

## A naval design study on a small, unmanned surface vessel

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### Motivation:

Today's society demand for a more effective use of resources. The use of technology to replace manned platforms have proven to be more effective in terms of cost, and a positive contribution to risk management. The use of existing technology may allow the nation to cover a greater area at a lower expense. With regards to the extent of the Northern Sea Territory, todays use of resources may be subject to improvement.

In this thesis a comparison of different concepts in order to find the ideal selection strategy for unmanned surface vessels has to be done. Depending on the design and use of the vessel, this can be adapted individually.

### Task description

- Literature research of unmanned surface vessels including different drive train concepts
- Analysis of requirements for previous defined applications
- Conception of unmanned vessels with respect to requirements
  - Design conception including selection of components
  - Analysis of energy consumption/ speed/ torque and different energy sources

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