

LeanShips

What is this European Innovation project all about ???



The project has received funding from the European's Horizon 2020 research and innovation programme (Contract No.: 636146)

LeanShips ...

... aims to demonstrate the effectiveness and reliability of energy saving and emission reduction technologies at real scale.

Target markets ...

... are the small to mid-sized ships for intra-European waterborne transport, vessels for offshore operations and the leisure and cruise market.

Seven demonstrators will be carried out ...

... combining technologies for improved efficiency and pollution reduction, in line with end-users' needs and requirements.

Major objectives ...

- ✓ CO₂ reduction of at least 25%
- ✓ Estimated fuel saving of up to 25%
- ✓ Expected decrease of SO_x/NO_x/PM air pollutants by up to 100%














7 Demo Cases in line with end-users' needs and requirements



Parallel development of demonstrators and their contribution to the project objectives, following the same harmonised innovation process.



LeanShips covers the entire energy chain

Demonstrator platforms	Technology cluster 1: Engines, fuels, drive trains						Technology cluster 2: Hull, propulsors		Technology cluster 3: Energy systems and emissions abatement technologies				
	 Internal combustion engines	 Fuels	 Generator	 Electrical energy transformation	 Storage device	 Electrical motor	 Improved geometry	 Propulsors	 Waste heat recovery	 Incinerator	 Photo voltaics, Wind energy, fuel cells	 Scrubbers	 Energy management systems
<i>WP04: Tug</i>	XX	XX			XX		XX	XX					
<i>WP05: SWATH/dredge</i>	XX	XX			XX								
<i>WP06: LNG carrier</i>	XX	XX	XX		XX		XX	XX					x
<i>WP07: General cargo ship</i>	XX	XX	XX		XX							XX	
<i>WP08: Inland ship</i>	x	x	x	x	x		XX	XX					
<i>WP09: Ice going cargo ship</i>	x	x			x	XX	XX	XX					
<i>WP10: Cruise/Leisure</i>					x		XX	XX					XX
<i>WP11: Cruise/Leisure</i>									XX	XX	XX	XX	

LeanShips' mission:

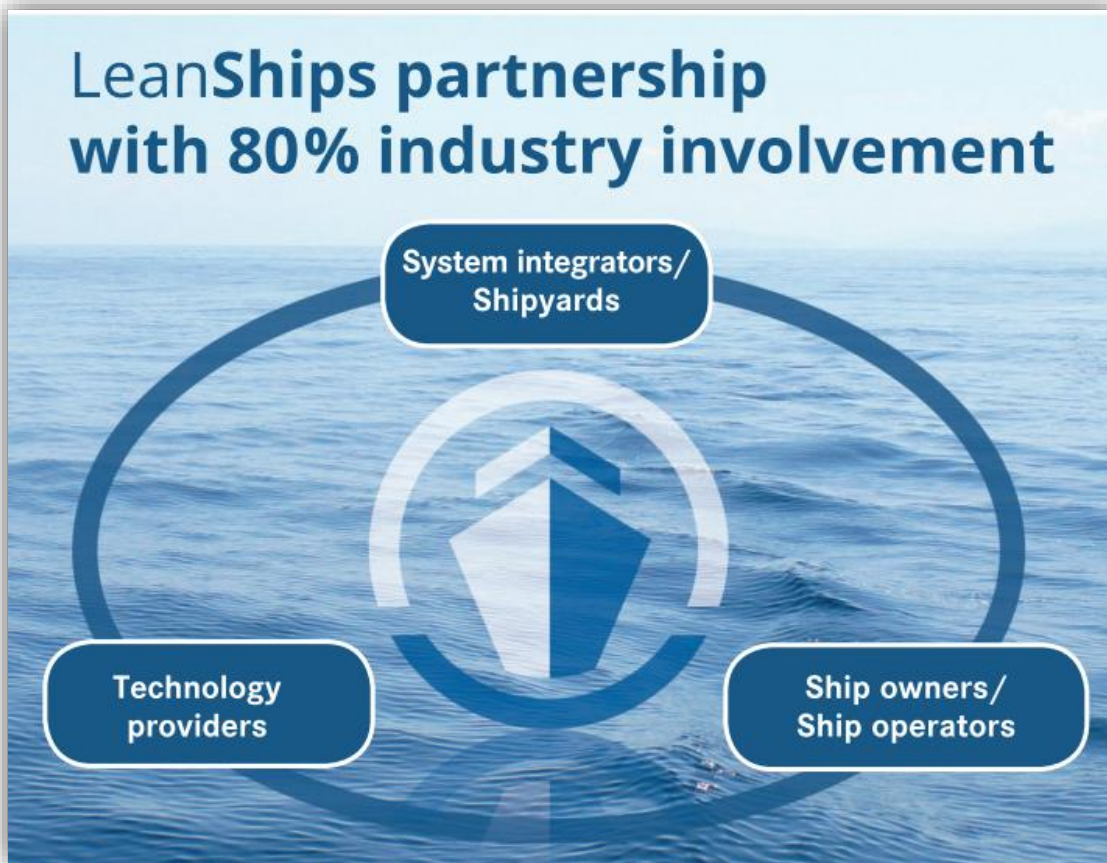
Prove that:

- a) **green** technology can be installed **onboard**
(new and old - *retrofit*);
- b) **green** technology works in maritime and is **reliable**
- c) **green** technology can be **economically viable**

And can **significantly contribute** to the EU energy and emission policies by collaborating with:

- a) ship equipment manufacturers;
- b) ship builders;
- c) ship operators;
- d) classification societies;
- e) research centres and universities

LeanShips partnership with 80% industry involvement



**41 partners
13 countries**

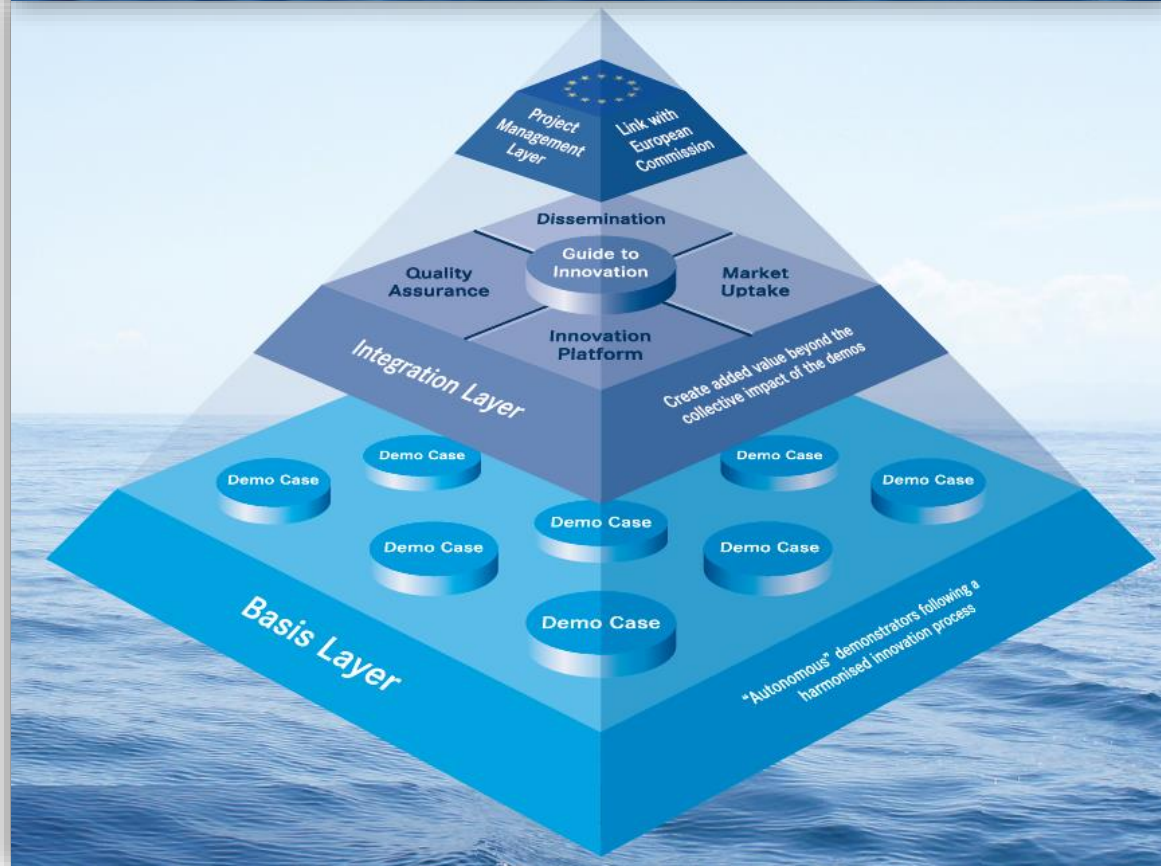


**Budget: € 20.7 M
Funding: € 15.8 M**



LeanShips

has a layered project structure and integrates the experiences from the Demo Cases into a web-based "Guide to Innovation".





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