



# OSK Group

Introduction

With you all the way

# OSK-Group

## Company Presentation

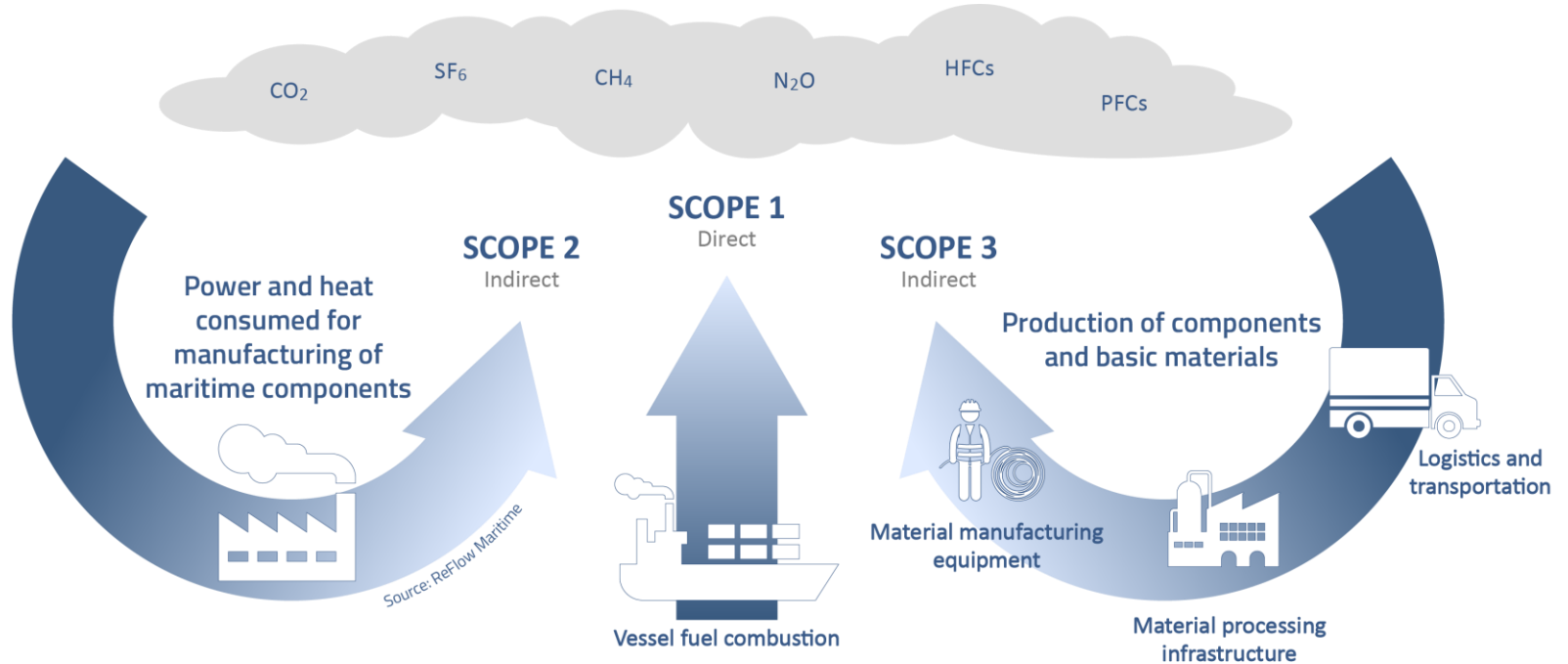
# OSK Group / Recent Projects



# Life Cycle Screening of an Electric Ferry

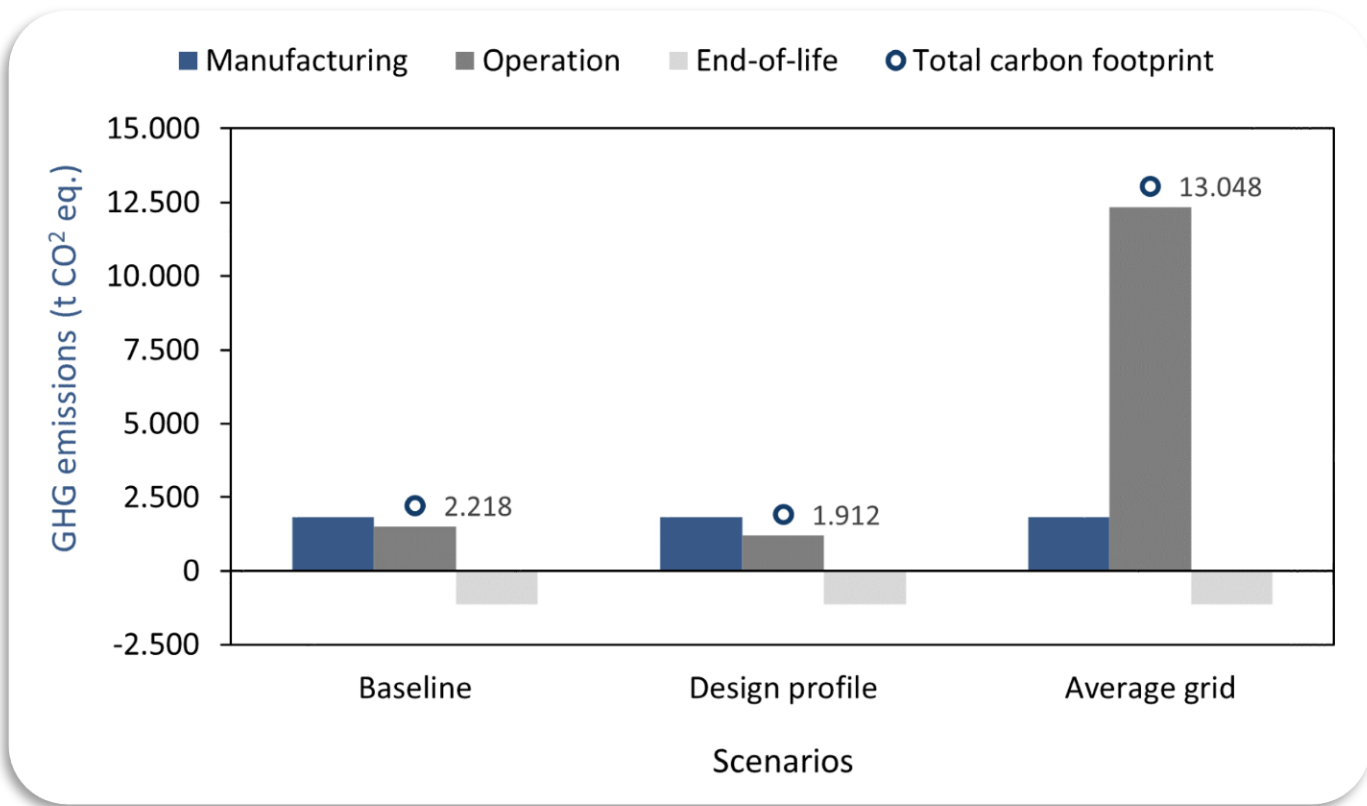
Developing a strategic design philosophy

# Life cycle emissions



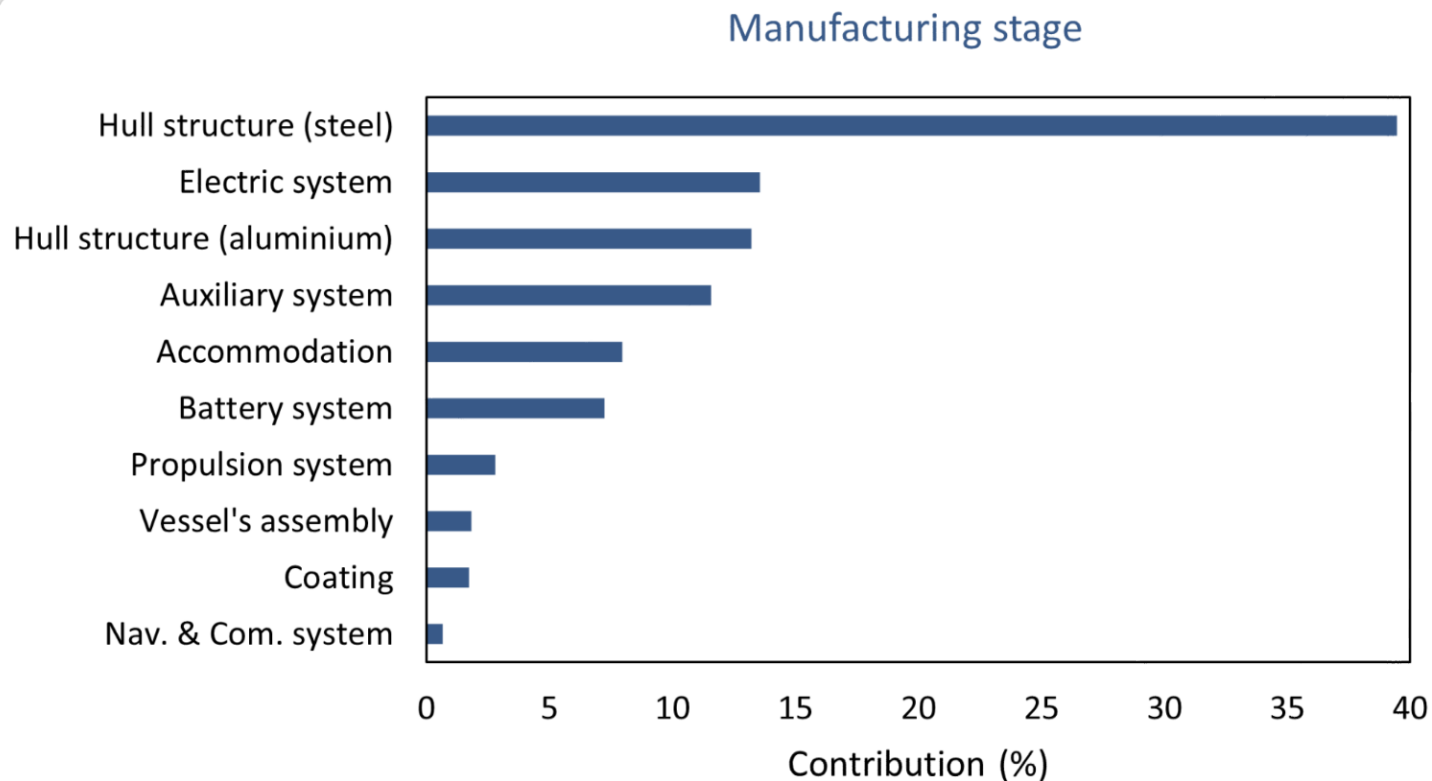
Parameter	Value	Unit	Scope
<i>Total Carbon Footprint</i>	2218.21	t CO <sub>2</sub> eq.	
<i>Total production emissions</i>	1833.64	t CO <sub>2</sub> eq.	3
Hull structure (steel)	723.24	t CO <sub>2</sub> eq.	
Hull structure (aluminium)	242.26	t CO <sub>2</sub> eq.	
Propulsion system	184.18	t CO <sub>2</sub> eq.	
Auxiliary system	212.11	t CO <sub>2</sub> eq.	
Electric system	248.50	t CO <sub>2</sub> eq.	
Nav. & Com system	12.33	t CO <sub>2</sub> eq.	
Accommodation	145.67	t CO <sub>2</sub> eq.	
Batteries*	132.66	t CO <sub>2</sub> eq.	
Coating	31.89	t CO <sub>2</sub> eq.	
Vessel's assembly	33.46	t CO <sub>2</sub> eq.	
<i>Total operation emissions</i>	1509.11	t CO <sub>2</sub> eq.	-
Electricity consumption	808.11	t CO <sub>2</sub> eq.	2
HVO consumption	132.03	t CO <sub>2</sub> eq.	3
HVO combustion	0.00	t CO <sub>2</sub> eq.	1
Lubrication oil	0.57	t CO <sub>2</sub> eq.	3
Batteries replacement	530.62	t CO <sub>2</sub> eq.	3
Used batteries disposal	36.78	t CO <sub>2</sub> eq.	3
Bilge oil disposal	1.00	t CO <sub>2</sub> eq.	3
<i>Vessel's end-of-life</i>	-1124.54	t CO <sub>2</sub> eq.	3
Dismantling	4.59	t CO <sub>2</sub> eq.	
Recycling	-1196.84	t CO <sub>2</sub> eq.	
Disposal	49.32	t CO <sub>2</sub> eq.	
Used batteries disposal	18.39	t CO <sub>2</sub> eq.	

# LCA results / 3 scenarios





# LCA results / Contributors





# LCA results / key takeaways

Zero emission ferry doesn't exist

We need to start focussing on scope 2 and 3

Build strategy to include LCA knowledge

Rebuild vs Newbuild

4 projects which includes LCA

Benchmark against infrastructure

Greenwashing can be avoided



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A BEACON IN SHIP DESIGN

**Thank You!**