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Optimizing the Supply Chain to De-risk Project Execution

An In-Person Event

FWS

Organized by FWE Quest Offshore

The Westin Memorial City, Houston 28 - 29 June 2021

FloatingWindSolutions.com

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Shell's climate ambition

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- Second level
  - Third level
    - Fourth level
      - Fifth level

A NET-ZERO EMISSIONS ENERGY BUSINESS BY 2050 OR SOONER

Changing our products and operations in step with society and our customers

Own operations: net-zero emissions

Reduce the emissions from the manufacture of all our products[1] to net-zero by 2050 or sooner

Energy products: carbon intensity in line with 1.5 °C

Reduce the Net Carbon Footprint[2] of the energy products we sell by 30% by 2035 and by 65% by 2050.
This is consistent with society's ambition to achieve a 1.5°C future

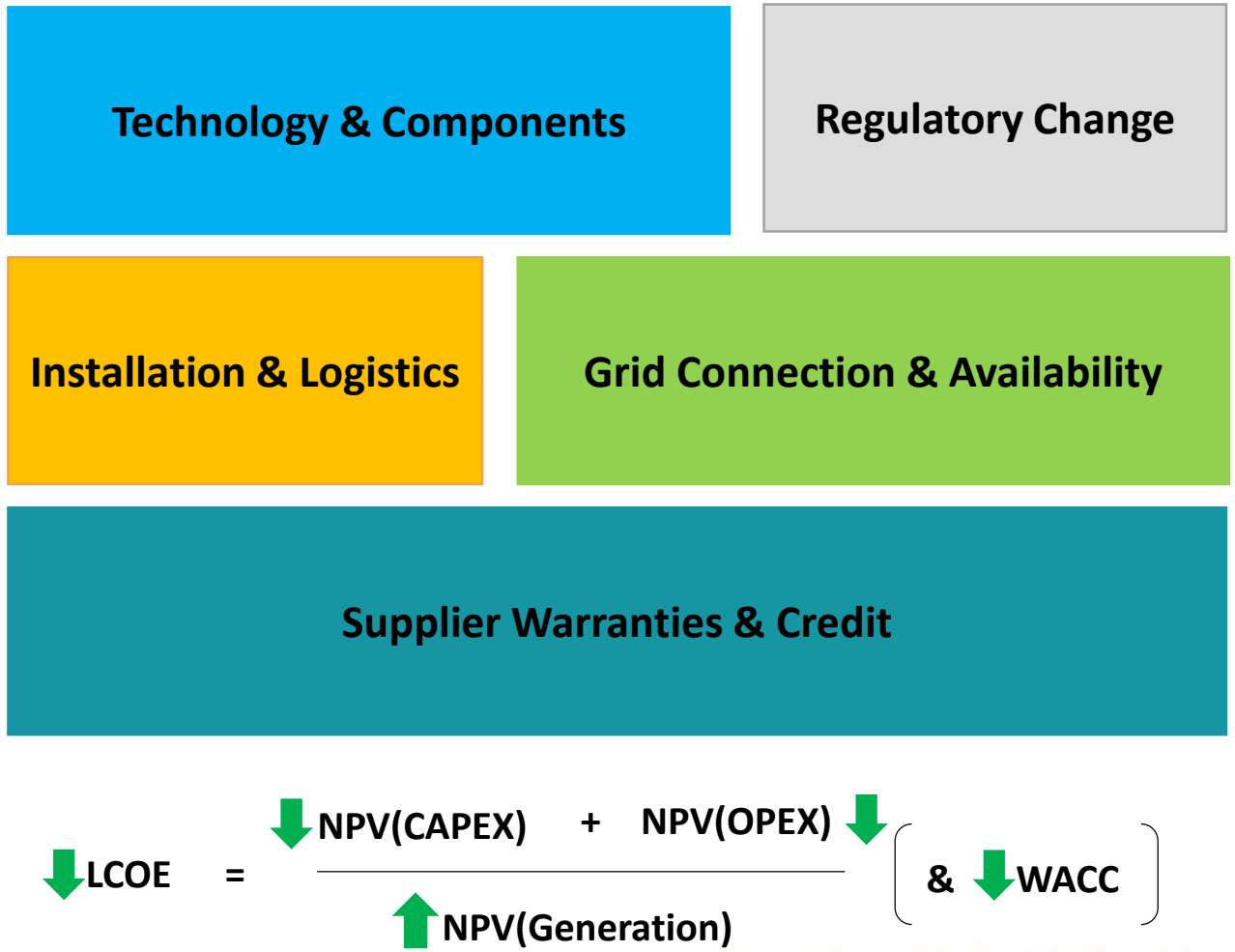
Remaining customer emissions: fully mitigated

Work with customers to reduce the emissions from their use of our energy products[3] to net-zero by 2050 or sooner

Why we need to de-risk?

Key Driver in decreasing the levelized costs of electricity to customers

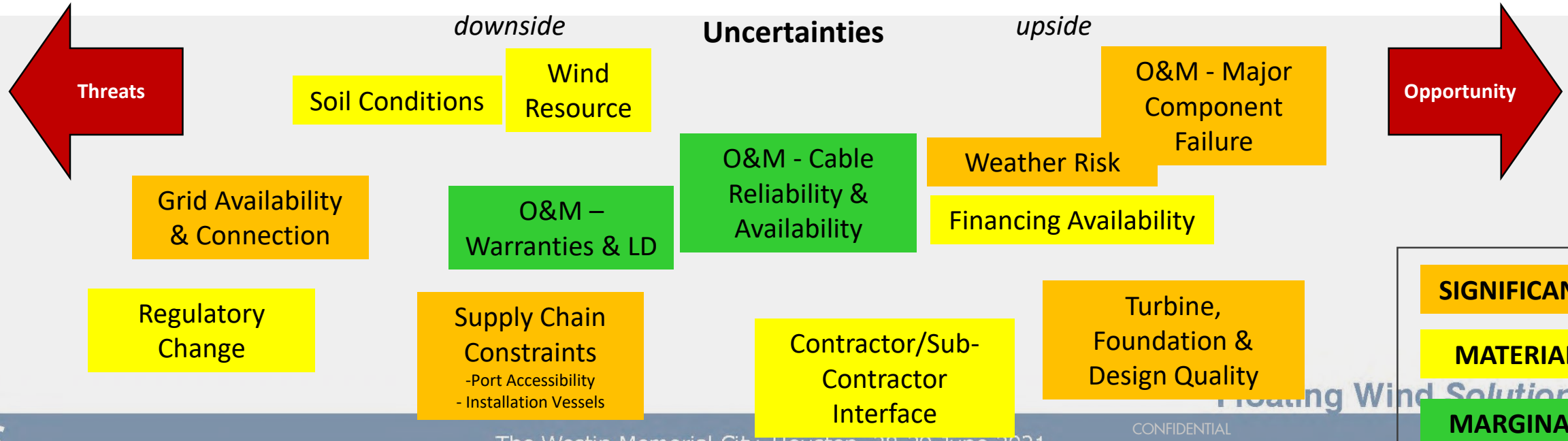
- Increase certainty of on-time project delivery
- Eliminate efficiencies in value chain, drive standardization
- Attract cheaper cost of capital into market
- Minimize penalties, contingencies and insurance premiums



De-risking: Where do we start

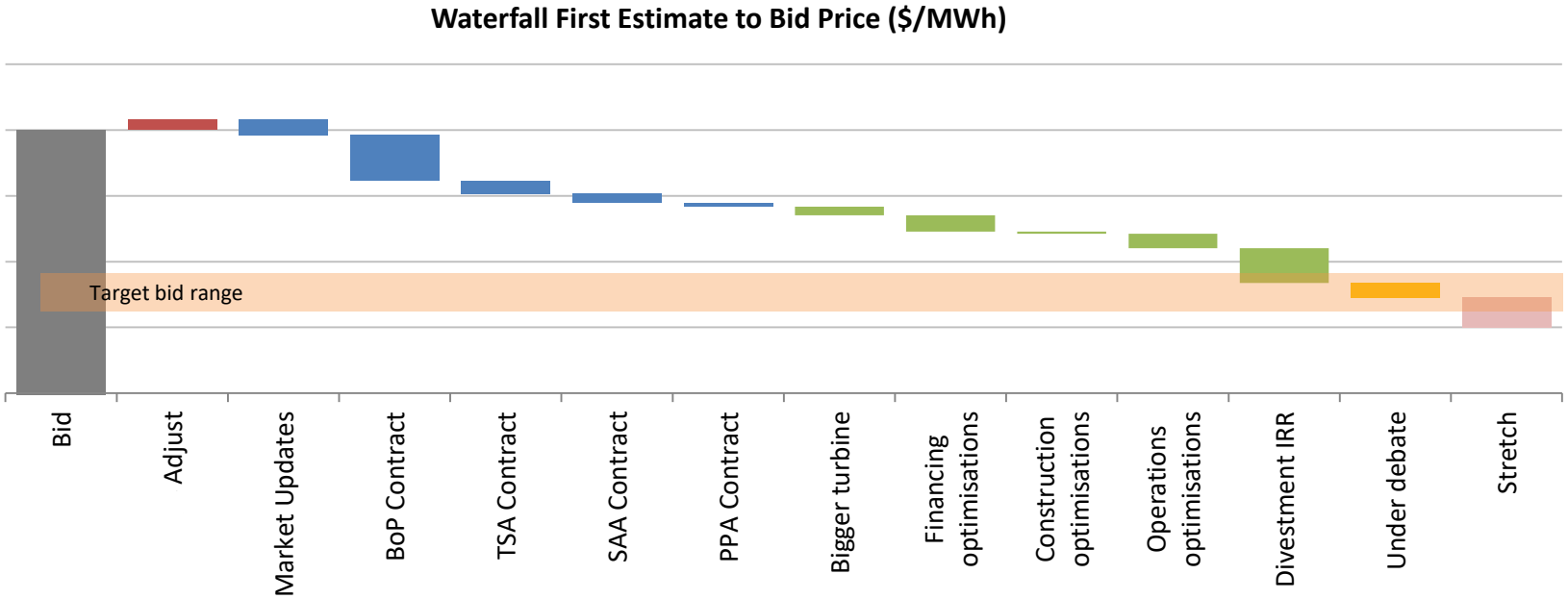
Developer's Perspective

1. Understanding what you are trying achieve, the best way to do it, and who/where to do it
2. Managing your probabilistic outcome and achieving it
3. Supply Chain – Work Execution in a predictive way to increase on-time delivery



Predictable outcome is key for the entire supply chain

Wind Development Journey - Present vs. Future

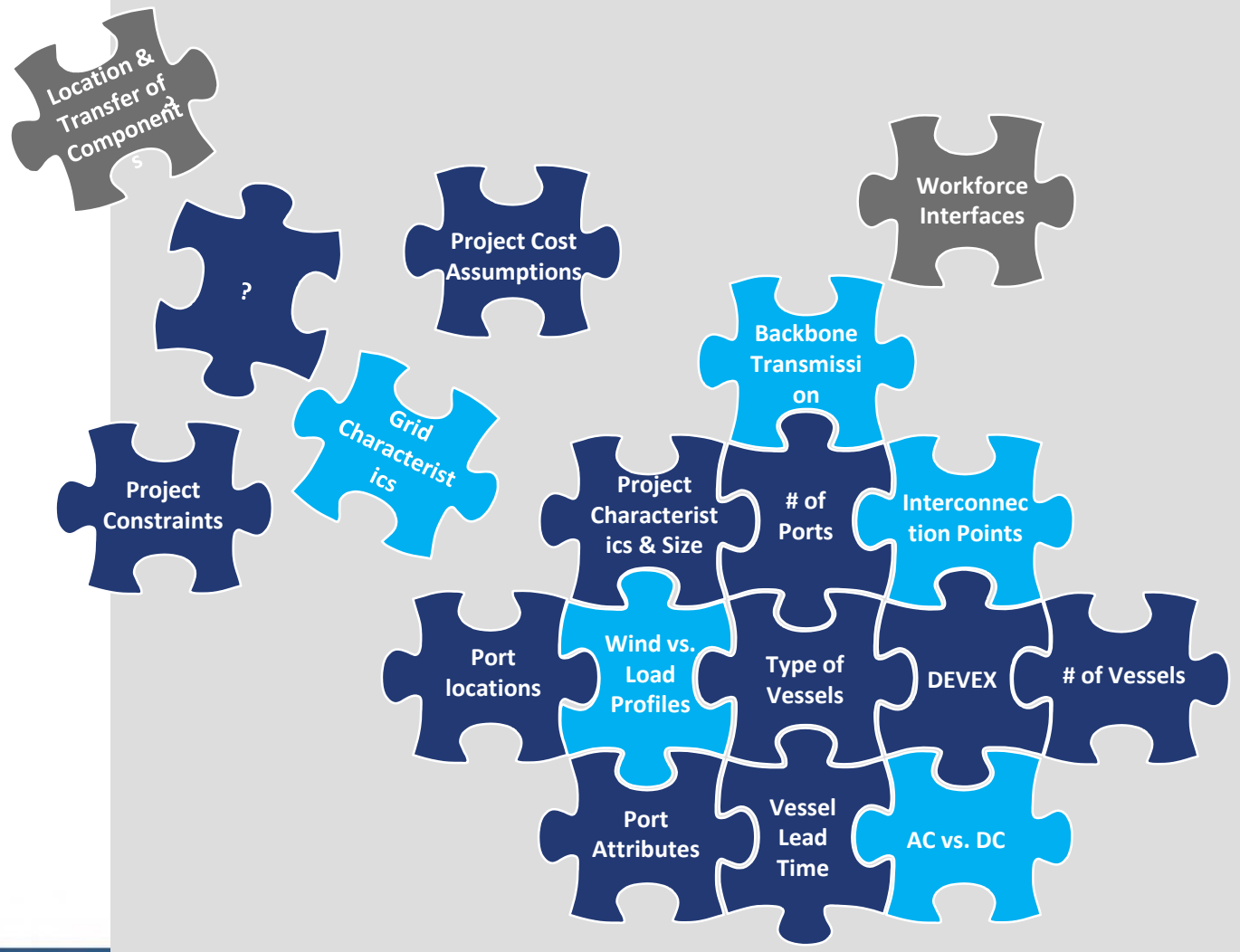


to bid	to financial close	to 1st production	Operations period
Sharpen commitments - Contracts (PPA!) - Assumptions, risks **Best market sounding** - Competition - Banks - Investors	**Finalize contracts** - TSA/SAA/BOP/PPA - Banks **Line up buyers** - Equity - (green) Power customers **Assess forward curves** - Lock-in FC timing - Lock-in Dilution	**Construction excellence** **Line up buyers** - Equity - (green) Power customers **Assess forward curves** - Lock-in refinancing - Lock-in Dilution	**Operational excellence** **Line up buyers** - Equity - Power customers **Assess forward curves** - Lock-in (green) power price

Whole Systems Approach to Optimizing Supply Chain

Tactics at hand to improve Project Delivery

- Effectively engage suppliers to get the “right scope” - to the “right people” - to get “the outcome”
- Listen to the Supply Chain subject matter experts - balancing act between developer RFI/RFP
- Simply shifting risk by way of EPCI Approach is not enough



De-Risking in Practice

Piloting to enable new Supply Chain

"New Innovation is not always about creating risk"

- Modularity – Existing Tower Mfgrs - Finding ways to maximize local skilled supply chain
- Transport & Assembly Optionality – Ability to transport by road and utilize conventional dock side crane
- Flexibility to utilize in multiple water depth conditions – shallow with gravity based fixed structure

TetraSpar Assembly and Installation

TetraSpar - a lateral brace painted and ready for assembly

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Shell Renewables & Energy Solutions

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