



UK OFFSHORE WIND SUPPLY CHAIN SPOTLIGHT

Showcasing UK Innovation & Excellence



EDINBURGH
12.12.23



WELCOME

UK Offshore Wind Supply Chain
Spotlight Breakout Stream 1

The Orsted logo features a blue circular icon with a vertical bar and a horizontal bar inside, resembling a stylized 'O' or a power symbol, followed by the word 'rsted' in a bold, blue, sans-serif font.



11.00 – 11.45:

Introduction to Ørsted and & Supplier Stories

- Ørsted and how we engage with the supply chain – Julian Das

Supplier Stories:

- Hutchinson Engineering – Steve Adams
- Sennen – Rita Desmyter

Introduction to Ørsted

Breakout session 1 – Supplier stories



Breakout sessions

11.10 am

Introduction Ørsted and supplier stories



Julian Das

Ørsted Supply Chain Development Manager

13.15 pm

Introduction to the Ørsted UK&I
Innovation Hub and pitch sessions: Site
Investigations



Alex Loudon

Ørsted Ventures and Open Innovation
Senior Ventures and Open Innovation Specialist

14.45 pm

O&M Services followed by pitch and panel
sessions

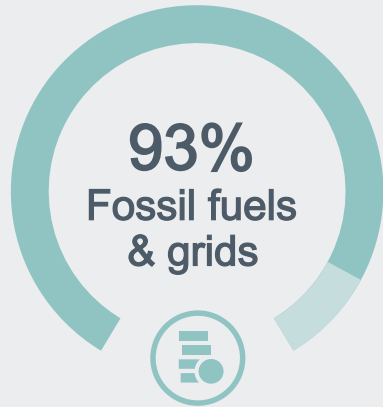


Julian Das & Alex Loudon

Ørsted Supply Chain Development Manager &
Ørsted Ventures and Open Innovation

We develop green, independent and economically viable energy systems

DONG energy in 2007



Operating profit
DKK bn, %

Ørsted in 2023



Offshore wind



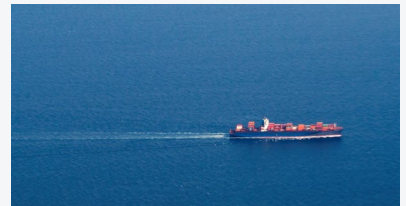
Onshore renewables



Bioenergy & other



Renewable hydrogen
and green fuels



Our offshore footprint in Great Britain, Ireland and Northern Ireland



Status

- In operation
- Under construction
- Under development

Our UK supply chain

A sustainable and competitive UK supply chain supporting our offshore wind farm projects in the UK and around the world

215+

UK suppliers have secured major contracts with us

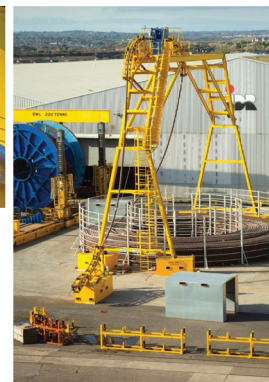
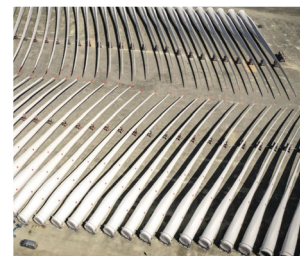
60

UK suppliers have supported our global portfolio

To find out more visit

orsted.co.uk/supply-chain

● Location of UK suppliers supporting our domestic and global portfolio



Three key supply chain questions

1. What is my product / service?

- Where is your product applied within a typical offshore wind farm?
- Does your product or service solve a real problem? (cost, quality, QHSE etc.)
- Have you consulted industry during the development of your product?

2. Who is my customer?

- Investigate how Developers / customers perform contracting
- Who will purchase your goods or services, possibly not the Developer
- What is the added value of your customer sourcing directly from you?

3. How do I engage with my customer?

- Engage with the Ørsted SCDM!
- Identify industry stakeholders and supporters
- Build relationships with Developer procurement departments – keep knocking on the door!



hutchinson

A better future, engineered together

Secondary Steel Structures to the OSW Industry



Steve Adams – Hutchinson Managing Director



hutchinson

A better future, engineered together

| Who are we ?

UK Based design, manufacture, assembly and servicing of steel structures and components for the Mobile-Telecommunication, On-Shore & Off-Shore Wind, Vehicle Chassis, Oil & Gas, Rail, and Nuclear sectors.

[Turnover £26m | Employees 165 | Production Space 12,000m²]



Core Vision |

To provide certainty for our customers and opportunity for our people.



Invest



Innovation



Integrity



Grow



Empower



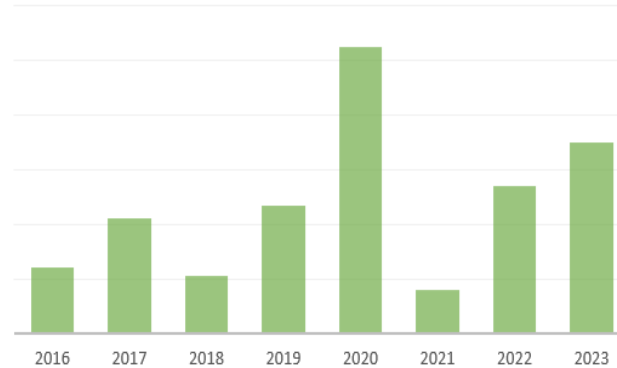
Collaboration



hutchinson | OFFSHORE WIND – Our journey into the industry

A better future, engineered together

2015	Secured first OffShore Wind project for the supply of Internal and External ladders for Dudgeon OWF to Tier 2 Fabricator.
2016	First project secured for the provision of Logistical Steelwork to turbine OEM for Burbo-Bank ext.
2017	Contract award for the Coating-Only scope for Beartrice OWF davit items.
2017	Secured first large-scale contract for the provision of Blade-Stackers.
2019	First production-line assembly jig, including on-site installation for turbine OEM.
2019	Secured first large-scale OffShore Wind project for the supply of SIPs for HOW02 to Tier-1 fabricator.
2022	Secured Davit component contracts for DC-A, DB-B, DB-C and Vineyard.



- Price.
- Dependability.
- Quality Assurance and Compliance.
- Timescale certainty.

Core Vision |

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Invest



Innovation



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Grow



Empower

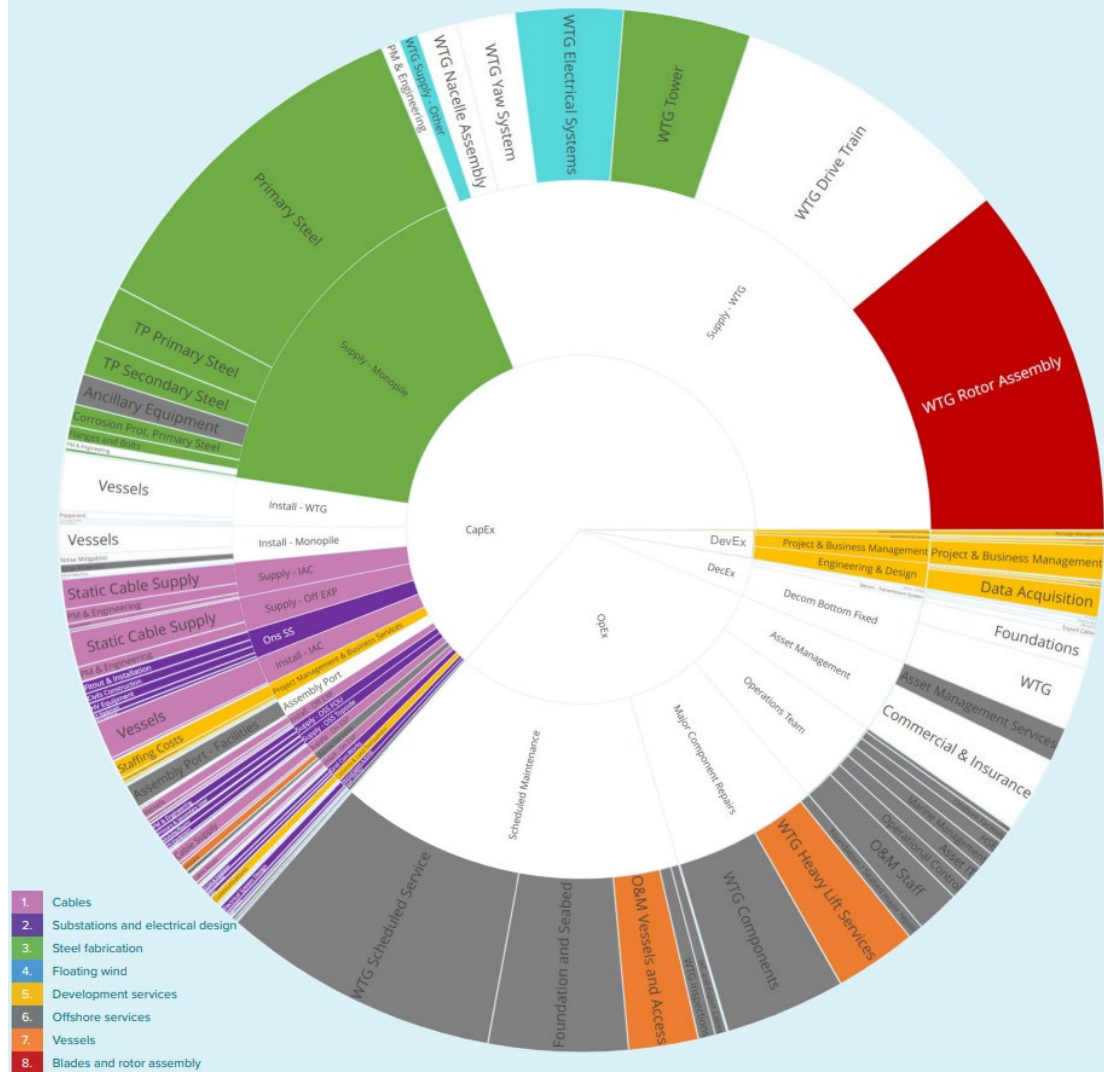


Collaboration

| OFFSHORE WIND – Scale of the Opportunity

- UK Government’s target of deploying 50GW by 2030, including 5GW of floating wind.
- Offshore Wind supply chain has £92 billion potential for UK economy by 2040
- The total value of the UK and export markets is estimated at £560 billion
- Global export market of expected offshore wind projects represents an opportunity of over £500 billion by 2040

(<https://www.owic.org.uk/>)





hutchinson | OFFSHORE WIND – SUPPLY CHAIN CHALLENGES

A better future, engineered together

- Turbine OEMs ?

Where do we fit in the Supply-Chain ?

- Developers ?

- Tier 1 – EPCI ?

- Tier 2 –Fabricators ?

- Lower Tiers ?

- Floating Platform Designers ?





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A better future, engineered together

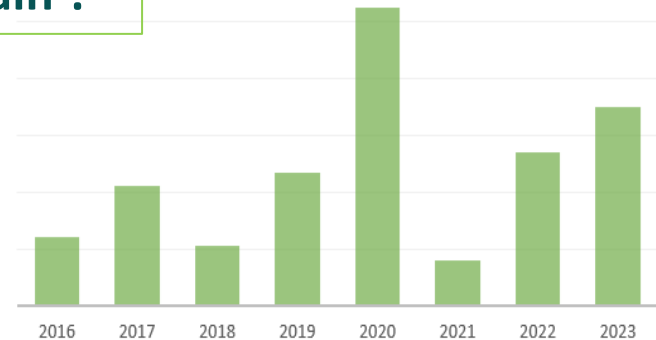
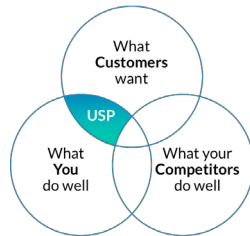
OFFSHORE WIND – SUPPLY CHAIN CHALLENGES

Managing the Cyclic Nature of the Sector?

- Whilst Government Policy, via the Sector-Deal is aiming to provide a continuous flow of activity in the sector, this is not currently the case. How can you deal with the peaks and troughs ?

Overcoming the inertia in the existing Supply Chain ?

- The sector is established, and supply chains exist. Why should we be selected ahead of the incumbents ?





hutchinson | OFFSHORE WIND – SUPPLY CHAIN CHALLENGES

A better future, engineered together

- There can often be a significant volume of customer documentation, specification and technical details. Ensure you know all the parameters of what is being asked for, and the Product Assurance methodology. There may be a commercial impact that has been overlooked.
- Be certain that you can meet the timescale and volume commitments.
- There will be insufficient time from contact award to resolve unforeseen requirements.



DEADLINE



hutchinson | OFFSHORE WIND – Opportunity

A better future, engineered together

The Offshore Wind Sector Deal, and the associated Supply-Chain Plans require reasonable efforts to be made to increase UK content. How can we take advantage of these conditions ?

- Understand your USP.
- Collaboration, to increase scope and scale.
- Innovation.
- Cost Reduction.
- Automation.
- Local Just-in-Time opportunity.
- Take advantage of the assistance offered by the sector [OWGP | OEA].





Software solutions for the OSW industry



Rita Desmyter – Head of Sales



Sennen Software solutions for renewable energy market leaders

OWGP – Edinburgh

12 December 2023



Agenda

1

Sennen – Company Presentation

2

It all started with a long-term relationship

3

Fast forwards: the factors to Sennen's successful growth

4

New product for new market :
The South Fork (US) construction project

1

Company Presentation

**Sennen
understands
the challenges
of the
renewable
energy sectors**



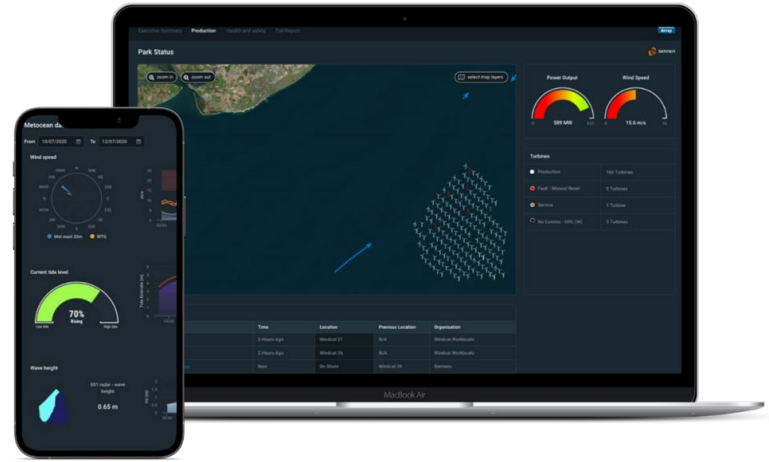
Our Vision

to transform infrastructures through technology, for a more sustainable world

Our mission

to become the go-to technology provider for the renewable energy stakeholders who are serious about efficiency at scale

We're creating
exceptional
tools that takes
processes to
the next level



- We have **first hand experience** of operating renewable projects
- We **understand the challenges** of the RE sector
- We have developed the **Sennen Platform**

Sennen: one platform, multiple use cases



**ASSET
PORTFOLIO
MANAGEMENT**

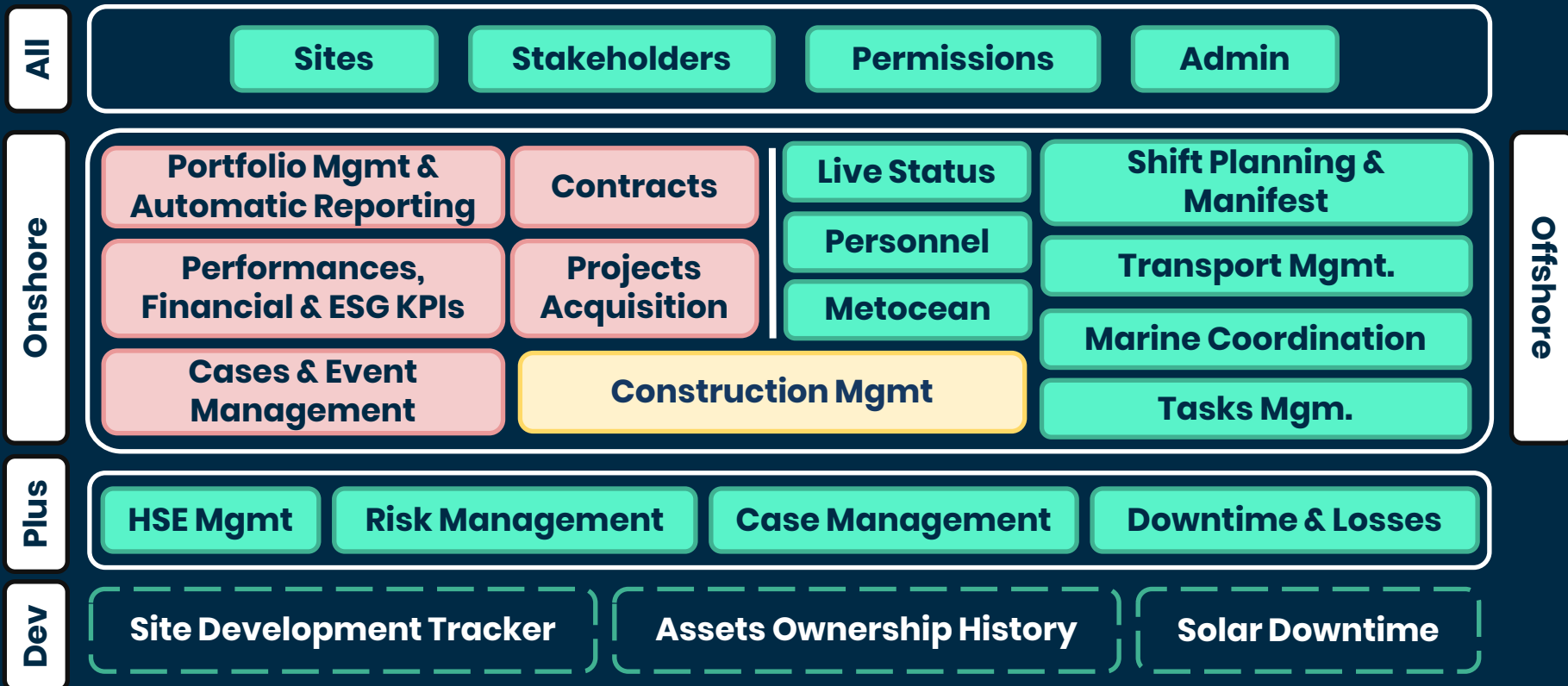


**OFFSHORE
CONTROL
ROOM**



**SCADA
ANALYSIS**

A fully integrated modular suite with a flexible architecture



Integrating all your Dynamic Data

Offshore data sources



Third party services



Protocols

AIS
OPC/IEC 104
REST/SOAP APIs
MS Azure Queues
ADS-B
WebSocket
ODBC
AWS SNS/SQS

A single centralised system for planning and mobilisation of work, marine control, performance monitoring and asset integrity management

Our software is managing a global portfolio of >30GW



Key Onshore Locations

- USA 6,000 MW
- UK 5,500 MW
- France 1,900 MW
- Australia 1,300 MW
- Spain 800 MW



Key Offshore Locations

- Channel 1,500 MW
- North Sea 1,200 MW
- Irish Sea 1,000 MW
- French Atlantic 500 MW



Major industry stakeholders are trusting us to improve the efficiency of their processes



RWE

Foresight
FOR A SMARTER FUTURE

Ørsted



octopus energy

Alpha Real Capital



NetreEnergy

Our team: talented professionals motivated by Sennen's mission

RE experts,
BD,
marketing

Client
Delivery &
Support

Engineering

25 Team

46% Women

11 Nationalities



2

**It all started with a
long-term relationship**

London Array - One of the largest operational wind farms

A complex site with operational challenges

- 175 turbines on tidal estuary
- OEM Service contract in place
- 100+ contractors on site any one time

- **Planning not optimised.**
- **Tasks not recorded.**
- **Work being called off.**

How we connected the dots since 2016, rolling out new features ever since

1

**Examined
the
workflows**

Spent time in
the control
room

2

**Introduced
a shift
planner tool**

Tied together
daily plan
with
Metocean

3

**Automated
safety
checks**

Qualifications
checked at
the planning
stage

4

**Recorded
the
transfers of
control**

Complete
record of
activity across
the site

5

**Introduced
dynamic
planning &
manifesting**

Rich data set
made easily
accessible

3

Fast forwards: the factors to Sennen's successful growth

Sennen has grown considerably since 2016 – thanks to a camel strategy



Experts in
Offshore /
Asset Portfolio



Senior Mgmt
with industry
experience



Solid financial
backing and
investor profile



Detailed
product
roadmap



Grants for
product
innovations



Partnership
with AWS for
high power
cloud solutions



Asset Portfolio
Mgmt product
into market and
across 3.5GW
(2020)



Global
contract for
EDFr fleet
(2021)



PoC with Orsted to
penetrate new
market (US) (2023)

4

New product for new market – the South Fork (US) construction project

Seamless transition from construction to operations

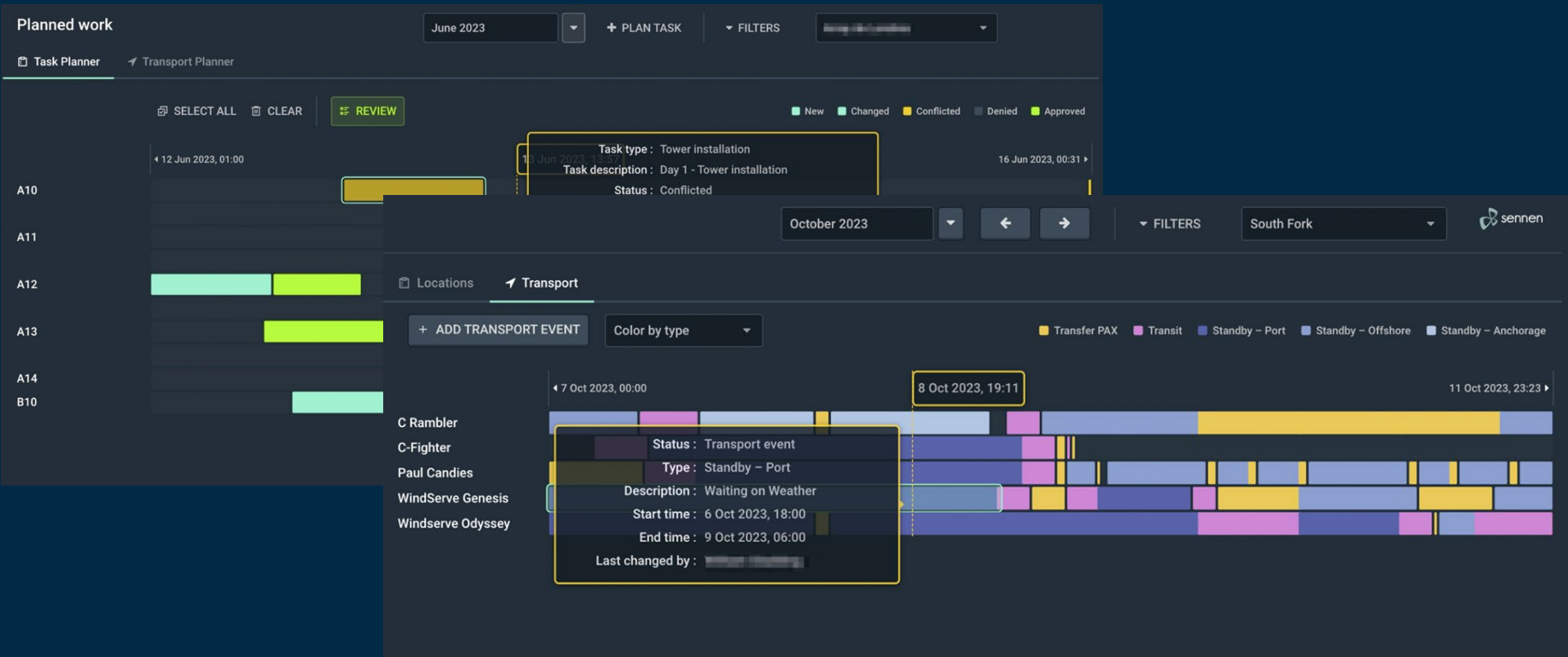
- Construction timeframe
- SIMOPS (Simultaneous Operations)
- Unlinked Data & Efficiency

Orsted

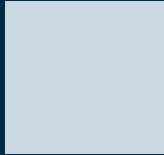
South Fork
Wind

- Orsted – South Fork Wind (US)
- Construction phase
- Commissioning Early 2024

Data are interconnected between contractors, planning, vessels



Thank you!



Rita Desmyter

Rita.Desmyter@Sennen.tech



www.sennen.tech

Thank you for listening!

Any questions?

Please find us in the break 😊



Julian Das

Ørsted Supply Chain Development Manager (SCDM)



julda@orsted.com



**PLEASE MAKE YOUR WAY TO
THE PENTLAND SUITE NOW**

**Up Next – Session 3
11.45 – 12.30**