Intuitive operation and pilot training when using marine azimuthing control devices

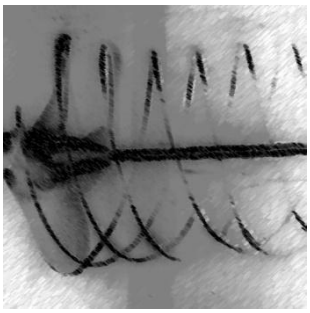
AZIPILOT

Aims & Objectives

The aim is to improve by policy and design, the safety and security of ships by taking into account the man-machine interface and the training of maritime pilots; specifically when operating ships equipped with azimuthing control devices.

The Problem Addressed

From the thrusters on smaller, but numerous, harbour support vessels through to the pod-drives on cruise ships and ocean going liners, azimuthing control has rapidly established itself in the maritime industry. While the industry has risen to meet the demand, this rapid evolution has not allowed sufficient time for the propagation of knowledge throughout the different disciplines. Though the various sectors of the industry each have their own expertise, a lack of communication is both restricting progress and compromising safety. To address this problem the project brings together the industry sectors; specifically:




Specialist in **HYDRODYNAMIC MODELLING** and testing, both theoretical and experimental, and expert in the understanding of azimuthing control devices.

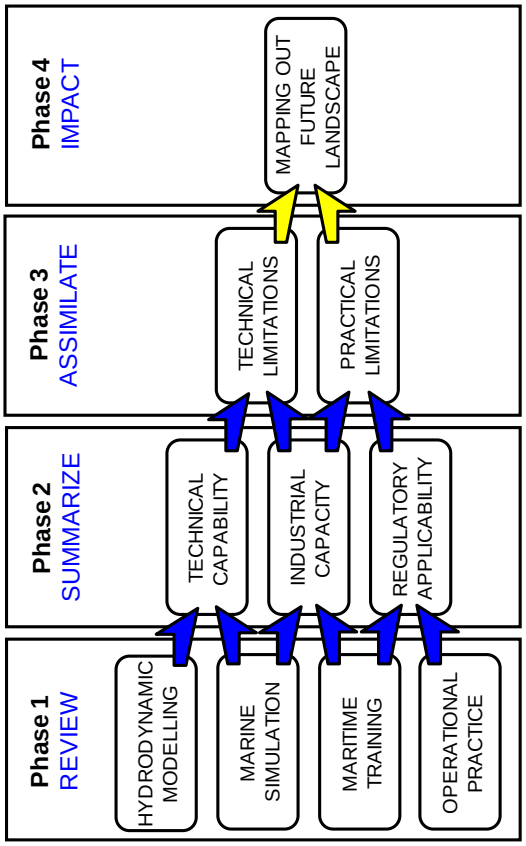
Designers and manufacturers of **MARINE SIMULATION** software, hardware and physical models that are used for the training of marine pilots. Including, the designers, human factors specialists and manufactures of automation and control systems, joystick systems and graphical user interfaces.

The **MARITIME TRAINING** facilities using both numerical and physical simulation tools and specialist in the theory and practice of human factors (physical and behavioural components) and specialist in the training of bridge-crews and pilots.

Practitioners in **OPERATIONAL PRACTICE** including maritime pilots, ship operators and managers, pilot association and end-users. And including, Maritime Authorities and Regulators specifically interested in policy and regulation.

Technical Approach

The project is organised into four logical phases. Phase 1 will focus on performing a critical **REVIEW** by collate existing knowledge and ongoing research from the four key technical disciplines which make up the project. Phase 2 will **SUMMARIZE** the data and put it into a format that is more readily accessible to the cross-disciplinary audience. Phase 3 will **ASSIMILATE** this more accusable information and used this process to identify critical short-comings within the subject areas. Phase 4 will establish the project **IMPACT** by mapping out the landscape for future research, education, training and policy making.



Project Implementation & Outputs

The project will draw on existing knowledge from the results and recommendations of previous projects; existing general maritime training methods; knowledge from contributing related disciplines; existing regulations and criteria. It will also draw on ongoing activities include: other research projects, conferences; international technical forums and maritime associations. The four main outputs include the publication of a dedicated technical journal; guidelines for a dedicated maritime training program; data for a dedicated engineering lecture series; recommendations for specific regulations and criteria.

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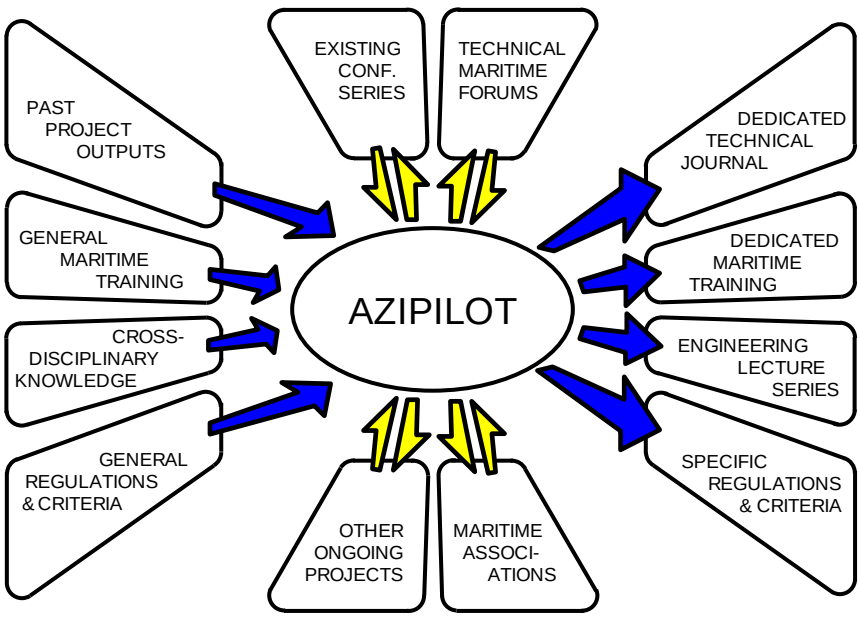

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A Strong Partnership

- Mettle
- Transas Ltd
- STC – Group
- SSPA Sweden AB
- BMT SeaTech Ltd
- FORCE Technology
- Broström Aktiebolag
- South Tyneside College
- SOGREAH – Port Revel manned models
- CTO – Ship Design and Research Centre
- Cons.a.r – Italian Ship Owners Research Consortium
- Foundation for Safety of Navigation and Environment Protection
- Development Centre for Ship Technology and Transport Systems
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