

# HYDROGEN & INLAND WATERWAY TRANSPORT

Condor:  
Containers Decarbonizing Our Rivers,  
“a Rh2ine project”



**CONDOR**

A RH<sub>2</sub>INE-PROJECT

# The RH2INE Network; participating countries, regions and ports



# Goals of the Condor Project:



Facilitate scaling of **emission-free** shipping, by:



Making H2 inland shipping **operationally, technically and economically** feasible by 2033 & creating solutions for shortsea



Creating **modular, standardised, scalable** solutions, with electrification as a “no-regret” choice



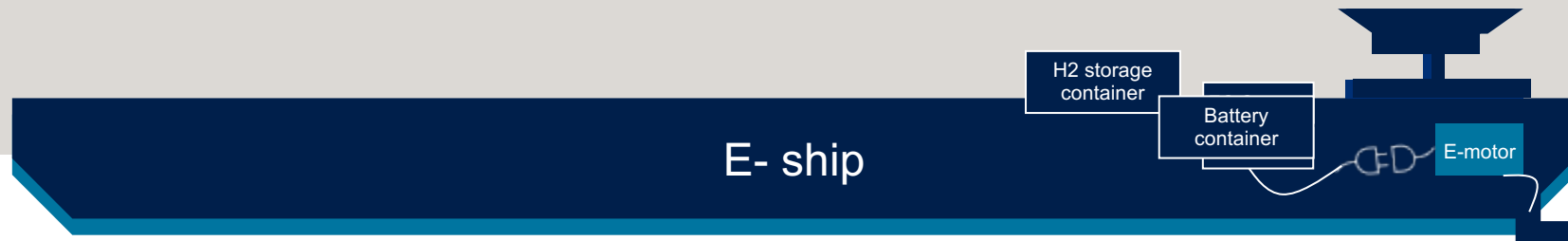
**Reducing necessary investments** by shipowners- move **towards Energy As A Service (EAAS)**



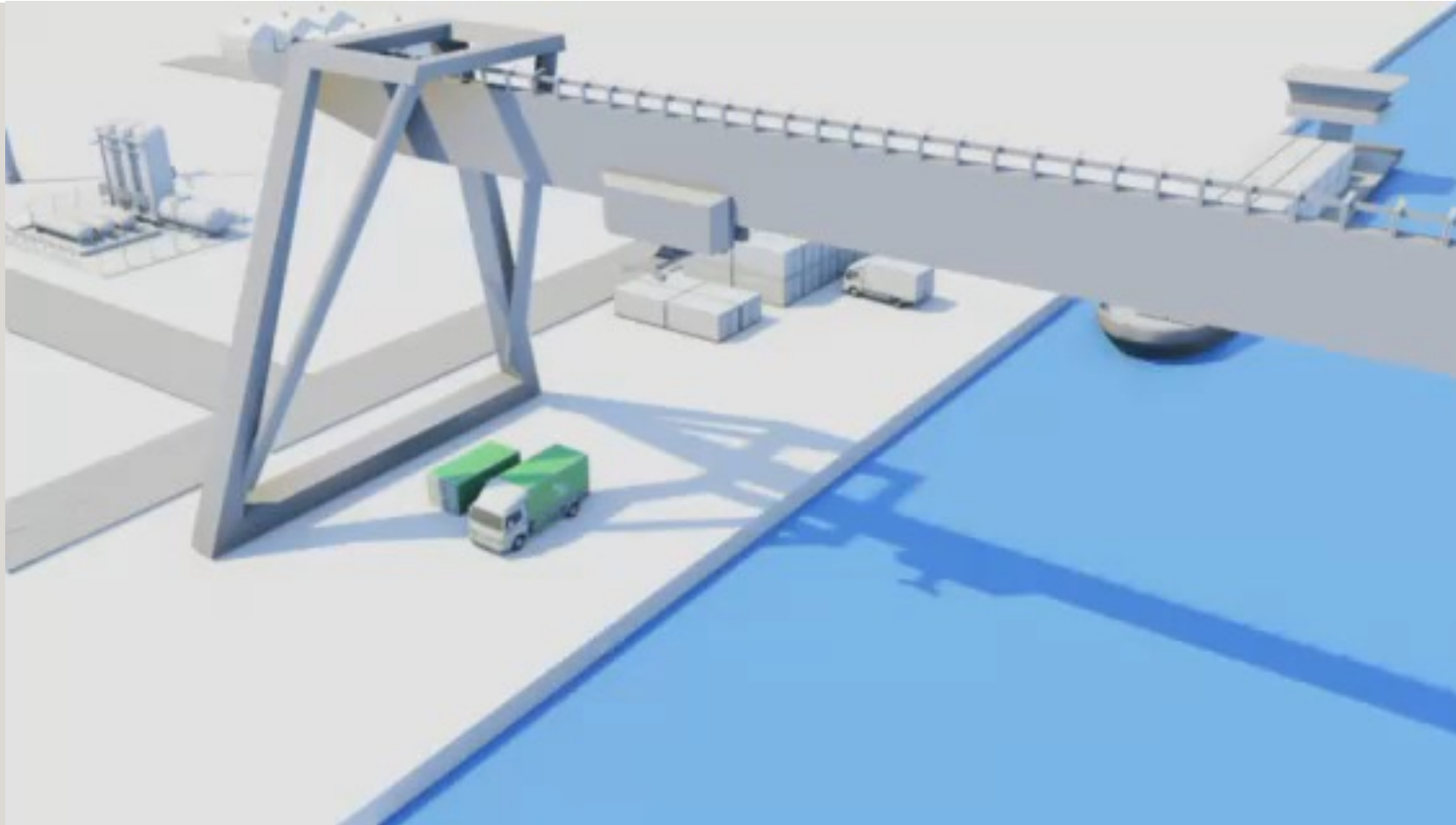
Implementation of the required **number of ships (40-60)**, to achieve feasible business cases



Facilitating an **open, flexible** hydrogen supply market for (inland) shipping



# How will it work?



# Concept set-up & budgeting full scope



## Budget blocks for investments and subsidies:

**Project Management, Penholder, Financial Preparation,  
Communication, Human Capital & Regulation,  
€ xx mln**

### Company 1

#### H2 storage tank pool

- Standardisation
- Business case
- Services set-up
- CAPEX- H2 tank tanks

€ xxx mln

### Company 2

#### H2 On-board technology

- Business case
- Services set-up
- CAPEX modular on-board tech (FC/ batteries etc.)

€ xxx mln

### Shipowners

#### On-board fixed H2-Electric

- Business case
- Ship design for modular solutions
- Electric drive train
- Fixed H2 technology

€ xxx mln

# Partners in Condor consortium (signed)

Group	Party	Number
<b>Bank/ investor</b>		<b>1</b>
	Rabobank	1
<b>Shipping</b>		<b>10</b>
	BCTN	1
	DFDS	1
	Future Proof Shipping	1
	HTS Maritiem	1
	Naval shipping	1
	NPRC	1
	Ruijtenberg Groep	1
	Samskip	1
	Theo Pouw B.V.	1
	Verenigde Tankrederij	1
<b>H2 supplier</b>		<b>6</b>
	Air Liquide	1
	Air Products	1
	EOLY/Virya	1
	Inovyn	1
	Linde	1
	Shell	1
<b>E-ship design/ build</b>		<b>2</b>
	Concordia damen	1
	Koedood	1
<b>Ship H2 hardware</b>		<b>3</b>
	Ballard	1
	Nedstack	1
	Zepp Solutions	1

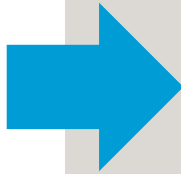
Group	Party	Number
<b>H2 storage hardware</b>		<b>5</b>
	Blue H Engineering	1
	H2storage BV	1
	NPROXX	1
	Umoe	1
	VITRITE Middelburg	1
<b>H2 logistics</b>		<b>2</b>
	Rotterdam Shortsea Terminal (RST)	1
	Schenk Tanktransport	1
<b>Ports</b>		<b>6</b>
	Port of Antwerpen Brugge	1
	(Port) Nijmegen	1
	Port of Rotterdam	1
	Port of Amsterdam	1
	Port of Duisburg	1
	Northseaports	1
<b>Other stakeholders</b>		<b>9</b>
	Ministerie I&W	1
	De Vlaamse Waterweg	1
	Provincie Zuid Holland	1
	Waterstofnet	1
	EICB	1
	Marin IWT	1
	STC	1
	Provincie Noord Holland	1
<b>Grand Total</b>		<b>44</b>



# Condor consortium: cross-sector, value chain participation



<p><b>H2 supply &amp; logistics</b></p> <p><b>Potential partners:</b></p> <ul style="list-style-type: none"> <li>• Banks, Investors</li> <li>• Energy suppliers/ H2 suppliers,</li> <li>• Logistics parties,</li> <li>• Technology providers (EOM/ service),</li> <li>• System integrators,</li> <li>• Vessel owners,</li> <li>• Ports</li> </ul>	<p><b>On-board technology</b></p> <p><b>Potential partners:</b></p> <ul style="list-style-type: none"> <li>• Banks, Investors</li> <li>• Technology providers (EOM/ service),</li> <li>• Shipyards,</li> <li>• System integrators,</li> <li>• Vessel owners,</li> <li>• Cargo owners,</li> <li>• Ports</li> </ul>	<p><b>E-Ships:</b></p> <p><b>Potential partners:</b></p> <ul style="list-style-type: none"> <li>• Shipyards,</li> <li>• System integrators,</li> <li>• Vessel owners,</li> <li>• Cargo owners</li> </ul>
<p><b>Potential supporting consortium partners:</b></p> <ul style="list-style-type: none"> <li>• Knowledge institutes, Ports, (semi-) government agencies, cargo owners</li> </ul>		



ROLE	Contribution	Benefits/role	Entry Fee
<b>PRIMARY (INVESTOR)</b>	<b>Pro-active contributor:</b> knowledge/ expertise and funding	Party considered as possible investor. Informed 6 weekly.	<b>Min.€ 5K*</b>
<b>PRIMARY (STAKEHOLDER)</b>		Direct recipient of funding, or large stakeholder. Informed 6 weekly.	<b>Min.€ 5K*</b>
<b>SECONDARY</b>	<b>Re-active contributor:</b> Knowledge/ expertise for pre-defined scope (one WP)	Party considered as part of consortium, (e.g. suppliers, customers, other stakeholders). Informed quarterly.	<b>Min. €2,5K</b>
<b>SUPPORTER (unlimited)</b>	<b>Sign LoS for subsidy application</b>	Other stakeholders, will be informed ad-hoc.	<b>€ -</b>

*\*Primary partners will be required to support with an additional contribution for a large, full scope subsidy application.*

# Interested to participate?



Contact the core team:

Marjon Castelijns- Project leader- [marjon.castelijns@darel.nl](mailto:marjon.castelijns@darel.nl)

Wouter Vuijk- Port of Rotterdam- [hw.vuijk@portofrotterdam.com](mailto:hw.vuijk@portofrotterdam.com)

Tom Verlinden- WaterstofNet- [tom.verlinden@waterstofnet.eu](mailto:tom.verlinden@waterstofnet.eu)

