

Multi-Contracting vs. EPCI BoP

Erfahrungen und Konsequenzen für die Projektabwicklung

Offshore Tage, Warnemünde, 1st March 2018

Hinnerk Maxl, K2 Management GmbH



For better energy projects

Structure

1 Introduction

2 K2 Management

3 Situation & Challenge

4 Supply chain & contract structure

5 Risk Management approach

6 Questions/Discussion

Hinnerk Maxl, K2 Management



Hinnerk Maxl

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CURRENT TASK

- Balance of Plant (BoP) Package Manager **OWF Deutsche Bucht**

PROFESSIONAL EXPERIENCE

- More than 10 years experience in leadership as nautical, diving and EOD officer as well as deputy commander 1998-2010
- Functional and managerial responsibility in offshore wind and project management since 2010
 - ✓ Procurement & execution support for **Vattenfall's DanTysk** installation logistics during 2010/2011, 2013/2014
 - ✓ Consultant for maritime issues & project management with K2 Management in 2011/2012
 - ✓ Contract Manager for the Installation contracts for **Meerwind SüdiOst** (WIV, CII, OSS) in 2011/2012
 - ✓ 2011/2012
 - ✓ Package Manager Installation Logistics for **Vattenfall's Sandbank project** 2012-2016
 - ✓ Technical Project Manager **OWF Deutsche Bucht** until Financial Close 2016/2017

EDUCATION

- Diplom-Kaufmann (Business Administration)
- International MBA

Executive Summary

- K2's global, independent services for wind and solar project planning and management is our unique selling proposition and covers all life cycle phases of an asset
- The contracting strategy is a key mechanism to influence the project risk profile and shall be the driver for the organizational and procurement setup of a project
- In order to determine the optimal contracting strategy, one has to consider the individual case and (re-)assess what suits best for the specific project
- Supply chain mapping and capability analysis enables a thorough assessment of dependencies, shortfalls and risks in order to find a robust AND efficient solution
- The classical EPCI multi-contracting requires a certain project team size to cover all aspects of a project life cycle – this is considered the base case
- Splitting up certain EPCI packages will enable more influence and more insight, however, do require more interface responsibility and will change the risk exposure
- Ultimately the added value of the split should be higher than the additional organizational efforts and potentially higher risks accepted
- Project size and/or supply chain constraints may lead to other constellations, which will again change project organization requirements
- Whether a considered 'leaner' contract landscape results in leaner project organization can be challenged, since the overall extent of works has not changed
- In order to enable dedicated risk management during the project planning and execution supply chain transparency and information is paramount
- Proper risk assessment enables quantitative risk analysis and contingency sizing, which can be used to optimise risk/scope allocation decisions and thus costs

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K2 Management – Services, locations and clients

- Offers 100 % independent service for all phases of a project
- 160+ employees with an overall experience of 150+ offshore and 1.200+ onshore project assignments in 30+ countries
- Including significant scope assignments in Veja Mate and Deutsche Bucht OWF (full EPCI project management scope)



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Situation

- Still different approaches for contracting strategies are being applied:
 - Whilst some developers tend to increase the extent of contract consolidation (both horizontal (e.g. BoP) and vertical (EPCI))
 - Others clearly follow a more diverse approach with separate package related EPCI contracts or
 - Even a split into project phases (design, supply, T&I)
- Interfaces become technically “standardized”, however, timing and involved risks remain crucial factors
- The contracting strategy is a key mechanism to influence the project risk profile

Challenge

- There is **no “one-size-fits-all”** approach - for each strategy the specifics of the individual project must be considered
- Some project stakeholders tend to go for applied strategies, without an individual assessment for the project in question
- Do you know your supply chain and its capabilities/weak points? - Black boxing can already become an issue in a multi-contracting environment.
- How does a “0”-subsidy environment influence the contracting strategy (Projects willing to take more risk ? Lower margins for all involved)?

In order to determine the optimal contracting strategy, one has to consider the individual case and (re-)assess what suits best for the specific project

Factors influencing the contracting strategy decision



- Capabilities of the project's organisation and the supply chain
- Risk allocation and risk management approach
- Stakeholders' point of view (e.g. project finance, equity partners, balance sheet)
- Project schedule → How decoupled or how risk exposed is your Programme?
- Competition? → How many capable BoP contractors are there actually?
- Saving potentials /LEC optimization vs. increased organizational costs

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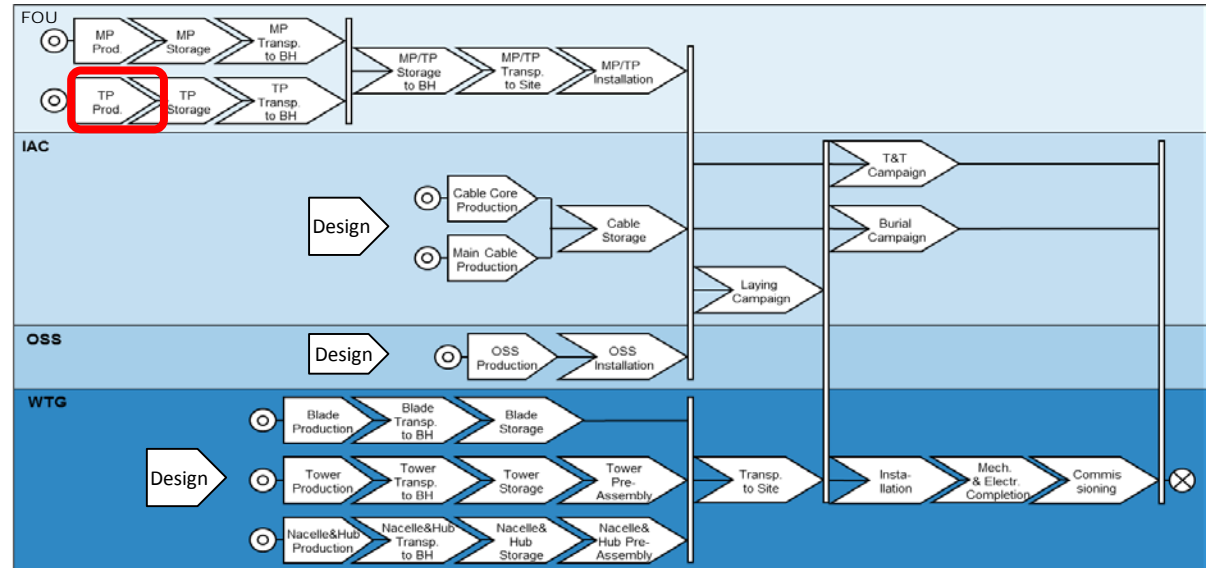
Supply chain mapping and capability analysis enables a thorough assessment of dependencies, shortfalls and risks in order to find a robust AND efficient solution

Dedicated supply chain analysis

Do you know your supply chain??

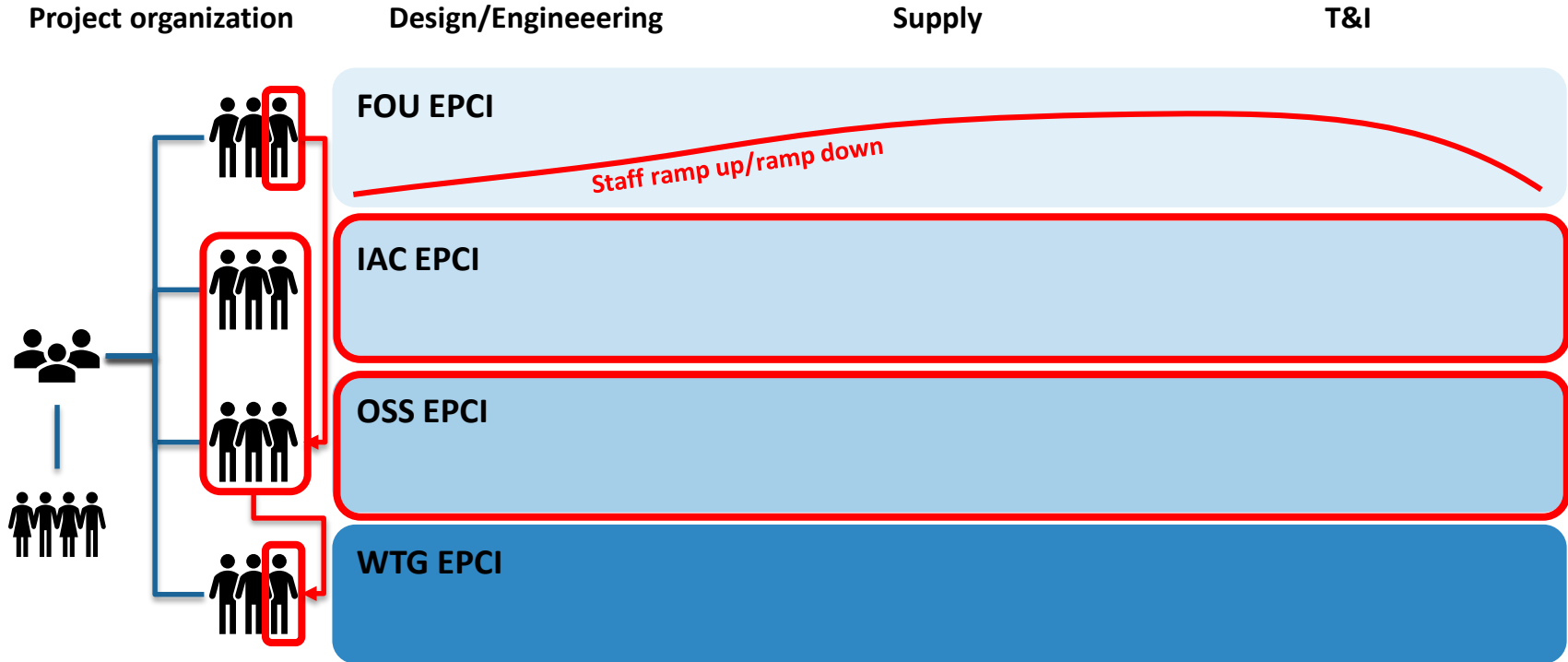
Analyse your supply chain's, its actors' and your own capabilities

- HSE awareness/ culture?
- Product quality?
- (Spare) Capacity/ resilience?
- Lead times
- Project and Supply Chain Management skills?
- Securities?
- Logistics?



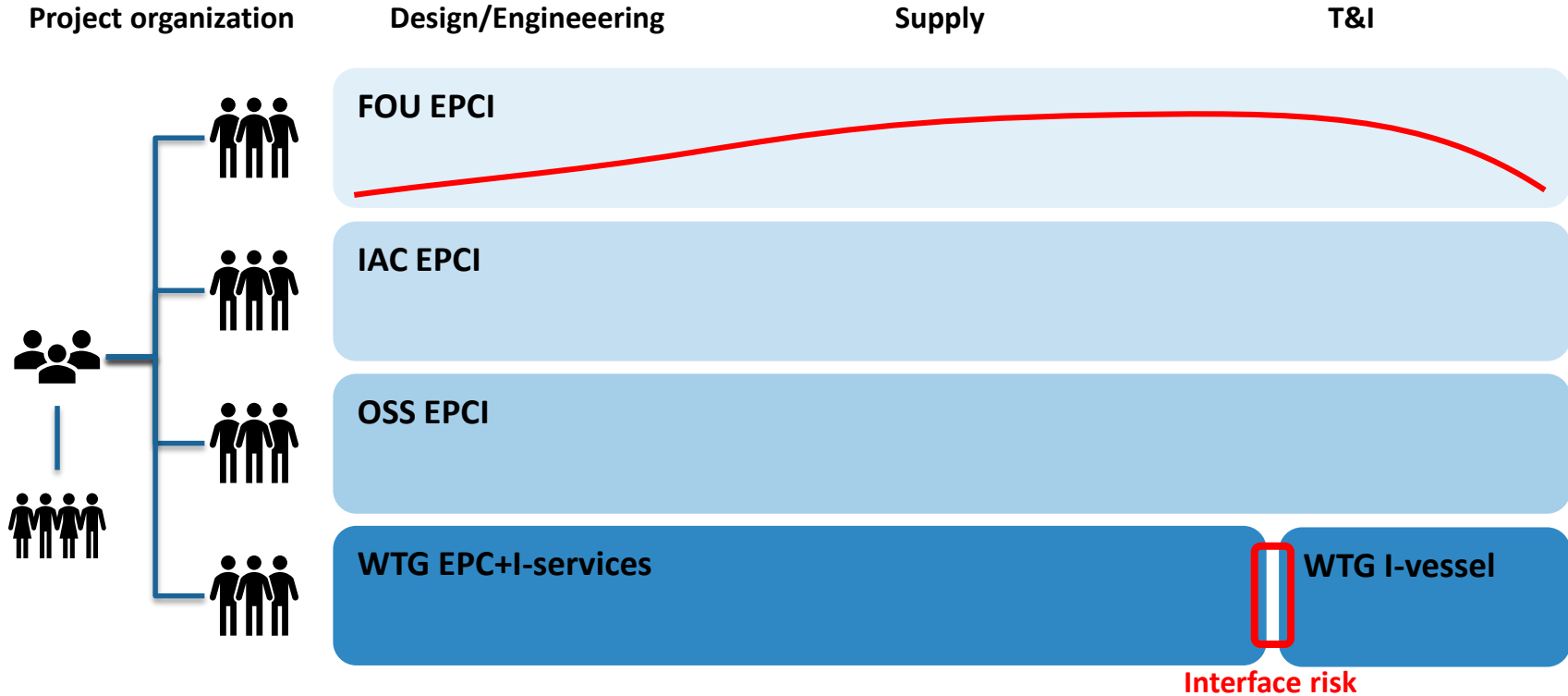
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Packages & EPCI scope allocation



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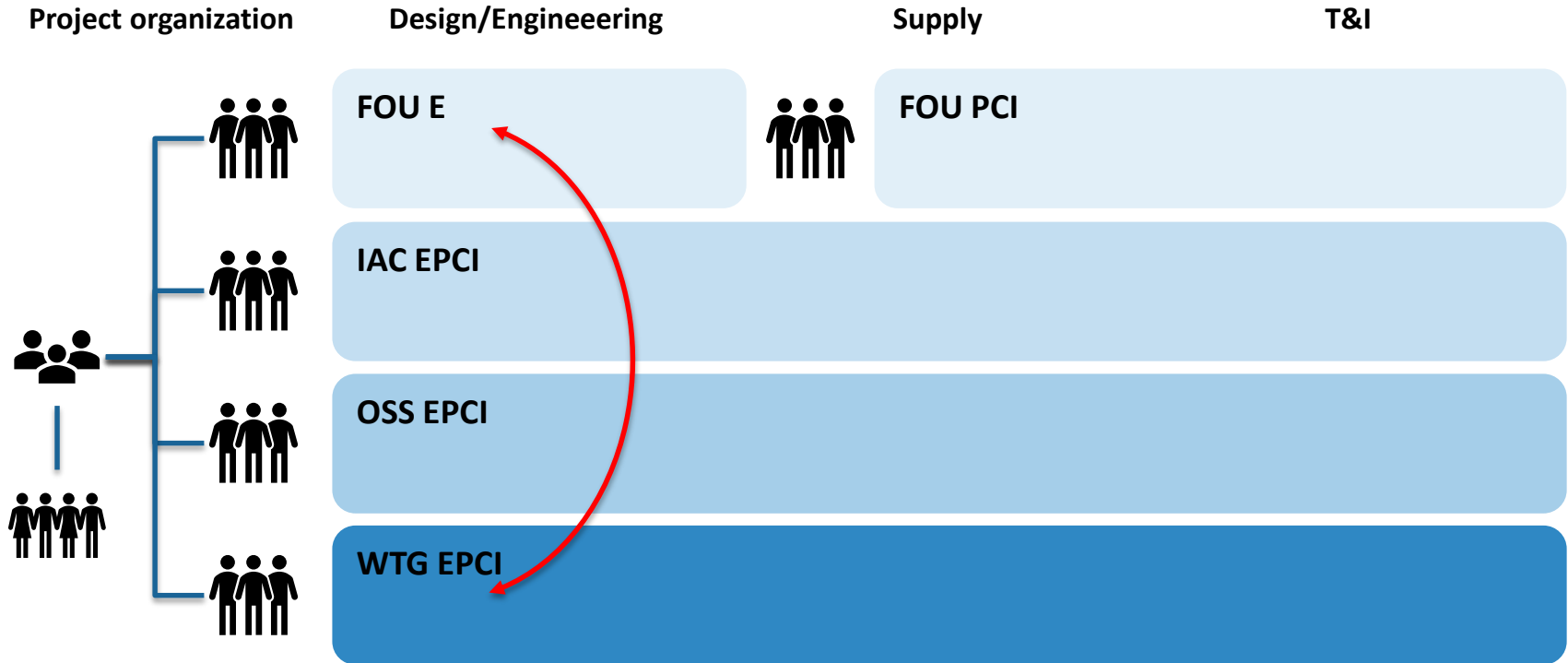
Packages & EPCI scope allocation



Interface risk

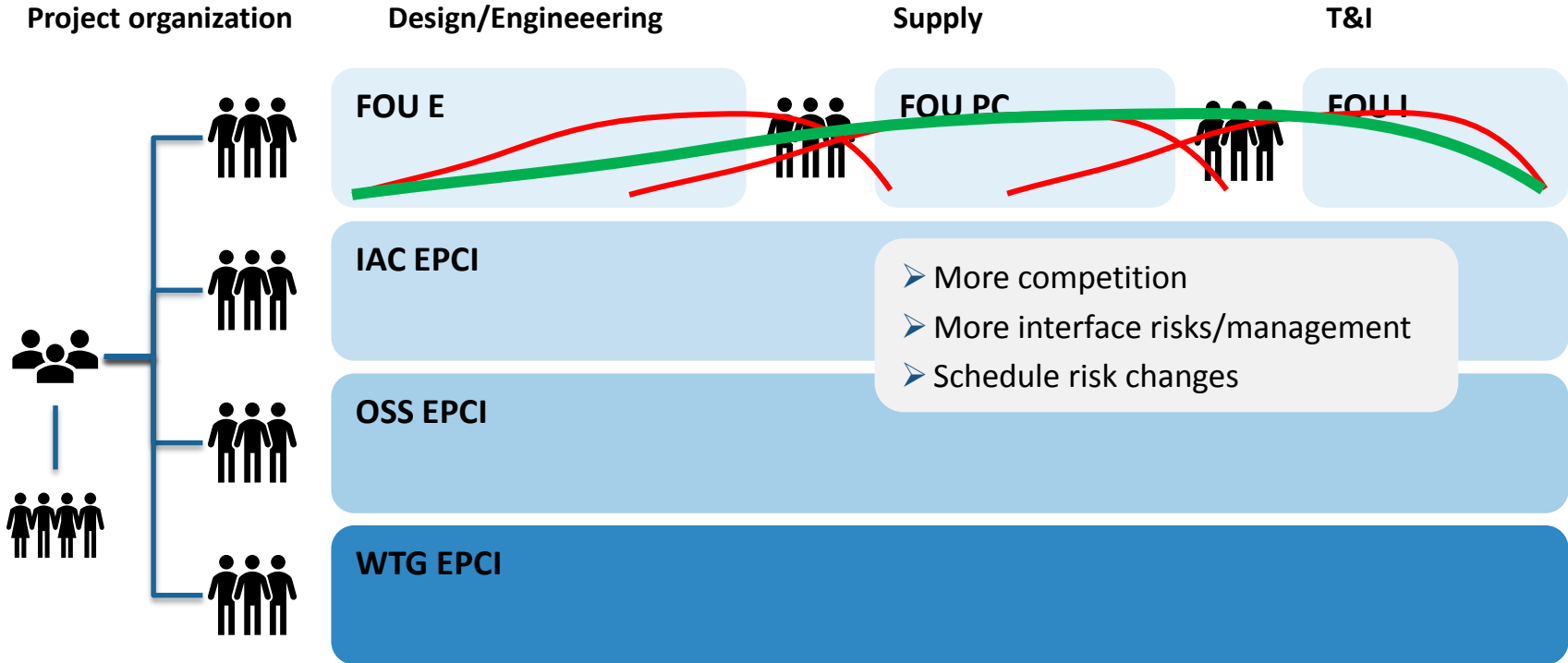
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Packages & EPCI scope allocation (cont'd)



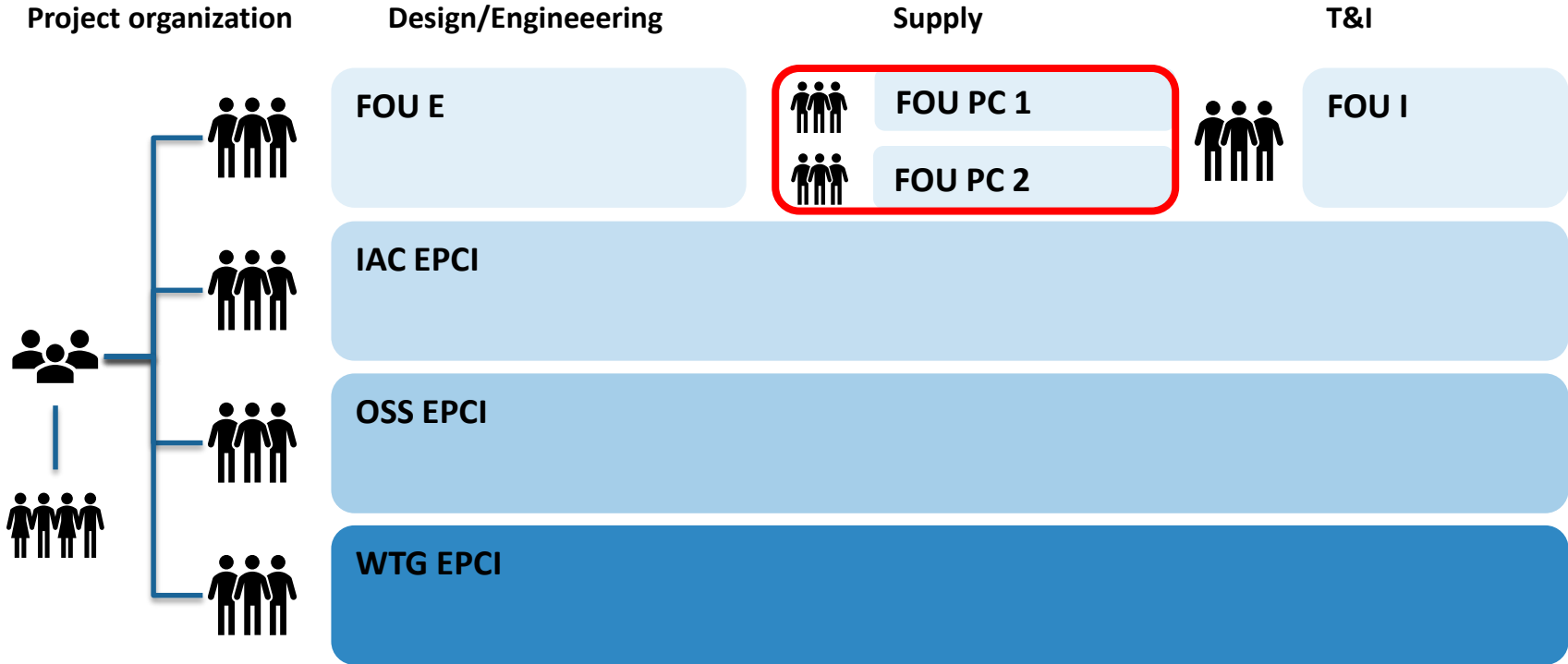
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Packages & EPCI scope allocation (cont'd)



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Packages & EPCI scope allocation (cont'd)



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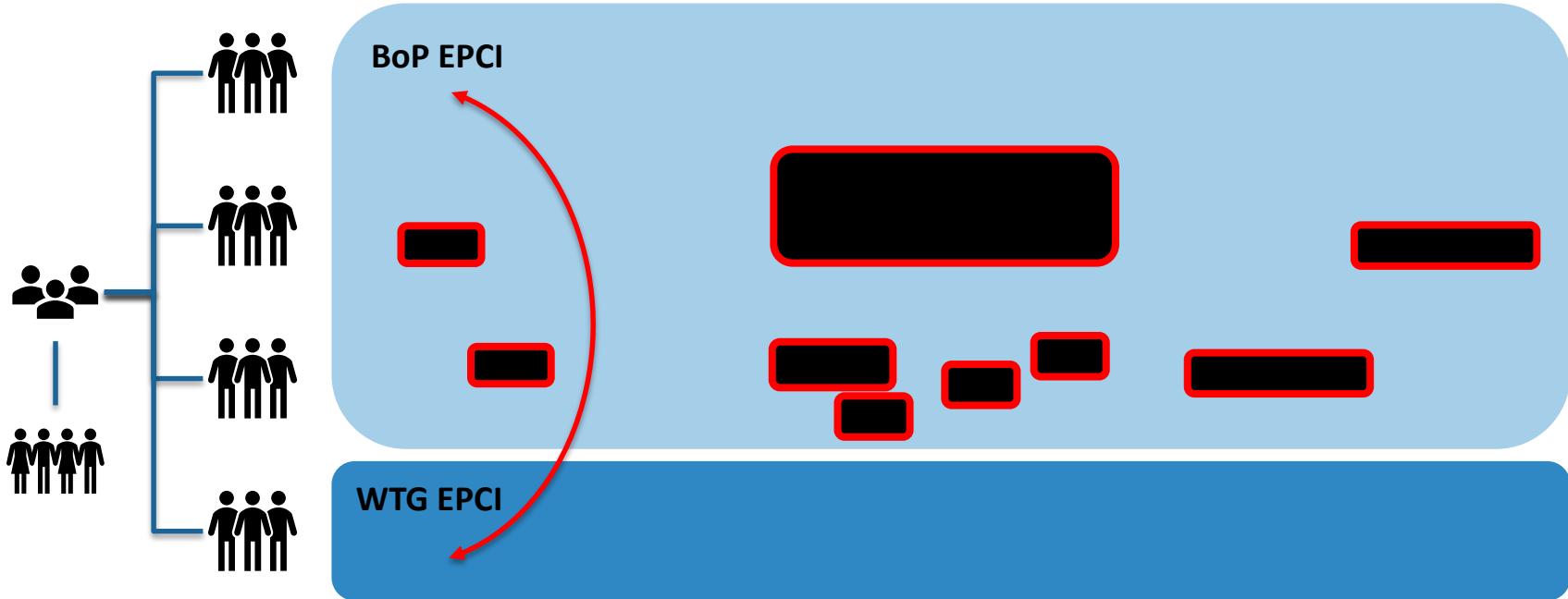
Packages & EPCI scope allocation (cont'd)

Project organization

Design/Engineering

Supply

T&I



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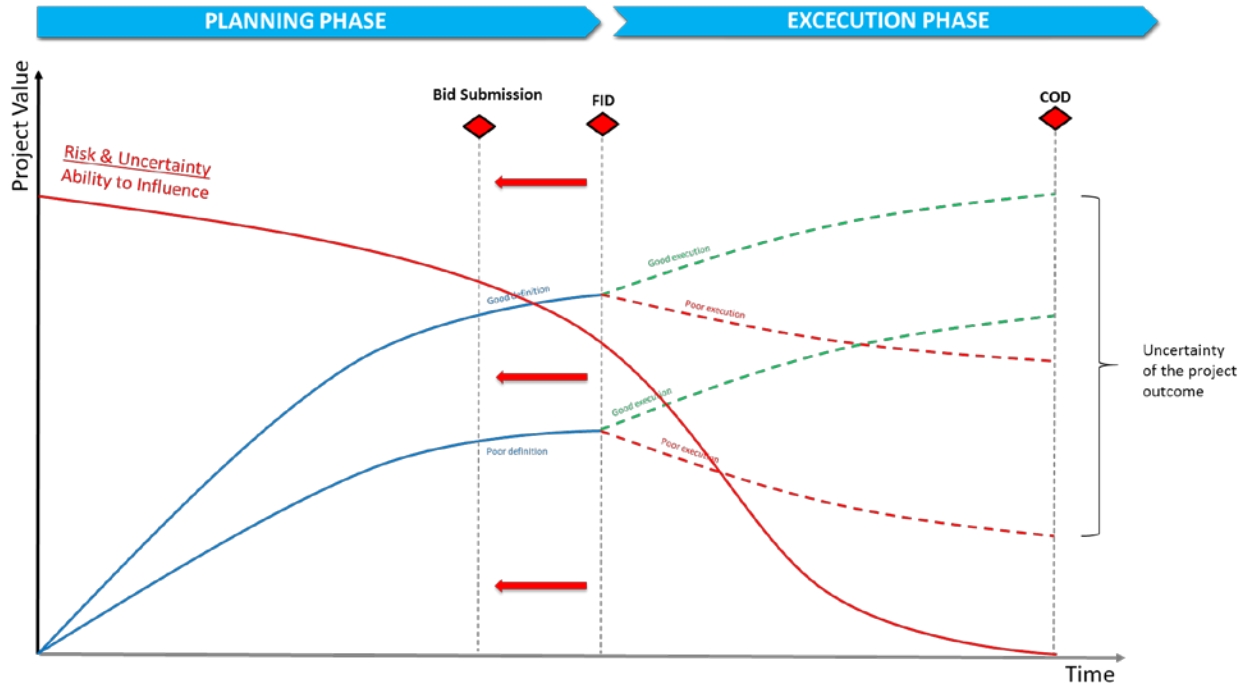
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Risk & uncertainty management



The project's outcome / value depends on:

- The **quality of the project definition** (e.g. quality of the design and engineering, risk profile of the schedule, quality of the contracts, etc.)
 - The **quality of the project execution** (e.g. execution of the contracts, quality control, claim management, etc.)
- **These quality factors are largely depending on the contracting structure and how much insight is possible to understand project's risks.**

Proper risk assessment enables quantitative risk analysis and contingency sizing, which can be used to optimise risk/scope allocation decisions and thus costs

Risk considerations for contracting

- Who is best to handle the risk?
- Contractual risk allocation is a false conclusion!
- Quantitative risk analysis and project specific contingency sizing (no flat rate application)
- Pro-active and progressive risk mitigation requires contractual mechanisms or grip on your Supply Chain
- Are LD schemes a risk mitigation???
- What about incentive mechanisms?
- In any case transparency is required
 - Transparency regarding risks, regarding supply chains, regarding issues arising during execution
 - Only a sufficient transparency will enable joint risk mitigation



Thanet Offshore Wind, Copyright Peter Barker

Thank you for your attention!

