

Vihreän siirtymän veturihanke NEcOLEAP



Ecosystem Lead
Ilkka Rytkölä, Meyer Turku
11.09.2023

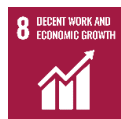
Meyer Turku in a nutshell

The **Meyer Turku Oy shipyard** is specialized in the construction of very demanding, innovative, and environmentally efficient cruise ships, car ferries, and special vessels. Our share of the global Cruise construction market is approximately 15%, and our shipyard's order books extend to 2026. Our largest customers are Royal Caribbean International, Carnival Cruise Lines, TUI Cruises and the Finnish Border Guard.

Meyer Turku employs 2.000 top professionals and operates the Turku shipyard where vessels are built since 1737. Meyer Turku's subsidiaries are Piikkiö Works Oy, a cabin factory located in Piikkiö, Shipbuilding Completion Oy, which offers complete deliveries to public spaces, and ENG'nD Oy, a shipbuilding and offshore design company based in Rauma.

Together with the German shipyards, Meyer Werft in Papenburg, and Neptun Werf in Rostock, Meyer Turku forms the Meyer Group, one of the world's leading cruise ship builders.

We are constantly striving for more sustainable shipbuilding. We have identified five UN Agenda 2030 goals, which we can especially influence in our operations and cooperation with partners and customers.







ICON OF THE SEAS

ARRIVES 2024



Royal Caribbean
INTERNATIONAL

Images and language for Icon of the Seas™ reflect our current plans and are subject to change without notice. © 2023 Royal Caribbean International. All rights reserved.



ICON OF THE SEAS FAST FACTS

20 TOTAL DECKS
18 GUEST DECKS

2,350 CREW
(INTERNATIONAL)

2,805 STATEROOMS

5,610 GUESTS
(DOUBLE OCCUPANCY)
7,600 MAX GUESTS

**7 POOLS AND
9 WHIRLPOOLS**

**6 RECORD-BREAKING
WATERSLIDES**

250,800 GT

1,198 FEET, 365 METRES LONG

BUILT AT
MEYER TURKU, TURKU, FINLAND

8 NEIGHBORHOODS



AQUADOME



CENTRAL PARK



CHILL ISLAND



ROYAL PROMENADE



SURFSIDE



SUITE NEIGHBORHOOD



THE HIDEAWAY



THRILL ISLAND



WHAT MAKES ICON SPECIAL?

Unique design

- Totally split superstructure
- More venues than any other ship
- Biggest water park ever
- Organic formed outdoor decks

Energy efficiency

- 20% better energy efficiency
- State of the art hull hydrodynamics
- Optimized AC
- Optimized heat recovery
- Dynamic simulation Energy efficiency

1st time in ship-building

- Best ever damage stability in industry
- Biggest glass structure ever lifted
- >250k GT cruise ship
- EHT Steel backbone



The largest passenger ship ever built will also be the safest, most efficient and have the most entertainment ever placed in a ship

NEOLEAP

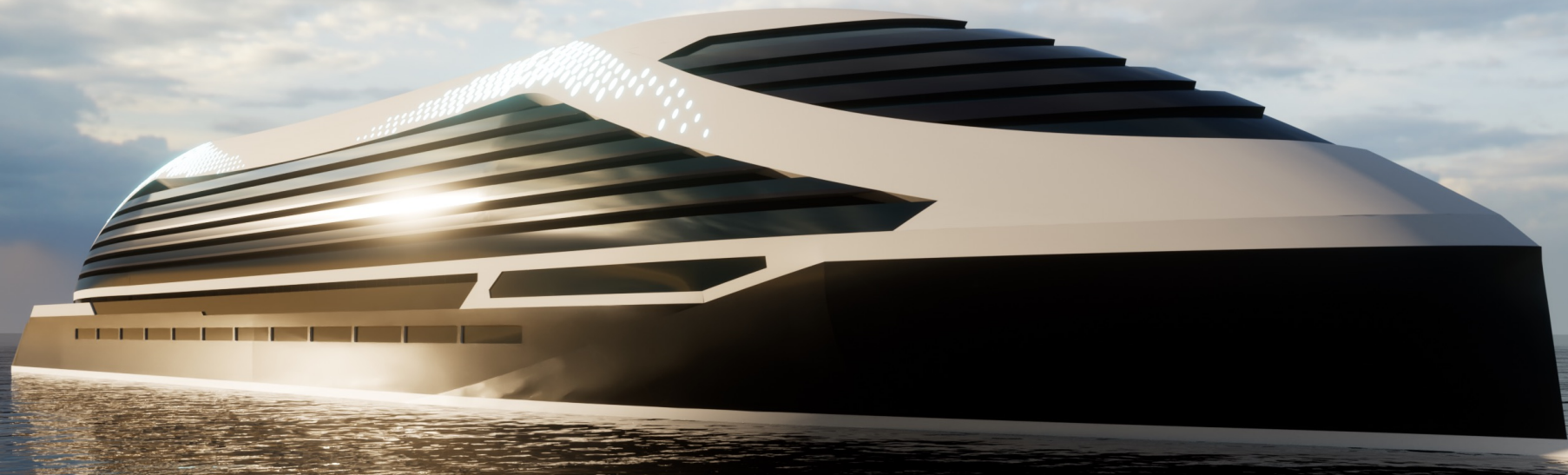
BUSINESS
FINLAND

ECOSYSTEM FOR DEVELOPING A CLIMATE-NEUTRAL CRUISE SHIP

Ecosystem Lead

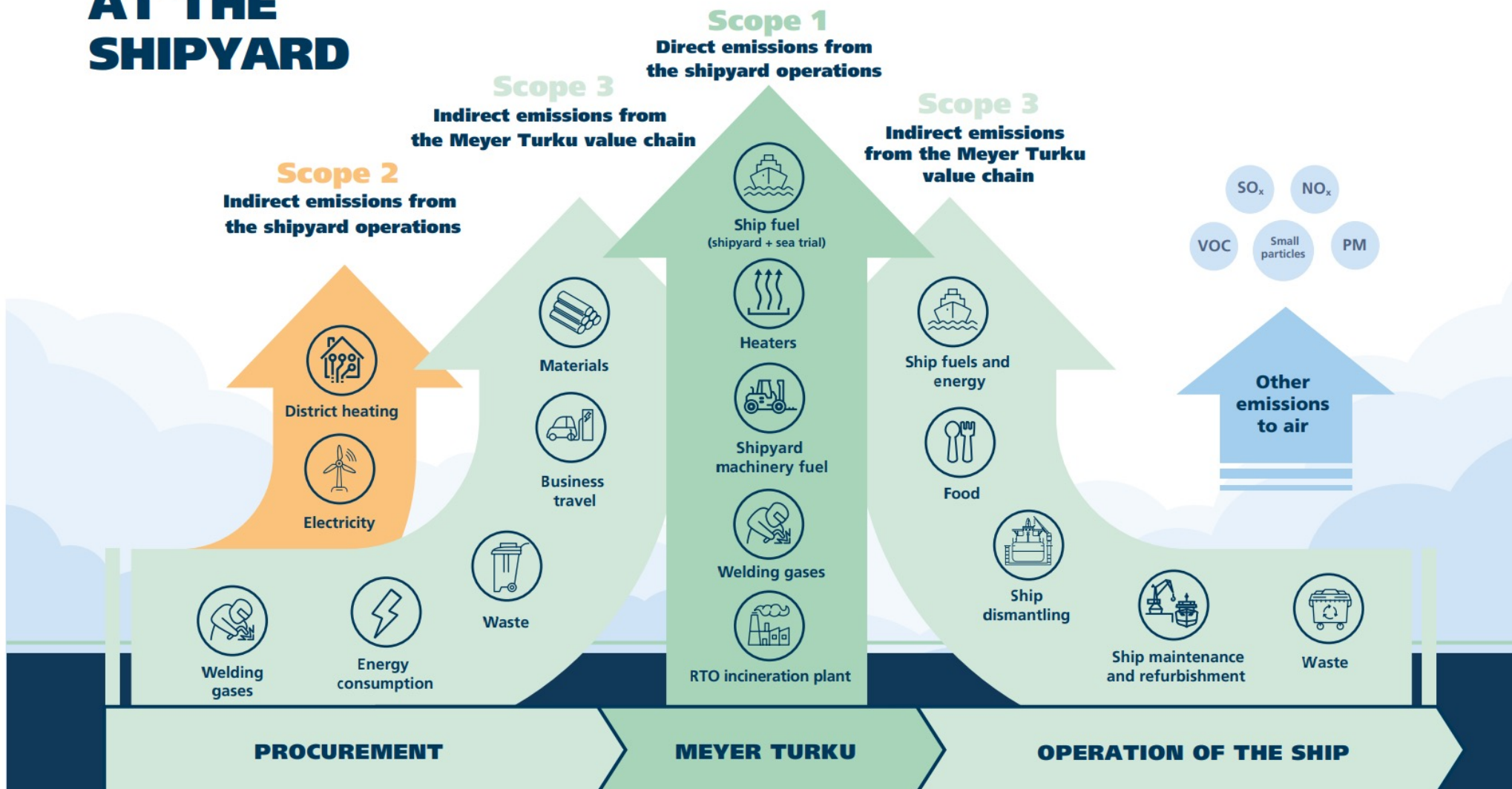
Ilkka Rytkölä

M. Sc. Nav. Arch.



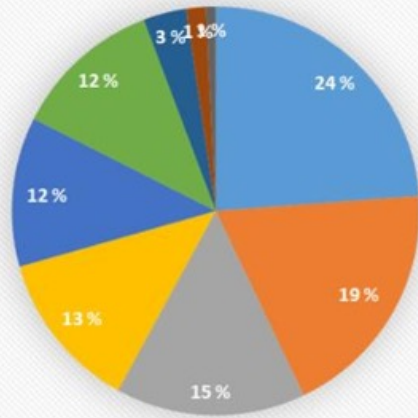
MEYER

GHG-EMISSIONS AT THE SHIPYARD



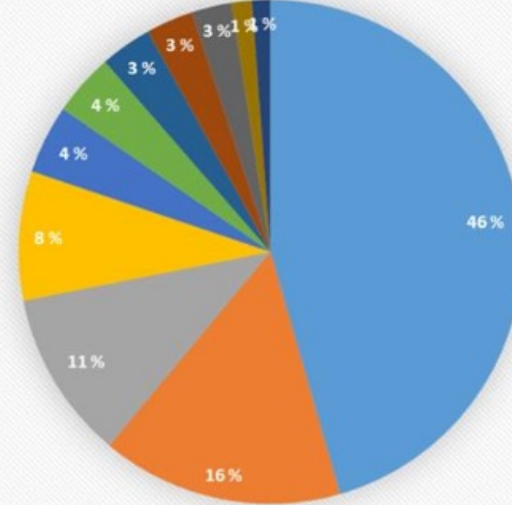
GHG – protocol-based carbon footprints

Shipyard 2020 CO2 eq emissions



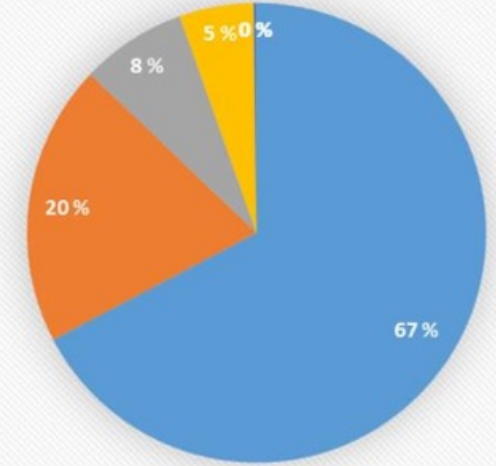
- Ship fuel consumption
- Employee commuting
- Fuel and energy related activities
- Purchased heat and electricity
- Waste generated in operations
- Facilities
- Purchased goods and services
- Company vehicles
- Business travel

Shipbuilding CO2 eq emissions



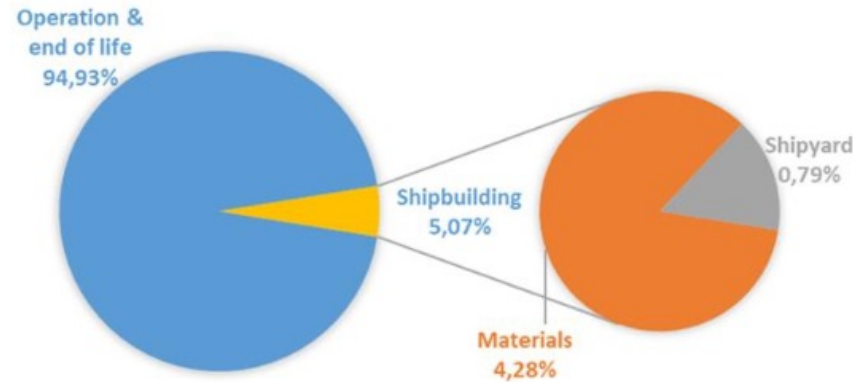
- Steel structure
- Shipyard
- Stateroom
- Pipes, plumbing
- Carpet
- Cables
- Machinery
- Windows
- Duct
- Insulation
- Paints

Full lifecycle CO2 eq emissions

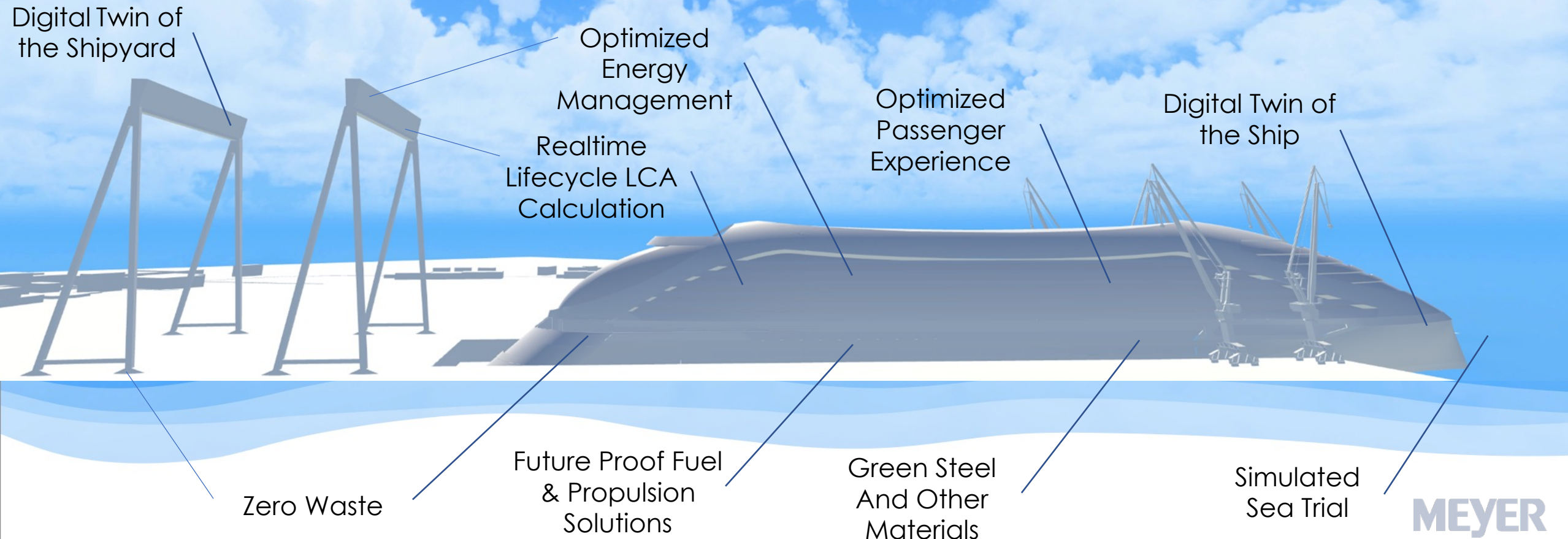


- Fuel onboard
- Fuel and energy related activities
- Building, Maintenance, Dismantling
- Food
- Lubricants
- Waste

OVERVIEW



Fuel and energy related activities = Upstream activities, production of fuel etc.



Project portfolio: approved and in execution

Status 07.09.2023

Name	Description	MT Responsible	Cluster	Started	Type
CaNeLis	Carbon-neutral lightweight ship structures	Ari Niemelä	Ship	2022	Co-Inno
NavisSpace	Future Passenger Spaces	Mikko Ilus	Ship	2022	Co-Inno
Indecs	Integration of design and operation of cruise-ship energy solutions	Wilhelm Gustafsson	Ship	2022	Co-Research
Necom	Lighter solutions and HVAC energy efficiency	Juho Virtanen	Ship	2022	Co-Research
VTC	Virtual Training Certifications	Vesa Eskonen	Ship	2022	Co-Inno
CASEMATE	Computationally Aided Systems Engineering for marine advanced technology and environment	Jouko Pirilä	Ship	2022	ZEM/ Co-Inno
Silent Engine	The project aims for a quieter and vibration-free engine.	Jouko Pirilä	Ship	2022	ZEM/ Co-Inno
SusFlow	LCA (Life Cycle Assessment) calculations and evaluations	Jami Kuusisto	Ship	2023	Co-Inno
Necoverse	Industrial Metaverse solutions for ship and shipyard	Ilkka Rytkölä	Digi.	05/2023	Co-Inno
ADEPT (NAPA)	Data Analysis and integration research for sustainable ship design and operation	N/A	Ship	06/2023	External

CONTACT

NEOLEAP

<https://necoleap.fi/>



Ecosystem Lead

Ilkka Rytkölä

M.Sc. Nav. Arch.



[MS Teams](#)

ilkka.rytkola@meyerturku.fi

+358407492725

<https://www.linkedin.com/in/ilkarytkola/>

Ilkka Rytkölä



Scan the QR code to add this contact.

MEYER