



CLIMMS



The Research Council
of Norway

 NTNU

 SINTEF

CLIMATE CHANGE MITIGATION IN THE MARITIME SECTOR

Primary Objective

- Identify pathways for the transformation of the international shipping sector towards the IMO goal for 2050, en route to the 2°C target.

Partners



HÖEGH AUTOLINERS



SOLVANG ASA



Wilh. Wilhelmsen



**Torvald
Klaveness**



ODFJELL

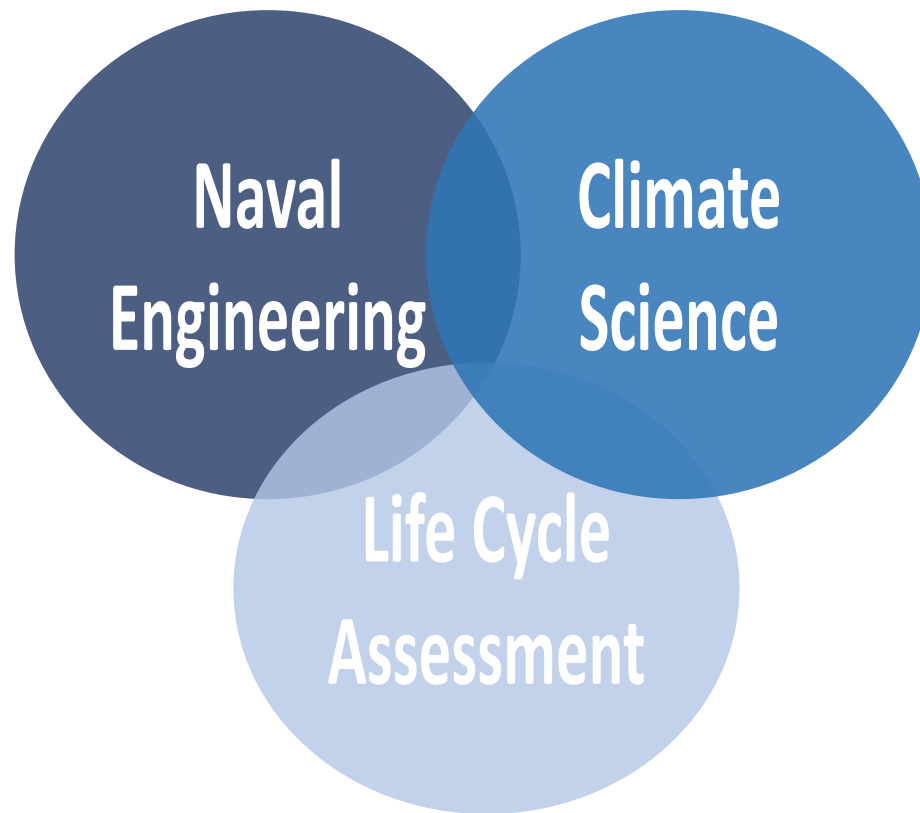


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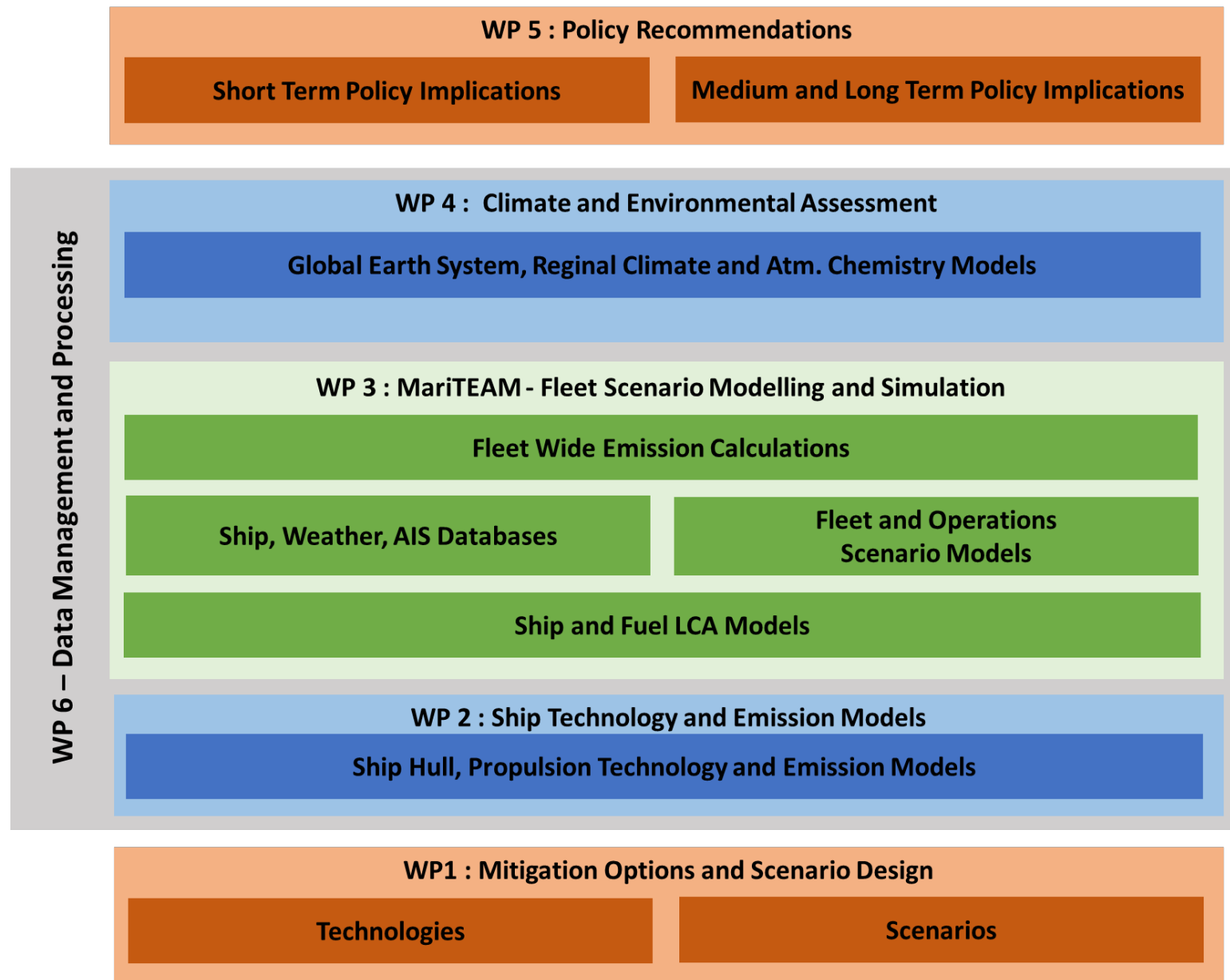
**KRISTIAN GERHARD JEBSEN
SKIPSREDERI**
PART OF THE KRISTIAN GERHARD JEBSEN GROUP

Novel scope of CLIMMS: combining excellence in naval engineering, LCA and climate science.

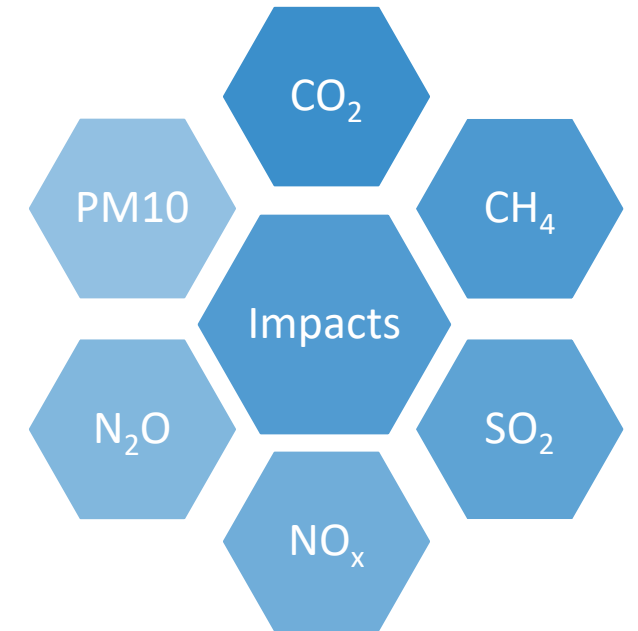
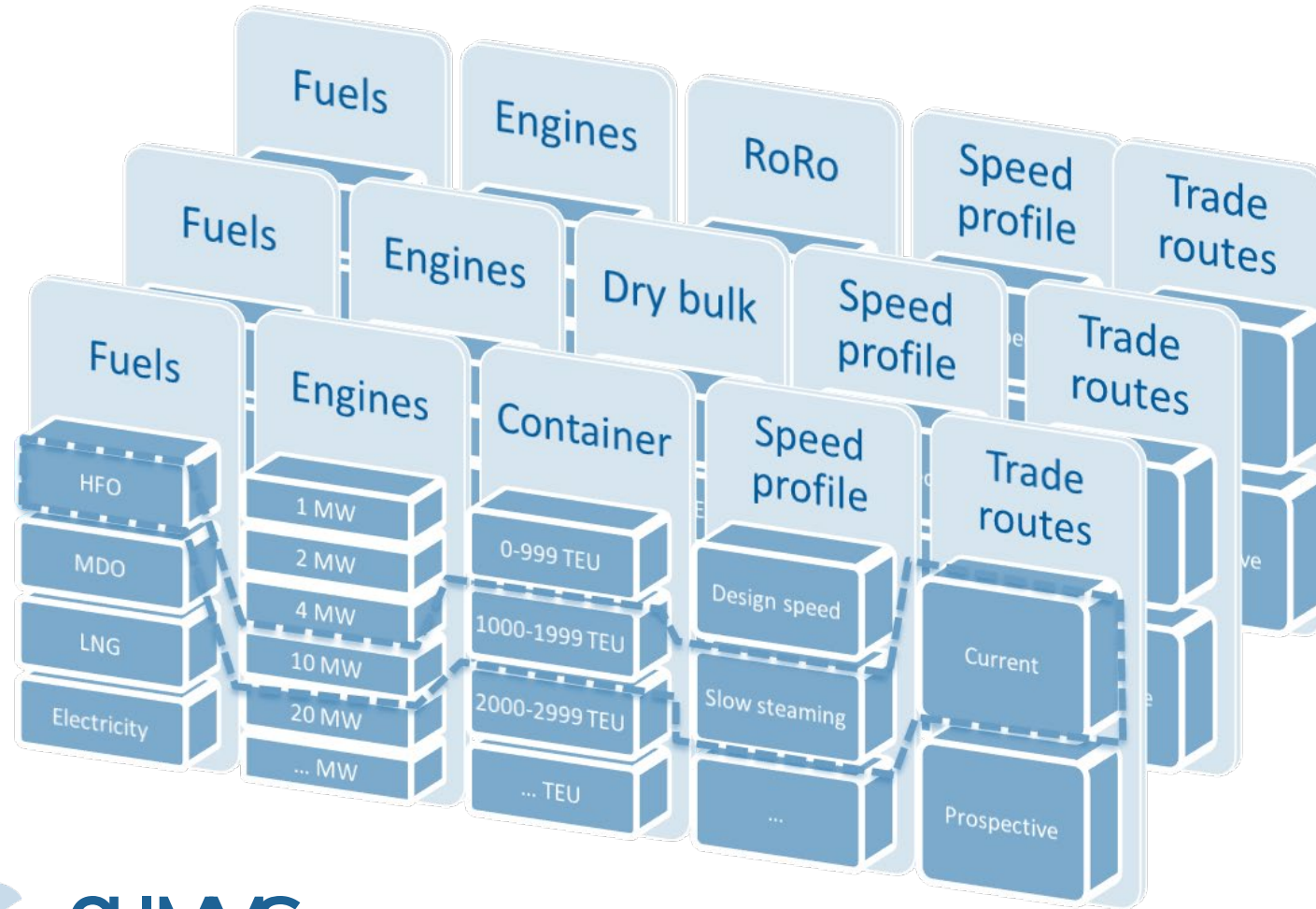


This will be achieved through accomplishing the following secondary objectives:

- Identify a portfolio of prospective i) ship propulsion, design, and fuel technologies, and ii) prospective trade routes and operational patterns - for short, medium, and long term mitigation targets (WP1).
- Develop new models for hull resistance, engine emissions, driveline, propeller efficiency, and fuel production that enables efficient fleetwide modelling of energy consumption and emissions, as a function of fleet composition, trading pattern, and application of various energy-saving and emission-reduction technologies (WP2).
- Undertake simulations of trade, technology, and routing scenarios for the transformation of the global maritime fleet consistent with meeting the IMO 2050 target, on a pathway towards the 2°C target by 2100, with their geospatially distributed emissions from ship operation and fuel value chains (WP3).
- Assess the climatic and environmental impacts of different transformation pathways through the use of global and regional climate and atmospheric chemistry models (WP4).
- Assess the policy design options and implications associated with the identified pathways, taking us towards IMO 2050 and the 2°C target (WP5).
- Develop and implement big data management and processing methods, allowing for robust handling of data in the project including information on current and prospective ship tracks, climate and meteorological simulations, and vessel data (WP6).



From ship technology to fleet level assessments





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