

USING SESAM™ AND BLADED IN ONE WORKFLOW

How Sesam and Bladed software can improve the efficiency of your structural design process when used together

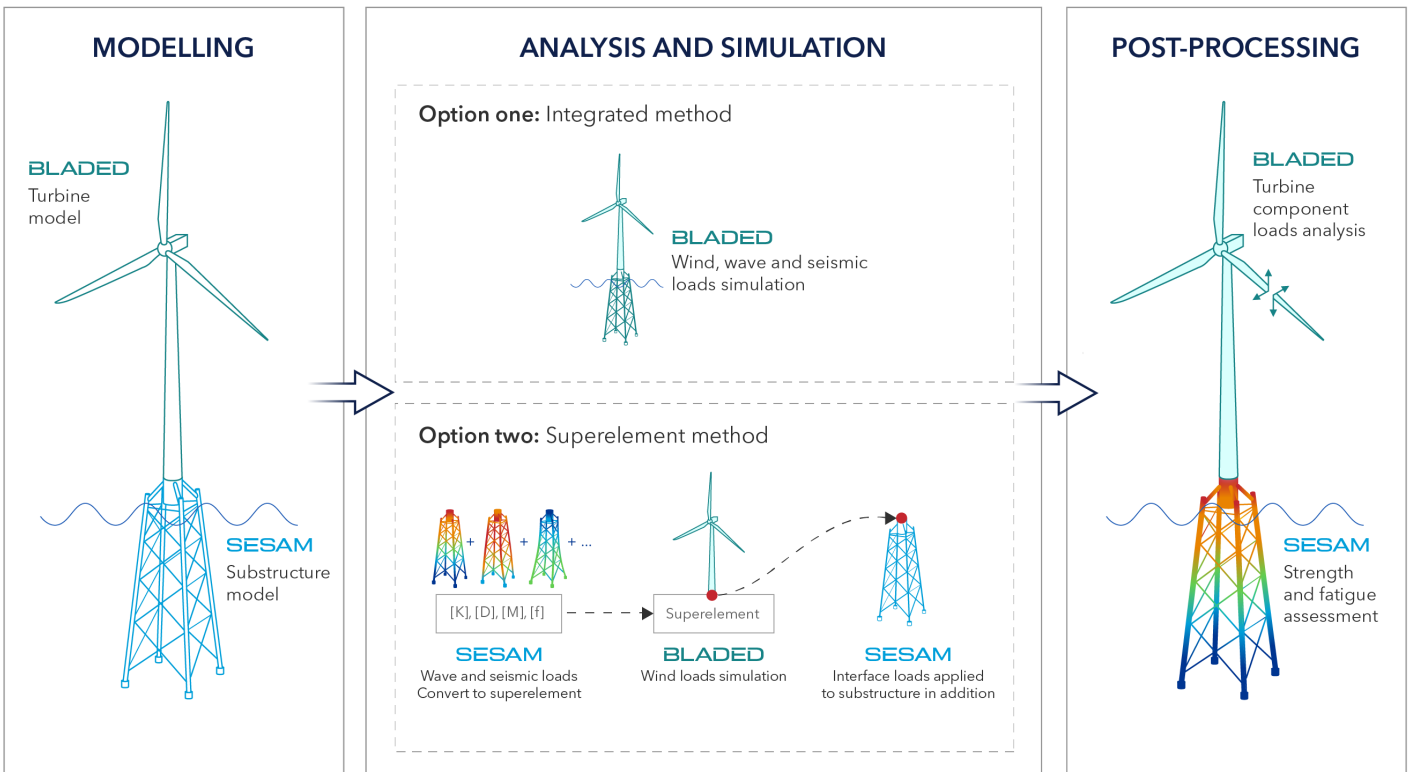


Integrated analysis

During an integrated analysis the entire support structure is modelled in Sesam and then converted to Bladed format. All load computations and dynamic structural analyses are performed in Bladed. Load results are then converted into Sesam format, and Sesam can be used for the fatigue and ultimate limit state analysis. Data transfer between the two codes is automated and optimised for a smooth and efficient structural design workflow.

Superelement analysis

The other analysis method enabled by Bladed and Sesam is to use a superelement to represent the foundation. The structure below tower base is modelled in Sesam and converted to a superelement, together with wave loading and optionally seismic loading. The superelement is then included in Bladed for the wind load calculation, and the resulting loads at the interface passed back to Sesam for analysis and post-processing.



Integrated design and Superelement analysis workflows when using Sesam and Bladed

Features and capabilities for integrated analysis:

- Model the structure in Sesam
- Transfer Sesam model to Bladed directly
- Analyse combined wind and wave loading in Bladed
- Post-process Bladed results in Sesam
- Wave, wind and seismic load calculation only done once
- Easy to optimize design
- Integrated FLS and ULS analysis

Features and capabilities for superelement analysis:

- Use Sesam superelement model and wave and seismic loads in Bladed
- No need to remodel structure in Bladed
- No need to share design
- Allows complex jacket structures
- Includes superelement convergence verification tool
- Post-process using Bladed interface loads in Sesam

Verification report

A verification report of the interface between Sesam and Bladed exists. It includes further details on the conversion process as well as assumptions and limitations. It also includes a comparison of the methods in Sesam and Bladed. The verification report is available upon request.