Challenge 1.1

Serial production

Lean production	Short-term	High priority

Description and scope

Production of substructures for floating wind turbines are costly. This production methodology is adopted from the oil and gas industry, characterised by “one-off” production series and a lot of costly work. Cost reduction of floating offshore wind substructures depends on effective automated production of the different parts. Optimisation and standardisation of the different parts could reduce the cost of substructures significantly.

Recommended research actions

- Develop new material qualified for structure elements, mooring lines and electrical cables.
- Design and develop post efficient building elements for floating offshore wind turbines.
- Standardisation of transport methods and assembly.
- Support the development of high precision manufacturing lines of floating platforms for more efficient mass production.

Milestones

- Designs to have global reach for yards.
- Best practices for optimisation and production of floating wind substructures and components such as coned cylinders, pressure resistance of marine structure components, stiffness of towers and substructure, connections between columns and pontoons, bracing column/pontoon connections and anchors.