



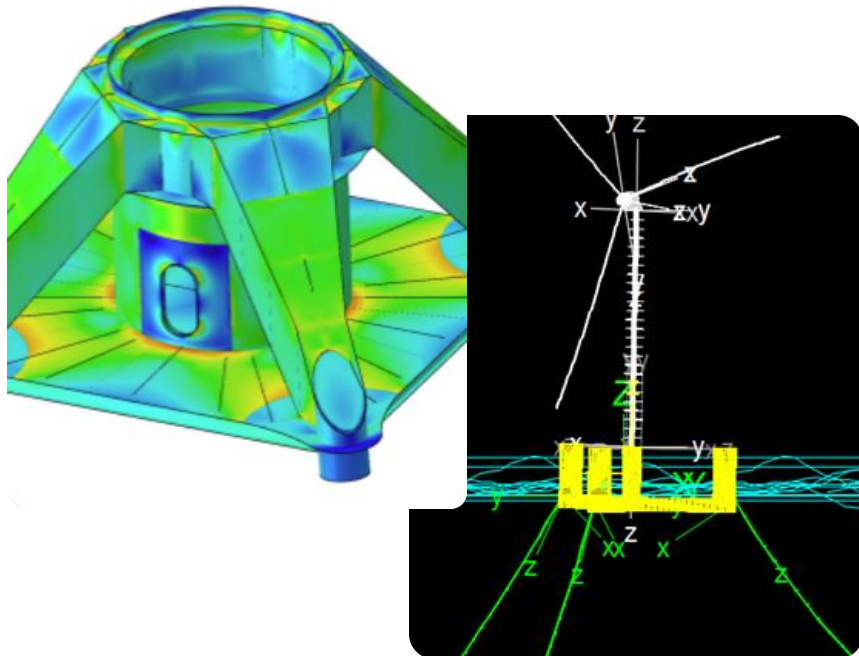
Lessons Learned for Early-Stage Offshore Wind Project Design

27 February 2025

Venterra's Design Expertise

Fixed and Floating Offshore

Feasibility to detailed design studies of foundations (WTGs & substation) including Owner's engineering services.



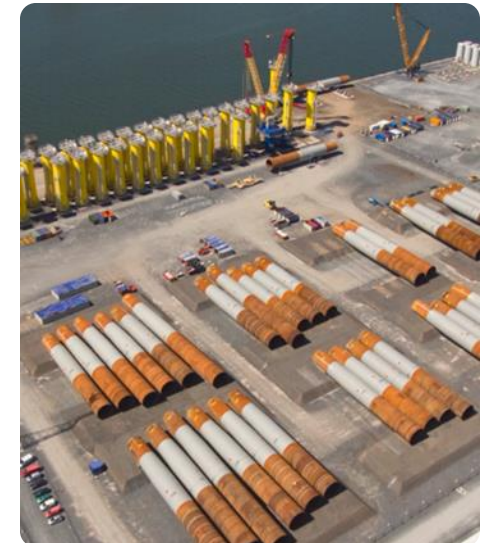
Transport & Installation

Considerations of cabling, routing, material selection, logistics.



Port & Harbours

From assessment to design, planning, environmental assessment, and infrastructure development



Agenda

Lessons Learned for Early-Stage Offshore Wind Project Design

The importance of involving owner's engineers early in the process: avoiding design inefficiencies, regulatory setbacks, and costly rework

The Importance of an Owner's Engineer

1. What does an Owner's Engineer do and where do they fit on the team?
2. How an Owner's Engineer helps a developer identify and manage early-stage project risks
3. How an Owner's Engineer helps a developer minimize project costs from the start

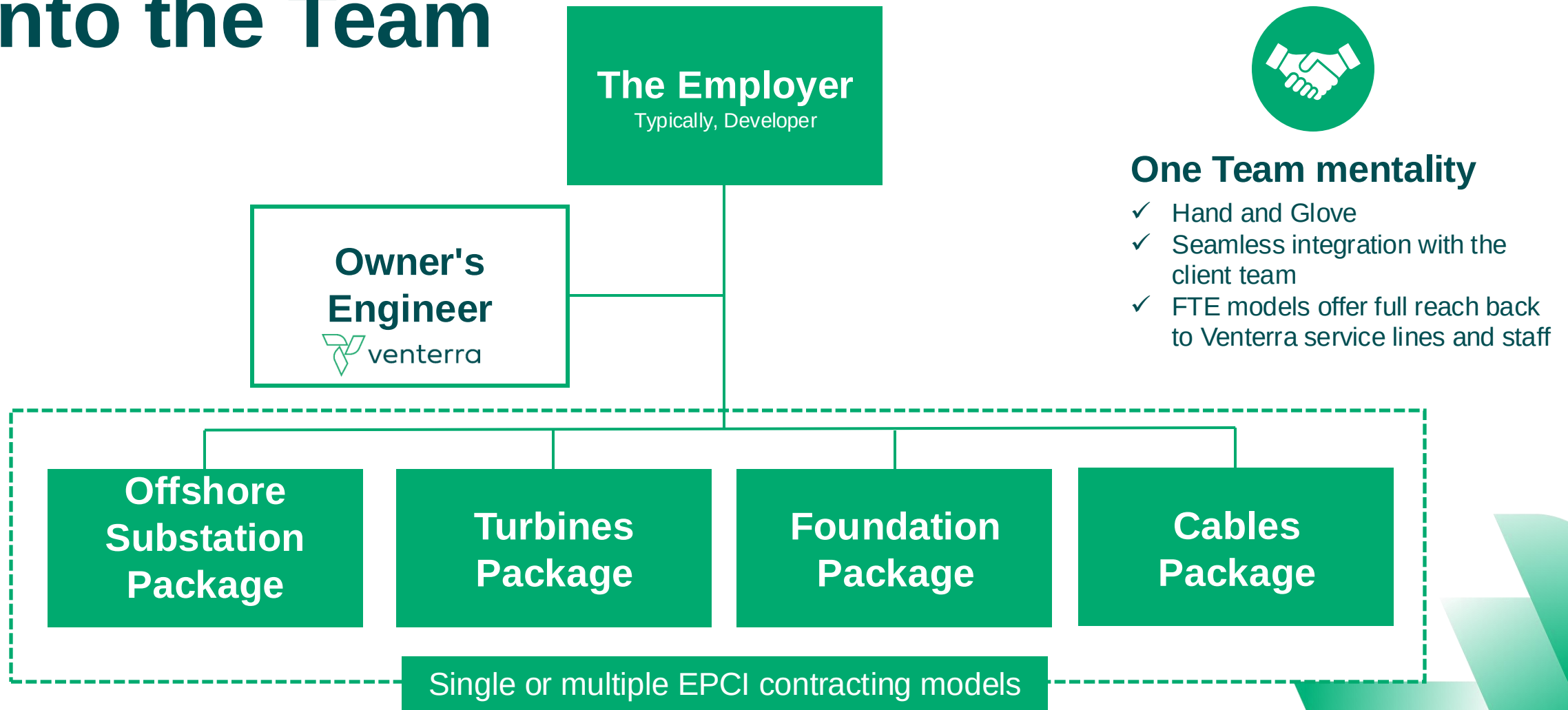
Case Study

1. Japan OSW 1st Round Projects

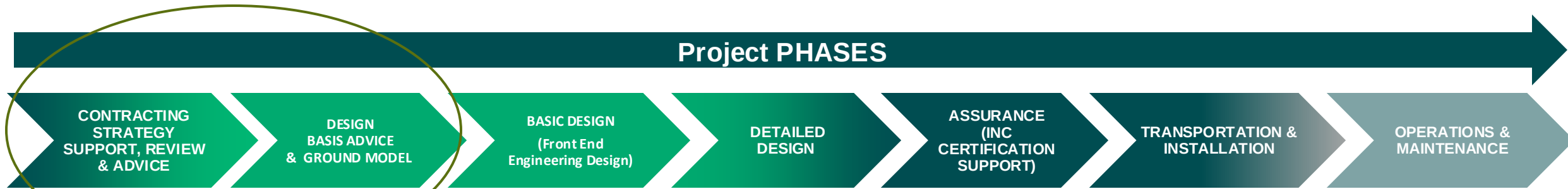
What Does an Owner's Engineer Do?

An owner's engineer, also known as the client's engineer, is a role undertaken to protect the owner's interests by ensuring compliance and efficiency in commercial, technical, quality and safety in all aspects of project delivery.

How an Owner's Engineer Fits into the Team



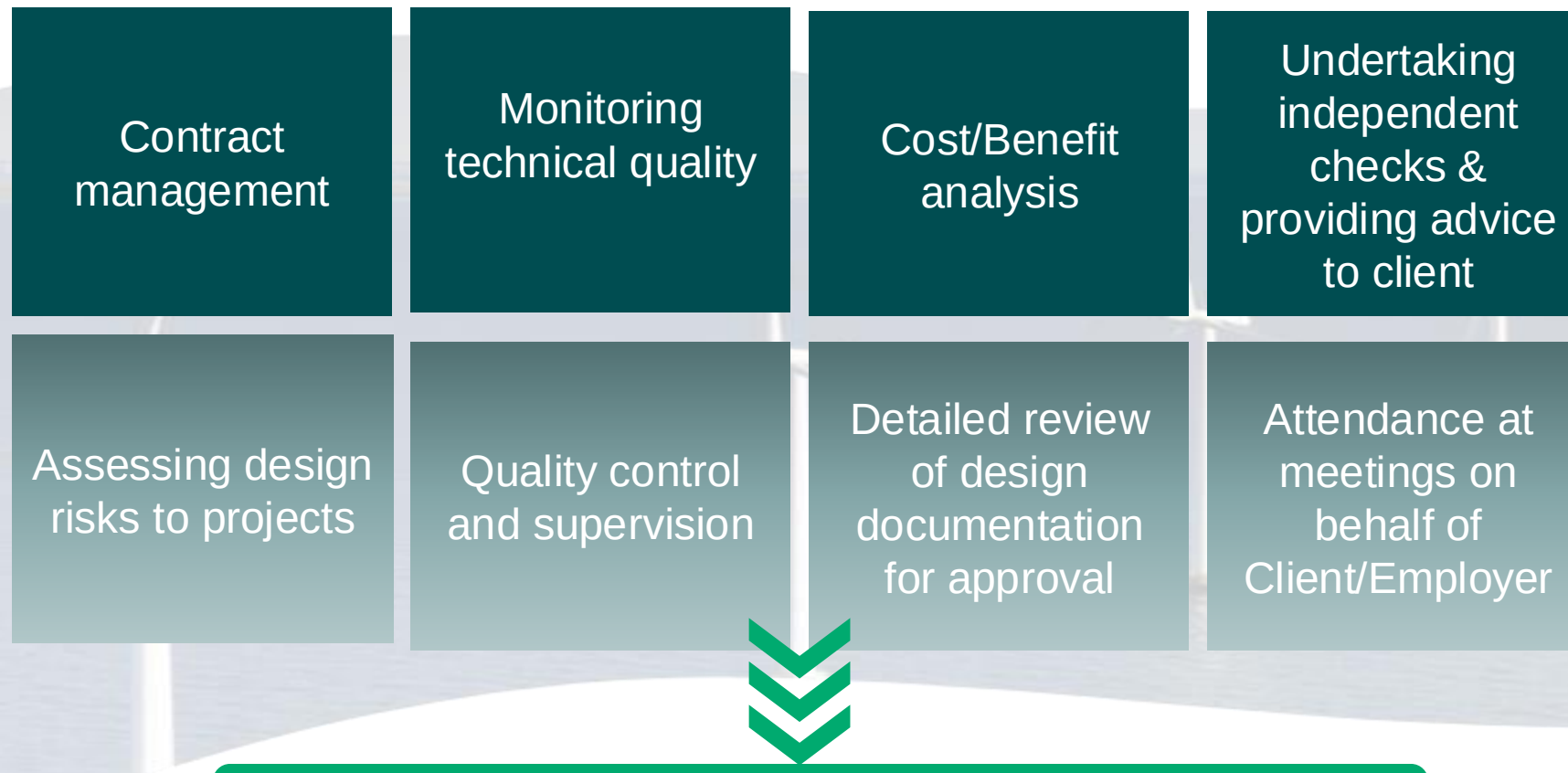
Identifying & Managing Early-Stage Risks



Key Risks

1. Contractual Risk	Who is taking the Soil Variability Risk ? Delay risks? Change of design risk?
2. Design Basis	Input data variability , ground model knowledge, presence of shallow gas?
3. Design Risk	Use of correct design methodology, and correct design assumptions .
4. Certification Risk	Delay in certification, EPCI contractor delays etc.
5. Transportation and Installation Risks	Supply chain delays, risk in installation of pile (refusal/pile run risk).
6. Operations and Maintenance Risks	Effects of seabed scour, monitoring blades, replacement parts etc.

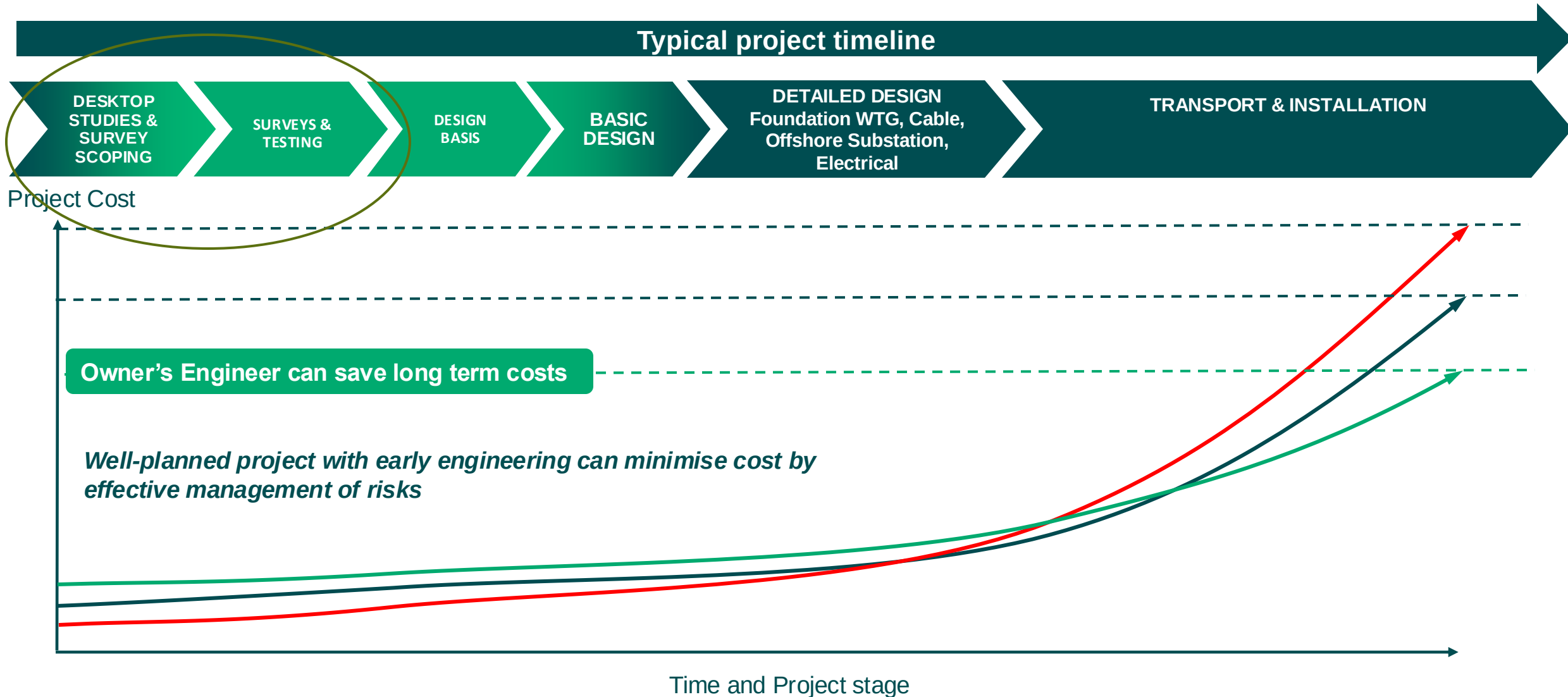
Typical Owner's Engineer Derisking Activities



Technical disciplines cover Geotechnical, Structural, Metocean, Environmental, UXO, T&I, Survey, Contractual Matters

De-risk project for the client (Schedule and Cost reductions)

Helping to minimise project costs



Early-Stage Owner's Engineer Case Study

Japan OSW 1st Round Projects

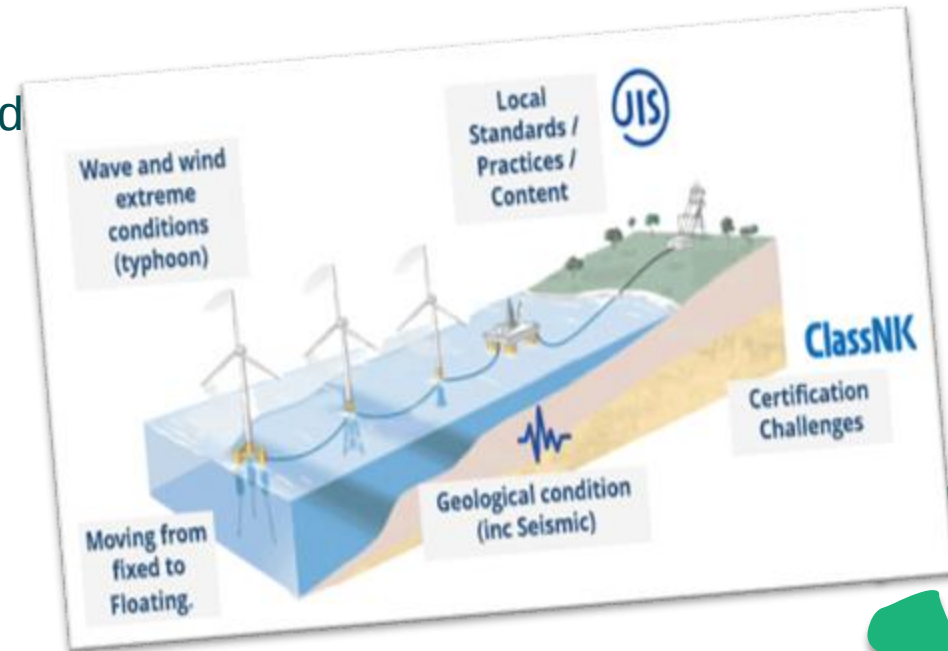


Japan OSW 1st Round Projects



In 2023, GDG (a Venterra member company) was awarded Owner's Engineer to all three Japan 1st round auction projects.

- Deep technical knowledge: geologic setting (e.g., faulting, seismics, cemented soils), geohazards (liquefaction)
- Experience in APAC/Japan: certification process through ClassNK procedures
- Academic connections and local partnership: Nikken Sekkei and GMS.



Value of the Owner's Engineer in the Case Study

Efficient design and cost savings

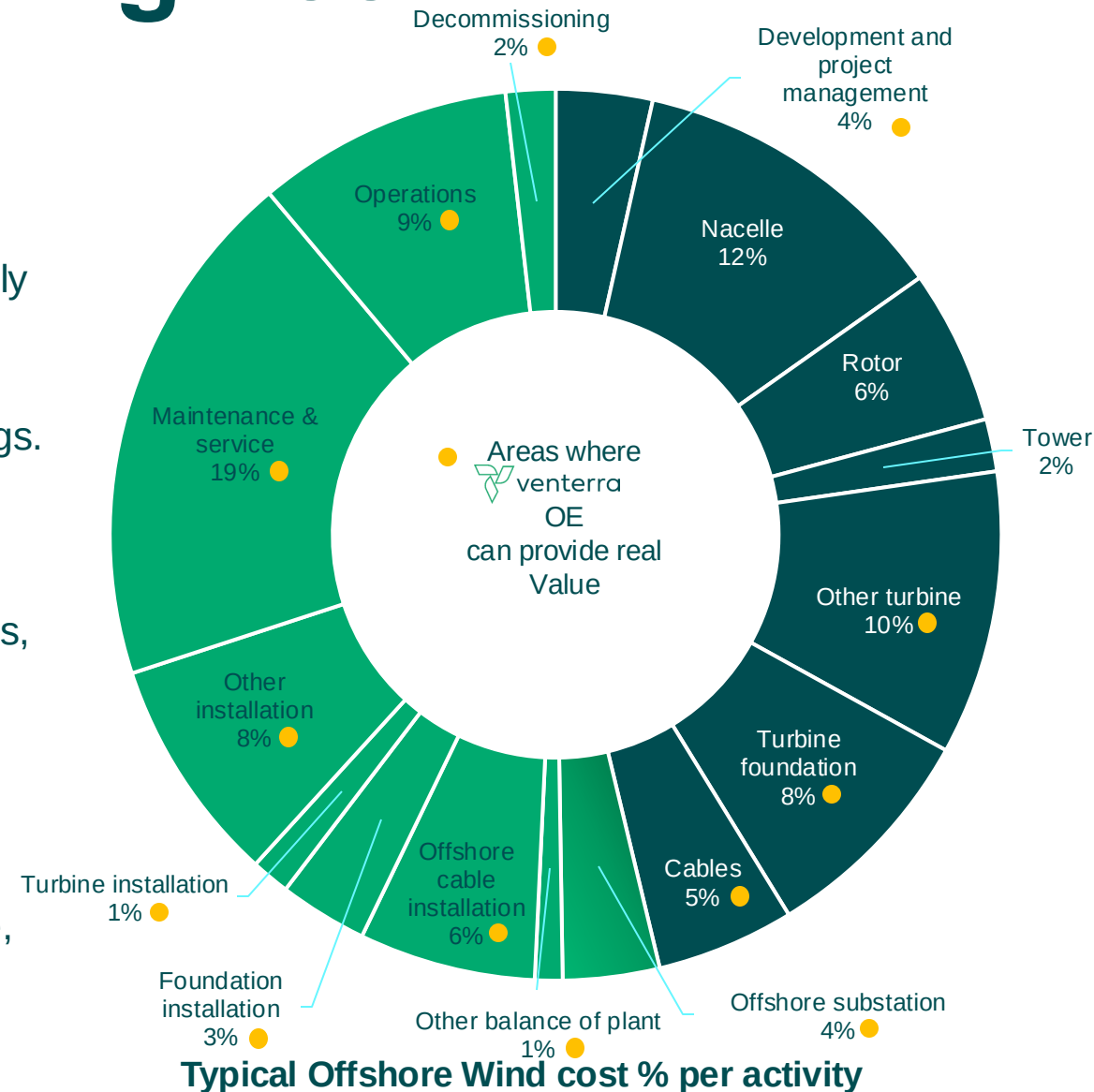
- Implement comprehensive technical evaluations that rigorously assess the EPC Contractor/ Designer, identifying and addressing inefficiencies to ensure optimal performance, minimize certification delays, and drive substantial cost savings.

Unforeseen ground conditions claims

- Important to safeguard against unforeseen ground conditions with robust contractual frameworks that clearly define liabilities, including soil parameter ownership, preventing potential litigation.

Schedule assurance

- Need transparency and accountability in scheduling with continuous, rigorous oversight throughout the project lifecycle, engaging all relevant stakeholders with well-informed challenges.



Get in touch



David Champness

BSc (hons) MSc CGeol EurGeol FGS RoGEP

Asia Pacific Director

David.Champness@venterra-group.com



Dr Indrasenan Thusyanthan

FICE CEng CMarEng MEng PhD (cantab)

Global Offshore Director

indrasenan.thusyanthan@venterra-group.com



www.venterra-group.com