

THE CONCEPTION OF THE KOTUG E-PUSHER

ABOUT KOTUG

1911



A FAMILY-OWNED COMPANY FOUNDED IN 1911

1953



GREW SUBSTANTIALLY WHILE SUPPORTING THE CONSTRUCTION OF THE DELTAWORKS IN 1953

1988 & ONWARD

STARTED COMPETITIVE HARBOUR TOWAGE SERVICE IN EUROPE IN 1988 AND EXPANDED ITS BUSINESS ON A GLOBAL SCALE WITH A FLEET OF TUGS AND OFFSHORE VESSELS.



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STRONG DRIVE FOR INNOVATION

1999



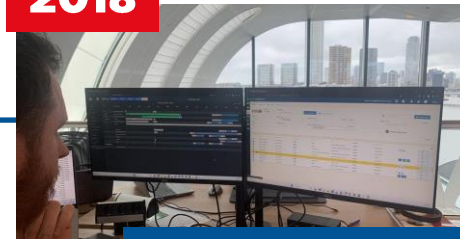
LAUNCH OF TRIPLE AZIMUTH
ROTORTUG

2012



WORLD'S FIRST HYBRID
TUGBOAT UNDER CLASS

2018



OPTIPORT: AI SCHEDULING
AND DISPATCH TOOL

2016-2020

DEMONSTRATION WITH REMOTE AND
AUTONOMOUS SAILING WITH AI ROUTING



2021



DESIGN OF REVOLUTIONARY
KOTUG E-PUSHER SERIES



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KOTUG E-PUSHER

TRANSITION TO SUSTAINABLE INLAND SHIPPING

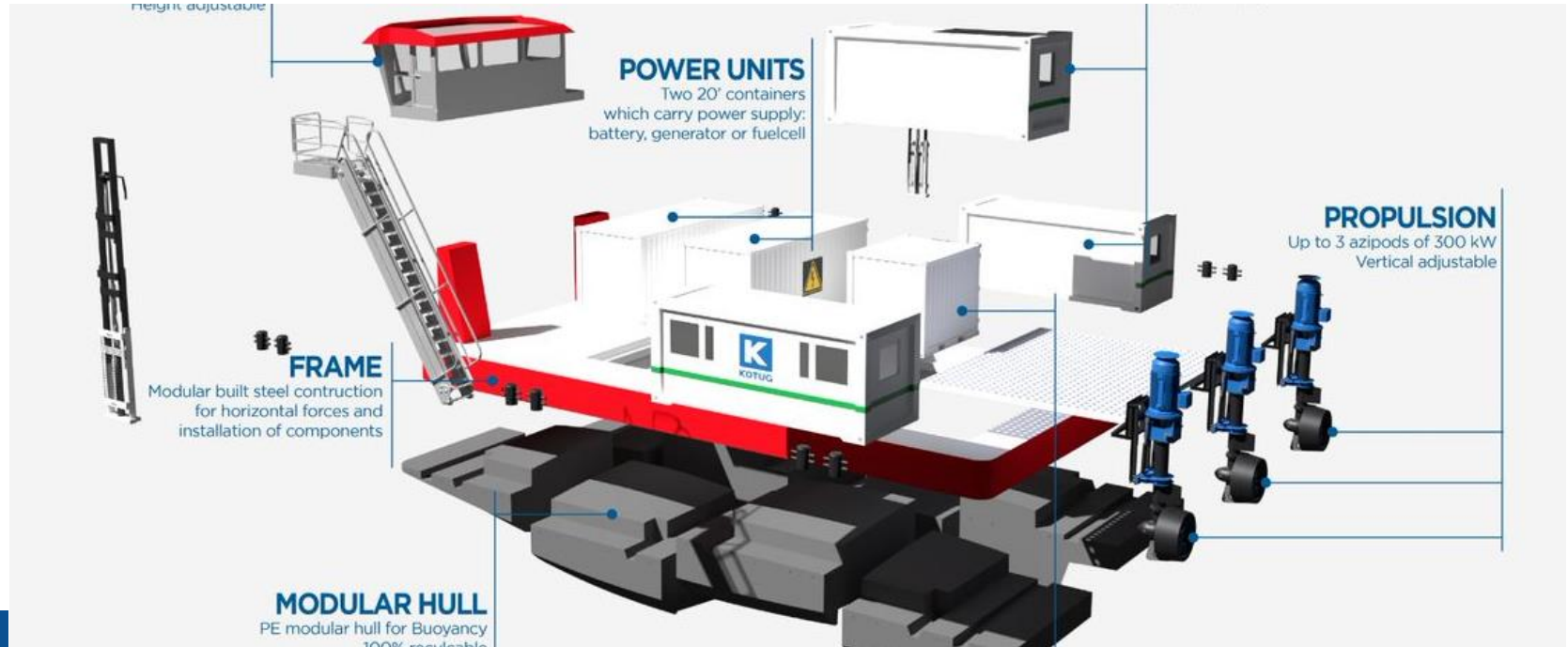
Which fuel will be leading?

How do we keep it affordable?

KOTUG E-PUSHER

- Development of a **modular electric pusher tug** as an answer to the energy transition for the inland shipping industry.
- Design of the vessel is based on an Electric Vessel (EV) platform - **steel frame and electric thrusters** having a **polyethelene (PE) hull**.
- E-Pusher is able to handle **both AC and DC** power from standard 20ft energy containers.

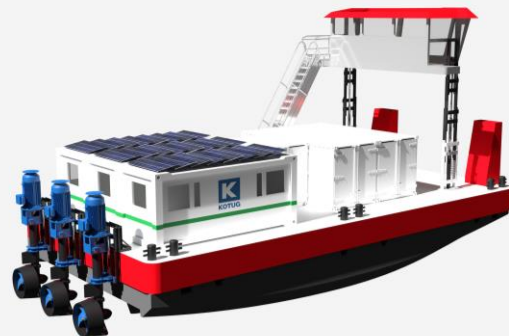
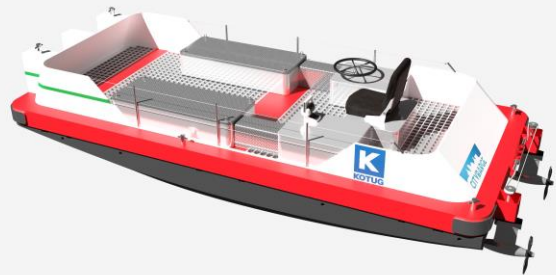
MODULAR BY DESIGN



MULTIPLE ADVANTAGES

- Assembly line production resulting in **lower capex, less weight** and **50% faster construction**.
- Optimized hull for **better efficiency, no anti-fouling** and a **maximum depth of 1,35** meter.
- Future-proof solution with modular energy containers that can be **powered onboard or lifted off** whereby it is **able to handle a variety of energy source** such as Stage V diesel, batteries or hydrogen.

KOTUG E-PUSHER SERIES



Length 5,5 m



30 m

Width 2,0 m



10 m

Depth 0,45 m



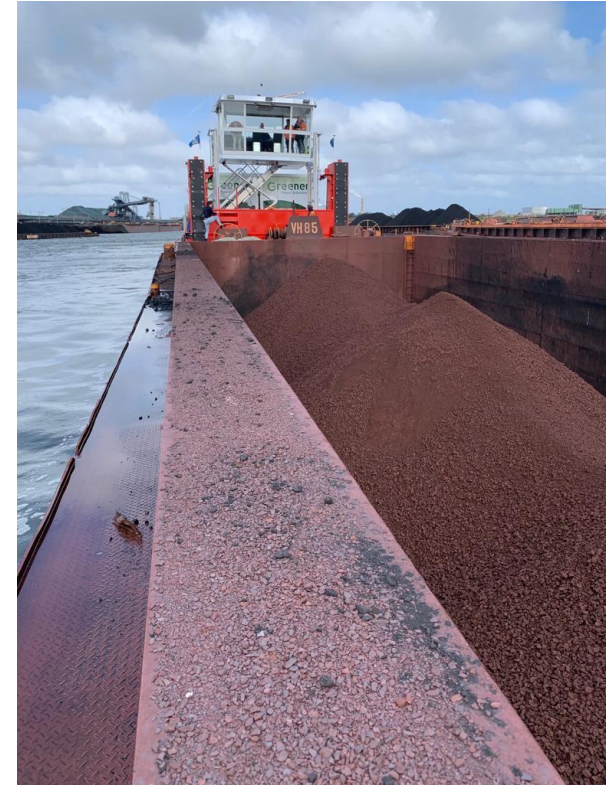
1,35 m



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MINIMAL CAPACITY

Citybarge	100 dwt
E-Pusher S	500 dwt
E-Pusher M	4,500 dwt
E-Pusher L	6,000 dwt
E-Pusher XL	6,000 dwt



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STARTED SMALL WITH CITYBARGES



Operations in Utrecht, Leiden and Amsterdam

GREW LARGER WITH E-PUSHER M



OPERATIONAL START JUNE 2023

100% Zero Emission transport of cacao beans in Amsterdam port Area.

1 x E-Pusher M

1 x 1,9 mWh battery container

4 x 1,280 tons self propelled barges

4 x 281 kWh batteries



Zero subsidy – 100% competitive

TRANSITION TO SUSTAINABLE INLAND SHIPPING

Which fuel will be leading?

No need for long term investment decision and option for separate financing.

How do we keep it affordable?

Lower capex whereby long term competitive investments can be made now!

OVERALL

Proven concept

-

Competitive

-

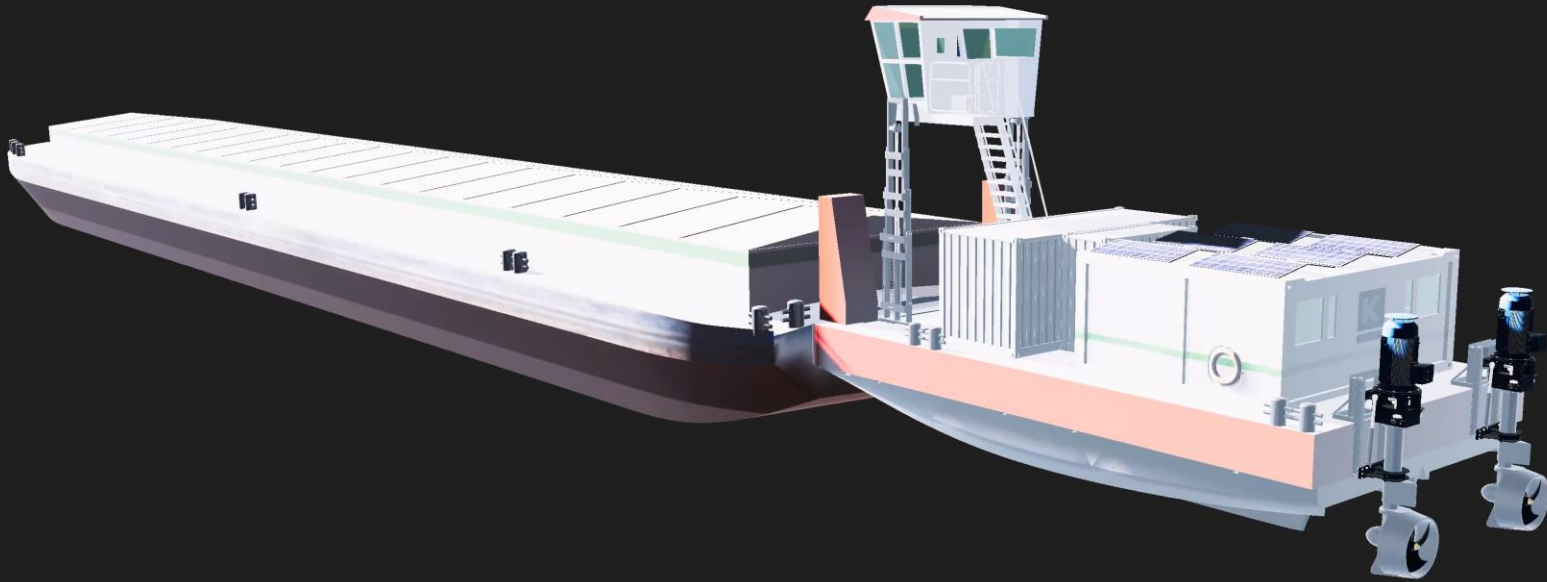
Energy independent with 100% zero emission solutions

-

Endless scaling possibilities

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Future proof solution



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KOTUG E-PUSHER



ZERO EMISSION PUSH!