

Solumar

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New Air & Gas filtering solutions
to directly cut emissions
in a cost-efficient way

13 CLIMATE ACTION
3 GOOD HEALTH AND WELL-BEING
14 LIFE BELOW WATER
15 LIFE ON LAND

FOR COMPANIES LIKE

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BMF PORT BURGAS

أرامكو السعودية
saudi aramco

MAERSK

VALMAR CORPORATION

DAMEN

SCORPIO Tankers

ΟΛΠ PIRAEUS PORT AUTHORITY S.A.

DP WORLD Limassol

EGA
الإمارات العالمية للألمنيوم
EMIRATES GLOBAL ALUMINIUM

P&O

PORT OF VARNA

EASTERN PACIFIC SHIPPING

NAVIBULGAR
www.navbul.com

MULLER MARITIME HOLDING

ΟΗ ΟΡΓΑΝΙΣΜΟΣ ΛΙΜΕΝΟΣ ΗΡΑΚΛΕΙΟΥ Α.Ε.
Heraklion Port Authority S.A.

TO:

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Comply with Net-zero Agenda

Save Money

Make Money

THE SOLUTION – OUR TECHNOLOGY. FIRST POWERED BY AIRBUS BIZ LAB

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Based on R&D in Aviation …

the technology combines the power of aero and fluid dynamics, static turbines, water and underwater cyclones, water atomization with low-energy plasma curtains/vortexes

Directly Capture 92-99% of multiple pollutants combined:

- Mechanical particles (incl. Black carbon, Ash)
- VOC
- TOC
- GHG (CO2, SOx, NOx)

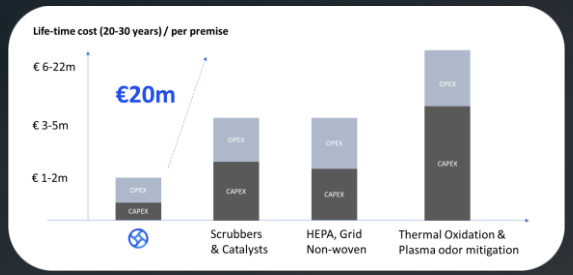
Fully functional product (in TRL 9) with proven capturing efficiency



Any size scalable, retrofits to any equipment:

- Diesel Generators
- HVAC
- Cranes
- Heavy Machinery
- Chimneys
- Welding and Cutting
- Burning
- Chemicals processing
- Mining

x 6–8 times lower CAPEX and OPEX



Works efficiently with tap water only

(No consumables such as Chemicals, no Grids that needs to be replaced)

Real-time air quality monitoring

24/7

Transparency in ESG reporting

Makes it possible to Utilize precious materials into a byproduct

- Recycle
- Reuse
- Resell

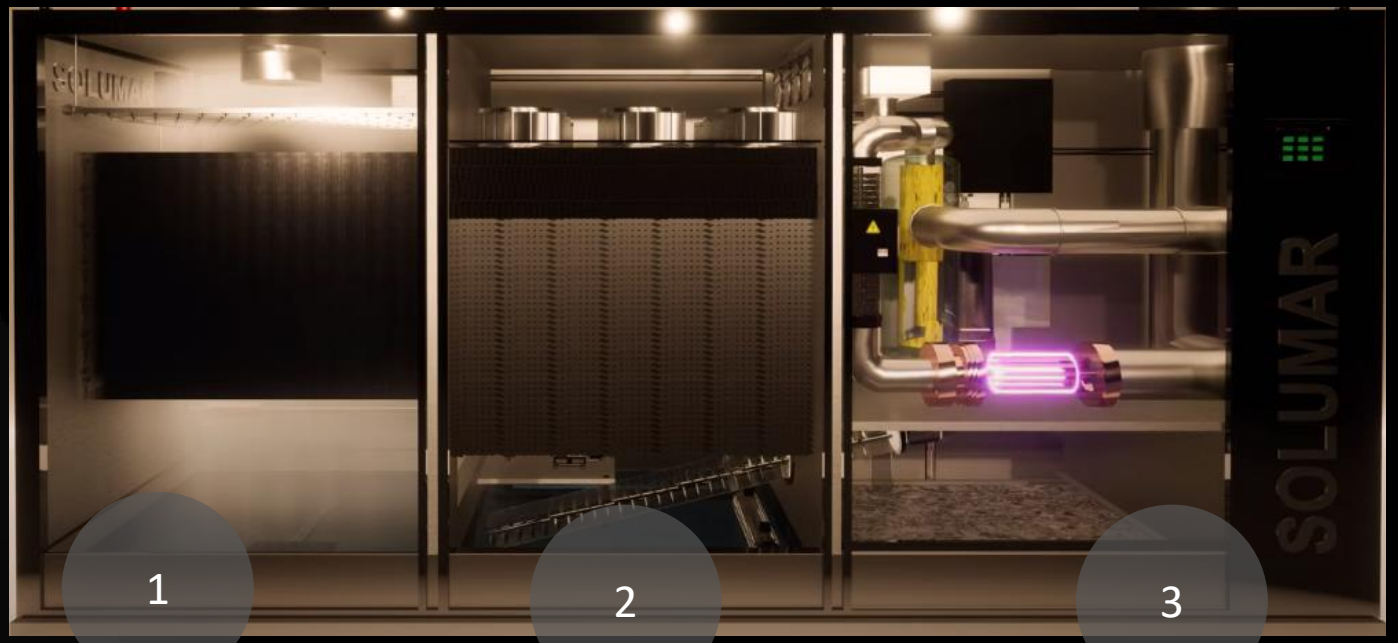
Technology – based on R&D in Aviation

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THE PRODUCT:



WHAT IS INSIDE:



1	2	3
Aero + Fluid Dynamics Turbulent airflow	Water atomization and declustering	Low-energy Plasma Curtains/Vortexes

THE SAME SOLUTION TURNS THE COLLECTED CARBON INTO REUSABLE CARBON POWDER

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Black Carbon
+ CO2





BLACK CARBON POWDER IS SOLD AT:



$3,000/MT

Generating recurring revenue for all the stakeholders in the value chain

CAPTURING EFFICIENCY - MEASURED BY 3RD PARTIES:

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99.9%

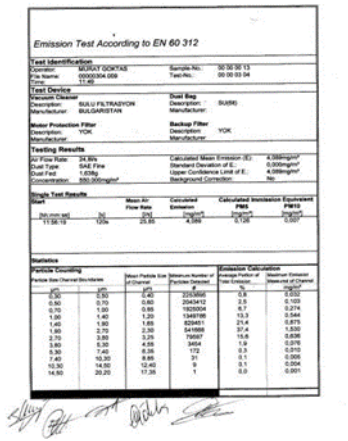
Particles & Black Carbon

98%

CO_2

92%

VOC / TOC



Emission Test According to EN 60 312

Date/Time	Value incoming CO2, µg/m3, ref	Outgoing value CO2, µg/m3	Net effect, %
14.06.2023 15:00	11388.3	804.5	92.94%
14.06.2023 15:01	64152.2	805.1	98.75%
14.06.2023 15:02	66843.5	806	98.79%
14.06.2023 15:03	66834.9	805.4	98.79%
14.06.2023 15:04	66828.3	807.5	98.79%
14.06.2023 15:05	66818.9	807.6	98.79%
14.06.2023 15:06	66811.3	808.8	98.79%
14.06.2023 15:07	66807.8	810.3	98.79%
14.06.2023 15:08	66804.6	813.6	98.78%
14.06.2023 15:09	66801.6	814.1	98.78%
14.06.2023 15:10	66798.8	815.8	98.78%
14.06.2023 15:11	66796.8	814.9	98.78%
14.06.2023 15:12	66794.8	809.9	98.79%
14.06.2023 15:13	66792.5	805.1	98.79%
14.06.2023 15:14	66789.7	802.9	98.80%
14.06.2023 15:15	65491.5	803.5	98.77%

Table 2: Net effect - analytical performance indicators at CO2

Before



After



Upon 2050 regulations the max VOC/TOC is 20 mlg/m3 to be reached in 2026 as a first milestone.

IN SUMMARY - UNIQUE SELLING PROPOSITION (USP)

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98%
Capturing efficiency

COMPLY WITH REGULATIONS

100%
Retrofits

Low CAPEX & OPEX

SAVE up to $66m per premise

Reuse
Resell
Byproducts

RECURRING REVENUE

COMPETITIVE LANDCAPE

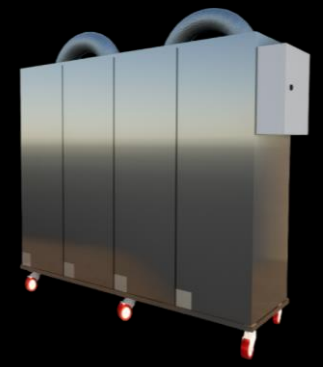
Competitive solutions are either expensive to acquire and operate with or cannot be retrofitted. We can solve this problem.

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Retrofittable

Biofuels

COMPETE FOR OUR SCARCE LAND. AFFECT FOOD PRICE.



High CAPEX & OPEX

Catalysts

Low CAPEX & OPEX

Scrubbers

WÄRTSILÄ

YARA

HALDOR TOPSØE
CATALYSING YOUR BUSINESS

Electrification

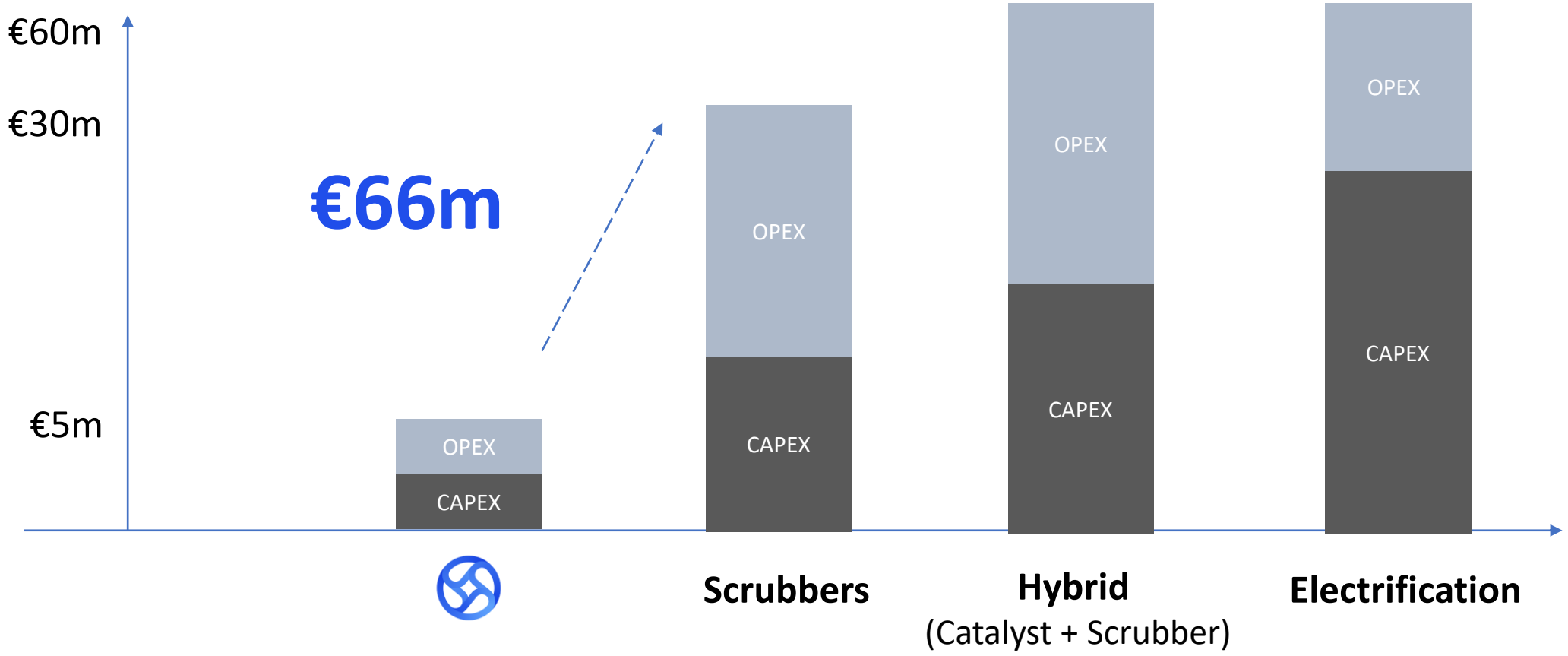
Hydrogen

Cannot be Retrofitted

VS COMPETITION - SAVE €66M/SHIP (MARITIME)

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Life-time cost (30-50 years)



Awards

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MENA MARITIME Accelerator

CLEANTECH BULGARIA

CNN

FUTURE 50 2023
pwc

Forbes
Product Innovation 2023

UNWTO
Social Impact Award

oslo innovation week

FUTUROLOGY

C3 Companies Creating Change

ATLANTIC SMART PORTS
BLUE ACCELERATION NETWORK

CLIMATE COLLECTIVE

AWARDS

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WOMEN in tech

webit

MCB MARINE CLUSTER BULGARIA

Climate Launchpad
Climate-KIC

standard chartered

جامعة الملك عبدالله للعلوم والتقنية
King Abdullah University of Science and Technology

مجمع الشارقة للبحوث والتكنولوجيا والابتكار
Sharjah Research Technology and Innovation Park

صنع في الإمارات
MAKE IT IN THE EMIRATES







TEAM & PARTNERS

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Rennie Popcheva
CEO, CMO
25+ Y in Business



Eng. **Emilian Nedelchev**
CEO, CTO
Aviation Engineer



Plamen Alexandrov
KA Head
9+ Y in B2B Sales



Alexandra Alexandrova
Brand Manager
7+ Y in B2B Sales



Sheikh Ahsan Tariq
CCO
15+ Y in B2B Ops



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Maritime & OG

P&G marinehound sulphur limit remote sensing Unilever PHILIPS Assembléon Senstate WBAF GALERA 07

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Berkeley UNIVERSITY OF CALIFORNIA
KAUST
RIIGILAEVASTIK
standard chartered
EGA
TAL TECH
IHB ShipDesign member of Industrial Holding Bulgaria
TECHNICAL UNIVERSITY SOFIA
Cyprus University of Technology

1:1 PILOT PROJECT

8 - 10 months

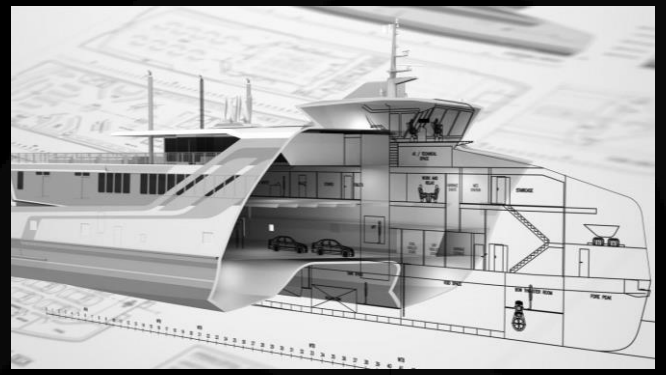
Agreement & Admin

Tech Designs Integration CAD

Manufacturing & Assembly

Delivery & Installation

Performance Tests & Assessment (tech + financial model)











Mo 1 Mo 2 Mo 3 Mo 4 Mo 5 Mo 6 Mo 7 Mo 8 Mo 9 Mo 10

SEE HOW THE TECHNOLOGY WORKS

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See How the technology works at: youtube.com/watch?v=otMNZ78d-fs

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SOLUTIONS FOR OUR PLANET

www.solumar.org



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