



# Floating Wind & Disruptive Technology

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# Introductions



**Úna Brosnan**  
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## Agenda

Introduction to Atkins

Safety Share

Offshore Wind Market – The global drivers

Floating Wind

Disrupter Technology



# SNC Lavalin - Atkins : Introduction

On July 3 2017, SNC-Lavalin and Atkins joined forces



- › A leading engineering and construction group in the world offering services in oil and gas, mining and metallurgy, infrastructure and power
- › Major player in the ownership of infrastructure

- › One of the world's most respected design, engineering and project management consultancies serving infrastructure, transportation and energy sectors

APPROXIMATELY  
**50,000**  
EMPLOYEES

SPEAKS  
 **70**  
LANGUAGES

WORK FROM  
OFFICES IN OVER  
 **50**  
COUNTRIES

REPRESENTS  
SOME  
**130**  
NATIONALITIES



# Offshore Wind : Safety Share

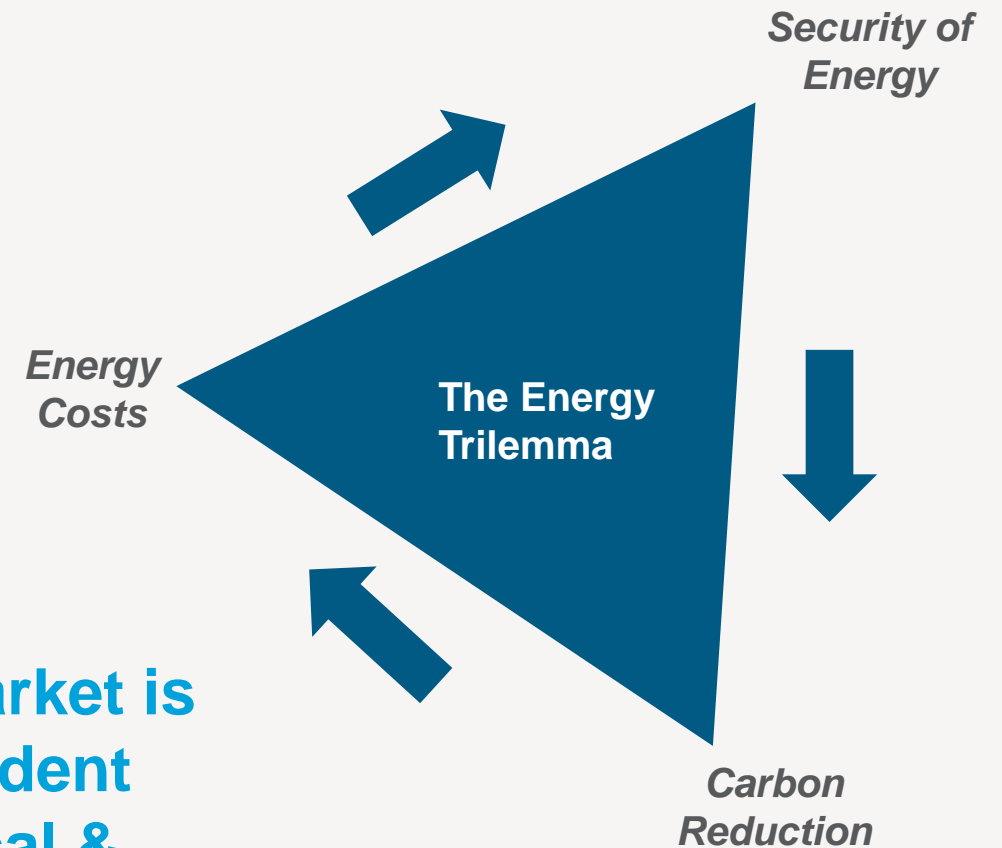


# Global Renewable Energy Drivers



Resilience v Cost

Our Global Energy Market is moving at an unprecedented pace from both political & technical & social perspective.



# Floating Wind

## Key benefits

Increased wind exploitation

Shore side assembly

Larger resource base

Significantly reduced ground risk

Conduct major repairs/upgrades

Deployment further **offshore**

Anchored moorings

Safety

**80% of the European offshore wind resource** is located in waters in excess of 60 m, where traditional bottom-fixed offshore wind (BFOW) is not economically attractive.

Country / Region	% of Offshore Wind Resource in deep water (>60m)	Potential floating wind capacity
Europe	80%	4,000GW
USA	60%	2,450GW
Japan	80%	500GW

Over **30 floating** wind concepts under development

For the most part, innovation for Floating Wind lies within the **design and Installation of the support structures**.



SNC • LAVALIN



# The Business Case for Commercialisation

Build on achievements to date

The opportunity for sector diversification, Jobs, Inward Investment,

Policy & Government Support

Energy security & Supply – realising our future targets

Route to market & Clear Pipeline

Innovation & Cost Reduction

Investor Confidence

Economic & Socio economic benefits



# Why Floating Wind within a sector deal?

***The technology ticks all the boxes of the UK's Industrial Strategy and aligns with the vision for a transformed economy***

## **Ideas:**

Innovation that delivers affordable and clean electricity in UK and globally

## **People:**

Good jobs at good wages in supply chain and export

## **Infrastructure:**

Ports and supply chain infrastructure improvement and general infrastructure upgrades in revitalization of deprived areas

## **Business Environment:**

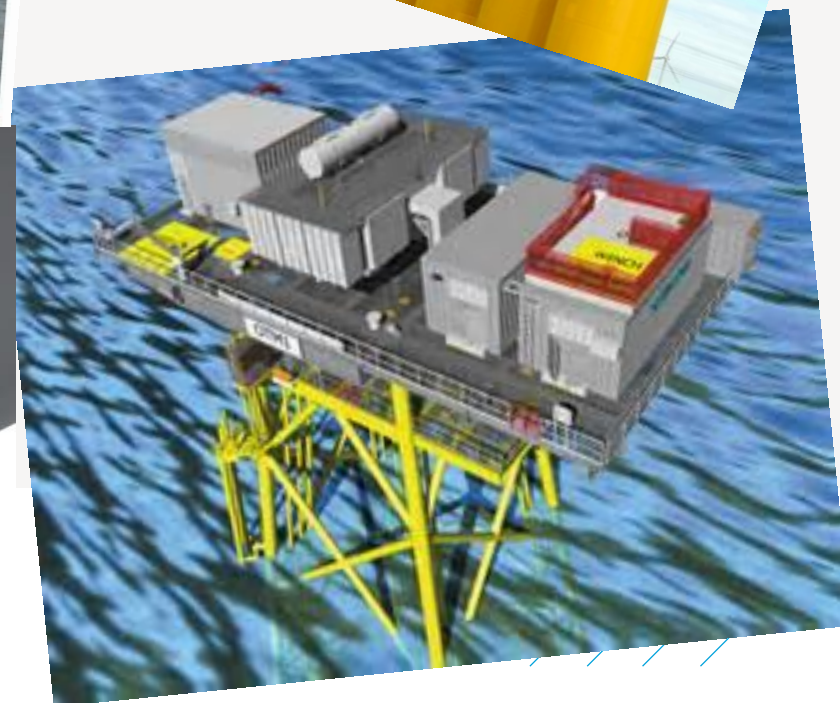
Future-proof diversification, inward investment, export opportunities

## **Places:**

remote areas, industrial areas, investment hubs to profit



# Innovation - The current disrupters



# Next Generation disrupters...

Floating technology

One / two bladed Turbines v kites

Horizontal v Vertical Axis

Automated O&M

Artificial Intelligence

Big data

Low frequency AC transmission

Ever larger turbine capacity - 10 – 15MW

Hybrid solutions

- › Wind – Wave Technology e.g. FPP
- › Integrated energy storage e.g. Batwind



# Thank You!



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