Verso Ocean Race:
innovazione, sostenibilità, impresa

GENOVA
BLUE DISTRICT

ENERGIA È ACQUA, ACQUA È ENERGIA

BLUE VISION

sfide, prospettive, soluzioni

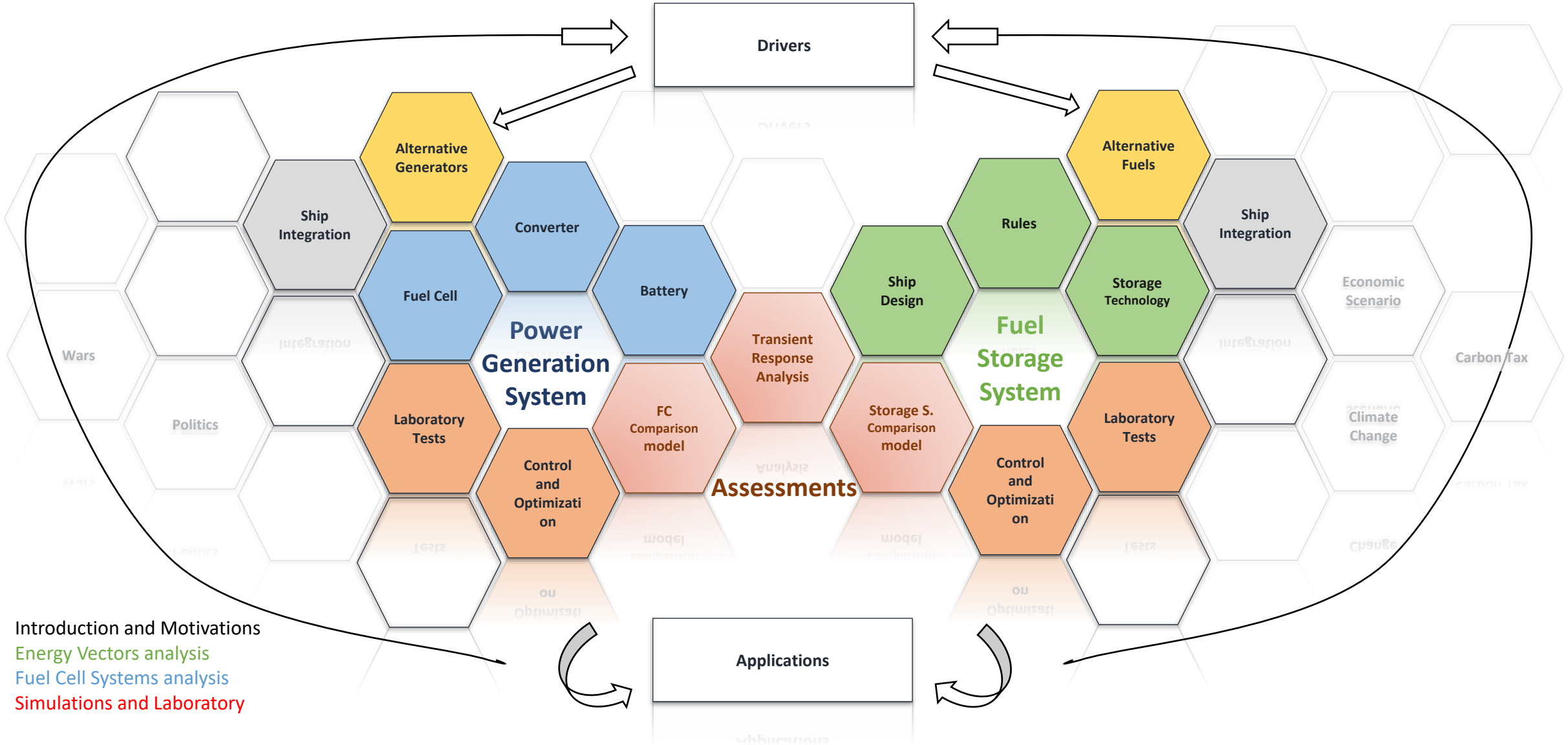
Acqua | Energia | Materia | Turismo sostenibile | Sport

Genova, 11/05/2022

h2boat
hydrogen to boat

Relatore: Ing. Thomas Lamberti

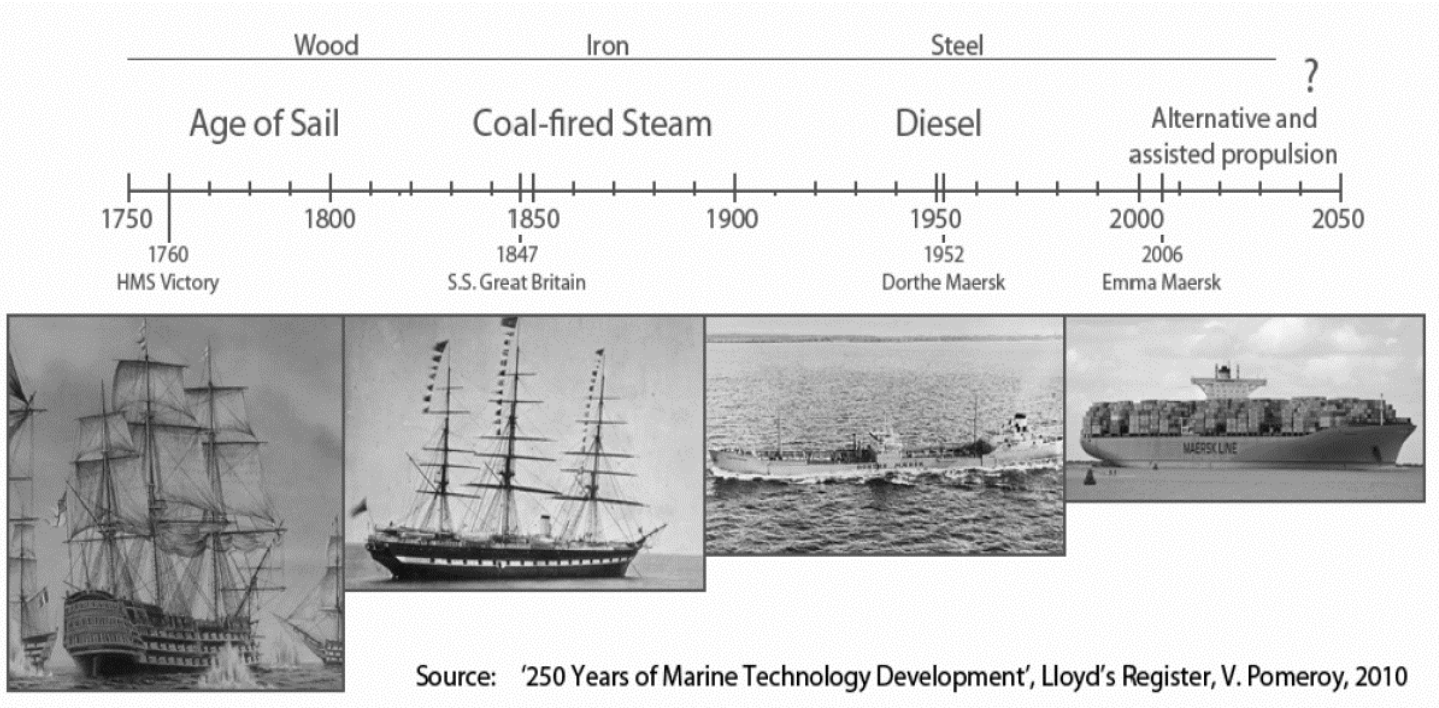
Big Picture



1. Introduction and Motivations
2. Energy Vectors analysis
3. Fuel Cell Systems analysis
4. Simulations and Laboratory

Relatore: Ing. Thomas Lamberti

Design Revolution



Source: '250 Years of Marine Technology Development', Lloyd's Register, V. Pomeroy, 2010

➢ other future innovations have to be considered:

- Information Communication Technologies (ICT)
- Increased electric consumption
- Distributed generation
- Co-generation and Tri-generation
- Modularity
- Fuel flexibility
- Market changes

Period	Energy Source	Power Unit	Hull Material	Trade Range	Other
up to 1850	Wind	Sail	Wood	Regional	
up to 1950	Coal	Steam Engine	Iron	Ocean Travels	Riveted
up to today	Oil	Internal Combustion Engines	Steel	Worldwide	Welded

➢ Some considerations:

- Fuel cell are studied separately from hydrogen storage systems;
- Fuel cells present higher efficiency at partial load;
- Fuel cell modularity will match with ship builders design and construction procedures;
- Ships characterized by higher design complexity will probably be the first platform in which new technologies as fuel cells will be introduced.

GENOVA BLUE DISTRICT
open innovation city

BluEnergy Revolution

h2boat
hydrogen to boat

ENERGY PACK

INTEGRATED HYDROGEN TECHNOLOGY

Energy Pack

Check-out our Proof Of Concept

WIND ENERGY

SOLAR ENERGY

FUEL CELL& ELECTROLYSER

PROOF OF CONCEPT READY

DRAG ENERGY&PROPULSION

ENERGY STORAGE

PATENTED

SOLBIAN
PROJECT SPONSOR

B&G
PROJECT SPONSOR

TECHNOLOGY PARTNERS

Genova, 11/05/2022

Relatore: Ing. Thomas Lamberti

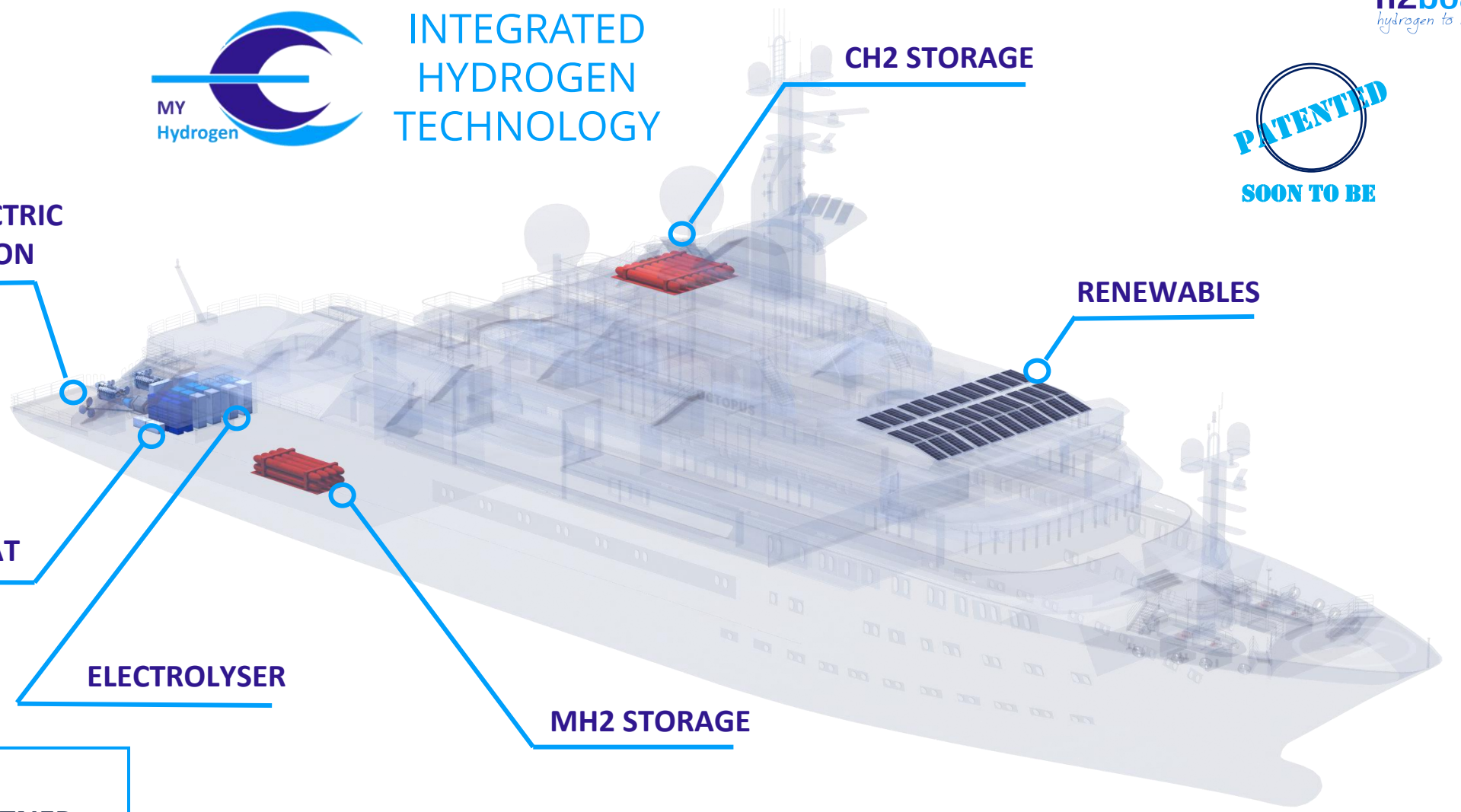
INTEGRATION

INTEGRATED HYDROGEN TECHNOLOGY

MY Hydrogen

h2boat
hydrogen to boat

PATENTED
SOON TO BE



B ZERO

PROJECT PARTNER
BAGLIETTO SUPPLIER

INTEGRATION CLIENT

Genova, 11/05/2022

Relatore: Ing. Thomas Lamberti

Key technical partners

BluEnergy Revolution

MetHydor

Financial partners

bancaetica

Coopfond
FONDO MUTUALISTICO LEGACOOP

Paola Bellotti
Sustainability Manager
Coopfond

Carlo Forcheri
CFO

Scientific Cometee

Lorenzo Di Fresco
PhD. Mech. Eng

Stefano Barberis
PhD. Mech. Eng

A. Sorce
Prof.

A. Traverso
Prof.

F. Massardo
Prof.

h2boat
hydrogen to boat

START UP INNOVATIVE

UCINA
CONFINDUSTRIA NAUTICA

h2boat
hydrogen to boat

H2Boat increases environmental sustainability with an innovative use of technology, made available for the nautical sector

BluEnergy Revolution

BluEnergy Revolution promotes a cultural change through innovative energy solutions

MetHydor

Methydor mission is to unleash the Renewable Energy storage potential introducing a green hydrogen storage system

Con il sostegno di
Fondazione Compagnia di San Paolo
e Fondazione Carige

Gestore

Partner

Promotore

THE OCEAN RACE
GENOVA
THE GRAND FINALE
2022-23