

PODUHVAT

N E X T G E N E R A T I O N S H I P S

I S S U E S

50%-60%
of all cost are
for fuel



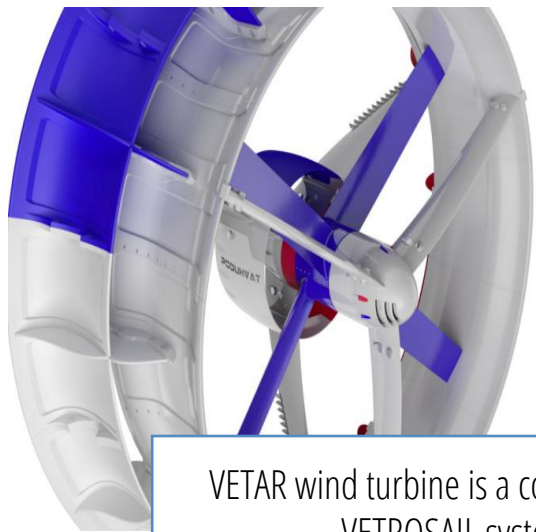
1 trillion USD
to pay for IMO
environmental
regulation adaptation



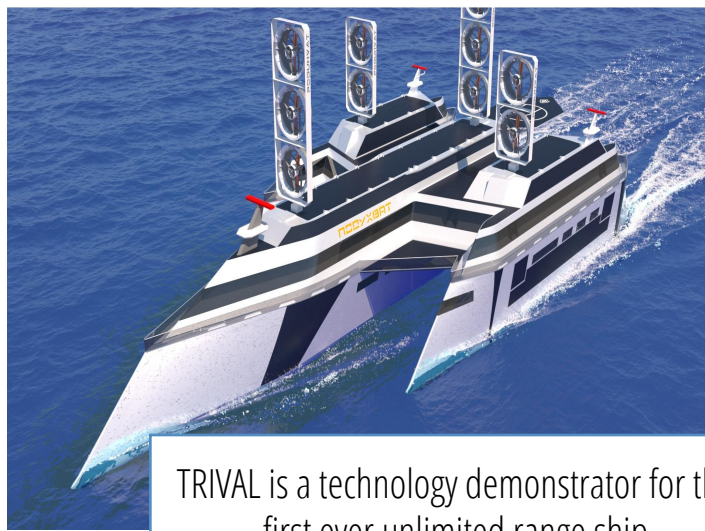
Often and
expensive
maintenance



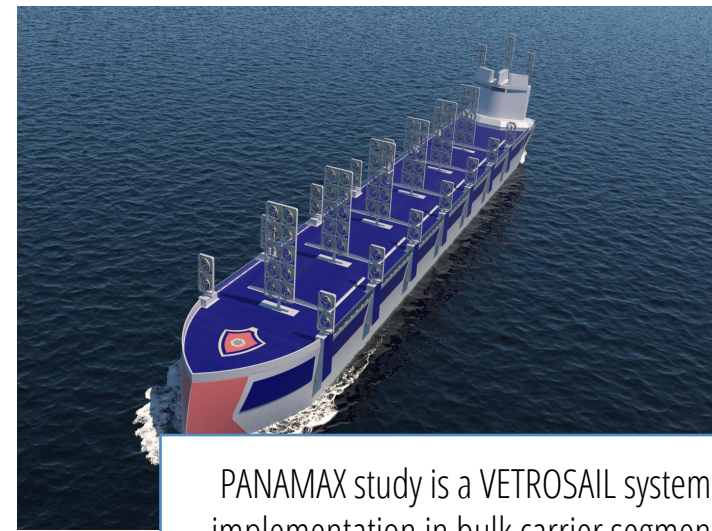
SOLUTIONS



VETAR wind turbine is a cornerstone of VETROSAIL system

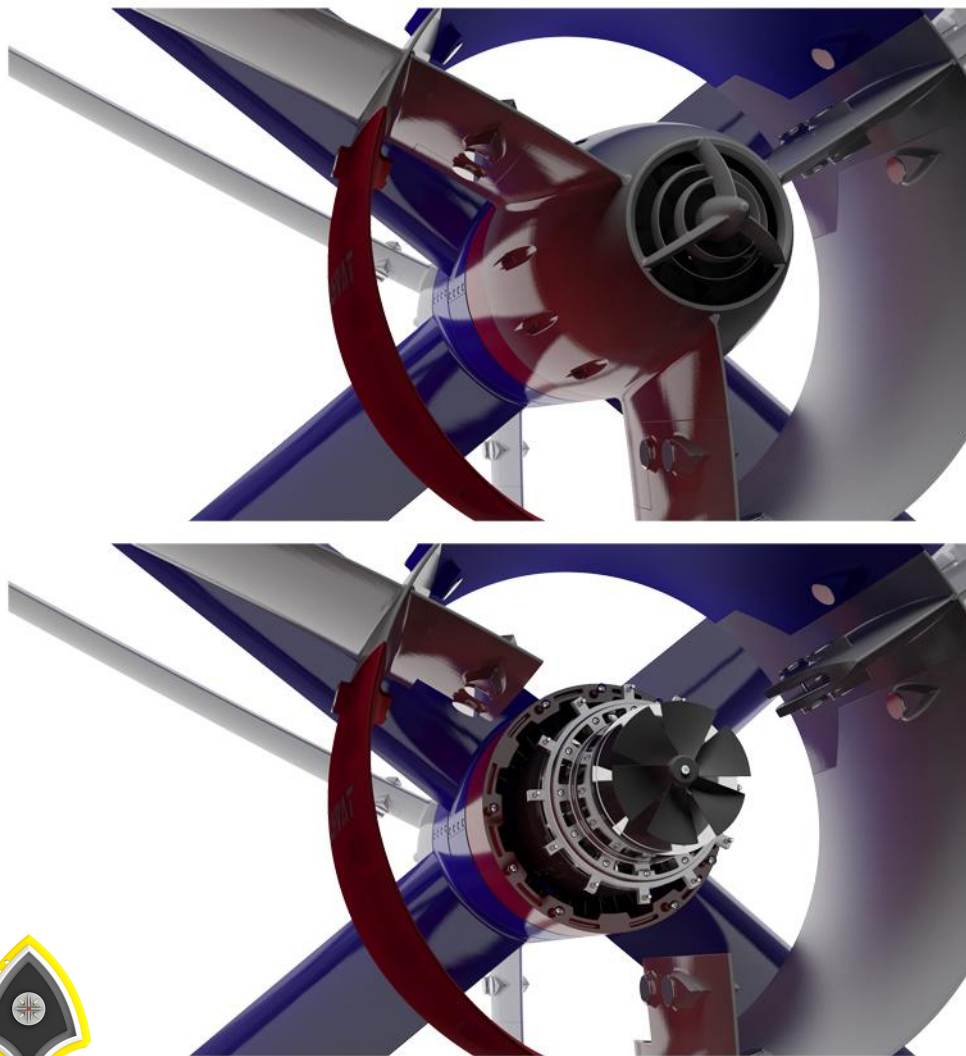


TRIVAL is a technology demonstrator for the first ever unlimited range ship



PANAMAX study is a VETROSAIL system implementation in bulk carrier segment





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Main advantages of VETAR wind turbines relative to other wind turbines regardless of size or type (HAWTs or VAWTs) are much higher energy generation density and reliability made possible by:

- Highly advanced aerodynamics which accelerate air inside turbine by 53%
- Two counter rotating rotors
- Two independent next generation hyper cooled and custom designed V-GEN electro-generators
- Unique turbulence and thermal control systems

Because of its small size but high power output, multilevel protection system and shrouded rotors it has one critical advantage relative to any same power rated wind turbines:

- Can be used safely in urban surroundings and specialized environment such as marine industry

PROVEN AND ANALIZED



In addition to years of analysis and CFD simulation VETAR has been experimentally proven and tested.

The results achieved during the testing have validated initial assumption during design and numerous CFD simulations.

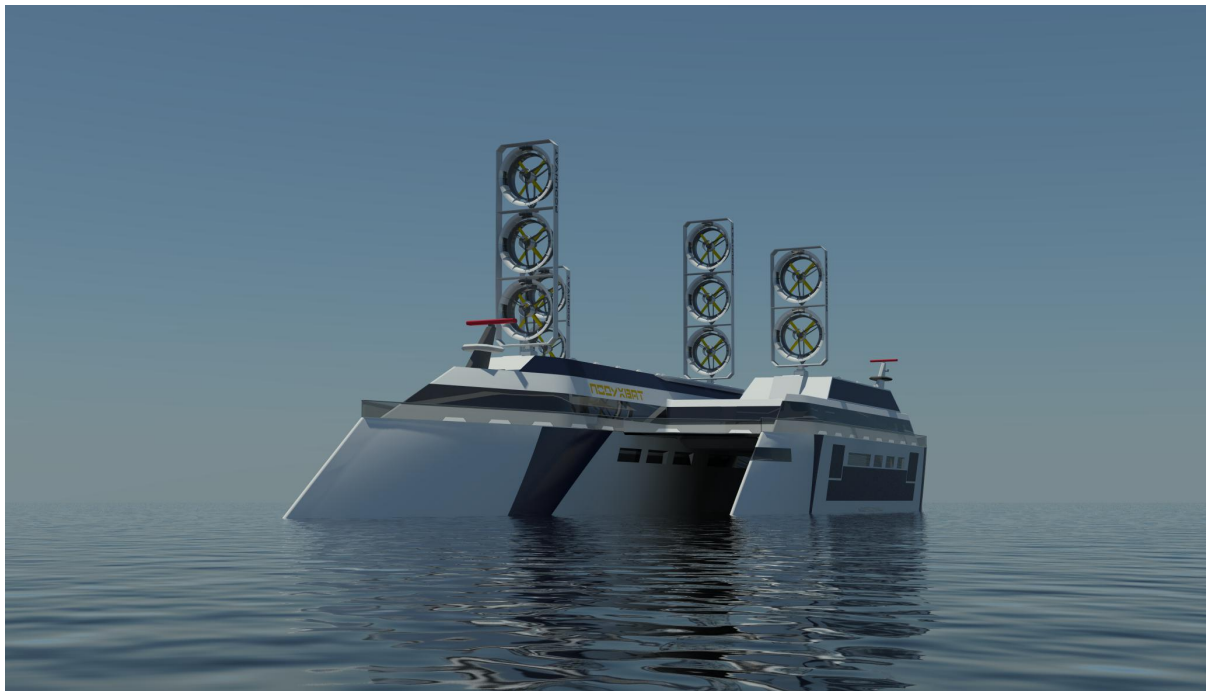
Poduhvat have achieved results in line with the highest quality product.

After experimentally testing scaled model there is no technical obstacles to built larger scale devices.



PODUHVAT

INTEGRATION



TRIVAL 68m

Yachts, Scientific, Security, Passenger



PANAMAX 220m

Bulk Carrier, Tanker, Commercial



TRIVAL

NON-NUCLEAR
UNLIMITED RANGE SHIP

VETAR

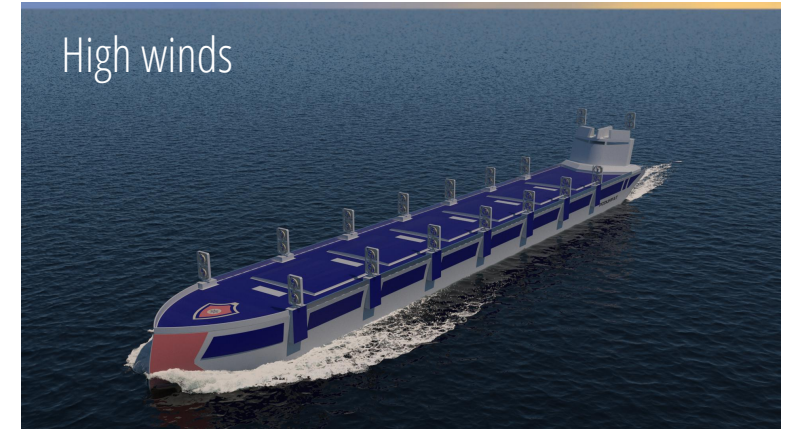
VETROSAIL

SOLAR FILM

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7

CONFIGURATIONS



Optimal wind and sun conditions wind and solar fully extended

M A R K E T

INDUSTRY
FERRIES
B U L K

SAIL BOATS

380 billion \$
2017.

Y A C H T S

CRUISE

INTRODUCTION MARKET

Bulk Carrier market

- **1350 million euro annually**

G R O W T H M A R K E T

Yachts Globally

- **35000 million euro annually**

G L O B A L M A R K E T

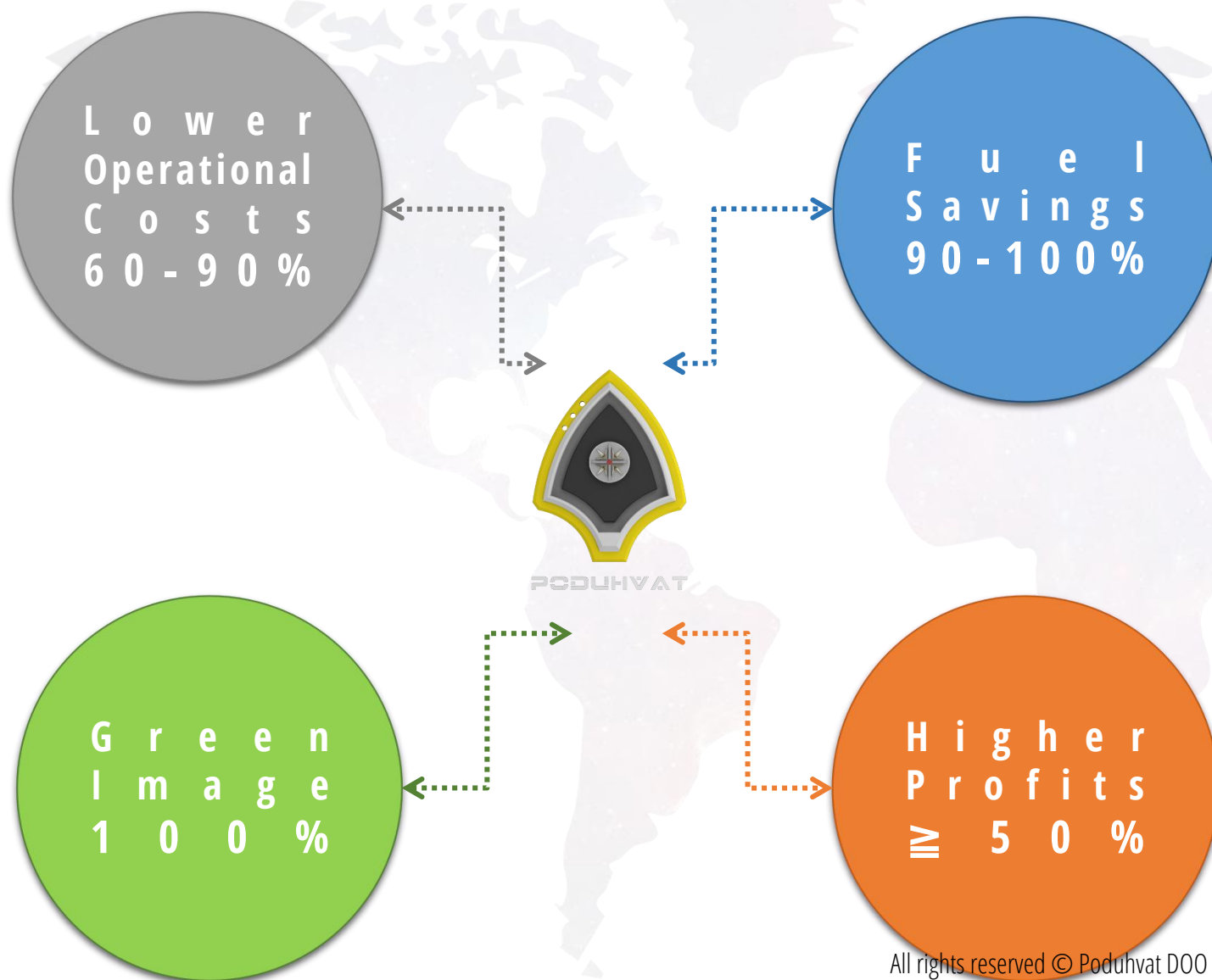
Sailboats Globally

- **185000 million euro annually**



PODUHVAT

A D V A N T A G E



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COMPETITIVE ADVANTAGE

5 INTERNATIONAL PATENTS

UK & EUROASIA

IP

6 YEARS OF DEVELOPMENT

KNOW HOW

R&D

VETROSAIL IMPLEMENTATION

EXLUSIVE

FIRST

UNLIMITED RANGE SHIP

RENEWABLY POWERED

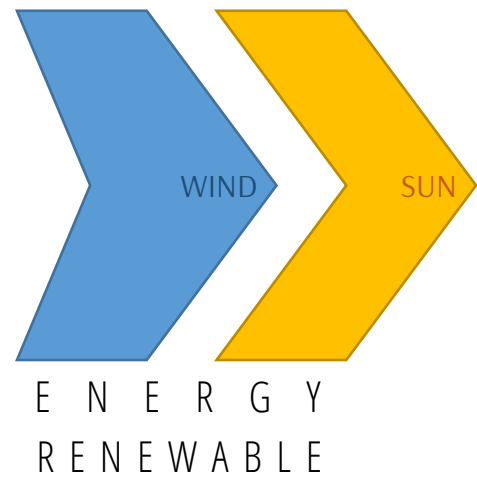
UNIQUE

CUSTOMER VALUE PROPOSITION

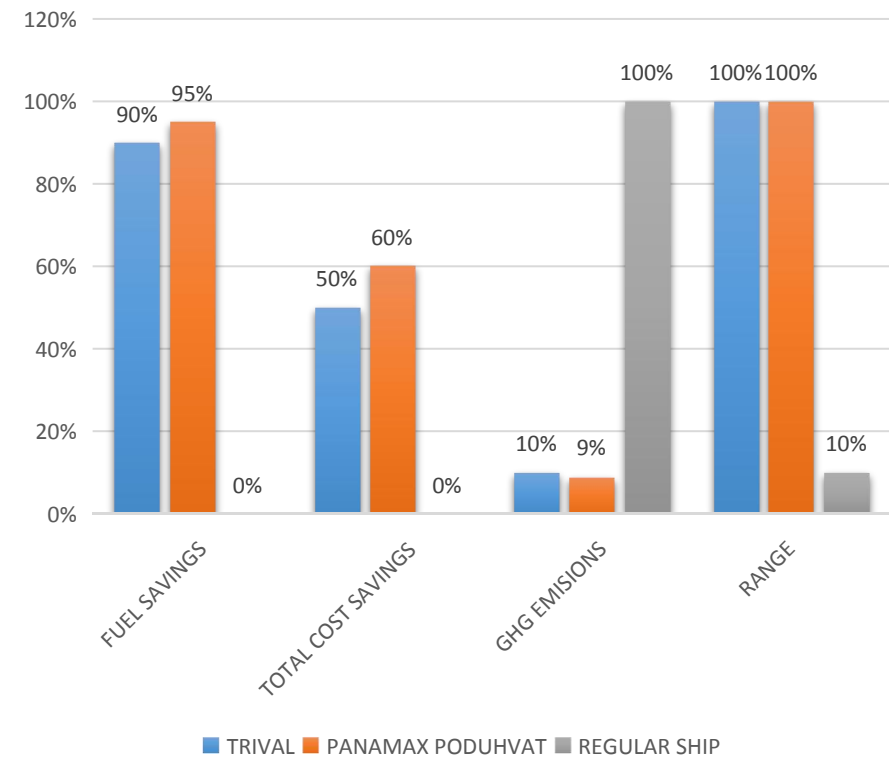
REGULAR WATER TAXI, BULK CARRIER, OTHER
R E P L A C E D W I T H



T R I V A L
&
P O D U H V A T
P A N A M A X



TRIVAL & Poduhvat PANAMAX
Comparison with Regular Ships



D E A L



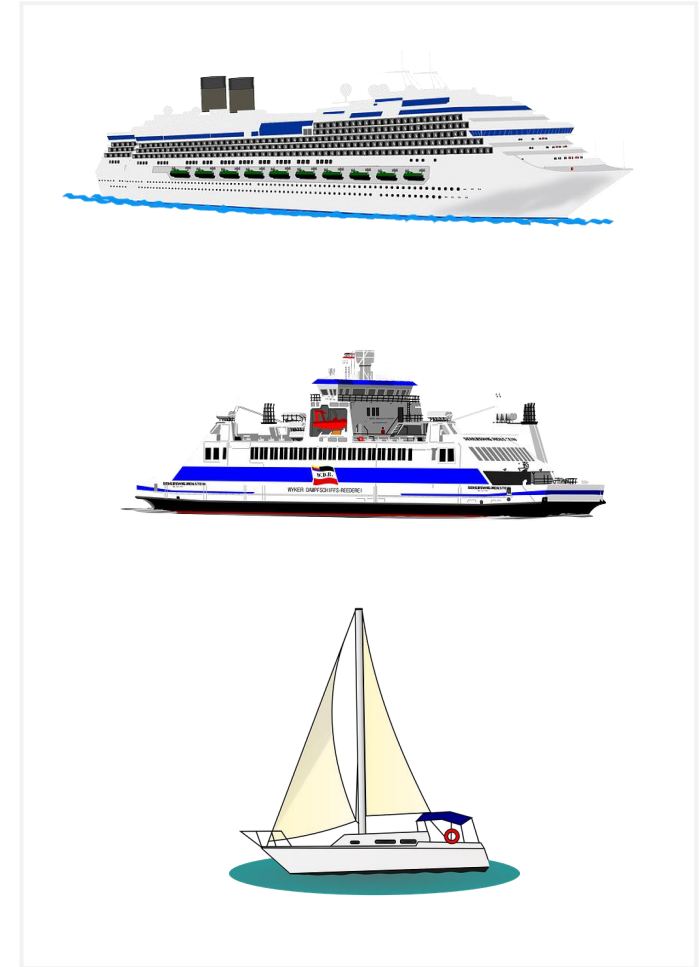
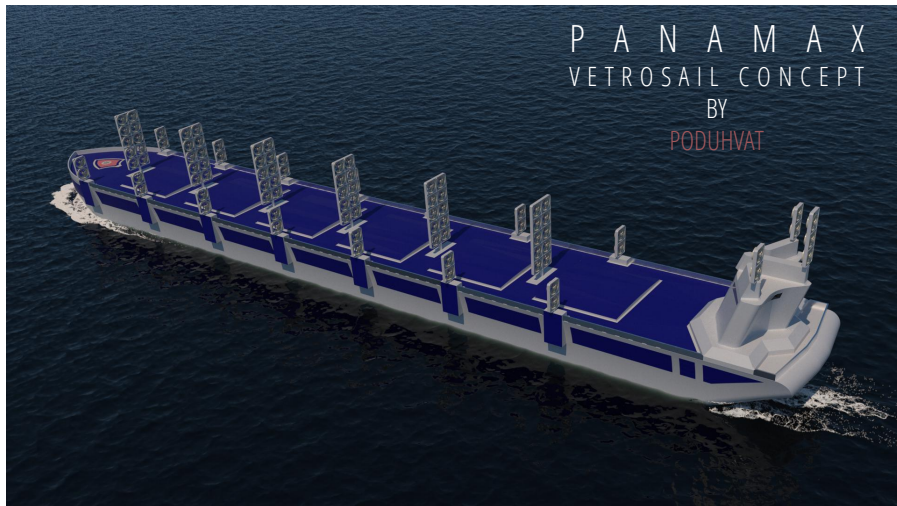
OFFER FOR AN UNLIMITED RANGE

RENEWABLE ENERGY POWERED TRIVAL
AND/OR PANAMAX



PODUHVAT

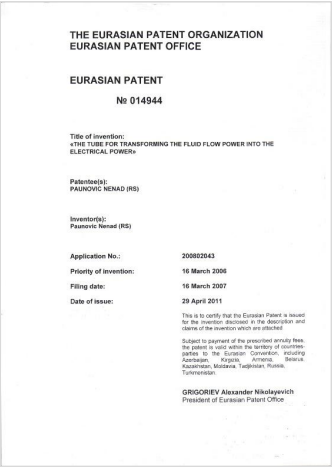
50 000 000 - 80 000 000€ /unit



BULK CARRIER, SHIPPING
COMPANY, WATER TAXI
OPERATORS

I P

Eurasian
№ 014944 patent



United Kingdom
GB2461435 patent



M U L T I P L E
I N T E R N A T I O N A L
P A T E N T S
G R A N T E D



PODUHVAT

NON REPETITIVE
UNIQUE SOLUTION

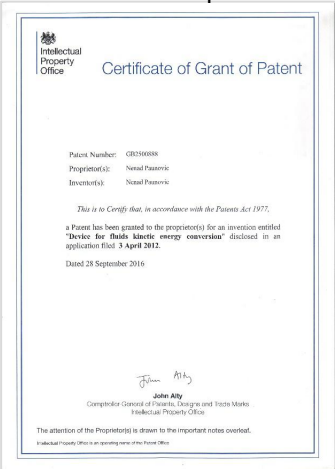
based on

P R O H I B I T O R Y
P R O P R I E T A R Y T E C H N O L O G Y

United Kingdom
GB2502779 patent



United Kingdom
GB2500888 patent



United Kingdom
GB2512567 patent



RECOGNITION

FEAUTURED
in
MEDIA



The New Zealand Herald

Forbes



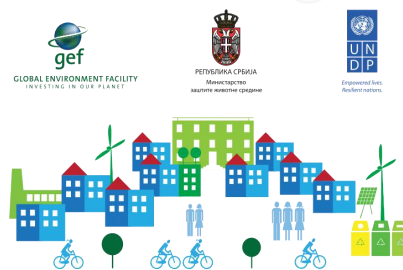
Autodesk Clean Tech Partner



Winner 2012



CLIMATE SMART URBAN
DEVELOPMENT CHALLENGE



Winner 2018

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Special Guest 2013



Winner 2016



Climate Smart Urban
Development Challenge

BEST IDEA AWARD
to
Predrag Paunovic
in front of
PODUHVAT

handed over by

Minister of Enviroment and Protection
Mr. Goran Trivan
and
Deputy Resident Representative UNDP
Ms. Steliana Nedera

BELGRADE
SERBIA
2018



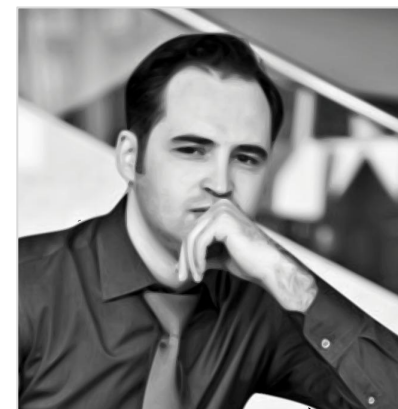
EXPO 2017
Official Participant Title
personally handed over to PODUHVAT
by Kazakhstan's Minister of Energy
Mr. Kanat Bozumbayev

As a ...
2016
WINNER
of



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C O R E



Predrag Paunovic



Nenad Paunovic

INVESTMENT ENGINEERING

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