

Accelerating Offshore Wind.

LCOE optimisation offshore wind farms in Denmark using
Vortex wind data





01

**VORTEX
PRESENTATION**

Series, LES, Farm

02

**VORTEX AND
YOUWIND LINK**

Process
introduction

03

**LCOE
optimisation
offshore wind
farms in Denmark
using Vortex wind
data**

Youwind Model
Pixel & Pixel Park

04

Q&A

**ANNEX:
YOUWIND
PLATFORM
INTRO AND
INTEGRATION**



VORTEX

Youwind

Renewables

01

VORTEX AND YOUWIND LINK





Most accurate synthetic wind resource data in the market prior to acquire measurements



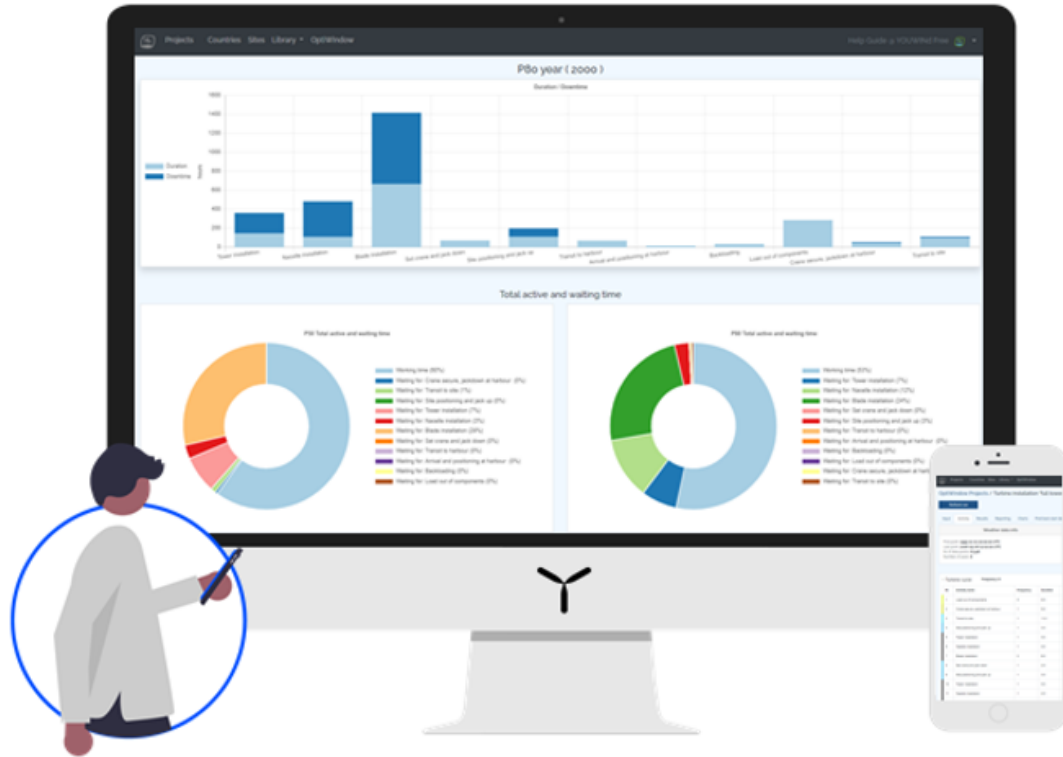
BUT, WHAT TO DO WITH THIS VALUABLE DATA??

- Where is the **best location** for my wind farm?
- Which turbine performs best within my project?
- What park capacity provides lowest **LCoE**?
- How can I calculate **bankable yield assessments**?

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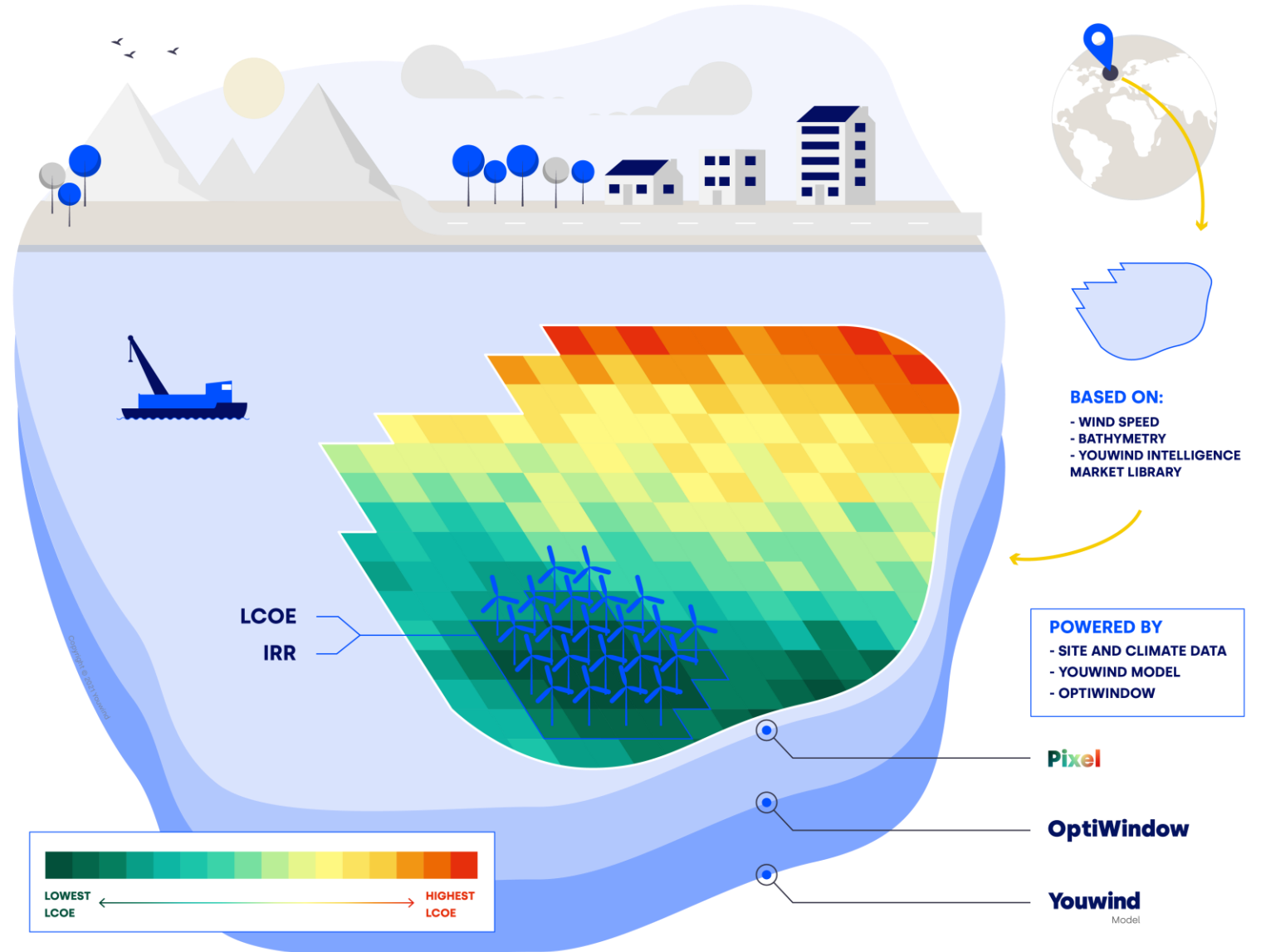
The Youwind solution offers site data, cost models and production in one place



- Y Youwind is a strong IT platform for professionals offering services to a broad client base from experienced professionals
- Y We cover the entire design process of offshore wind projects while recommending optimal values during the process.
- Y Our users execute several weeks of work in a few minutes.



1. Accelerate early-stage screening with our interactive visualization platform
2. Linked to perfection with Youwind Model, OptiWindow and external data resources.
3. When starting a new offshore wind project, complex multicriteria challenges arise. Pixel simplifies that.



LCOE and final result?

Key consideration factors:

- Y Wind climate and wind rose
- Y Wind speed variations
- Y Turbine spacing

The layout of a wind farm is dictated by:

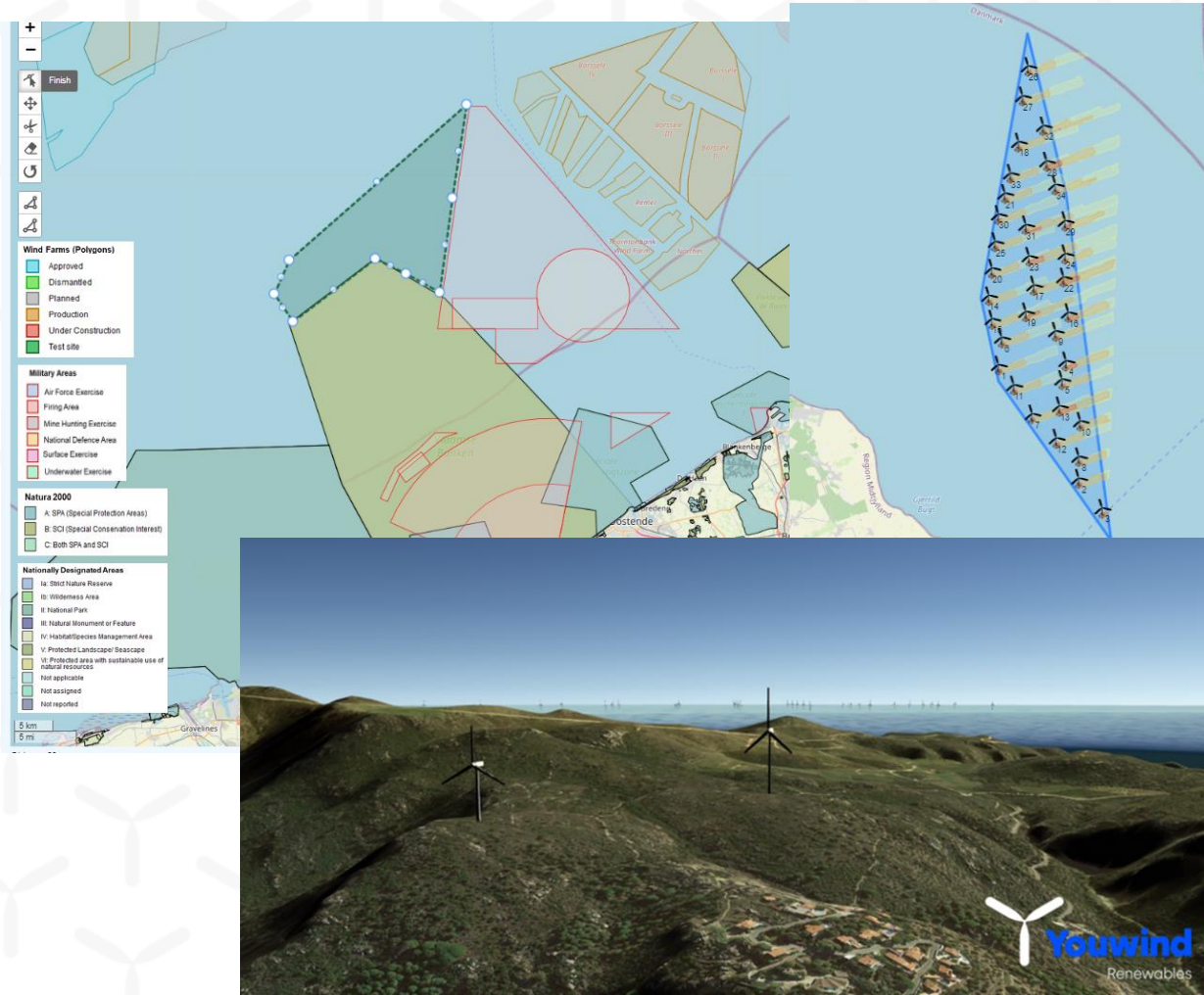
- Y Maximising production
- Y Minimizing construction costs
- Y Minimizing losses
- Y Meeting planning criteria

Human and environmental constraints:

- Y Excluded areas, set-backs from boundaries
- Y Preserved and natural areas
- Y Migration corridors
- Y Noise limits at specified locations
- Y Visibility from specified viewpoints and radar stations
- Y Harbours
- Y Grid connection

Stakeholders:

- Y Consents
- Y Foundation team
- Y Electrical team
- Y Turbine team
- Y GIS team
- Y External wind farms
- Y Authorities



03

LCOE optimisation offshore wind farms in Denmark using Vortex wind data

Life demo of Vortex and Youwind platforms and integration



04

Q&A SESSION



VORTEX

Youwind

Renewables



Wind
EUROPE

ANNUAL EVENT
2023
COPENHAGEN
25-27 APRIL

VISIT US:
S12



Request
a Demo





Stand S12



VORTEX

Stand C1 - C 41

04
ANNEX

YOUWIND PLATFORM INTRO & INTEGRATION



Accelerating Offshore Wind

Who we are

Youwind Renewables is a **SaaS** company with its own developed **web-based IT-platform** to support strategic decision processes when developing or installing offshore wind projects.



Our cutting-edge IT systems



Technical and cost simulations of offshore wind farms.



Installation and logistics optimization of offshore wind farms.

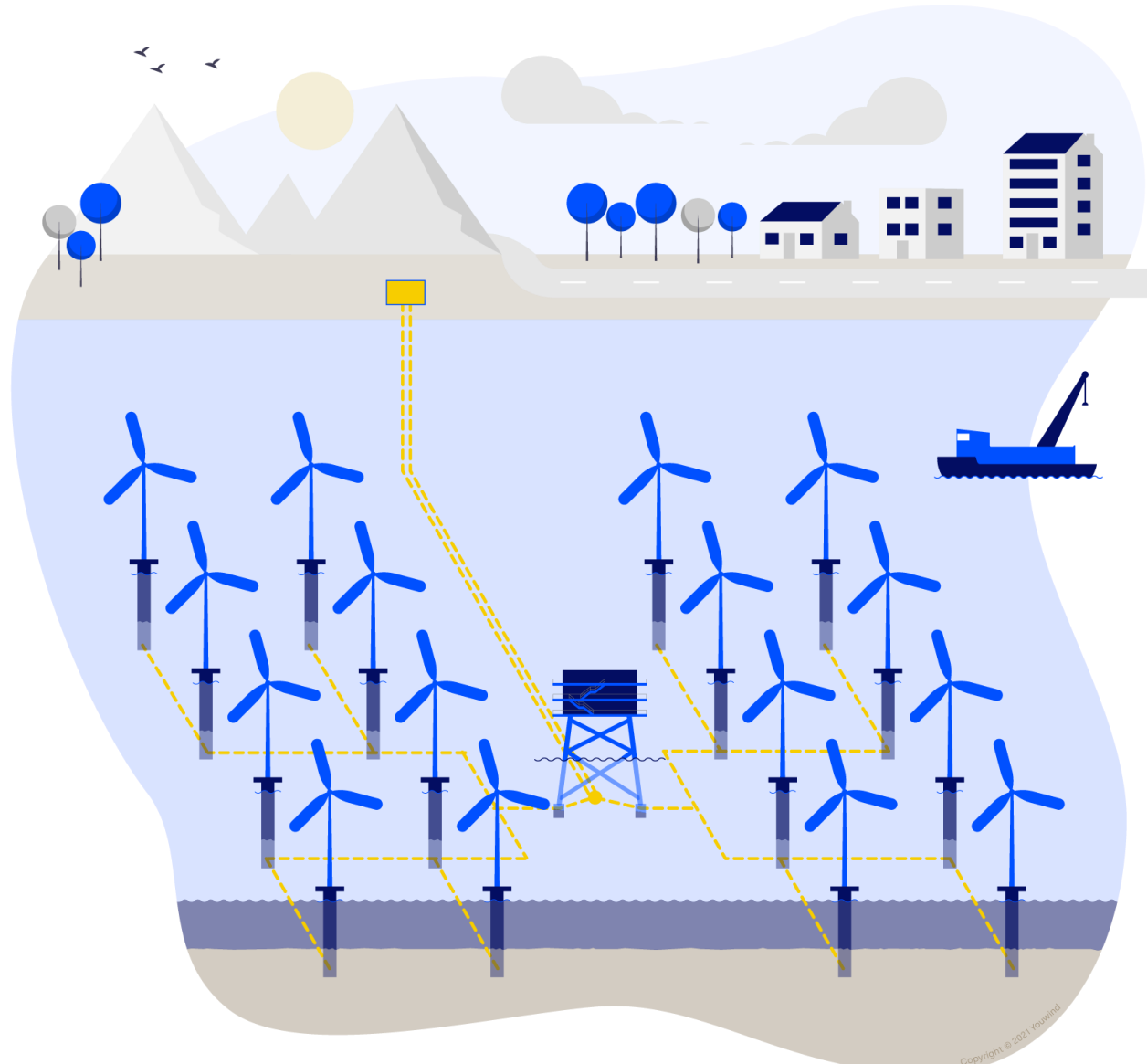


Interactive visualization platform for LCoE/IRR heat mapping plus optimal layout generator with state-of-the-art wake modelling





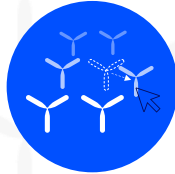
Technical, cost and financial evaluations of offshore wind farms under development – keep track of production, layout and business case in any project scenario



PixelPark in a nutshell



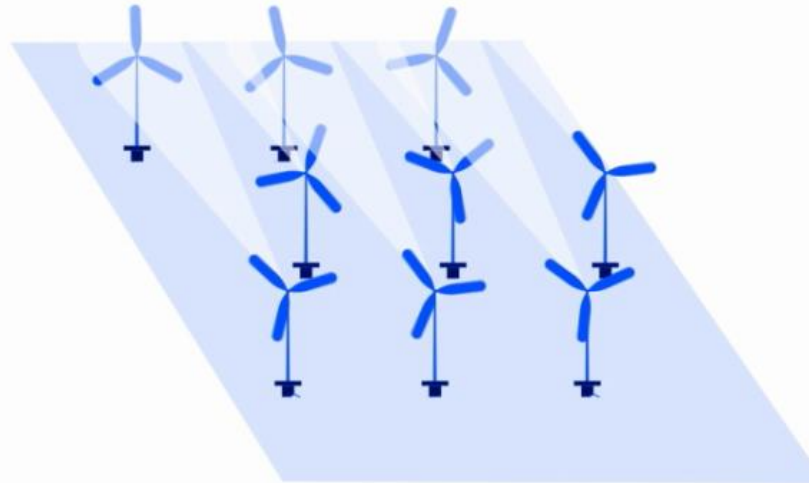
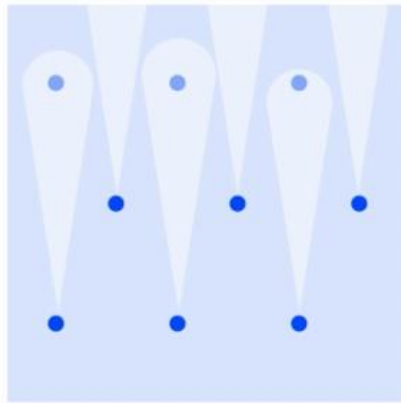
Automatically generate a park layout



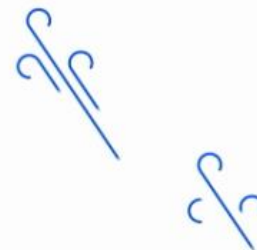
Drag-and-drop turbines to optimize further



Integrated with the Youwind Model



Fully Integration of **N.O. Jensen** modelling as well as Ørsted open-source **TurbOPark** wake model



Thanks!

Do you have any **questions?**

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www.youwindrenewables.com

