Release Notes [Print](#)

```
Releases featuring changes to the simulation engine can affect case outputs. Releases affecting output calculations will be marked in the release info
```

Release date	December 16, 2024

Where	What

Dashboard	The dashboard is now split in two tabs; one tab for the data that is sampled across all runs (Statistical), and one tab with the data from a specific run picked

```
PS! This feature is only used for construction cases for now, which use specific runs to display timeline data (S-curve and inventory st
```


Dashboard	For run based data you're able to control what the runs are ranked based on with this feature. By default it still ranks runs based on the duration of the whole any of the tasks you add to your assets in the case.

```
Example
E.g. in a project with installation and subsequent commissioning you can rank runs based on installation end date instead of project end
```


Dashboard	Each chart now have an info button where you can find a definition of what the chart shows.

Release name	Advanced modeling capabilities for Towing vessels
Release Date	November 21, 2024

Headline	Description	Shoreline Product
Tow-to-Port Operations with PBA Loss Calculations	You can now model **Tow-to-Port operations** withadvanced precision • Compute PBA loss on the remaining WTGs in the string during Tow-to-Port operations. • A new toggle in the **Corrective Maintenance** tab allows you to include or exclude PBA loss calculations across the string based on your modeling preferences	O&M

Add lead time durations for towing vessels to model more accurate scheduling and downtime calculations

Logistic Lead Time Inputs for Towing Vessels

Con 3, O&M

Charter starts after vessel's lead time in Design Shoresim

- Vessel charters now span multiple work orders without requiring lead time resets after each round trip.
- Lead time applies only at the start of the charter period, enabling uninterrupted operations.

Continuous Towing in/out modeling

Users can now model a scenario where Towing vessels towing an asset back to the wind farm can pick up another for MCR during the return trip.

Enable this feature by selecting the new **"Allow Continuous Disconnection"** option on towing vessel instances

O&M

Towing vessel

Name	Towing vessel
Number of units to add	1
Port	None
Logistics lead time	_____ days
ⓘ **Allow continuous disconnection**	☑

Settings ⓘ

Availability ⦿ Always available

- Shoresim now prioritize **available chartered vessels** before initiating new charters, reducing redundancy and costs.
- Vessel charters remain active during towing-in and towing-out phases to avoid operational gaps.
- Enhanced coordination for multiple towing vessels ensures charters end only after their respective operations are complete.
- Towing operation days are calculated only for the period between **mobilization and demobilization.**

Headline	Description	Shoreline product
	Users should be able to import corrective maintenance tasks using the Input library - Asset import button or Scheduled maintenance tab	
	Input library - Assets - Import assets	
	Scheduled Maintenance tab	
New corrective maintenance tab		O&M

Release version	Design v3.51.0	
Release date	November 13th 2024	

Please perform a hard refresh of your browser to view the updates made to the map in the Design application.

Headline	Description	Shoreline Product
New corrective maintenance tab	As part of ongoing efforts to improve user experience, performance, and scalability, the Corrective Maintenance tab - Design O&M has been updated with a modernized layout.	O&M

Key Enhancements:

- Data has been migrated 1:1 from the old framework to a new, modern framework.
- All input data and core functionalities for corrective maintenance remain the same
- The updated design delivers a more intuitive and visually modern experience with consistency in design and workflow.
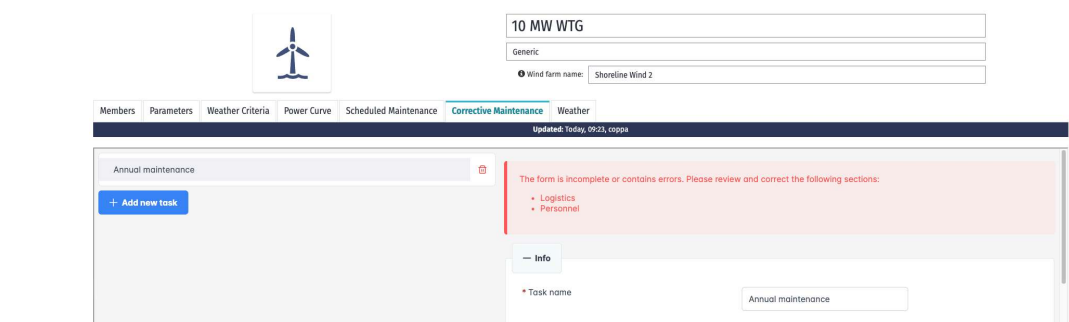
Corrective Maintenance | Weather

Updated: Today, 09:23, coppa

— Failure

ⓘ Severity   Non critical | **Critical**

ⓘ * Production curtailment from failure   100 | % reduced production

ⓘ Production curtailment during work   100 | % reduced production

Lifetime distribution   **Exponential** | Weibull

Failure rate time series   ⬤

Time series   * Year   * Rate

                                             0 ⌃⌄   0   🗑

                                             ＋ Add item

Substation 2.40

2.4

ⓘ Wind farm name:

Criteria | Scheduled Maintenance | **Corrective Maintenance** | Weather

Updated: 05/08/2024, 09:34, coppa

🔍

No tasks found

No tasks have been added yet.

＋ Add new task

Expected Benefits:

- Users will experience improved performance within the Corrective Maintenance tab.
- This release lays the groundwork for further enhancements to scalability and usability, with additional improvements planned in upcoming releases.

We hope these changes contribute to a smoother and more efficient experience on the platform. Please reach out to the support team with any feedback or questions regarding this update.

Planned improvements in future releases:

1. Users will only be able to save new tasks in the Corrective Maintenance tab once all required inputs are completed and validated for each task. Currently, the error notification does not indicate which specific tasks or fields need correction. In the next release, this will be improved to provide more detailed guidance for user corrections.
2. Improvement in general error and warnings notifications

| Helicopter - day light restrictions | Users can now toggle the daylight restriction setting on or off under the **Weather Criteria** tab for helicopter logistics. | Con 3, O&M |

- **Default Setting**: ON, maintaining the current daylight restriction application.
- **New Option**: OFF, allowing helicopter operations based solely on weather conditions, independent of daylight restrictions.

Heli 2.40

2.40

Category:

| Performance | **Weather Criteria** | Fuel Consumption | Cost | Activity Durations |

Updated: 15/08/2024, 13:51, coppa

🛈 Wind speed access limit * 40

O&M 🛈 Wind speed limitation reference height * 150
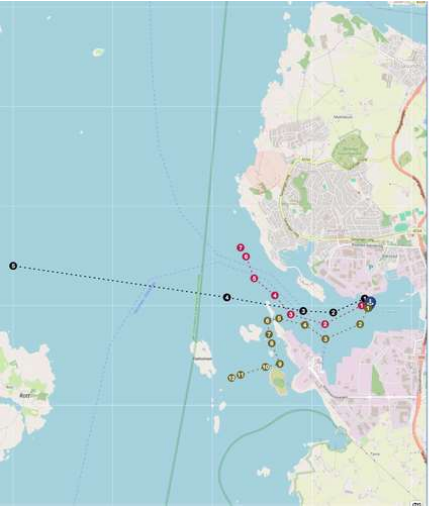
Visibility access limit 3

Significant wave height access limit * 2

Daylight restriction ☑

With this release, users can now view **all waypoints for all routes** modeled using the Route Planner feature directly on the **main application map** in Design.

Users will get a comprehensive, visual overview of route details within each case, improving route planning and navigation visibility.
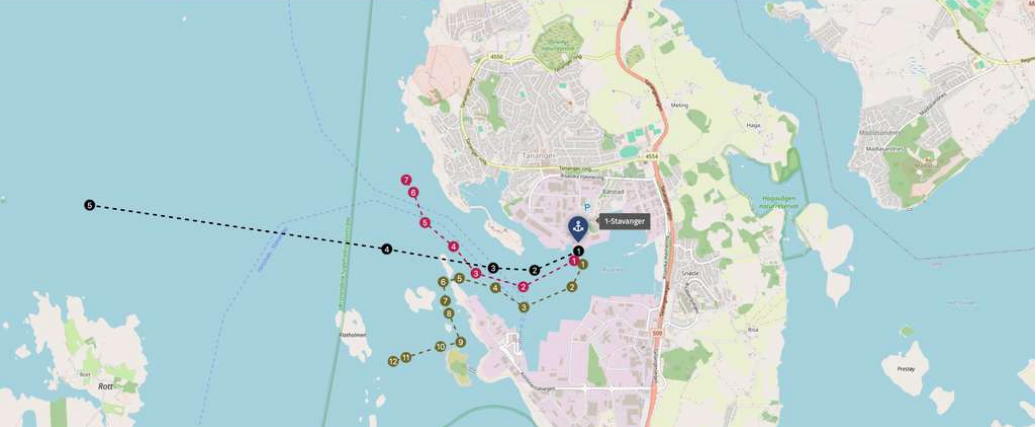
Release version	Design v3.50.0
Release date	October 26th, 2024

Headline	Description	Shoreline product
Feeder logistics utilization	We resolved a minor bug causing inconsistencies between the report and dashboard for feeder utilization, where the report displayed the correct utilization but the dashboard chart incorrectly showed it as 0	Construction 3

Release version	Design v3.49.0
Release Date	October 7th, 2024

Headline	Description	Shoreline Product
Feeder scenario modeling enhancements for Wind farm construction projects modeling	We are pleased to announce the launch of the Enhanced Feeder Modeling feature in our Design Construction software. This update introduces the ability for feeders to remain offshore for extended periods, delivering multiple assets sequentially to installation vessels with limited space. The new capabilities aim to enhance operational planning, improve installation workflow, and optimize feeder/barge usage in offshore wind projects.	Construction 3

Key Benefits:

1. Feeders now have the ability to carry multiple components simultaneously and deliver them one at a time as installation vessel deck space becomes available in the case.
2. Feeders can stay offshore longer, reducing the need for frequent returns to port, which lowers fuel costs and increases efficiency in the simulation model.

Technical Overview:

- We've added a "Maximum capacity per transfer to HLV" field to define how many components a feeder can deliver in one trip. If more tasks remain, the feeder will automatically move to the next location and await further transfers.

- A new "Transit to Next Asset" process has been introduced to handle feeder movement between locations. By default, the speed for this step is set to 0, following standard configuration rules.

User Action for Existing Cases:

Important: In existing cases, the default speed for this step is set to 0, which will result in the case failing.

A case checker will notify users to configure the speed for the new "Transit to Next Asset" step.

 Users must manually set the speed to an appropriate value before running the simulation again.
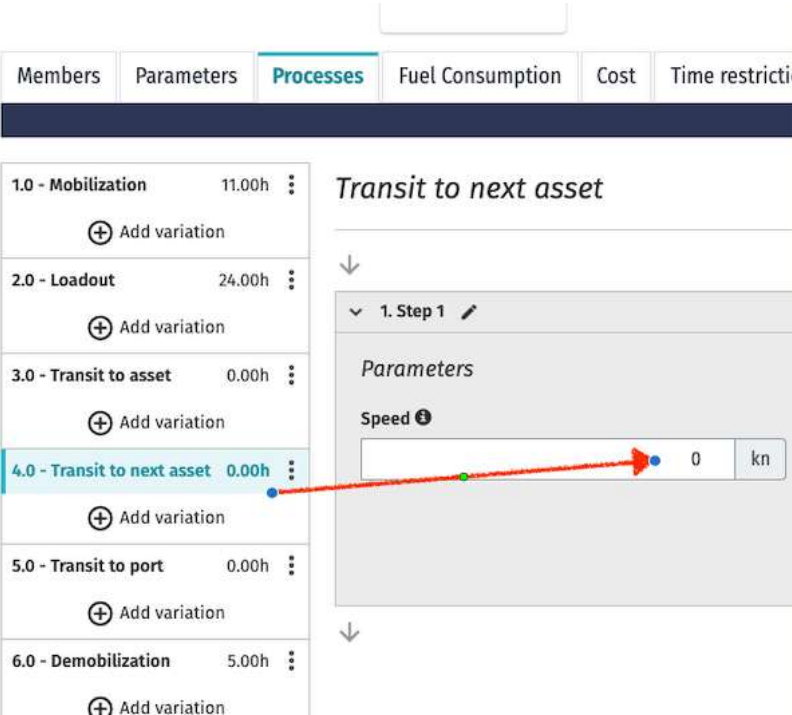
Bug fix	We have addressed and removed faulty error notifications in Design construction- Asset- task tab to improve the user experience and reduce confusion.	Con 3

Release date	October 1, 2024
Feature	Route planner - Advanced options

Headline	Description	Shoreline Product
Route Planner - Advanced options for Design	**Key Features – Advanced options** 1. Model various routes tailored to different logistic types, such as vessels and helicopters. 2. Choose the destination of each route from the base. 3. Define the logistic load conditions for each route. **For more details: Refer to this guide** **This feature is available for all users of Design Con, O&M.**	Con 3, O&M
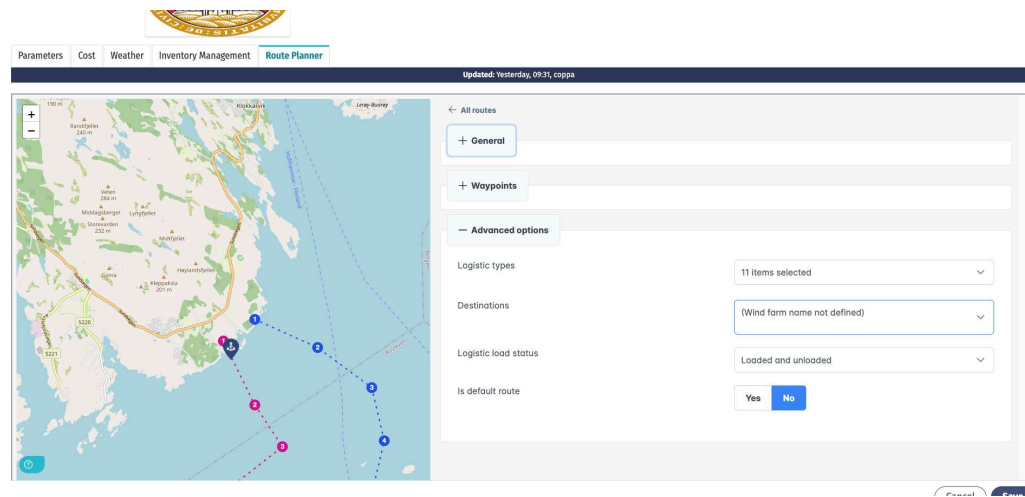
Practical application

- **10 Knot Speed Restriction:** Model the 10-knot speed restriction for the first 30 nautical miles outside the US coast, meeting US developers' requirements.
- **Helicopter Routing:** Differentiate helicopter routes from sailing routes, addressing longstanding industry demands.
- **Heavy Lift Vessels (HLVs):** Plan different routes for HLVs entering and exiting harbors to minimize delays.
- **Onshore Transportation:** Enhance modeling for specialized trucks, such as those transporting nacelles and blades.
- **Floating Wind:** Distinguish between towing routes for semisub tows and regular sailing routes.
- **Long Voyages**: Plan distinct routes to ports and fabrication yards, considering cost-effective options like avoiding the Suez Canal.

Start exploring the advanced modeling capabilities with Shoreline Design!

Release date	24 September, 2024
Feature	[Logistics Charter and Lead time management for O&M Major component repair modeling](#)

Headline	Description	Shoreline product
Logistics charter and Lead time management	This is one of the important updates to our Logistics charter management in O&M. This will optimize logistics lead times and charter periods, to enable users to be able to model the practical needs of real-world operations. **Key Improvements:** • Shoresim, the simulation engine, will allow a logistics charter period to cover multiple work orders without needing a lead time reset after each trip. Once a vessel is chartered and available, it remains ready for subsequent tasks until all assigned work orders are completed. • Previously, each roundtrip triggered a new lead time before the vessel could begin the next task. With this implementation, lead time is only applied once at the start of the charter period, enabling continuous, uninterrupted operations. Now, chartering logistics ensures full utilization during the contracted period. The logistics will transition from one work order to the next, maximizing efficiency and reducing idle time. Benefits: • Reduced Operational Downtime: By eliminating unnecessary lead time resets, vessels can now operate continuously, minimizing delays between tasks. Please note that Charter starts after Logistics's lead time in Design Shoresim	Applicable for major component replacement corrective maintenance tasks (HLV) **O&M**

Release number	Design v3.48.0
Release date	23 September 2024

Headline	Description	Shoreline product
	New Map Update for Design Con 3 and O&M Until now, users have been seeing a new map (Open street map) for the Route planner feature from the release since April, 2024.	
Migration to a modern, new map for Design application	**Consistent Design with OpenStreetMap** With this release, the application will use OpenStreetMap as the background everywhere in the Design application (for the main map and weather maps). This switch from Bing Maps by Microsoft to Open Street Maps provides unified and modern visual experience. While the current update improves visual consistency, it also opens doors to address customer requests for more detailed map features, such as info about existing wind farms, grids, water levels, etc. Stay tuned for the release updates	Con 3, O&M
User experience improvements	• Lead time labels have been updated to include a prefix based on the application input settings context. They will now be prefixed with either **"Logistics"** or **"Task"** to provide clearer context and improve usability.	Con 3, O&M

• Tooltips: Users can now find tooltips explaining spot chartered and Dedicated tasks inputs labels

Crew transfer vessel

Name	Crew transfer vessel 1
🛈 Dedicated tasks	☐
Port	Port of Esbjerg ⌄
	Service operation vessel 1 ⌄
🛈 Spot chartered	☐

> Enable Lead time for the Logistics. To add lead time, please go to Activity durations.

Logistics transfer chart has been added as part of the new O&M output dashboard

Logistics transfer chart

O&M

Release number	Design v3.47.0
Release date	09 September 2024

Note: This release will have an impact on the simulation outputs due to updates in the Design Shoresim simulation engine. If you want the outputs to remain the same, please do not rerun the specific case.

Slight changes can be expected in PBA loss per root cause categorization, Logistics routing to wind farm

Headline	Description	Shoreline product
Output dashboard	The New Output Dashboard has been set as the default main dashboard for all users.	Con 3, O&M
PBA loss per root cause chart - Output dashboard	PBA loss per root cause chart is now available in the new output dashboard with improved user experience and design.	O&M
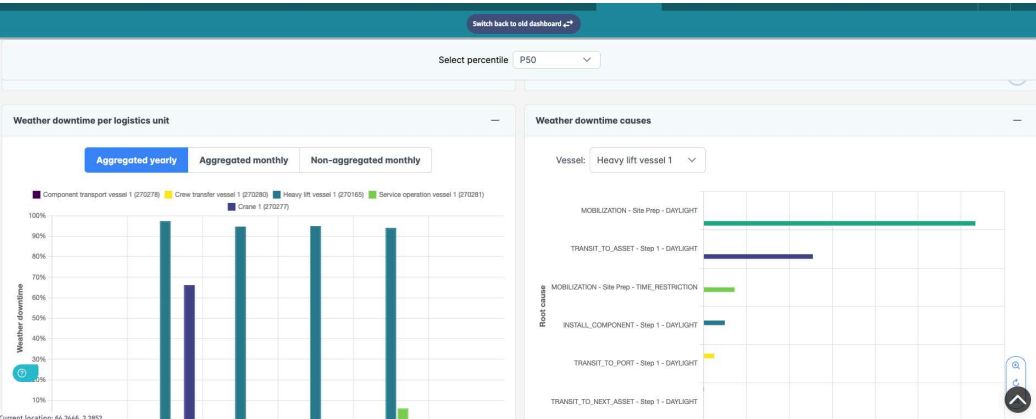
Wind farm: Shoreline Wind

● Minor weather delay: 2.05%　○ No available personnel (Minor response time): 1.84%　● Minor work WTG: 0.48%
● No dropoff and pickup combination (Minor response time): 0.39%　● Floating weather delay: 0.36%
● Waiting to be scheduled (Minor response time): 0.25%　● Schedule service work WTG: 0.18%　● Floating response time: 0.05%
● Crane (Floating work WTG): 0.05%　● No available vessel (Minor response time): 0.03%　● Vessel (Floating work WTG): 0.01%
● Floating towing time: 0%

Waiting to be scheduled (Minor response time): 0.25%

The new "Type" column is introduced across all output report sheets with the following values:

- Non-aggregated Monthly
- Aggregated Monthly
- Yearly
- Aggregated Yearly

This will help users filter and visualize data more easily and quickly, providing a better user experience.

Output report- Data structure enhancements		Con 3, O&M

| ERA 5 Weather data enhancements | ERA 5 weather data enhancement: In addition to behind-the-scenes important technical optimization and updates, | Con 3, O&M |

- When a user selects a year range for ERA 5 weather data the simulation will consider weather from the selected period only.
- When a user clicks download file, then the file will only contain the data from the selected time range

Change weather file

Select weather from Input library or the map below

Select weather from Input Library

Location: 59.0, 5.5

Use ERA5 (59.0, 5.5) [1979 - 2020]

Use 1-ERA5

Download ERA5 data from [1979] to [2020]

1979
1980
1981
1982
1983
1984
1985
1986
1987

Or select from other weather in the cu...

ERA5 (57.5, 2.5)   ERA5 (56.0, 15.5)

Cancel   Save

Users can now differentiate con 1 and con 3 cases in the project overview page with a tag name con 1

Con 1 vs Con 3 identification		Con 1, Con 3

Route planner enhancement	• All dedicated Crew Transfer Vessels (CTVs) accompanying the Heavy Lift Vessel (MCR HLV) will now follow the designated CTV logistics route as set in the route planner feature. • Previously, sometimes logistics entered the wind farm from the south side. With this release, all logistics will directly approach the wind turbine for operations and maintenance.	Con 3, O&M

PBA loss per root cause enhancement	• The internal function related to the calculation of PBA (Production-Based Availability) loss root causes has been updated. However, there will be **no changes** to the calculation results. • Prior to this release, there were instances where, apart from the work shift, the simulation categorized loss per root cause as part of the full-day in-route logistics instead of weather delays. This primarily occurred when moving from inspection to preparation stages. • After this release, these losses will now be correctly categorized under **major weather delays**, rather than **major response time** delays.	O&M

Release number   Design v3.46.0
Release Date   26 August , 2024

Headline	Description	Shoreline Product
	The PBA Loss Root Cause chart's downloadable sheet is now integrated into the main Output report, saving users time and eliminating the need for additional downloads.	
PBA loss root cause report		O&M

Release number	Design v3.45.0
Release Date	August 8, 2024

Note: This release will have an impact on the simulation outputs due to updates in the Design Shoresim simulation engine. If you want the outputs to remain the same, please do not rerun the specific case.

For cases involving cables, foundations, or substations, users can find differences in PBA outputs as the new release includes an updated approach for evaluating their impact.

Headline	Description	Shoreline Product
New feature	Wind farm system level reliability modeling	O&M

Power Capacity Definition by Assets

Users can define power capacities for wind farm components to calculate the accurate power output of the wind farm.

Cable failures:

Users can now define which end of the cable will undergo scheduled or corrective maintenance, for precise and efficient maintenance planning.

Updated: Yesterday, 09:05, coppa

Import CSV

Corrective Cable

None

❶ Severity	Critical
Lifetime distribution	Exponential
Failure rate time series	☐
❶ Annual failure rate *	0.1	avg. failures/year
❶ Production curtailment from failure*	50	% reduced production
❶ Production curtailment during work	100	% reduced production
Cable end *	Cable end A
Vessel *	☑ Crew Transfer Vessel ☑ Any member
	☑ Daughter Craft Vessel
	☑ Any member (No members created yet)
	☑ Service Operation Vessel ☑ Any member

Dynamic Power Adjustment

User can simulate real world scenario to prevents overloading of the power transport infrastructure with this implementation to reduce WTG power production when the associated cable or Offshore Substation (OSS) reaches its maximum power capacity or encounters a failure.
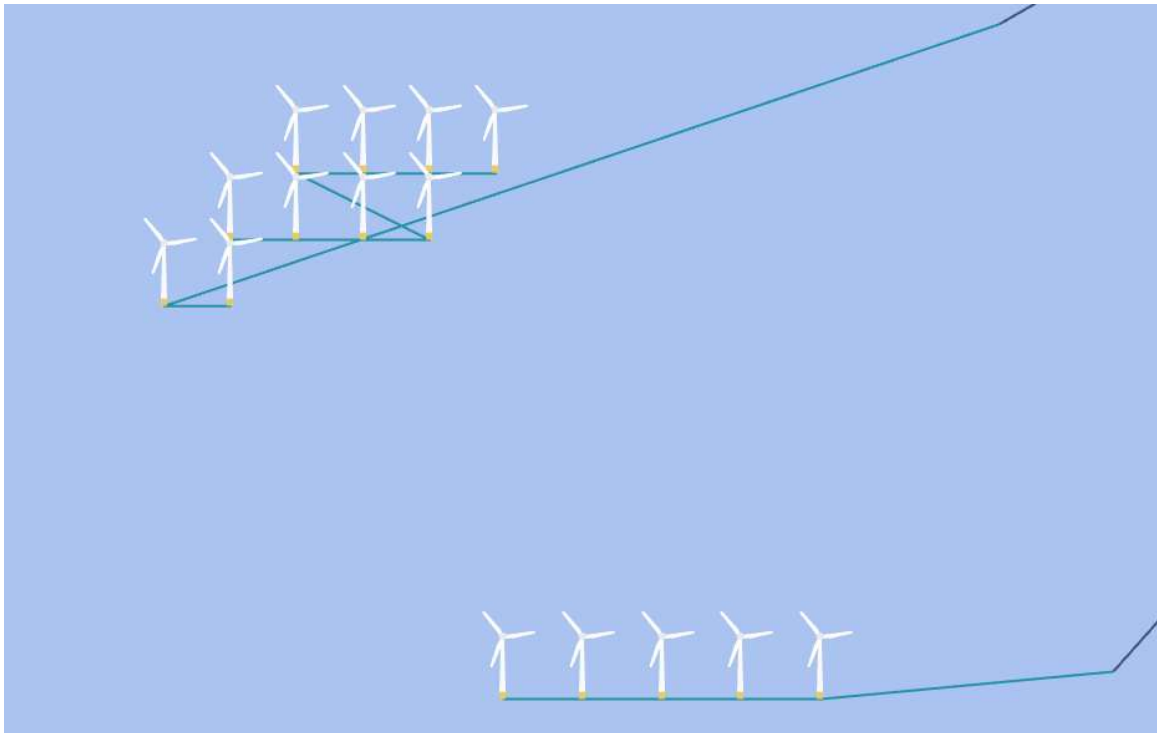
Impact of BOP on Production-Based Availability (PBA)

Users can simulate failures of cable, OSS, and foundations impacting wind farm power production and analyze the influence of foundations, cables, and OSS BOP components on the PBA outputs.

Average PBA loss per root cause

Shoreline Wind: 1.20 %

Cable at max capacity
0.49 % loss (41.01 %)

(auses) 0 %

- Cable at max capac... : 0.49 %
- Floating weather d... : 0.32 %
- Schedule service w... : 0.23 %
- Floating response ... : 0.06 %
- Crane (Floating wo... : 0.05 %
- No available perso... : 0.01 %
- Minor weather delay: 0.01 %
- Vessel (Floating wo... : 0.01 %
- Minor work WTG: 0.01 %
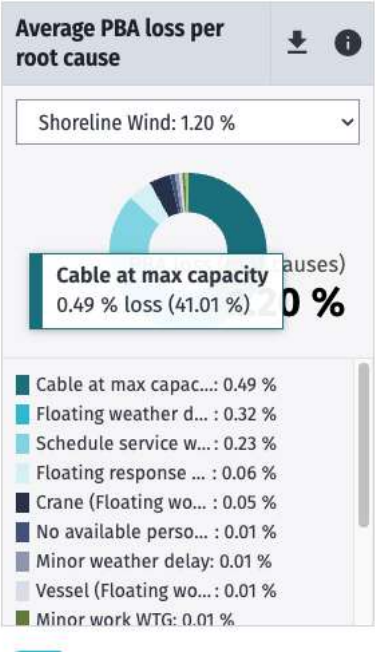
Key metrics

Summary

| 0.76 % TBA Loss | 1.15 % PBA Loss | 20,989,844.79 MWh Total actual production | 244,090.55 MWh Lost production | 35,008.4 Hours Downtime |
| 46.12 % Gross capacity factor | 45.61 % Net capacity factor | | | |

Please note:

- You can also add foundations to your case that impact power production by adding them as related instances to the relevant asset.

- If you don't add cables to your case with power capacity inputs, the wind turbines in your case will generate power according to the windspeed and WTG power curve.

- If you only have an OSS and no cables, the OSS will reduce energy production on every WTG in the wind farm to which it is connected according to the percentage you set on the maintenance activity.

- Finally, if you want cables in your case without them influencing site-wide power production, you can add the cables to your case without linking them to an asset.

Detailed steps for Wind farm reliability modeling is available here

PBA loss root cause:
Users can now find long weather delays categorized under the Major weather delay category in the PBA loss root cause.

Improvement

TBA calculation:
With this release, Users can see TBA outputs based on the impact of Wind turbines only. BoP assets will not have any influence on TBA calculations.

O&M

Release number   Design v3.44.0
Release Date   July 25, 2024

Headline	Description
Key metrics on the Output dashboard	1. Duration of Campaign 2. Campaign end date

Key metrics

∨ Summary

381 Days
Campaign duration

16 January 2030
Campaign end date

Key metrics on the Output dashboard

1. PBA total for each wind farm
2. TBA total for each wind farm

∨ Wind farms

Shoreline Wind	Shoreline Wind 2
93.35 % PBA	**92.82** % PBA
6.65 % PBA loss	**7.18** % PBA loss
93.35 % TBA	**93.66** % TBA
6.65 % TBA loss	**6.34** % TBA loss

3. Logistics utilization total for each vessel

∨ Logistics utilization

Crew transfer vessel 1 (249531)	Daughter craft vessel 1 (249533)	Heavy lift
0 Days Operation days	**0** Days Operation days	**0** Days Operation da
0.00 % Possible operation days	**0.00** % Possible operation days	**0.00** % Possible oper

4. Personnel utilization total for each personnel group

5. Total Production (MW/GW)
6. TBA loss
7. 100% - TBA for full simulation (all years and all wind farms)
8. PBA loss
9. 100% - PBA for full simulation (all years and all wind farms)
10. Lost production for full simulation (all years and all wind farms)
11. Downtime hours for full simulation (all years and all wind farms)
12. Gross capacity factor
13. Net capacity factor
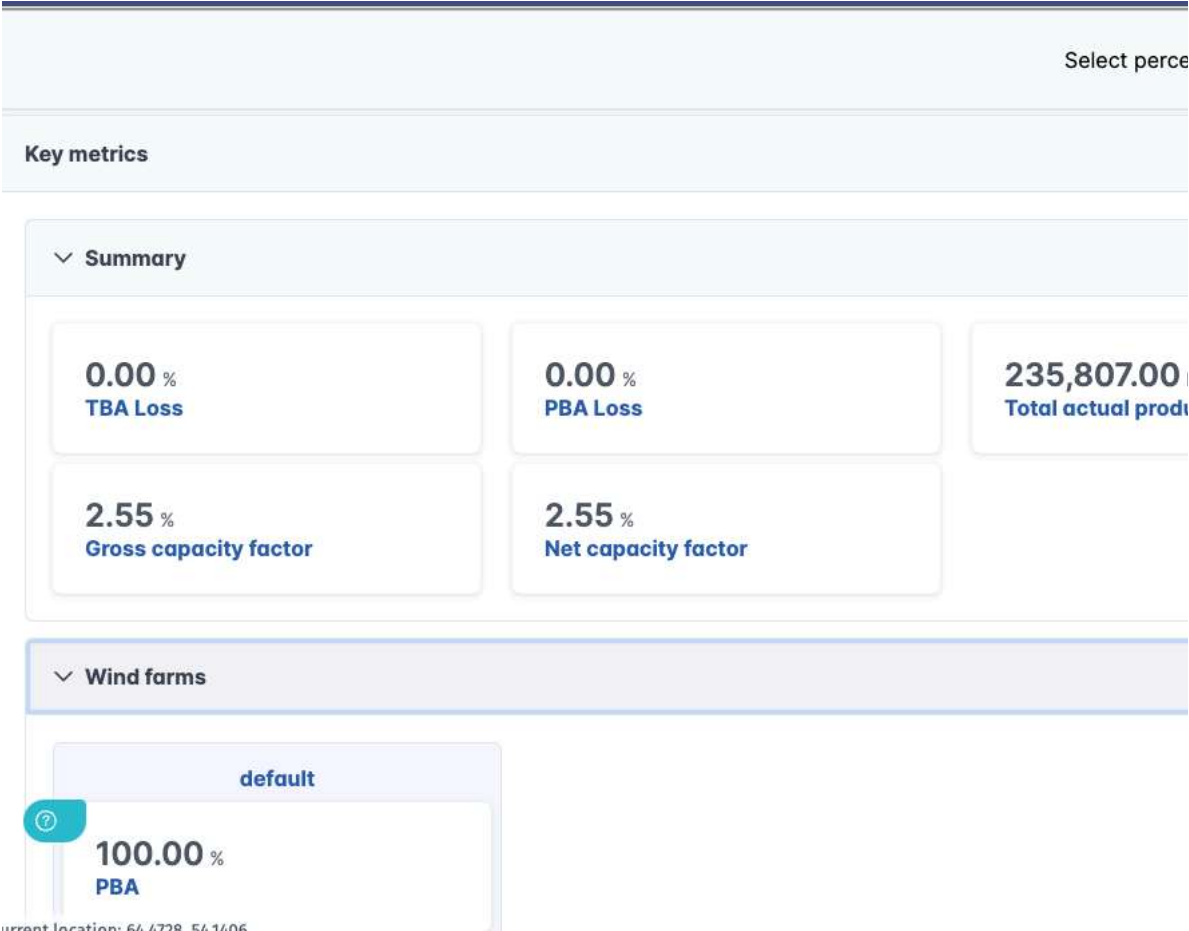
| Output Dashboard – Download options enhancements, Simulation log downloads | Added the ability to download simulation logs on the new output page. |

Log Naming and Structure:
- Logistics Log: Renamed as "Transfer task log" for Con 3 and "Transfer work order log" for O&M.
- Raw Log: Renamed as "Task status change timestamp log" for Con 3 and "Work order status change timestamp log" for O&M.
- Visualization Log: The "Visualization log" remains for both Con 3 and O&M.

-

- **File Naming** Format: projectID_caseID_fileName_SimulationRunStartTime_RunID.csv (e.g., 232_3090_SomeLog_2024-04-15-06

Run Selection:

a. O&M: Logs will always be generated for the first run of the simulation.
b. Con 3: Logs will correspond to the P-run for the selected P-value.

Process Cycle Download on S-Curve: Made available as a separate download button, similar to other reports.

Please note that the Graph CSV download options from the charts have been removed, as the same data is available in the output reports.

Compressed CSV Logs: Due to large file sizes, the system now compresses CSV logs into zip format to optimize storage and performance

Output dashboard Simulation Year Alignment: Updated all new graphs to consistently use the actual year instead of a mix between the simulation year and the actual year, aligning with

Tooltip Messages for Missing Logs: Tooltips will inform users when an output log file is not generated in the simulation engine, with guid

Key Metrics Section Redesign: The "Summary" section has been renamed "Key metrics" and made collapsible. Each metric section now

UI/UX improvements in the Output dashboard

Restructured and arranged the charts for a better user experience
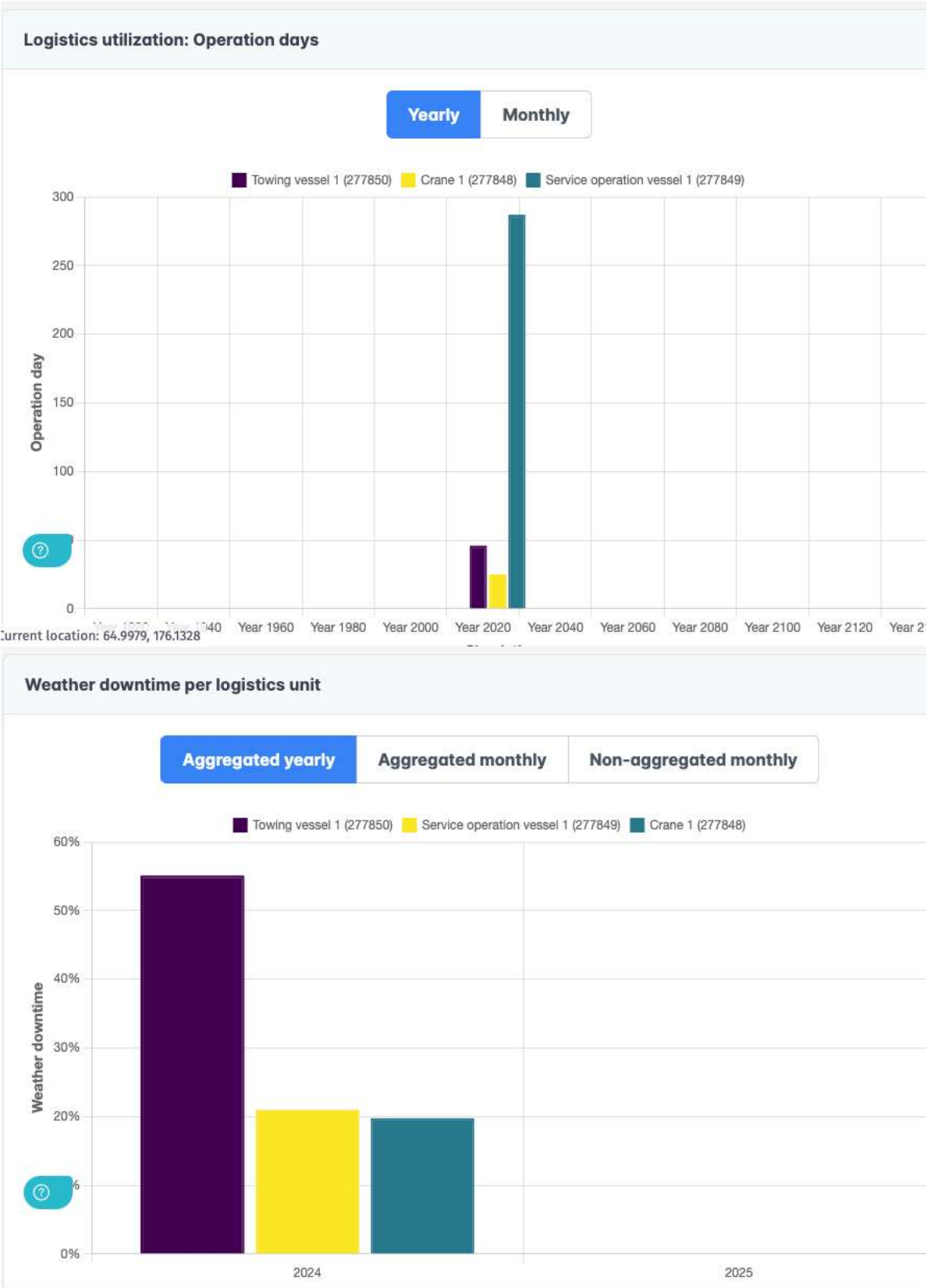
Advanced Route Planner UI improvements

Logistic Types Label: The label "Logistic types" will now display "None" when no logistic types are selected instead of showing no data.

Enhanced Drop-down Display: Collapsed drop-downs under advanced options will now expand in width or hold more lines to show all s

Loading Indicator during data processing: Implemented a loading indicator for multiple routes to provide users with visual feedback tha

Project plan reports are now available in **Excel format** in the output dashboard.

Project plan report as an Excel download

⬇ Output report .xlsx	⬇ P50 Project plan .csv	⬇ P50 Project plan
⬇ Project plan - All percentiles .zip CSV	⬇ Project plan - All percentiles .zip EXCEL	⬇ P50 PQ

Weather file data handling: Users can now upload weather data for current m/s and will be able to choose the option Current m/s as wea

Daughter Craft Base Location

Feature: Automatically use the SOV base location as the default daughter craft base location to save time and reduce confusion. This chang

Additional Check: a case checker is implemented to verify that all logistic instances have a valid port.

General enhancements

Simulations failed when a Daughter Craft with unlimited availability had an SOV with limited availability specified as the mother vessel. T

Fixed an issue where simulations froze if a personnel group was not removed from a deleted SOV. The system now checks if personnel are

Release number   **Design v3.43.0**
Release Date   **June 12, 2024**

Headline	Description
Route Planner Basic	**Custom route – Waypoints feature data will be migrated and placed under the Route planner tab on all bases as Default Route 1. Changes apply to**
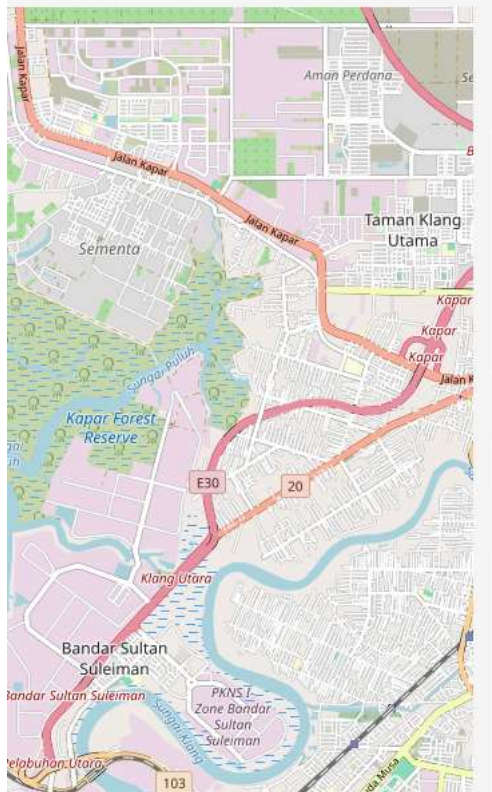
New addition: Users can set the route color.

Route Planner Advanced options (available on request)	1. Model multiple routes suitable for each logistic type 2. Specify wait times and speed limitation criteria for each waypoint on each route 3. Choose the destination of each route from the base 4. Set the Logistic load condition

Port Klang

Configuration title

| Parameters | Cost | Weather | Inventory Management | **Route Planner** |

Updated: 2 days ago, 22:32, coppa

+ **Add new route**

Route 1

Logistic types

AHV | CIV | COTV | +8

Route 2

Logistic types

AHV | CIV | COTV | +7

Design Shoresim API

Integrate and automate Shoresim functionality into your workflows with robust enterprise-grade security.

⚙ **Team settings**

Shoreline

| Field Settings | Construction | O&M | Input Library | SSO | **API Clients** | Privacy Notice |

Name	Identifier	Secret ⓘ		
test	fad7eeb5-bee8-4a65-90d...	********************	✏	🗑
wwwclient	33e14cbc-db73-49df-8dc...	********************	✏	🗑
abcclient	fb11a840-d10a-4703-939...	********************	✏	🗑
newtest	491d4b56-11cd-4e05-b98...	********************	✓	↩
auto@shoreline.no	c0df5ea0-585d-4879-a22...	********************	✏	🗑

+ **New client**

Custom workflows

Embed Shoresim functionalities into your existing workflows for a more integrated and efficient process.

Scripts

Develop scripts to automatically create and run sensitivity cases, drastically reducing the time and effort associated with manual workflows.

Batch processing

To enhance efficiency, users can schedule batch processing within your scripts to execute case simulations and run multiple sensitivity cases concu

Automated sensitivity analysis and output retrieval

Easily extract output files from sensitivity analyses through the API.

Data pipelining

Directly pipe output data into BI tools for enhanced visualization and reporting.

Shoreline Simulation API v1 OAS3

/api/v3/api-docs

Servers

/api/ ▼

Simulations

POST /simulations Posts a new simulation request, with a case in the body

GET /simulations/{requestId} Retrieves information about a simulation request

GET /simulations/{requestId}/runs/{runNumber}/outputs/{output} Downloads the specified output file

GET /simulations/copy/{caseId} Retrieves a copy of a case

O&M Output Report – Case

We've finalized the Case Inputs feature by adding Bases, Assets, Personnel, and the strategy output. Now, users can access all parameters inputted in their case buil

Logistics SOV- Performance tab - Dynamic positioning transit speed will be a mandatory field. The simulation will fail if the transit speed is undef

SOV

MOL : VARD419

| Members | Parameters | Capacity | **Performance** | Weather Criteria | Fuel Consumption | Cost | Activity Durations |

Updated: Today, 08:19, shoreline

Bug fixes

Cruising speed *   13   kn

Dynamic positioning transit speed   kn

Dynamic positioning activation time *   1h   Duration (add d/h/m/s)

Reliability   %

When the user Saves the Personnel page without entering the required title field on the personnel page, an error message will be displayed and the

09:24

Headline	Description
	Our **O&M Output report** undergoes a significant makeover, providing a renewed format for easy processing. Users will find the data mor
	Improvements in the new report
	1. Removal of empty columns/rows
	2. Uniform structure
	3. Compatible data layout
	4. Data accessibility
New output report for O&M **O&M Output report - Detailed dive demo**	**In the new beta output dashboard, only the newly formatted O&M output report is available.**
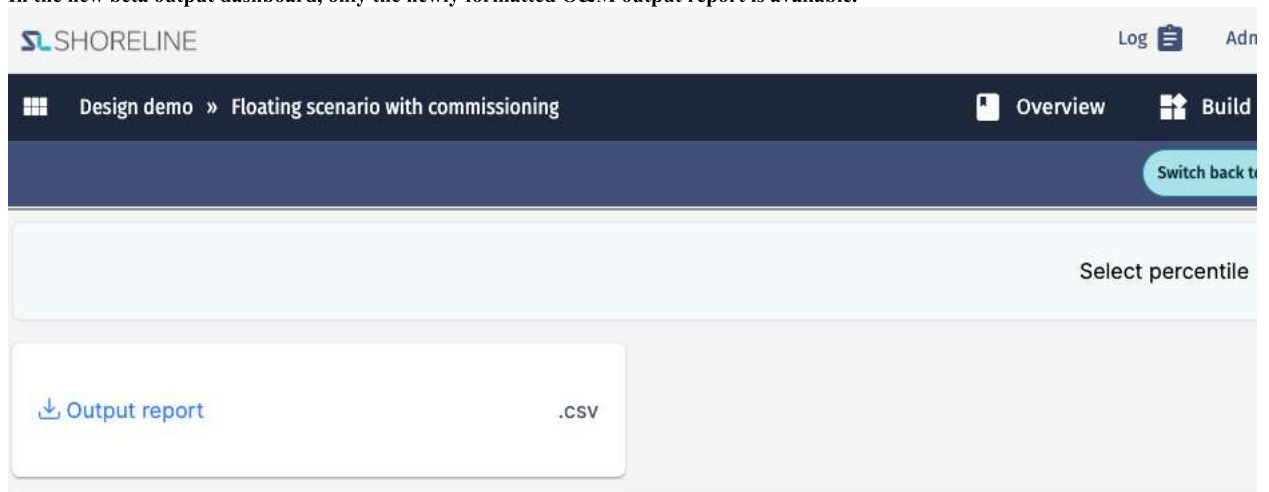
	Both existing and new O&M output reports are available in the existing output dashboard.
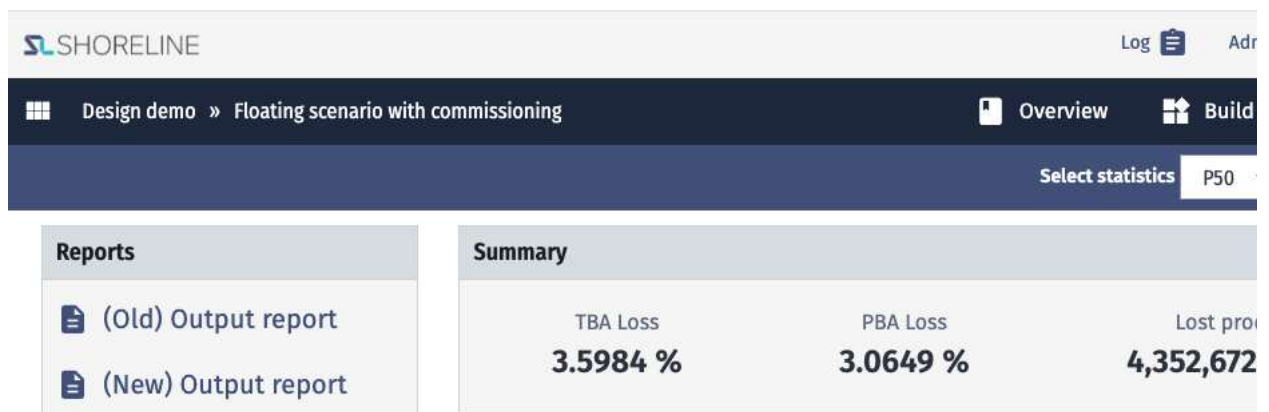
| **New outputs to O&M report** **O&M output -** | **1. Weather-downtime-causes report** **2. Logistics transfer utilization: count – Asset drop off /pick up** **3. Personnel time spent outputs** **4. Case inputs – logistics and more** |

Sailing days—Vessel operation days or sailing days are the number of days a vessel has been used, regardless of how many hours that day Operation days, including processes loadout, jack-up time, etc. = Sailing days

Users can find this output in the Logistics utilization output sheet in the report.
Operation days: Total refers to sailing/flying days depending on the type of logistics

New outputs to Design – Operation days: Sailing days

	A	B
1	Group name	Operation Days
2	Daughter craft vessel 1 (254291)	Total
3	Daughter craft vessel 1 (254291)	Total
4	Daughter craft vessel 1 (254291)	Total
5	Daughter craft vessel 1 (254291)	Total
6	Daughter craft vessel 1 (254291)	Total
7	Daughter craft vessel 1 (254291)	Total
8	Daughter craft vessel 1 (254291)	Total
9	Daughter craft vessel 1 (254291)	Total
10	Daughter craft vessel 1 (254291)	Total
11	Daughter craft vessel 1 (254291)	Total
12	Daughter craft vessel 1 (254291)	Total
13	Daughter craft vessel 1 (254291)	Total
14	Daughter craft vessel 1 (254291)	Total
15	Daughter craft vessel 1 (254291)	Total
16	Daughter craft vessel 1 (254291)	Total
17	Daughter craft vessel 1 (254291)	Total
18	Daughter craft vessel 1 (254291)	Total
19	Daughter craft vessel 1 (254291)	Total
20	Daughter craft vessel 1 (254291)	Total
21	Daughter craft vessel 1 (254291)	Total
22	Daughter craft vessel 1 (254291)	Total
23	Daughter craft vessel 1 (254291)	Total
24	Daughter craft vessel 1 (254291)	Total
25	Daughter craft vessel 1 (254291)	Total
26	Daughter craft vessel 1 (254291)	Total

Summary | Costs | Logistics Utilization | Logistics Transfer Utilization

Ready | Accessibility: Good to go

New outputs to Design – Operation days: Flying days

The number of days a Helicopter has been used, regardless of how many hours that day and regardless of how many drop-offs/pick-ups

Users can find this output in the Logistics utilization output sheet in the report

Operation days: Total refers to sailing/flying days depending on the type of logistics

	Group name	Operation Days	SimulationY	Month
13	Helicopter 1 (254288)	Total	10	
14	Helicopter 1 (254288)	Total	11	
15	Helicopter 1 (254288)	Total	12	
16	Helicopter 1 (254288)	Total	13	
17	Helicopter 1 (254288)	Total	14	
18	Helicopter 1 (254288)	Total	15	
19	Helicopter 1 (254288)	Total	16	
20	Helicopter 1 (254288)	Total	17	
21	Helicopter 1 (254288)	Total	18	
22	Helicopter 1 (254288)	Total	19	
23	Helicopter 1 (254288)	Total	20	
24	Helicopter 1 (254288)	Total	21	
25	Helicopter 1 (254288)	Total		January
26	Helicopter 1 (254288)	Total		February
27	Helicopter 1 (254288)	Total		March
28	Helicopter 1 (254288)	Total		April
29	Helicopter 1 (254288)	Total		May
30	Helicopter 1 (254288)	Total		June
31	Helicopter 1 (254288)	Total		July
32	Helicopter 1 (254288)	Total		August
33	Helicopter 1 (254288)	Total		September
34	Helicopter 1 (254288)	Total		October
35	Helicopter 1 (254288)	Total		November
36	Helicopter 1 (254288)	Total		December
37	Helicopter 1 (254288)	Total		Total

Summary | Costs | **Logistics Utilization** | Logistics Transfer Utilization | Personnel Utilization | Personnel

Ready   Accessibility: Good to go

The total number of days a helicopter is used for flight operations, regardless of the duration of each flight, is called Flying days. In contra

Users can find this output in the Logistics utilization output sheet in the report

	Group name	Operation Days	SimulationY	Month	Average
1					
42	Helicopter 1 (254288)	Flying Hours			
43	Helicopter 1 (254288)	Flying Hours			
44	Helicopter 1 (254288)	Flying Hours			
45	Helicopter 1 (254288)	Flying Hours			
46	Helicopter 1 (254288)	Flying Hours			
47	Helicopter 1 (254288)	Flying Hours			
48	Helicopter 1 (254288)	Flying Hours			
49	Helicopter 1 (254288)	Flying Hours			
50	Helicopter 1 (254288)	Flying Hours			
51	Helicopter 1 (254288)	Flying Hours			
52	Helicopter 1 (254288)	Flying Hours			
53	Helicopter 1 (254288)	Flying Hours			
54	Helicopter 1 (254288)	Flying Hours			
55	Helicopter 1 (254288)	Flying Hours			
56	Helicopter 1 (254288)	Flying Hours			
57	Helicopter 1 (254288)	Flying Hours			
58	Helicopter 1 (254288)	Flying Hours			
59	Helicopter 1 (254288)	Flying Hours			
60	Helicopter 1 (254288)	Flying Hours			
61	Helicopter 1 (254288)	Flying Hours		20	
62	Helicopter 1 (254288)	Flying Hours		21	
63	Helicopter 1 (254288)	Flying Hours			January
64	Helicopter 1 (254288)	Flying Hours			February
65	Helicopter 1 (254288)	Flying Hours			March
66	Helicopter 1 (254288)	Flying Hours			April

New outputs to Design – Operation days: Flying hours

Sort panel:
- Ascending / Descending
- By colour: None
- Filter
- By colour: None
- Equals — Flying Ho...
- And / Or
- Choose One
- Search
- ☐ (Select All)
- ☑ Flying Hours
- ☐ Possible
- ☐ Total
- ☑ Auto Apply
- Apply Filter / Clear Filter

Summary | Costs | **Logistics Utilization** | Logistics Transfer Utilization | Personnel Utilization | Personnel Time Spent

Ready   34 of 374 records found   Accessibility: Good to go

Output Dashboard – New graphs

1) Operation days: Sailing days / Flying days graph

Operation days: Sailing/flying days

Yearly

Legend: ■ Towing vessel 1 (256708) ■ Crew transfer vessel 1 (25...

Chart (y-axis: Operation day, 0–700; x-axis months Jan–Jun):

- Jan: ~160, ~335, ~325, ~40
- Feb: ~170, ~352, ~275, ~48
- Mar: ~172, ~470, ~460, ~50
- Apr: ~122, ~662, ~465, ~62
- May: ~85, ~665, ~160, ~48
- Jun: ~85, ~652, ~88, ...

Si...

2) Personnel time spent

Personnel time spent

Personnel groups

Operators ⌄

Yearly | Aggre...

Chart (y-axis: 0%–3.5%; x-axis: 2024–2040):

Values hover around 3% and 2.5–2.8% for the two main bars, with small bars near 0.3% each year from 2024 to 2040.

Current location: 67.8755, 180.8789

Simulation yea...

Removal of presentation mode	We want to inform you that the Presentation mode feature will be discontinued starting this release. All cases previously accessible under
Case checkers	Several case checkers have been refined to improve scenario validation, reducing the likelihood of case failures.

Release number	Design v3.41.0.1 (Hotfix)
Release Date	11 Apr 2024

Headline	Description	Shoreline Product
Data mapping using Import CSV for Tasks in O&M	Importing Scheduled or Corrective maintenance tasks from CSV to an asset on an O&M case should persist in new logistics type Daughter craft selection.	O&M

Release number	Design v3.41.0.0
Release Date	08 Apr 2024

Design Release 3.41.0

Shoreline

16:59

Headline	Description
New output : Personnel/technician time spent on output – Output report	We've introduced a new output called Technician Time Spent data, which offers detailed insights into how efficiently personnel allocate

In this release, we have projected the data in the Construction output report.

In the next release, the same output will have an output dashboard view.

Below is the categorization available in Design application |

Output
Crew change
Drop off at start location
Pick up at start location
Traveling on vessel
Work ongoing (or On asset)
Pick up (at turbine)
Drop off (at turbine)

	A	B	C	D	E
1	Group name	Category	SimulationYe:	Month	Averag
2	Completion team	Pick up at turbine			
3	Completion team	Pick up at turbine			
4	Completion team	Pick up at turbine			
5	Completion team	Pick up at turbine			
6	Completion team	Pick up at turbine			
7	Completion team	Pick up at turbine			
8	Completion team	Pick up at turbine			
9	Completion team	Pick up at turbine			
10	Completion team	Pick up at turbine			
11	Completion team	Pick up at turbine			
12	Completion team	Pick up at turbine			
13	Completion team	Pick up at turbine			
14	Completion team	Pick up at turbine			
15	Completion team	Pick up at turbine			
16	Completion team	Pick up at turbine			
17	Completion team	Pick up at turbine			
18	Completion team	Pick up at turbine			
19	Completion team	Pick up at turbine			
20	Completion team	Pick up at turbine			
21	Completion team	Pick up at turbine			
22	Completion team	Pick up at turbine			

Category

Sort

A→Z Ascending   Z→A Des

By colour: None

Filter

By colour: None

Choose One

🔍 Search

☑ (Select All)
☑ Crew change
☑ Drop off at turbine
☑ Pick up at turbine
☑ Traveling on vessel
☑ Work ongoing

Group name	Category	SimulationYea
Completion team	Pick up at turbine	2023
Completion team	Pick up at turbine	2024
Completion team	Pick up at turbine	2026
Completion team	Pick up at turbine	
Completion team	Work ongoing	2023
Completion team	Work ongoing	2024
Completion team	Work ongoing	2026
Completion team	Work ongoing	
Completion team	Crew change	2023
Completion team	Crew change	2024
Completion team	Crew change	2026
Completion team	Crew change	
Completion team	Drop off at turbine	2023
Completion team	Drop off at turbine	2024
Completion team	Drop off at turbine	2026
Completion team	Drop off at turbine	
Completion team	Traveling on vessel	2023
Completion team	Traveling on vessel	2024
Completion team	Traveling on vessel	2026
Completion team	Traveling on vessel	

New output – Logistics transfer count /utilization – Output report

Users currently have access to vessel utilization data through our existing outputs. To enhance granularity and complement this informa

| 30 | Crew transfer vessel 1 (249515) | Offshore Wind Turbi |

◄ ► Summary   Costs   Logistics Utilization   **Logistics Tr**

Ready   Accessibility: Good to go

	A	B
	Logistics name ▼	Asset name
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
0	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
1	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
2	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
3	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
4	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
5	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
5	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
7	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
3	Crew transfer vessel 1 (249515)	Offshore Wind Turbine
9	Crew transfer vessel 1 (249515)	Offshore Wind Turbine

New output dashboard – Average task duration in a task group output chart

A new dashboard view displays the average task duration for each task group, offering quick insights into project timelines

Task group and average task duration
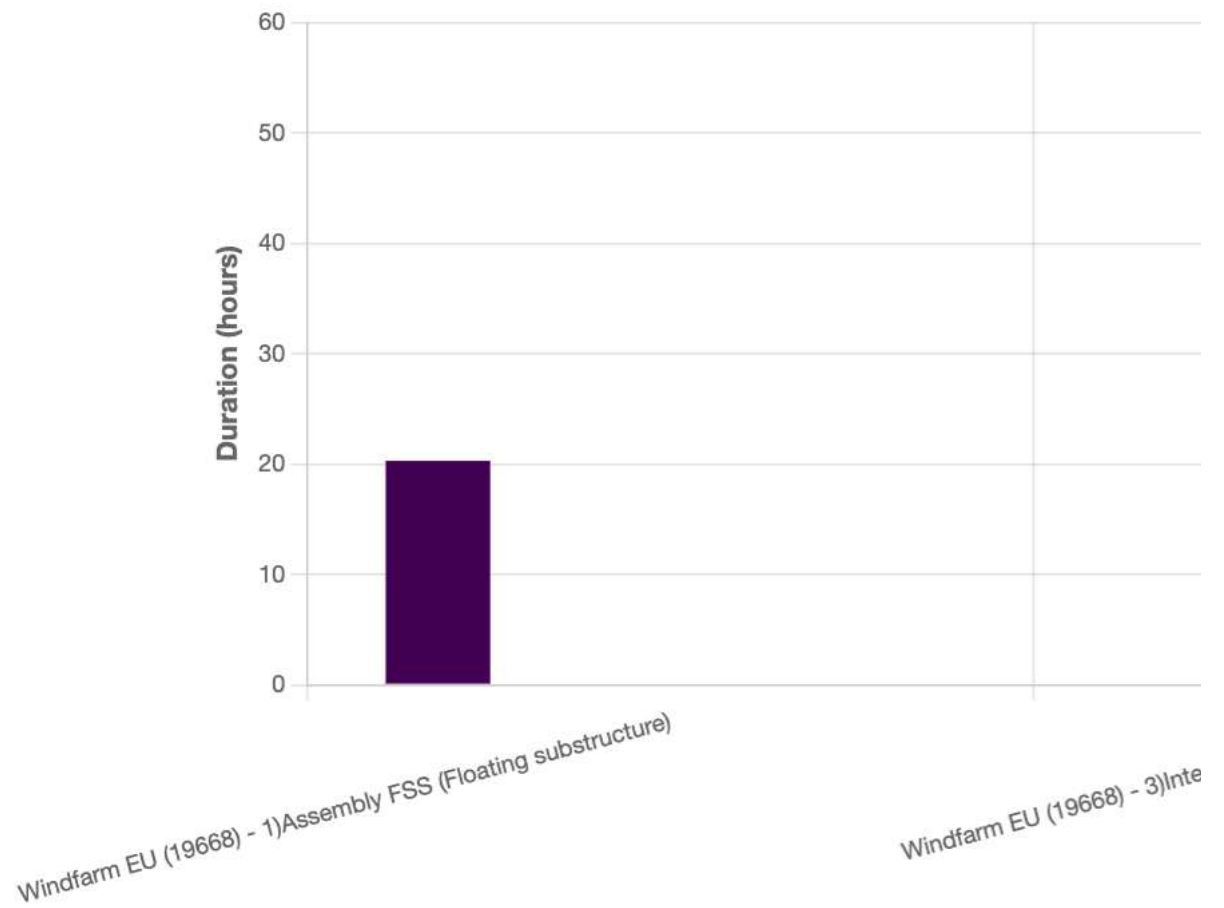
New outputs – Case input parameters output as part of the Output report	We've finalized the Case Inputs feature by adding the strategy output. Now, users can access all parameters inputted in their case building for compariso
New output dashboard – Weather downtime root causesper logistics chart	We've introduced a new chart displaying the top ten major root causes affecting vessels and their processes during simulations. This hel

Weather downtime causes

Vessel

Ring crane ⌄

> Ring crane
>
> Port tug

Root cause

Floater and tower sections - TIME_RESTRICTION

ASSEMBLY - Add blades - TIME_RESTRICTION

ASSEMBLY - Assemble the Pontoons - TIME_RESTRICTION

ASSEMBLY - Assemble the columns - TIME_RESTRICTION

ASSEMBLY - Lift and put the floater on the water depth on quay side - TIME_RESTRICTION

ASSEMBLY - Add nacelle - TIME_RESTRICTION

DEMOBILIZATION - Step 1 - WIND_SPEED

0

New output dashboard UI improvements	• We've increased the size of plotted dots on task end-time graphs for better visibility. • We've also standardized color schemes across charts for a more intuitive user experience.
New logistics type – Daughter craft vessel	Presently, our users face limitations when modeling scenarios involving a daughter craft attached to an SOV in Design, Construction, a

Recognizing the critical role of daughter crafts in offshore wind farm operations and maintenance, we understand their importance for

Daughter craft vessel

Name	Daughter craft vessel
Number of units to add	
Port	2)Bergen - Marshalling port
Mother vessel	Service operation vessel 1
Spot chartered	☐

Members	Parameters	Weather Criteria	Power Curve

Tasks	Start date
Manual HSE checkup	**01. Jan**
Service Nacelle	01. Jun
Service Turbine Hub	01. Jul
Statuatory inspection	20. Mar
Annual Service	01. Jan

+ Add Scheduled Maintenance   **⛟** Import CSV

Utilization percentage

90%

80%

70%

60%

50%

40%

30%

20%

10%

0%
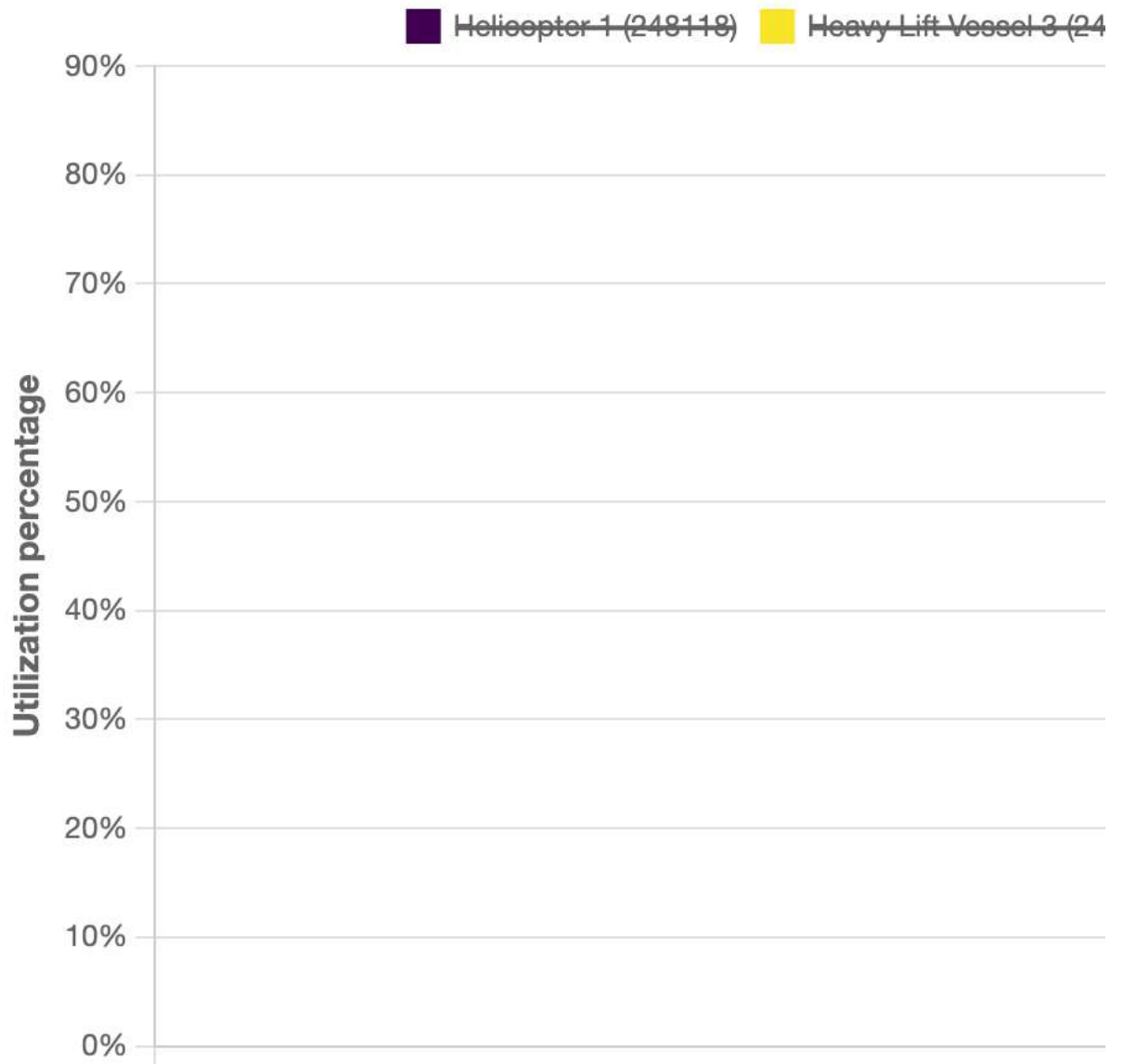
Others   Alongside introducing new features, we have consistently enhanced the technical aspects of our platform to ensure seamless and uninter

Release number   Design v3.40.0.0
Release Date   12 Mar 2024

20:47

Headline	Description
	In response to customer requests, a chart displaying the duration of each task group from the start of the first work order/task to the end of th[...] Construction 3 Design. This offers a more intuitive visualization compared to the milestone log based on P-run data.
New dashboard view: Chart - Task group duration	
New dashboard view: Chart - Task group end date	The new Task Groups end-time graph will allow users to see the completion date of each group of tasks for different percentiles. We will improve the visualization of this chart in the subsequent releases
Average task duration per task group - Output report	Users can now find the output data for average duration of a task from a Task group
Case Inputs – Output Report	Users can now generate a comprehensive report detailing important case input parameters or configurations for a case model. This feature en[...] leading to specific outputs within the Design application. Next iterations – Will be available for O&M in subsequent releases
Input Library access	The customer Account Admin role can now have the highest permission access to all templates in the input library, streamlining template man[...] users.
Enhanced Skill Validation for Transfer Tasks	Modelers will now receive notifications if they forget to set required skills on transfer tasks or omit these skills from personnel groups. Additio[...] personnel with the required skills and consider vessel transportation capabilities for the tasks.
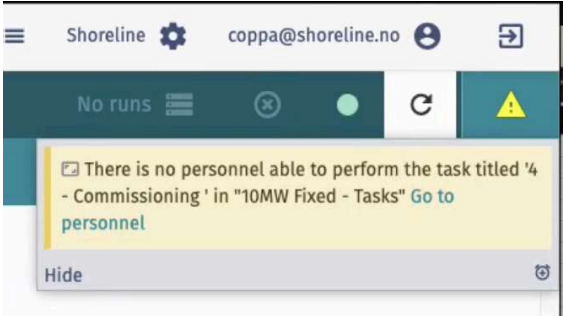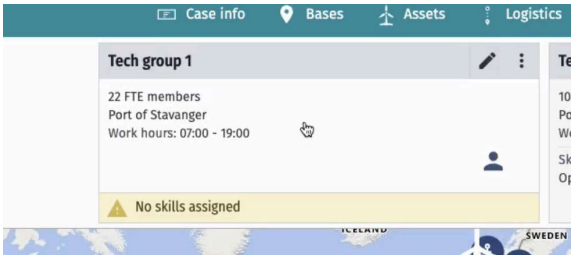
Task and Personnel Group Validation	Users editing tasks on assets or personnel groups will be prompted to add necessary skill groups or skills, respectively, before saving changes. sets assigned to transfer tasks that have not been allocated to any personnel group. Implemented a validation check to address simulation failures from vessel capacity exceeding port capacity. Users will now receive an error n simulation failure.
Case validation to check vessel vs. Port capacity – Inventory	
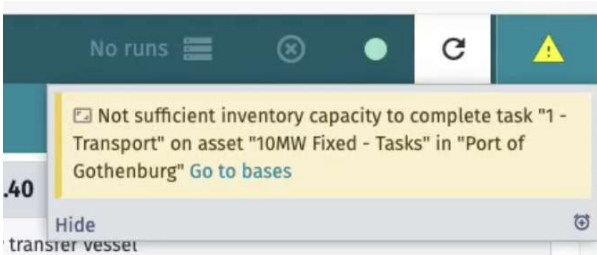
The asset access limitations settings can now be modeled for Crew transfer vessels to improve case accuracy.

More weather criteria inputs on CTV	• Wind speed access limit values in m/s (similar to SOV) • Wind speed limitation reference height in m (similar to SOV)

Enhancements Technical improvements

Release Number	**Design v3.39.0.0**
Release Date	**27 Feb 2024**

Headline	Description
	The "weather causes output" feature provides insights into the factors contributing to the total weather downtime experienced by logistics u...
	•The weather causes report explains how various weather conditions affect the total downtime of a vessel during a simulation period or camp...
Weather causes output	•For example, suppose there's a 20% occurrence of wind speed exceeding limits during step 1 of process A on vessel X. In that case, this cont...

Configurations	We have removed some of the old Construction 1 fields on the product to make the workflow for Construction 3 users easier and clearer. (no...

Design Construction 3 new output dashboard has all the listed additions now.

Charts

1. S-Curve
2. Inventory Management
3. Vessel Utilization
4. Personnel Utilization
5. Weather downtime per logistics unit

Reports

1. Output report
2. Project Plan

New output dashboard Beta
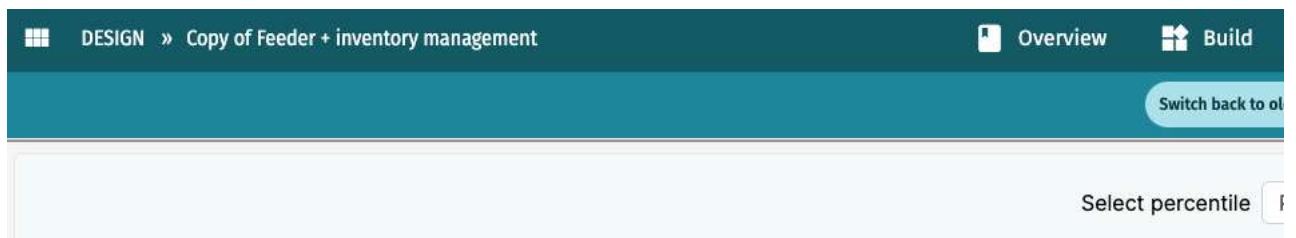
New output dashboard Beta

Design O&M's new output dashboard has all the listed additions now

Charts

1. Time-based availability (TBA)
2. Production-based availability (PBA)
3. Vessel Utilization
4. Personnel Utilization
5. Scheduled maintenance completion per year
6. Weather downtime per logistics unit

Reports

1. Output report

Enhancements Technical improvements

Release Number	**Design v3.38.0**
Release Date	**07 Feb 2024**

Design v3.38.0

Shoreline

08:58

Headline	Description	Shoreline Design
	The new Task group duration and Task group end time output will allow users to see the duration of each group of tasks for different percentiles to identify the individual risk each task has at each percentile. This will remove the need for them to look at the milestone log to find this detail. In this release, we are releasing the output data as part of the Output report, and the chart in the dashboard will be implemented iteratively in future releases.	
New Outputs to Design	Downtime Task Group Duration (days) Task Group End Time Milestones Inventory +	**Con 3 and O&M**
Project plan for all P values	It has been possible to download one Project Plan report per percentile. For users wishing to compare the reports for all percentiles without lots of manual clicking, we have now released the option to download a zip folder that contains the CSV files for all the percentiles. The folder is called 'All percentiles csv'	Con 3

It is now possible to duplicate the configurations of Base, Asset, and Logistics and reuse it in the same case instantaneously without saving them to the Input library by choice.

Duplicate the configuration template within a case		**Con 3 and O&M**
Enhancement and Bug fixes	**General technical improvements**	**Con 3, O&M**
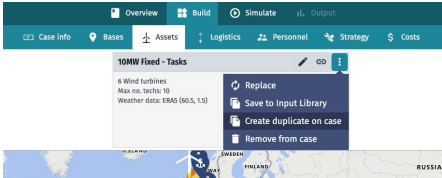
Release Number	**Design v3.37.0**
Release Date	**24.01.2024**

Headline	Description
Additional route inputs such as Speed limit and Time Delays for Waypoints	**Construction 3 & O&M**
	We have added the ability to set speed limits (Max speed) at bases and the wait times ('Time delay') at each waypoint. This is an excellent addi
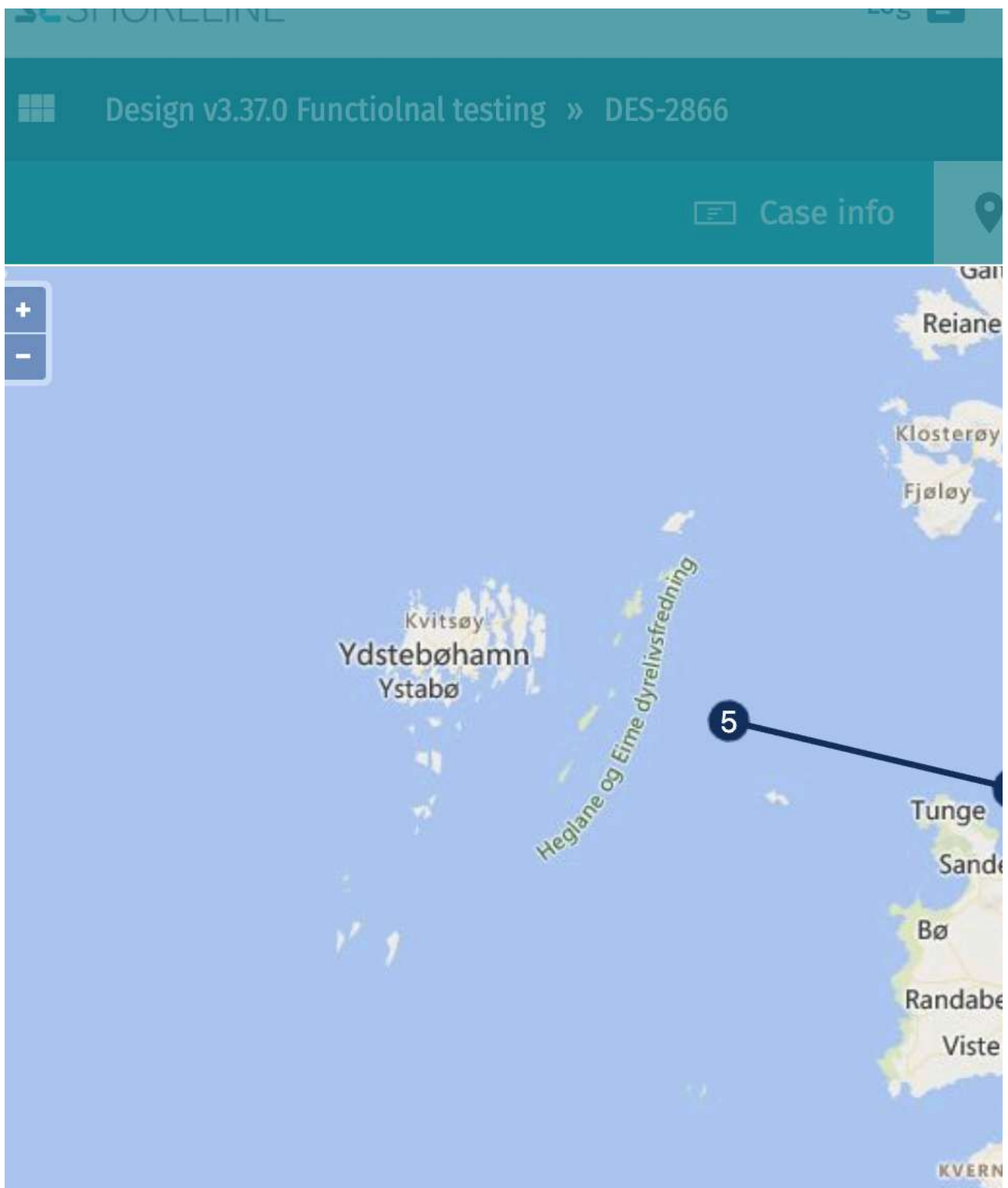
These local restrictions could include:

- Designated zone areas within the port (anchorage areas, gates, customs & security checkpoints)

- Environmental restrictions, e.g., whale movements, sea animals' mating season, etc.,

- Local laws to manage local community relations – e.g., as regards reducing noise and disturbance caused by fast-moving vessels

The impact of setting these restrictions can be viewed in the Visualisation Log and the visualization.

Lead Time for individual vessel instances

In Shoreline Design, lead time is the amount of time needed to make preparations before a vessel carries out a task.

It was previously possible to set lead time for all the major vessels on the Strategy tab, which meant the same lead time was applied to all vessels. In reality, there can be a l

Heavy lift vessel

Name	Heavy lift vessel 1
Port	Stavanger Airport
Lead time	8 days

Schedule

Availability   ● Always available
           ○ Shift start/end time

Alter vessel settings   - constant settings -

Wind farms   ☑ All wind farms

It is now possible to save Base, Asset, or Logistics configuration settings in a case back to the Input Library so they can be reused in other case

Saving data from the Case of the project to Input Library

Case info	Bases	Assets	Logistics	Personnel

Substation 2.40

1 Substation
2.40
Scheduled task: 1
Corrective task: 1
Max no. techs: 2
Weather data: ERA5 (62.0, 2.5)

  ↻ Replace
  ▢ Save to Input Library
  🗑 Remove from case

Updated: 07/12/2023, 22:55, coppa

Wind turbine

54 Wind turbines
Scheduled tasks: 8
Corrective tasks: 4
Weather data: Demo_Weathe

We have increased Shoreline Design's performance! Previously, we have been continually validating cases as users build them; now, we only va

Enhanced case validation function

No runs   ⊗   ○   C   ⚠

☑ Missing technicians on SOV: Service operation vessel 1,
Go to personnel

2

Hide   ⏲

You may also have observed that we have improved the hints and warnings given to users so that they don't always appear and only notify wh
warned of how this change will impact the rest of their case.

Test for release Jan 24   🔖 Overview   ❗ 🔧 Build   ▶ Simulate   📊

Download Simulation JSON: Case   Weather

Weather: Disable   Historical   Increment start year   Markov   **Start year:** 2023   7   years

Simulation failed - To resolve errors, Please address the displayed warnings under the notification at the top right c

Inventory Management Output report

Inventory Management output data is now available in **Design Construction's Output report**. This can be found in the Output report under th

	A	B	C	D	E	F
1	This is not aggregated data, but each inventory log, matching the P-value based on project duration.					
2						
3	P-Value	Port	Component Name	Change	Actual Stock	Time
4	NET	Port of Esbjerg (218038)	Tower bottom	0	0	2023-11-09T00:00
5	NET	Port of Esbjerg (218038)	Tower bottom	1	1	2023-11-11T12:00:02
6	NET	Port of Esbjerg (218038)	Tower bottom	1	2	2023-11-11T12:00:02
7	NET	Port of Esbjerg (218038)	Tower bottom	1	3	2023-11-11T12:00:02
8	NET	Port of Esbjerg (218038)	Tower bottom	1	4	2023-11-11T12:00:02
9	NET	Port of Esbjerg (218038)	Tower bottom	1	5	2023-11-11T12:00:02
10	NET	Port of Esbjerg (218038)	Tower bottom	-1	4	2023-11-11T13:00:02
11	NET	Port of Esbjerg (218038)	Tower bottom	-1	3	2023-11-15T15:00:02
12	NET	Port of Esbjerg (218038)	Tower bottom	-1	2	2023-11-19T17:00:02
13	NET	Port of Esbjerg (218038)	Tower bottom	-1	1	2023-11-23T19:00:02
14	NET	Port of Esbjerg (218038)	Tower bottom	-1	0	2023-11-27T21:00:02
15	NET	Port of Esbjerg (218038)	Tower bottom	1	1	2023-11-27T22:00:02
16	NET	Port of Esbjerg (218038)	Tower bottom	1	2	2023-11-27T22:00:02
17	NET	Port of Esbjerg (218038)	Tower bottom	1	3	2023-11-27T22:00:02
18	NET	Port of Esbjerg (218038)	Tower bottom	1	4	2023-11-27T22:00:02
19	NET	Port of Esbjerg (218038)	Tower bottom	1	5	2023-11-27T22:00:02

We're making some changes to the Design application's Output Dashboard for **Construction** and **O&M**.

Check out the development by selecting to view the beta version.

Note: the Inventory Management graph can only be found on the beta dashboard.

Caution: The new output page is in beta and undergoing active development. You might encounter bugs and limited functionality.
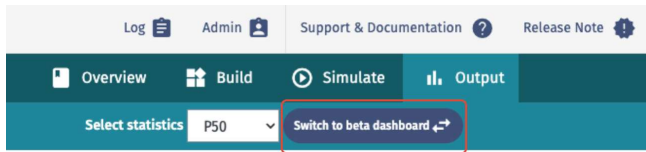
In future releases during Q1, we will continue to add new output data (charts, widgets, tables) to the dashboard for both construction and O&I

Highlights:

- **The percentile selector applies to all items on the page, including the reports.**
- **All reports can be found at the top of the page.**
- **All graphs have zooming functionality, colors, and icons designed to improve readability and accessibility.**

Construction 3

The 3 Weather Downtime per Logistics Unit graphs are now amalgamated into one, with tabs for Yearly, Aggregated, and Monthly. This reduc

New Output
dashboard
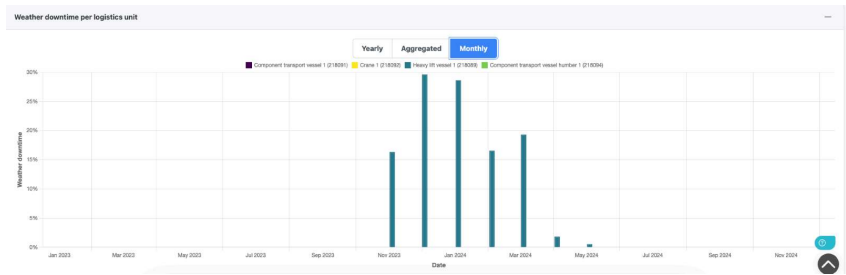
The Inventory Management graph is now on the beta dashboard and has improved visuals.

Process cycle We have restructured the towing vessel process cycle to optimize O&M specially for floating scenarios, enabling more efficient execution of tov
for towing
vessel

Enhancement and bug fixes	1. **Tasks will now be completed if the Inspection, Preparation, Replacement, and Finalisation fields are empty or have a default value of 0. N**
	2. **Scheduled Maintenance recurrence should be based on the number of operational years.**

Release Number	**Design v3.36.0**
Release Date	**14.12.2023**

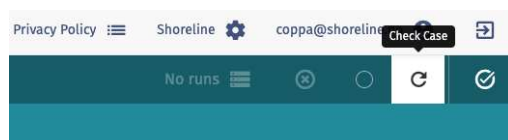| **Headline**	**Description**
Optimization	**Improved process scheduling: Fix in response to user feedback regarding process initiation times. Previously, processes commenced on the hou minute discrepancies, especially within larger campaigns, this fix ensures that processes start the next minute following the previous process cy**
	Bulk Edit permissions will be applied correctly without refreshing the page twice.
Enhancement and bug fixes	
Enhancement and bug fixes	1. **In cases involving feeder vessels for installation tasks, there was a minor bug causing them to go unreported in the process cycle log. We have successfully**
	2. **Fixed the bug around cable installation vessel (CIV) capacity. The project timeline now accurately reflects CIV capacity**

| **Release Number** | Design v3.35.1 |
| **Release Date** | 08.12.2023 |

| **Headline** | **Description** | **Shoreline Design** |
| Enhancement and Bug fixes | We have fixed a minor bug around vessel selection not replicated on copied case. | O&M |

| **Release Number** | Design v3.35.0 |
| **Release Date** | 30.11.2023 |

Headline	**Description**	**Shoreline Design product (s)**
	Design Construction: Inventory Management feature release	
New Feature	Inventory Management is a feature that enables the users to strategically control every component in the construction of wind farm project simulation in Design software. Users can now model all the components required to construct a wind farm project on Shoreline Design, such as tower components, tower assemblies, nacelles, blades, and floating foundations. Port Capacity: The storage of components can now be modeled on bases, allowing users to itemize the exact number of each component that can be stored at each base. The flow of components between the manufacturing base, marshaling harbor, and wet storage can be easily tracked using the new Inventory Management graph on the Output page, and stock levels can be set to reflect real-world space limitations. Strategic movement of components: The movement of components can be modeled on transport tasks, allowing users to itemize what is being transported from one location to another and in which quantity. Complex assemblies and installations: The assembly of components, such as several tower components into a tower assembly, can now be modeled on an asset's tasks. This aids in greater visibility of what is being performed in each assembly and installation task and allows for modeling more complex scenarios, such as floating installations. Find out more about how Inventory Management can help: Inventory Management	Construction 3
Optimisation	1) We have now added more Statistical selector Percentile values such as Min, Max, 25, 50, 75 with the existing ones P10, P20, P30, P40, P50, P60, P70, P80, P90 are available in the project plan report the output report, Statistical p-Selector in the output dashboard.	Construction 3, O&M

2) Users can now validate their cases using Check Case button. This triggers case checkers run on demand and notify all the errors and warnings under Notifications.

3) We've integrated a permanent link within the Design application, allowing users to conveniently access release notes whenever they prefer.

Minor Changes	1. We have **removed MS Project and Primavera format Milestones and Process cycle Log from S-Curve download section.**	**Construction 3**
Enhancements and Bug Fixes	1. **The users can export the assets without any error messages in O&M** 2. **The users can upload a corrective maintenance task without any errors in O&M** 3. **The user can save changes by clicking the newly added Save button at the bottom section of the Scheduled Maintenance task page in O&M.**	**O&M**

Release Number	**Design v3.34.0**
Release Date	**21.11.2023**

Headline	Description	Shoreline Design product (s)
O&M - Corrective maintenance tasks	**Design O&M** In a wind farm with Operations start year X+2 (X being the simulation start year), we have had a bug where failure rates were not started X+2 but X. This has been fixed in this release.	**O&M**
Addressing Location Mismatches between Personnel and Vessels (CTVs and Helicopters Without Mother Vessels)	In our previous tool version, a discrepancy between personnel and vessel locations allowed the simulation to proceed, marking tasks as completed inaccurately. This occurred ONLY with CTVs and helicopters lacking a mother vessel. We've rectified this problem by implementing a fix, ensuring tasks progress only when the site/location matches. The simulation now correctly fails when there is a mismatch.	**Construction 3, O&M**
Enhancements and Bug Fixes	1. **When multiple cranes work on the same assembly tasks, the simulation will run successfully without failing.** 2. **We have also improved our scheduling algorithm to handle the interaction between the daylight restriction of the helicopter and the personnel work shift.** 3. **Users can delete projects without any issues**	**Con 3, O&M**

Release Number	**Design v3.33.0**
Release Date	**18.10.2023**

Headline	Description	Shoreline Design product (s)
O&M - Corrective maintenance tasks	**Design O&M can now have major Vessels(with Processes) for Offshore Substation Corrective maintenance Task.** **Available major vessels : Heavy Lift Vessel (Jack-up vessel) , Towing Vessel**	**O&M**
Date and Time Restrictions	1. **You can now bulk select and apply date and time restrictions in multiple process' steps by using the Bulk Manage Limitation option on the three-dot menu.** 2. **If the user did not save the rule by clicking apply, a warning message will notify the user that the rule is not saved** **How to use: [Date and Time Restrictions document](#)**	**Construction 3, O&M**
Enhancements and Bug Fixes	**We have removed the Case Comparison tab from the Design tool**	**Con 3, O&M**

| Release Number | 3.32.0 |
| Release Date | 28.09.2023 |

Headline	Description	Shoreline Design product (s)
	Project Plan Report	
New Feature	- Managing wind farm simulation projects is now simpler and more insightful with the Project Plan Report. - Get a comprehensive view of your entire project timeline in one report. - Tasks are organized hierarchically and can be expanded or collapsed as needed using software like MS Project, Primavera P6(Oracle) - Visualize task hierarchies and dependencies effortlessly. - Make informed decisions and streamline project management. **How to use: Project Plan Report document**	Construction 3
New Feature	**Date and Time Restrictions** - You can now specify certain timeframes during which logistics are unavailable for use on a project at a task's Process and Step level of logistics. - This feature empowers you to accurately represent real-world constraints within your projects. - Constraints may include Local Laws, Environmental restrictions, Cost reduction and financial planning, Authority body rules, and more. - Enhance your project modeling experience with unparalleled flexibility and realism **How to use: Date and Time Restrictions document**	Construction 3, O&M

| Release Number | 3.30.0 |
| Release Date | 19.09.2023 |

Headline	Description	Shoreline Design product (s) affected
Improvements	The feeder vessels can be assigned different feeder task combinations as long as all the feeder tasks main task is assigned to the same HLV. However there was an edge case scenario of a feeder task combination on the same feeder vessels, that broke the HLVs work flow. The scenarios we could handle without problems:	Construction 3

- Same feeder task type, but for different main tasks (on the feeder vessel would be:)

  - Feeder task type A for installation task 1

  - Feeder task type A for installation task 2

- Different feeder task types, but for the same main task (on the feeder vessel would be:)

  - Feeder task type A for installation task 1

  - Feeder task type B for installation task 1

The scenario we could not handle before, but we can now

- **Different feeder task types, and different main task (on the feeder vessel would be:)**
  - **Feeder task type A for installation task 1**
  - **Feeder task type B for installation task 2**

Release Number	3.29.0
Release Date	06.09.2023

Headline	Description	Shoreline Design product (s) affected
Bug fix and Improvements	**1. Addressing variations for multiple feeder tasks under Logistics - process** **2. Removed invalid warning for Construction 1 - When you add assets with tasks from input library**	Construction 1, 3

Release Number	3.26.0
Release Date	17.08.2023

Headline	Description	Shoreline Design product (s) affected
Bug fix and Improvements	Adding related instances on the asset	Construction 3

Release Number	3.25.0
Release Date	10.08.2023

Headline	Description	Shoreline Design product (s) affected
Bug fix and Improvements	1. Modelling cases with multiple feeder vessels 2. Adding steps for anchor Handling vessel - Processes	Construction 3

Release Number	3.24.2
Release Date	10.07.2023

Headline	Description	Shoreline Design product (s) affected
S-curve	We have updated how the S-curve is calculated. Please see here and here for more information.	Construction 3
Bug fix and Improvements	Addressed bug fixes in relation to deletion of new customers and users that are not assigned with projects or cases	Construction 3 and O&M

| Release Number | 3.23.0 |
| Release Date | 29.06.2023 |

Headline	Description	Shoreline Design product (s) affected
Bug fix and Improvements	Addressed bug fixes in relation to deletion of new customers and users that are not assigned with projects or cases	Construction 3 and O&M

| Release Number | 3.22.0 |
| Release Date | 16.06.2023 |

Headline	Description	Shoreline Design product (s) affected
Bug fix and Improvements	Addressed bug fixes in relation to uploading CSV files for Power curve of Asset -Turbines, Inter-Array Cables and edition of Asset member locations	Construction 3 and O&M

| Release Number | 3.21.0 |
| Release Date | 01. 06. 2023 |

Headline	Description	Shoreline Design product (s) affected
Bug fix	We fixed a bug related to deletion of Skill set under Tasks module of Assets	Construction 3

| Release number | 3.20 |
| Release date | 04.05.2023 |

Headline	Description	Shoreline Design product(s) affected
Distances and Transit Times	Distances and Transit Times between port and wind farm, and between assets: All information which was available on the Cycle Overview tab on Construction 1 is now available on Construction 3 on the processes for each Logistic. More information can be found here.	Construction 3

Headline	Description	Shoreline Design products(s) affected

Learning Curves

In Construction 1 the Learning Curve indexes started from "1". In Construction 3 they start from "0". We have added some clarifying

information in the product:

See the **Learning Curves page** for more information.

Construction 3

Bug fix

We continued work on the bug fix identified in 3.19 regarding limitations due to daylight restrictions.

Construction 3 O&M

Weather data

We have added weather data for South India.

Construction 3 O&M

Release number	3.19
Release date	27.04.2023

Headline	Description	Shoreline Design products(s) affected

Some weather files (not ERA-5) contain data on daylight and lightning.

When these weather files are uploaded, historically both boolean values were registered for Lightning and for Limited by Daylight.

Bug fix

However for some time we have only been simulating on "it is dark" = 0 and "there is not lightning" = 0. This is a bug, which we have now fixed so that daylight and lightning are taken into consideration in the simulation.

We will investigate how long this has been a bug and the likely impact on customers' cases.

Construction 3 O&M

Release number	3.18
Release date	19.04.2023

Headline	Description	Shoreline Design products(s) affected
Construction 3 Output Report	The Output Report is now available for download on the Outputs Page. Please find more information here.	**Construction 3**

Release number	3.17
Release date	12.04.2023

Headline	Description	Shoreline Design product(s) affected
Bug fix	We have fixed a bug related to the creation of new cases.	**Construction 3 O&M**

Release number	3.16
Release date	30.03.2023

Headline	Description	Shoreline Design product(s) affected
Bug fix	The fuel cost implications of all steps of cable laying were not fully considered in Shoresim calculations. The cable laying vessel now registers fuel consumption when it is in transit (per km) and when doing the cable lying cycle, in line with other vessels.	Construction 3
Max time to wait before start (Process Builder)	Reworked "Max time to wait before start". This is a feature which has caused many users confusion so we have made some adjustments. See the [Process Builder in Construction 3](#) page for more information.	Construction 3 O&M
Bug fix	We found that when the SOV is working at highest utilisation during a day we don't count the day rate. Now the day rate includes the count of every date.	Construction O&M

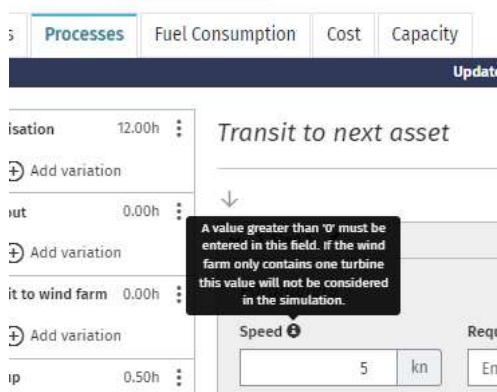| Release number	3.15
Release date	22.03.2023

Headline	Description	Shoreline Design product(s) affected
Improved usability	The Lead time on the Strategy tab now defaults to "0" if left blank, making it clearer for users	Construction O&M

Release number	3.14
Release date	16.03.2023

No customer-facing updates

Release number	3.13
Release date	13.03.2023
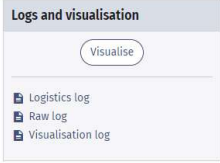
Headline	Description	Shoreline Design product(s) affected
Housekeeping	Clean up of old accessibility logs	Shoresim
Bug fix	When copying a case it is now only possible to click the 'Add' button once. The dialog box is then closed and a copy is made behind the scenes.	Construction O&M
Transit to next asset	Added a tooltip for clarity on this functionality:	Construction 3

Release number   **3.12**

Release date   **03.03.2023**

No customer-facing updates

Release number   **3.11**

Release date   **28.02.2023**

Headline	Description	Shoreline Design product(s) affected
Logs and Visualisation	**We have made some improvements to the Output Page which will make opening files in Logs and Visualisation faster. Some unused fields and files were removed.** 	**Construction O&M**
Performance	**We made some improvements to Shoresim 3 which should make cases with lots of runs complete faster.**	**Shoresim**

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