



**NAUTILUS**

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The final version after the approval may differ.





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## D5.4 – Control interface and integration with ship

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<b>Project coordinator:</b>	Dr. Asif Ansar, Deutsches Zentrum für Luft – und Raumfahrt (DLR)
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## Deliverable D5.4 – Control interface and integration with ship

**Short summary:** As part of this deliverable, a control interface was developed that can be used to transfer control signals from an energy management unit (EMU) to the ship's control system. Furthermore, the schematic integration of antirbes components and the control system into the ship's network is being investigated. The result of this work should enable shipyards and operators to operate efficient energy management methods on a large cruise ship.

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**WP, leader:** [WP 5, RWTH]

**Authors:** Katharina Quade, Cem Ünlübayir, Daniel Sahren, Amandine Thomas, Santiago Salas Ventura, Fabian Grimm

### Dissemination Level

- PU** Public
- PP** Restricted to other programme participants (including the Commission Services)
- RE** Restricted to a group specified by the consortium (including the Commission Services)
- CO** Confidential, only for members of the consortium (including the Commission Services)

### Document history

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<b>List of participants</b>		
<b>Participant No</b>	<b>Participant organisation name</b>	<b>Country</b>
1 Coordinator	Deutsches Zentrum für Luft –und Raumfahrt (DLR)	DE
2	Chantiers de l'Atlantique (CdA)	FR
7	MAN Energy Solutions (MAN)	DE
8	Meyer Werft PAPENBURG (MW)	DE
10	Rheinisch-Westfälische Technische Hochschule Aachen (RWTH)	DE
11	SolydEra SPA (SE_SPA)*	IT

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## 1 Introduction

In this deliverable, the integration of the propulsion components into the ship grid is described. As part of work package WP5, a control unit (EMU) is being developed that is designed for operation on ship networks (see Deliverable D5.3 Unitized control algorithm for hybrid PoC and demonstrator). In order for this control unit to be compatible with real-scale ship propulsion systems, a series of steps must be taken. The following requirements shall be implemented in order to ensure a technically feasible integration into the ship grid:

- The ship's propulsion system is to be designed for various load profile scenarios.
- The propulsion systems are to be schematically integrated into various parts of the ship.
- A common interface between the control system and drive components, the power electronics and the ship's control network.