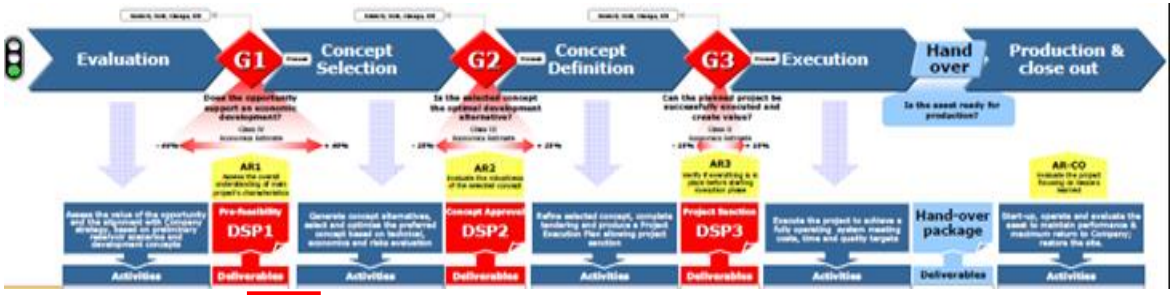
- **RETHINKING THE PROJECT FRAMEWORK** so that companies can better leverage *their internal scale and scarce internal resources* to handle increasingly complex projects
- **STANDARDIZING DESIGN** when possible to *reduce project cost* and to *focus technological innovation.* The "**Design one, build many**" concept has had some notable successes
- **REMODELING THE RELATIONSHIP BETWEEN OWNERS AND SUPPLIERS**, which involves rethinking the *contractual framework* and increasing the level of *constructive cooperation* so that both parties can jointly address current and future concerns

NEW PROJECT EXECUTION STRATEGY

To face the new challenging market company is a changing project execution strategy shifting from:

“CONVENTIONAL MODEL”:

sequential select, design, construct, operate



Markets are volatile, and innovation is accelerating rapidly

“FAST TRACK MODEL”:

select, design while build, operate

Major issue of a project shift from

TECHNOLOGY PUSH to

BUSINESS SOLUTION

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FAST TRACK APPROACH

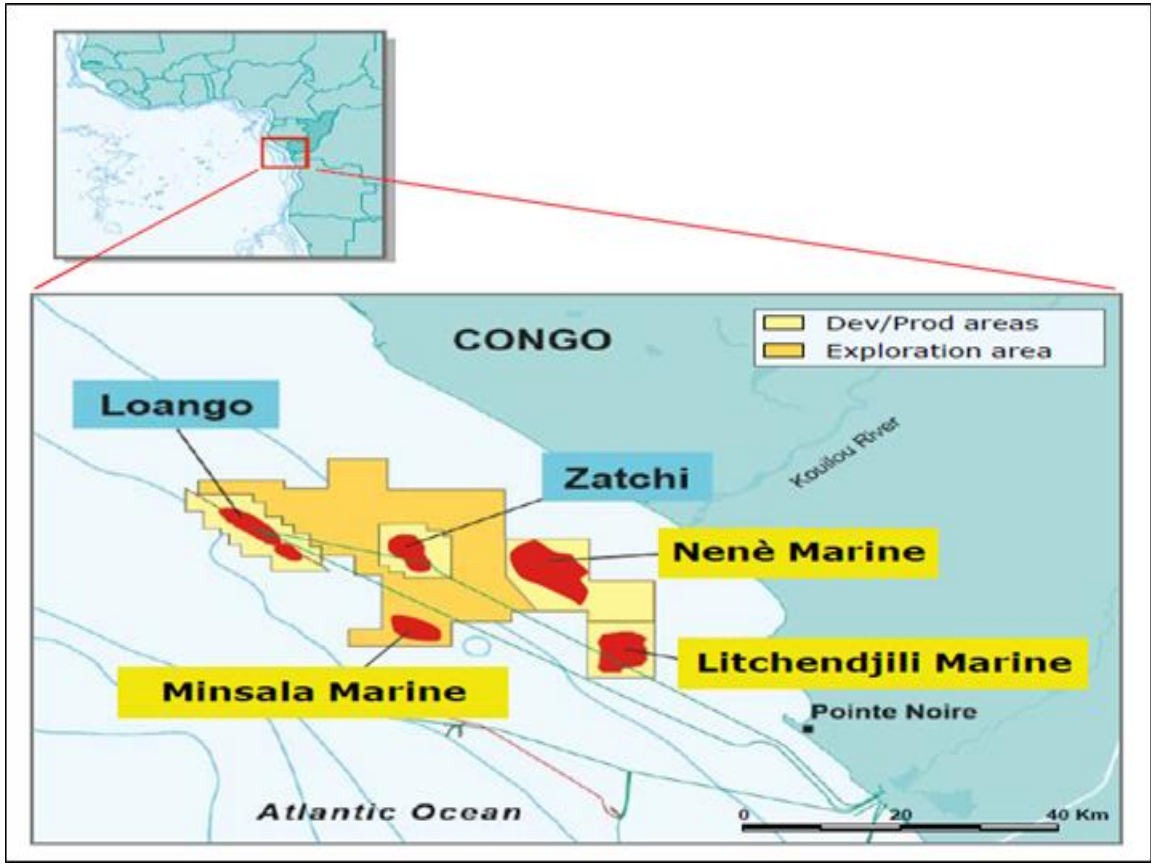
More agile and iterative methods may be more effective than a regimented and slow gate process foresees parallel processes and rapid development methodologies.

- **Supersede** the review gates and a sequential, converging process for project development
- Avoid **long rework cycles** (gate is not passed).
- Help to **make decisions** based on imperfect but sufficient information.
- Avoid the risk to **overinvest** in defining conceptual designs to reach an outcome that could have been decided more easily.
- Reverse the conventional logic and start with **what would be needed** for the project to fly.
- Help to keep **more options** open in the early stages, pursuing multiple concepts in competition with each other allowing to reorient the project in case the input data (i.e. reservoir data) change.

FAST TRACK APPROACH APPLICATION

OFFSHORE CONGO – Pre-salt Marine XII block

Field development in several stages and include the installation of **production platforms and the drilling of over 30 wells.**
Production of over 140,000 barrels per day.
The production of the first phase is 7,500 boe/d



Target: start the production **8 months** after obtaining the production permit and **16 months** following the exploration discovery

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CONTRACT STRATEGY

Development has been divided into two main phases

1) ADVANCED EARLY PRODUCTION (AEP):

- Use existing contracts available on call basis:
  - ✓ Engineering framework agreement
  - ✓ Procurement and installation agreement
- Refurbishment, Transportation & Topsides integration of pre-owned Structures (Jacket & Deck) located in Louisiana
- Use existing facilities for treatment an export of the hydrocarbons

2) Full Field Development: by means of EPC contracts to install new production and drilling platforms

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ADVANCED EARLY PRODUCTION ACTIVITIES

The development of the project is performed in parallel with an iterative process

Scope 1 – Res & Drill

- Reservoir Re-Modelling
- Drilling activities

Scope 2 – Eng & Constr

- Jacket & Deck refurbishment
- Structures transportation “US – Congo”
- Topsides Integration
- Transportation to Installation Site
- HUC & assistance to S-Up

Scope 3 – Operation

Gap analysis of the existing facilities

– Treatment capacity of platform

– Sealine availability and capacity

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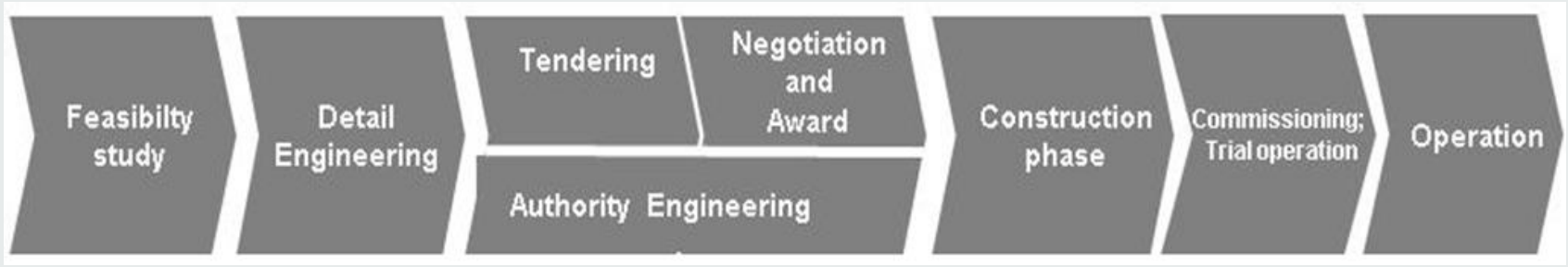
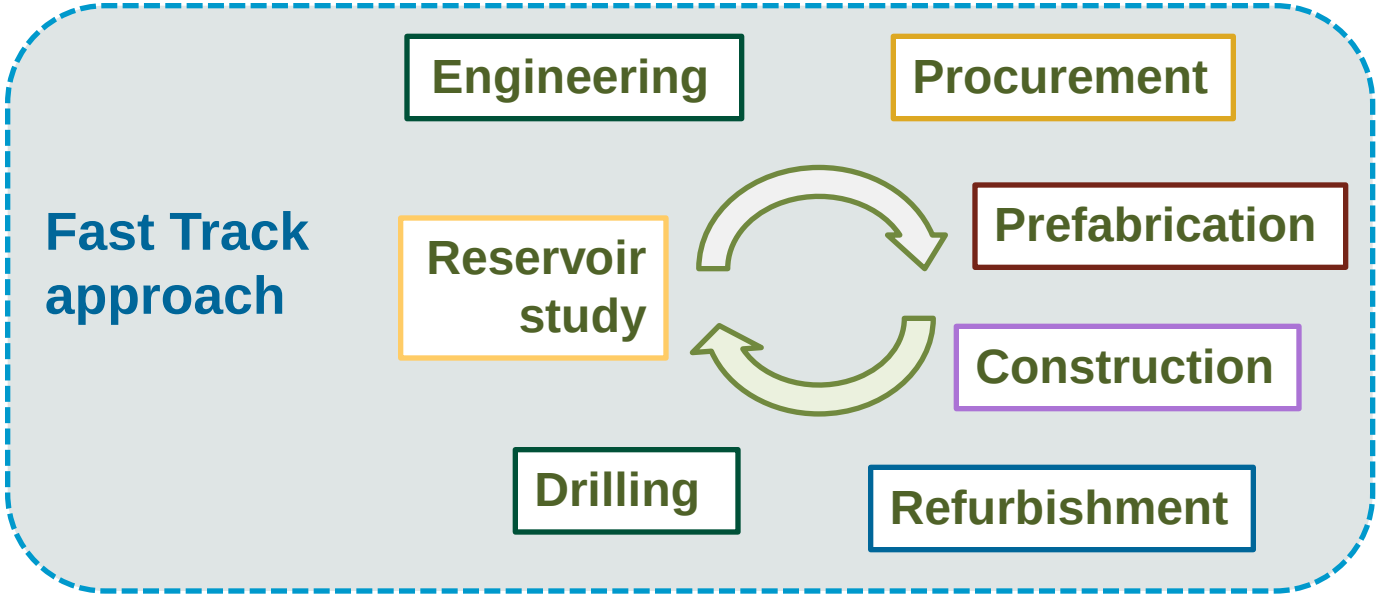
PROJECT SCHEDULE OPTIMIZATION

Traditional Project Phases



Fast Track approach



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SCOPE 2 - SCHEDULE

Scope 2 - *Engineering & Construction* was awarded in May 2014.

- The existing jacket was founded in Louisiana: it was refurbished and transported in Congo.
- Early stage of engineering activities where focused to the refurbished needs
- During the transportation (started in **July**) time Feed & detailed engineering, procurement of the main item and prefabrication in Italy where performed
- In **August** the integration of deck and topside facilities where performed in the yard in Congo
- In **November** erection and hook up started in the offshore

First Oil started in **December** 2014

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CONCLUSIONS

- The drivers of a project development are changing in the global and more and more volatile market: *time to market* is a key issue
- *Fast Track* approach can be an effective improvement to face new challenging environments in the oil&gas market
- A changing in the approach and organizational structure and vision is mandatory.

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