SHORELINE
Superior Simulation Solutions

4th Asia Offshore Wind Day – Taipei, September 18th, 2018

Experiences from Europe using simulation tools for construction and O&M planning and optimization

About Shoreline

Shoreline deliver intelligent and cutting edge simulation solutions based on artificial intelligence with a smart, user-friendly and intuitive design.

Our ground breaking cloud based, patented and scalable simulation technology allow customers to build virtual models of offshore wind farms, to simulate and optimize the construction and operational phase during project development, and the daily operation once in operation, in a risk free environment, and thus save time, cost and increase production output.

We have offices in Stavanger, Esbjerg, Hamburg, representation in Korea, and are in the process of establishing local presence in the US

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Customer references

Hydropower

Life Cycle Simulation and Optimisation Solutions

Development & Design | **Construction** | **Operations & Maintenance** | **Decommissioning**

CONSTRUCTION DESIGN
O&M DESIGN

CONSTRUCTION EXECUTION

O&M EXECUTION

SHORELINE INTEGRATION PLATFORM

Why model?

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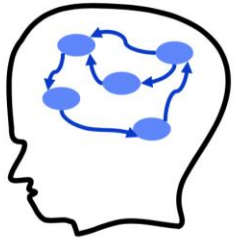
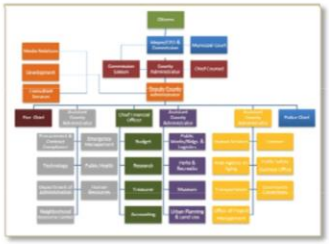
Types of models

Mental models

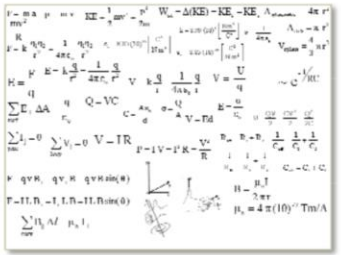


Boxes connected with lines



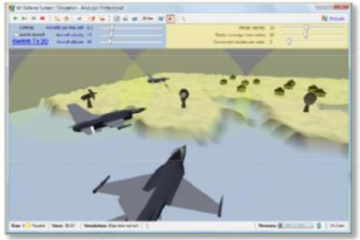
Physical models

Formulas on a sheet of paper



Excel spreadsheets

Simulation models



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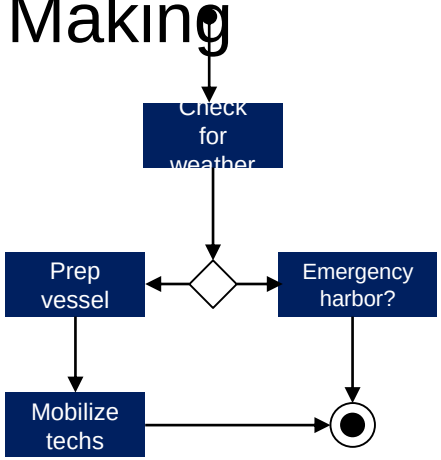
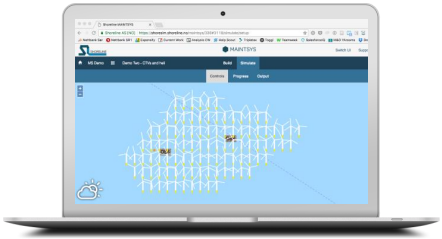
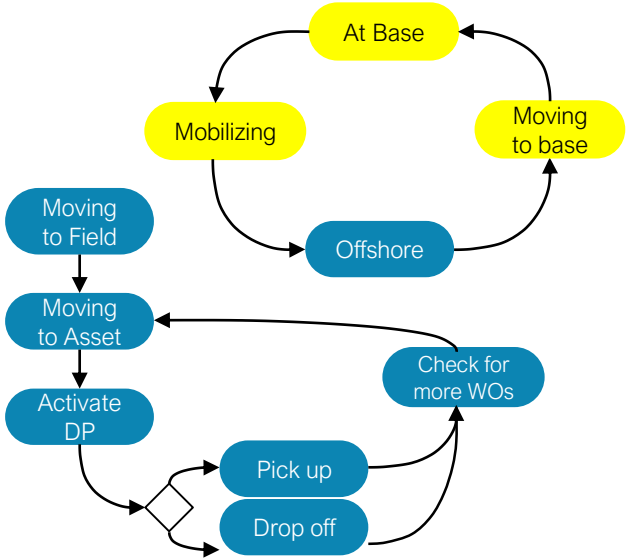
Agent based modelling – Imitating reality…..

Real Life Decision Making





Real Life Behavior



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Typical questions during strategy development

Infrastructure and logistics

Vessel spread

Schedule

Weather downtime

Cost

Contracting

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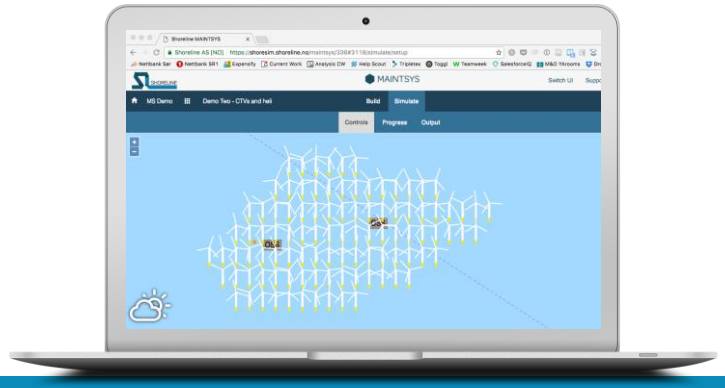
Case study: UK Offshore Windfarm

Study scope	Transportation and Installation contracting strategy development

Model Input	Output	Activity	Time
Historical time series weather	• Installation schedule • Weather downtime • Cost • Early production • Vessel utilization • Bottle neck overview	Build-up of virtual offshore windfarm model	2-3 days
Windfarm layout		Scenario modelling and assessment	1 day/scenario
Infrastructure		Time per case run	5 – 10 minutes
Vessel spread			
Installation start dates			



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Thank you for your attention

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