



Oil & Gas
Authority

How Can We Ensure Project Success?



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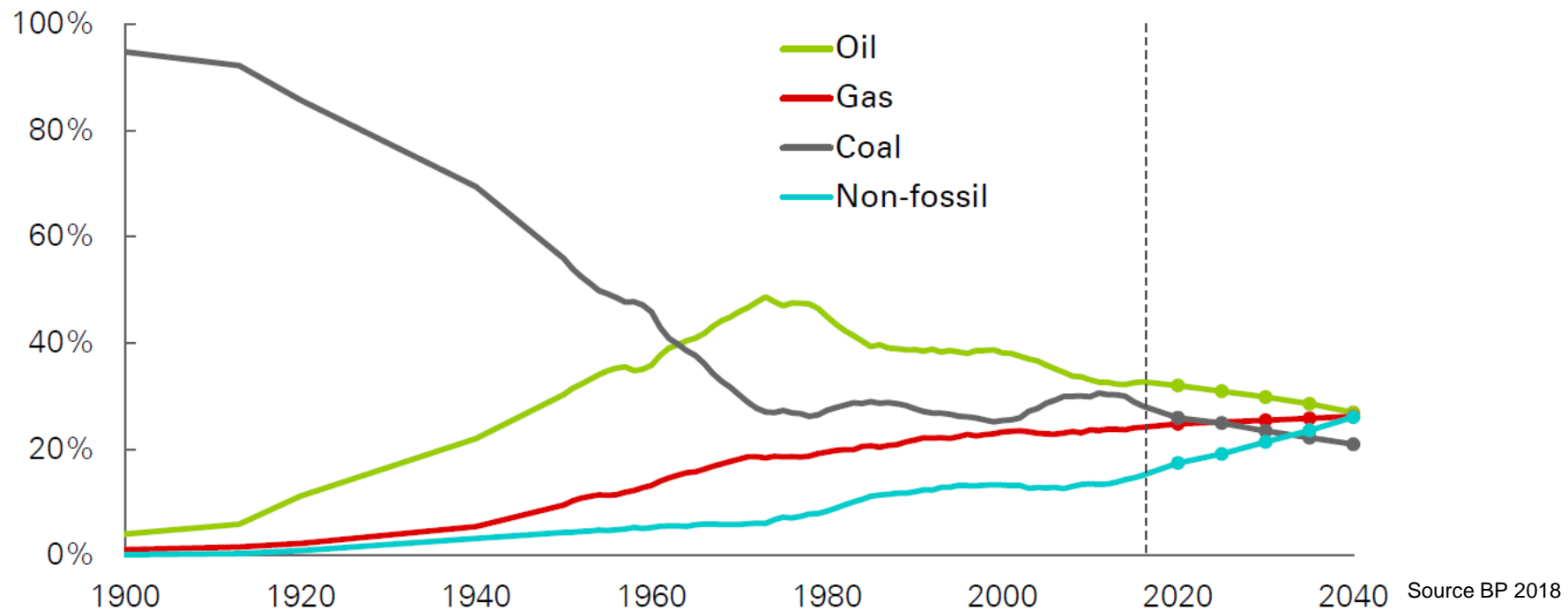
May 2018

Energy Demand

The outlook for oil & gas has fundamentally changed

- There is an abundance of supply; shale & conventional
- Energy demand is shared with coal and non fossil (renewables, hydro etc). Non fossil fuels are set to grow considerably

Shares of primary energy



Learn from the past

The OGA conducted a study in 2016 with contribution from 11 operators and 3 major Tier-1 contractors

- Greenfield and Brownfield
- Types: Subsea, Platform, FPSO
- All Regions: WoS, NNS, CNS & SNS

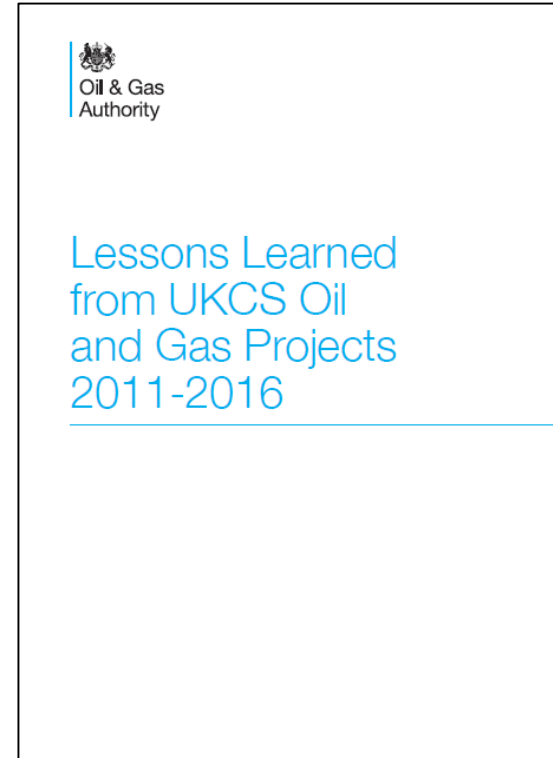
58 Projects; 38 post production start-up and 20 under execution at the time

Compare FDP vs actual performance

Lessons learnt sessions held with 11 operators and 3 Tier-1 Contractors covering successful and underdelivered projects

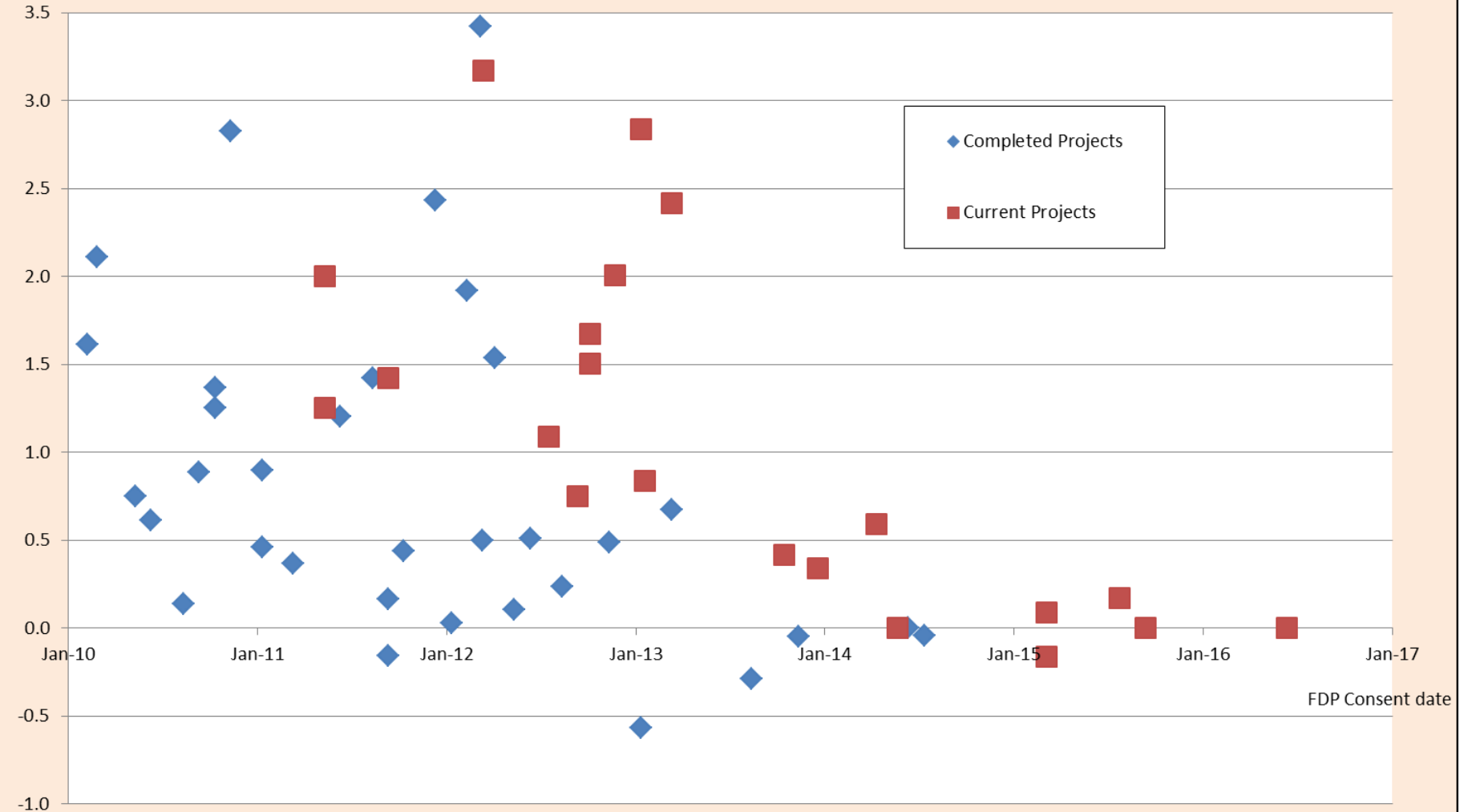
Summarised in the report

The full report is available on the [OGA website](#)



**Start-up delay compared to FDP Consent date
(years)**

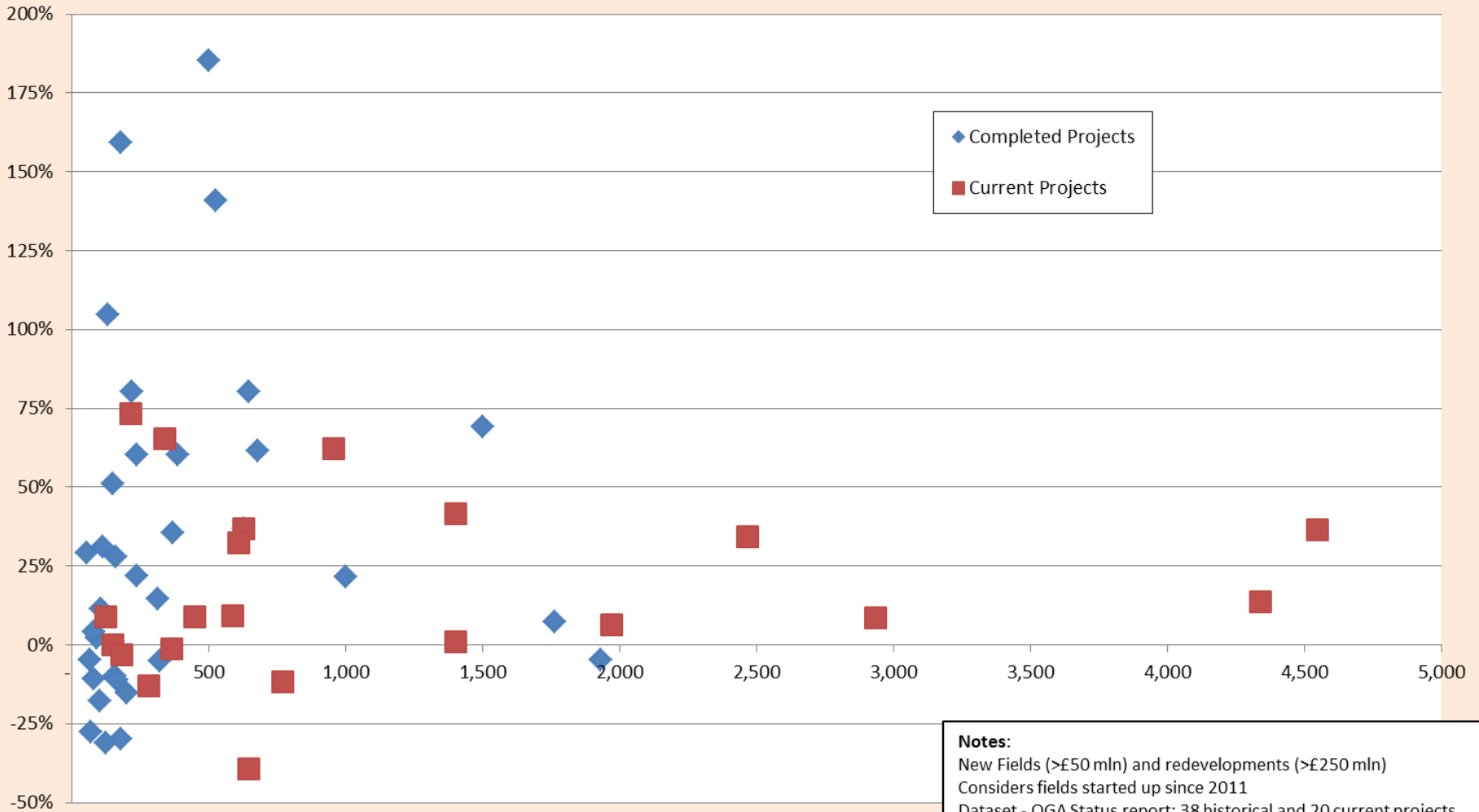
Years of delay
in start-up
from FDP



Capex Overspend Percentage

Cost overrun
from FDP
(100% is double)

**Outturn costs compared to FDP Cost
(£'000 mln)**

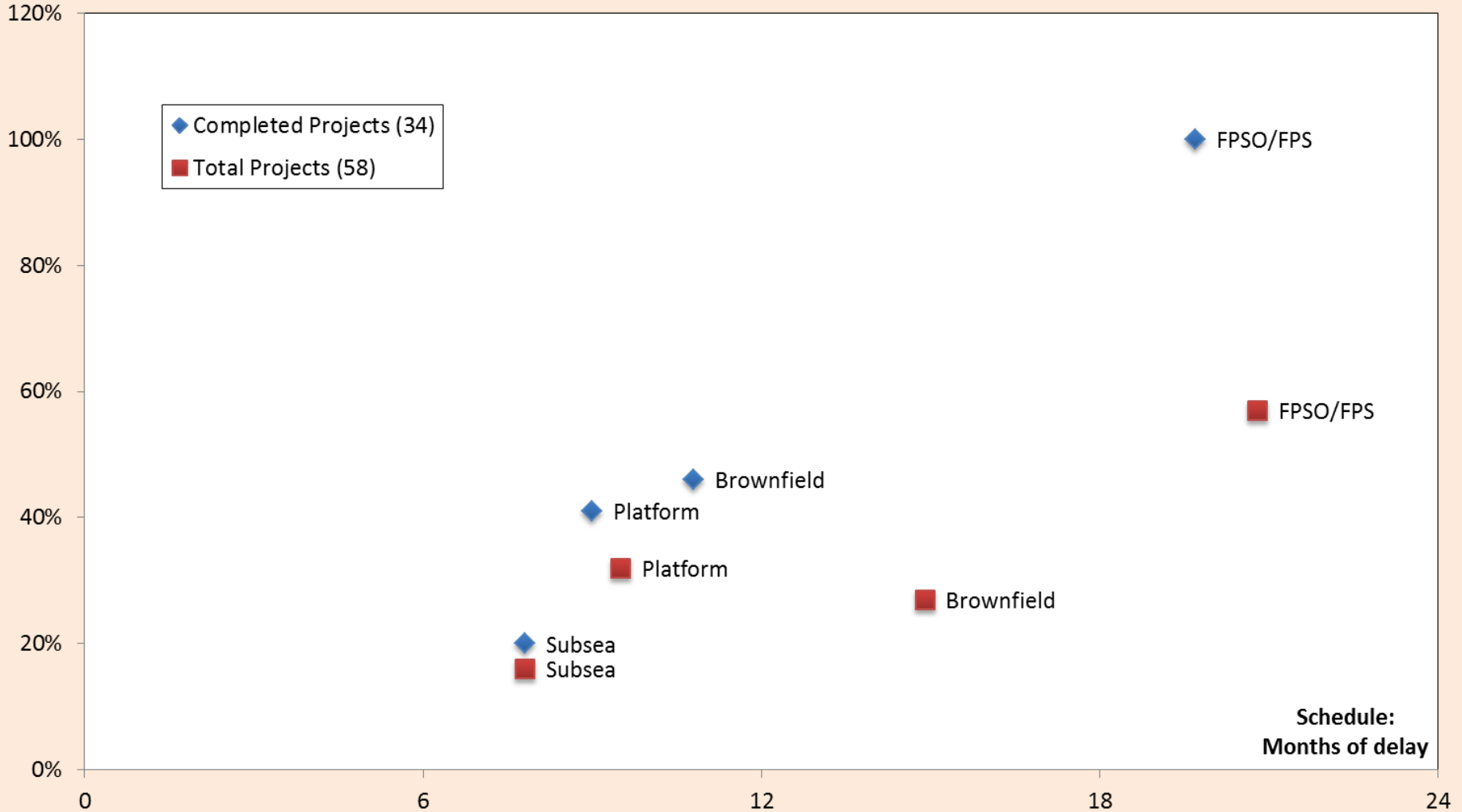


Notes:
 New Fields (>£50 mln) and redevelopments (>£250 mln)
 Considers fields started up since 2011
 Dataset - OGA Status report: 38 historical and 20 current projects
 CAPEX in £000 mln as quoted in FDP (not current estimate)

Project Types

Cost:
Percentage Overrun
(100% equates to a
doubling of cost)

Project Performance - Asset Class relative to FDP commitments



All FPSO projects experienced cost over-run, schedule delay

Subsea scope more predictable

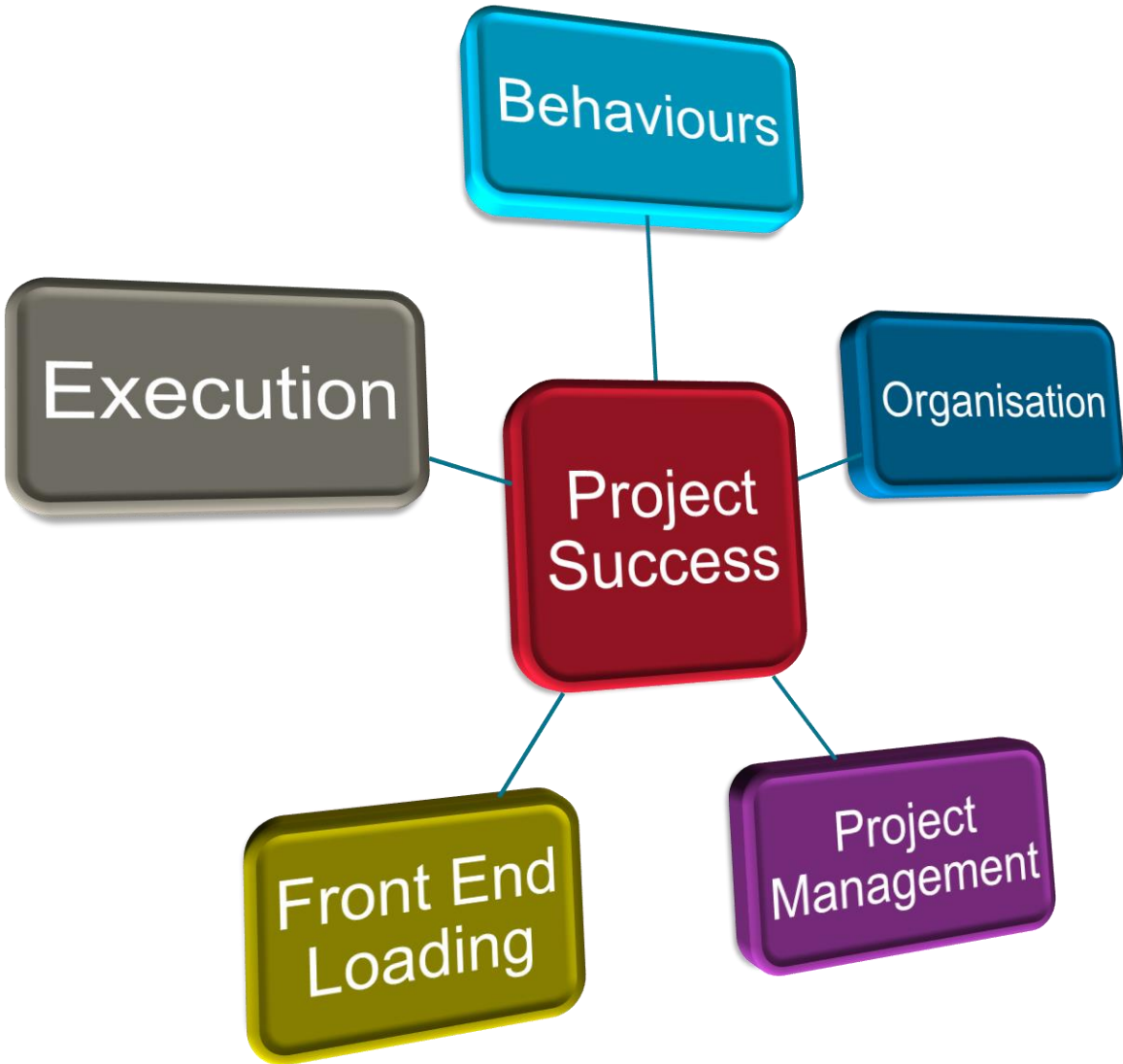
No simple correlation between size, complexity and delay/over-run

- Outcome determined by “how” the project was executed and less by “what” was executed
- Many of the reasons are non-technical in nature
- 25% of the projects were delivered on time

The review found that there was an average delay of 10 months and a 35% cost over-run.

1. Ensure clear definition of the project scope prior to project sanction – Do not move forward unless this is the case
2. Keep the project as simple as possible
3. Ensure clear accountability for project delivery, by scope and deliverables
4. Ensure cooperation and collaboration between companies and stake holders – don't assume, test effectiveness and gain feedback

Drivers to support project success



The oil and gas industry has evolved with a high degree of prescriptive control. Contracting terms and behaviours have been largely construed as adversarial rather than collaborative.

Leadership – Create an agile, motivated, “right sized” team that is empowered and accountable

Communication – Clearly and effectively share project goals and objectives and ensure everyone including all stakeholders, partners, and supply chain are aligned

Culture – Respect, Integrity, Trust, Collaboration - Message this as a project mantra, make it a core value, and live by it!

Messaging – Ensure reporting adds value and is read, don't over promise and set realistic targets. Set expectations early and do not withhold information

There is a strong relationship between successful project execution, the TEAM who deliver it and how well they are organised

Organisation – Correctly size the owners team with as many permanent staff as possible and maintain the team for the full project life cycle

Governance – Fully define the project team structure, and execution plan, be clear on who is accountable for what; and reporting lines

Location – Locate the team in one location if at all possible, this will improve communication, alignment and improve project efficiency

Administration – Minimise administration, processes, specifications and standards

Capabilities – Check and confirm the teams skill set and provide additional training in project management and HSEQ

A Project Management Process will help deliver a successful project but it is not the whole answer and companies with rigorous project management process's are no more successful than those that use a lean process

Plan - Build a realistic cost estimate and probabilistic schedule, rigorously check and benchmark your cost and schedule

Systems - Develop and use a project management system, ensure everyone is familiar with it and reference it through out the project

Assurance Risk and Interface – Develop and manage your AIR process within your PM team, do not out source, review monthly throughout the project cycle

Gate and Decision Process – Follow a decision/gate process with formal acceptance by a management team, document and record key decisions

Change Management – Have a formal Change Management Process which should fully assess and define the change against key metrics cost, time resources

If a comprehensive FEL is not undertaken there are two main drivers to lost value: 1. Selecting and executing the wrong project, (event if it is executed well!) : 2. Changes and additional work will be required which will lead to cost and schedule escalation

Sanction – Fully define all areas of the project scope, complete a detailed review and benchmark the project before sanction

Stages – Finish FEED before starting detailed design. Do not start construction until Detailed Design is complete

Benchmarking- Review your solution against industry information and have it rigorously reviewed by stakeholders and independents.

Supply Chain – Develop a contracting strategy and fully engage with supply chain as early as possible to ensure the companies doing the work have input into the solution

In the Execution phase most of the work and cost is carried out by contractors, the project structure needs to account for this so all parties are clear on their responsibilities and their accountability. Deliver the FEED scope and plan

Collaboration– Build a collaborative team and include all parties in the development and management of the risks and mitigations

Scope Growth - Manage weight control, vendor packages, hook up and commissioning

Interface Management– Rigorous company led interface management with partners, contractors and suppliers is required to successfully manage cost and schedule

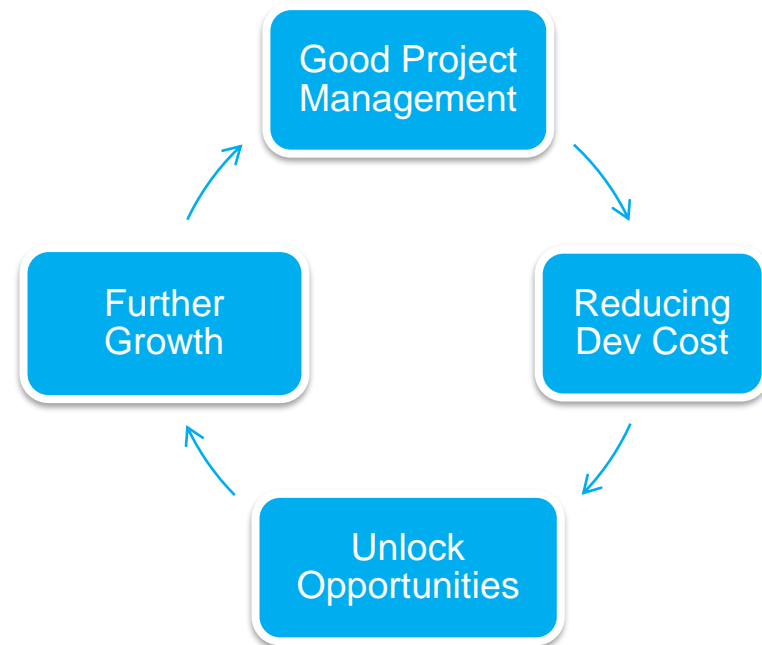
Change Management – No changes!..... can be accepted without being fully assessed and the implications communicated to all stakeholders and incorporated into the cost and schedule.

Project Management input in Field Development Planning:

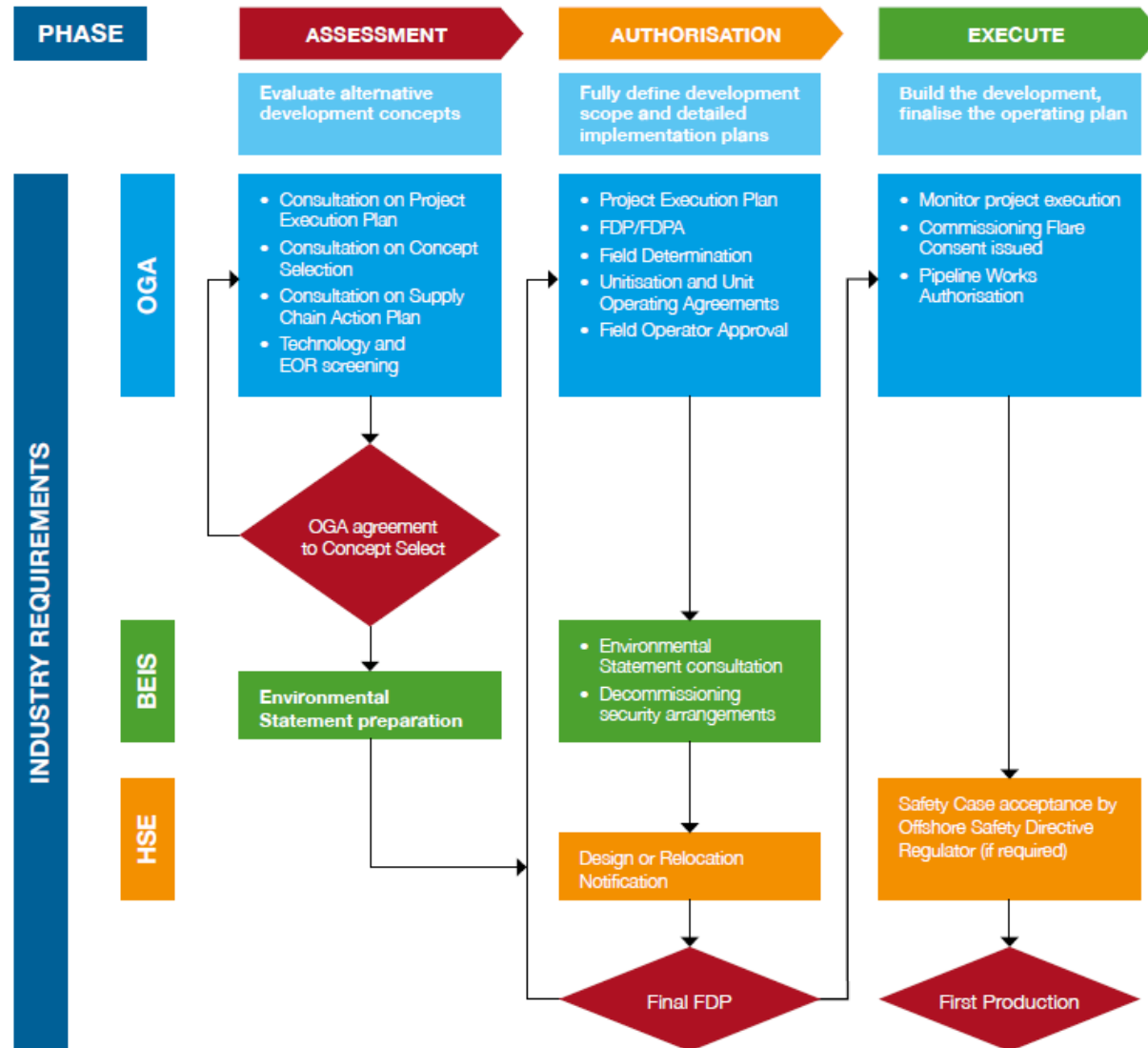
1. Concept Select review
2. SE-05: Robust Project Delivery
3. Supply Chain Action Plan (SCAP)
4. Project Execution Plan (PEP)

OGA Initiatives:

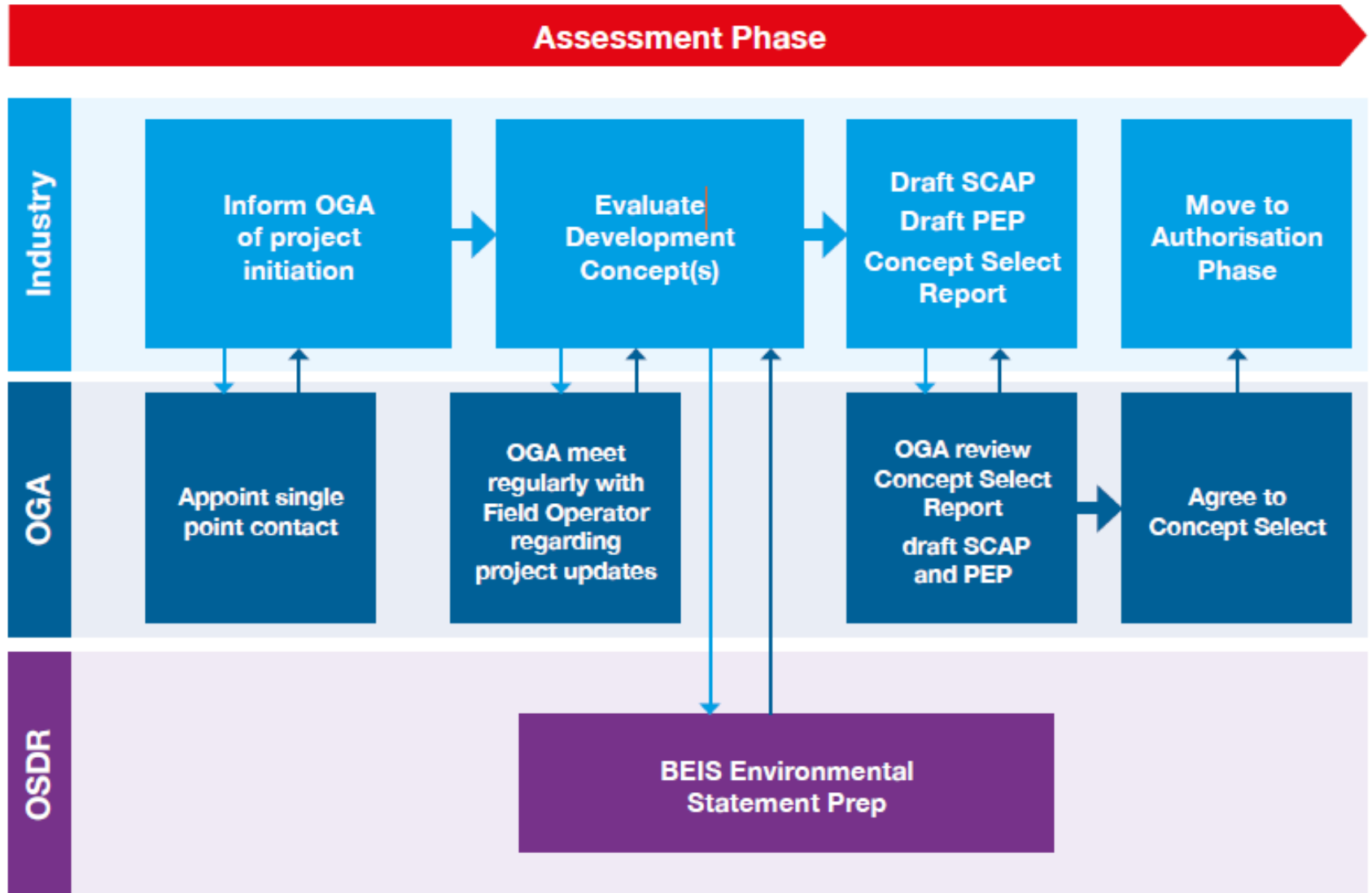
1. New Field Development Guidance Updated
2. Lesson Learnt Database
3. SE-05: Robust Project Delivery Operator/OGA review meetings
4. Support Industry with any Project Management initiatives



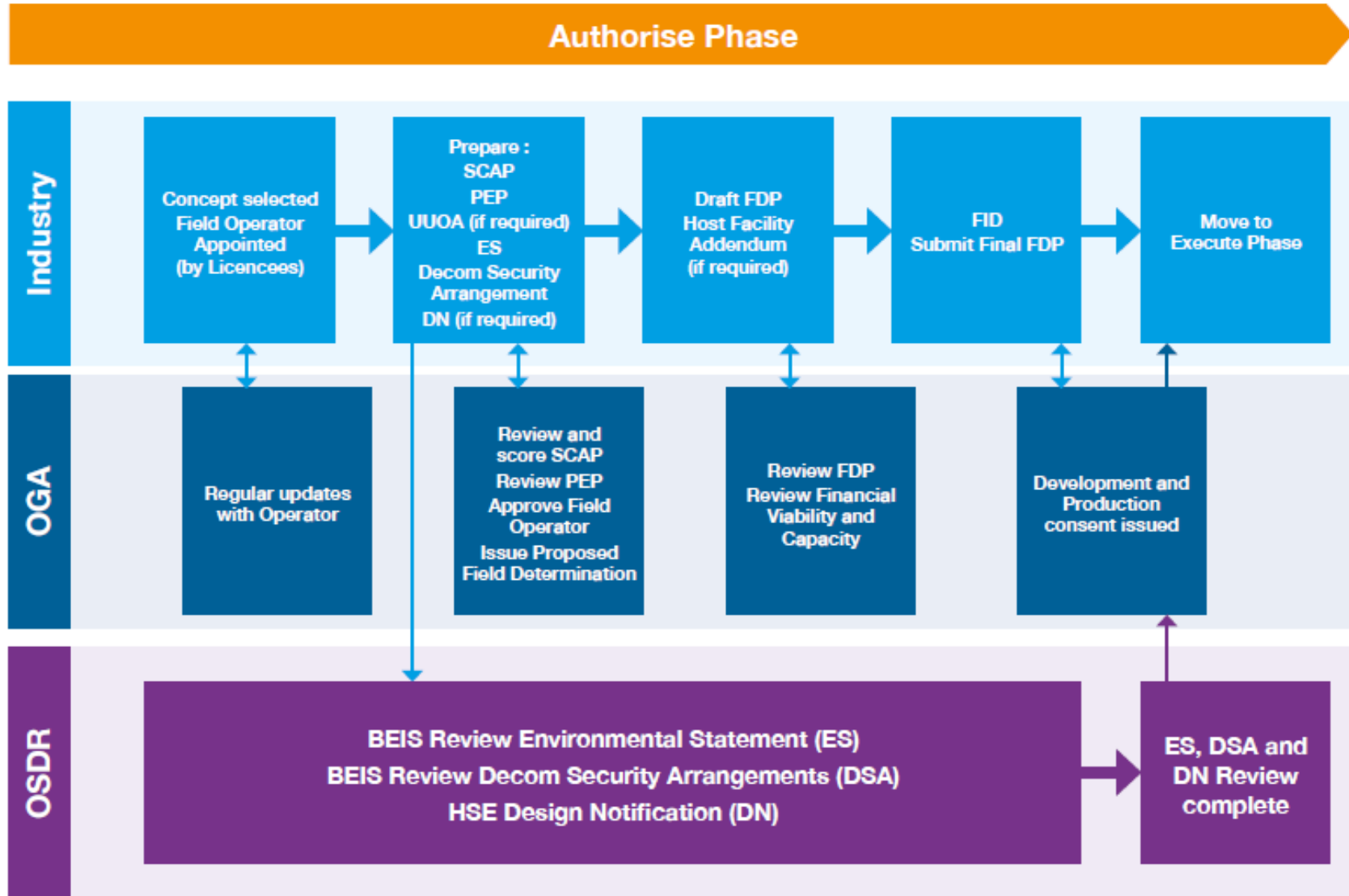
FDP Road Map



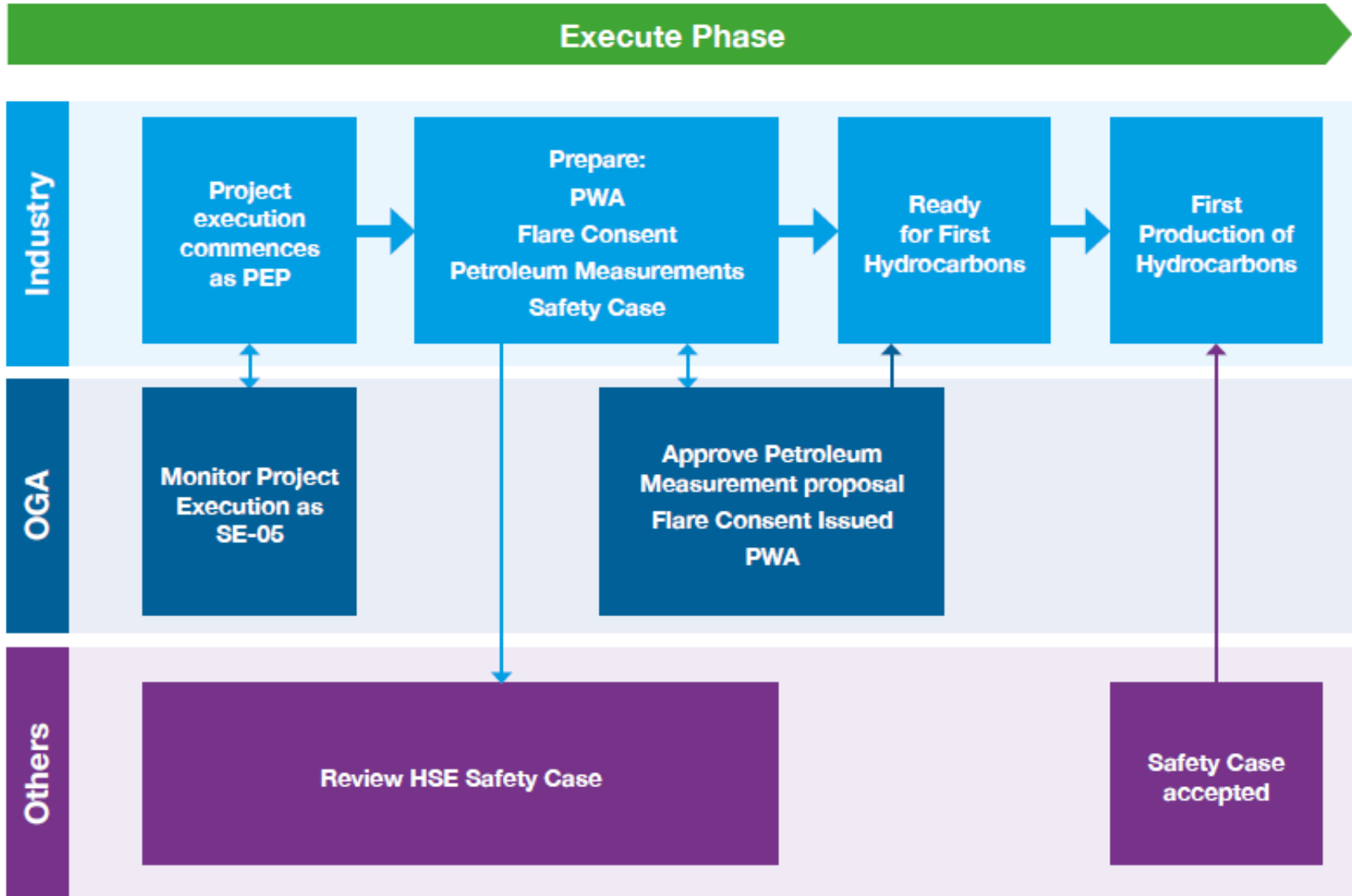
Assessment Phase



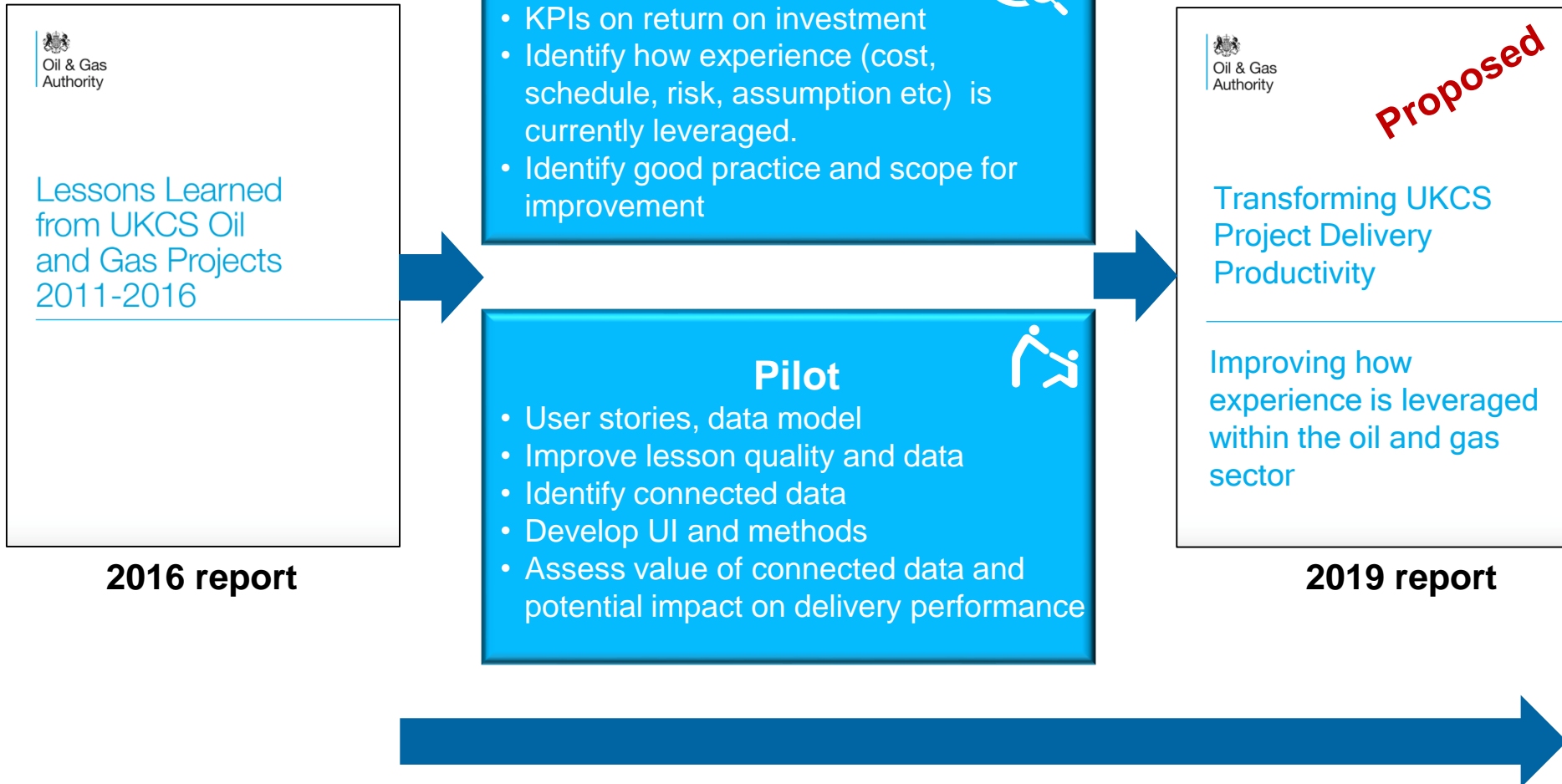
Authorisation Phase



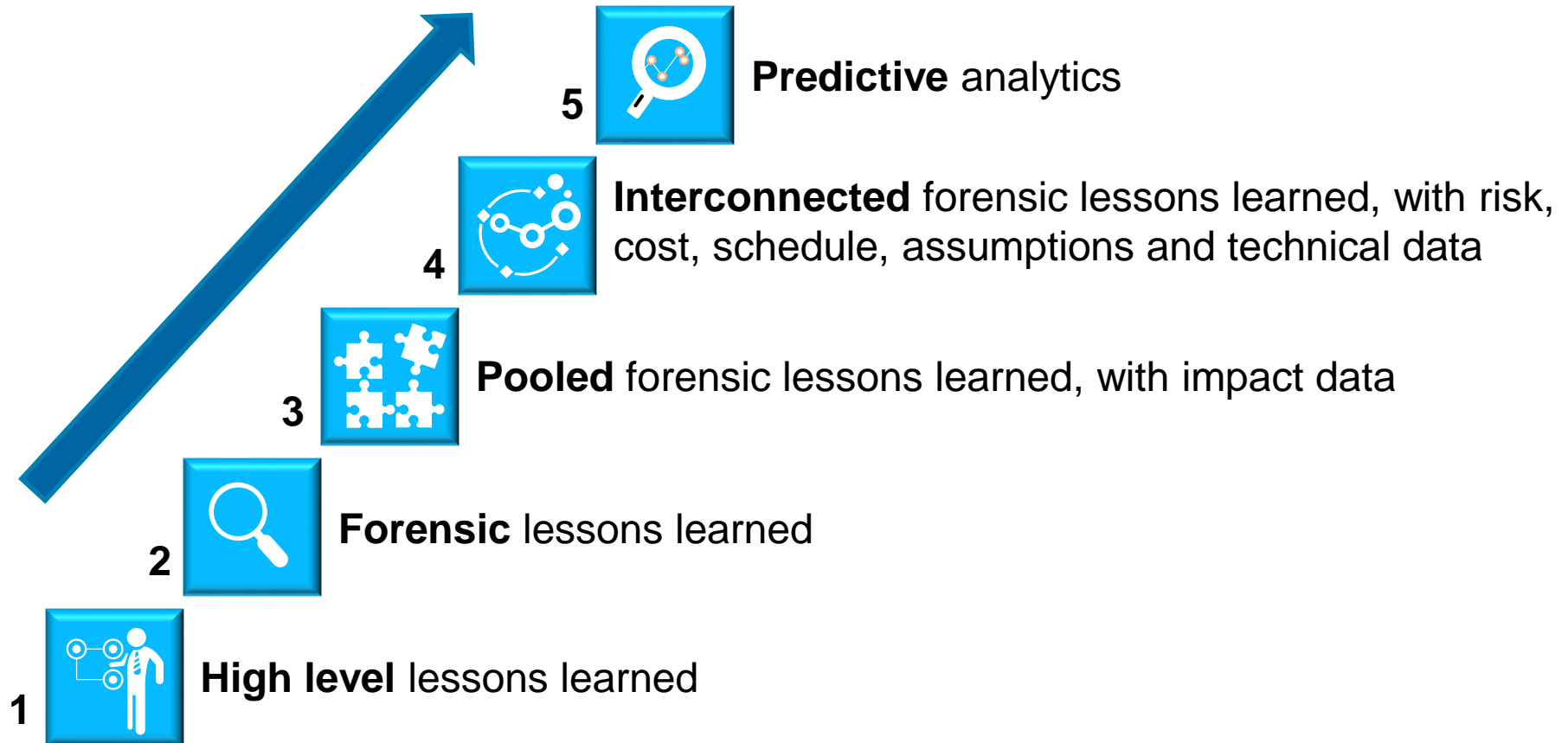
Execution Phase



Lesson Learnt Database



A Journey of Improvement



In conclusion

Consistent successful project delivery can be achieved

OGA support and input during new field development planning and implementation as per the FDP Roadmap

Asset Stewardship - Specifically SE05 Robust Project Delivery

Developing a Lesson Learnt Database with machine learning capabilities

Sharing best practice, insights and supporting industry initiatives



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Thank you

If you have any further questions
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