CONCEPT AND T&I OPTIMISATION REVIEW
CONDUCTOR SUPPORTED WELLHEAD PLATFORM (CSP)

Offshore West Africa

ICON Engineering was engaged by a large independent West African energy company to conduct a Concept and Transport and Installation (T&I) Optimisation Review for its wellhead platform design.

This wellhead platform design forms an integral part of the client's development programme for a large offshore oil field.

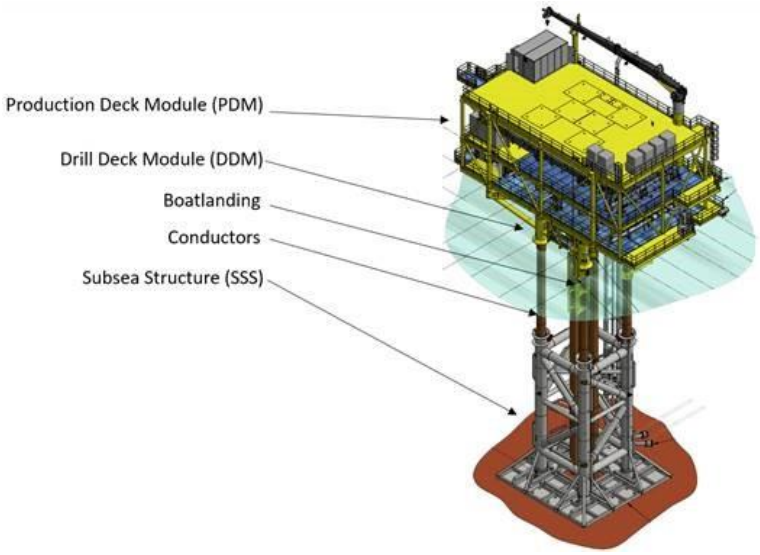
This design is proposed to be replicated across the field.

The third-party original design was based around the concept of a Conductor Supported Platform (CSP). The challenges of a CSP design comprise multiple components to be installed by the jack-up drill rig in critical path time.

Given the high cost of a drilling spread a multiple piece CSP design has both significant schedule and cost related disadvantages relative to a conventional single-piece substructure and single-piece topsides.

Given its previous negative experiences with CSP installation, the client requested ICON's support to:

- review the existing design;
- improve safety for construction personnel;
- reduce overall technical risk;
- develop new cost and schedule-effective rig installation methods;



Conductor Supported Platform Configuration and Major Components.

ICON worked closely with the client and developed recommendations for modifications to the existing substructure and topsides design. Some of the modifications included:

- reduced number of substructure and topsides components;
- no diving or major construction work below the water surface;
- a single-piece substructure design; and
- simplification of the topsides structures.

Even though the platform was already being fabricated at a yard, ICON and the client were still able to significantly improve the installation sequence, duration, costs and risk within these constraints.

For future platforms, the client will be able to implement all recommended enhancements to the CSP design.

Conductor Supported Platform – Drill Deck Module.

Platform Data:

Water depth	28m
Lower Substructure Weight	180mT
Topsides Weight	400mT

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