



**An automatic bio-decontamination
system for everyone, everywhere**



MICROBIAL CONTAMINATION

HEALTHCARE-ASSOCIATED INFECTIONS

kill more people than car crashes

7 x more in Portugal 2.5 x more in USA

ADDITIONAL HEALTHCARE COST

\$25–\$45B (€22.5-€40.5B) per year

THE GLOBAL PANDEMIC OF COVID-19



THE ADDRESSED PROBLEM

Bio-decontamination lacks effective, compact and affordable devices to be widely adopted in healthcare sector.



FOR COVID-2019 PREVENTION

BIO-DECONTAMINATION AS THE MOST RELIABLE PREVENTIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Although crucial for safety of healthcare personnel, there is a major PPE shortage

HYDROGEN PEROXIDE VAPOR (VHP)

Can inactivate COVID-19, without affecting protective properties of treated PPE, enabling its safe reuse and solving the shortage

DELOX TECHNOLOGY DRYVHP

Equally efficient to VHP, while enabling compact and affordable devices for PPE bio-decontamination

TECHNOLOGY

NEW GENERATION OF BIO-DECONTAMINATION DEVICES



Innovative solid formulation of hydrogen peroxide (dryVHP)
(PCT patent application no. PCT/IB2020/051385)

Compact device that releases the sterilant – provisional
patent (U.S. patent pending, application no. 62/781-849)

Faster aeration module (patent to be submitted)



DELOX SOLUTIONS

FOR HEALTHCARE FACILITIES

Compact devices that release and disperse hydrogen peroxide vapor

Bio-decontamination of Personal Protective Equipment (PPE) enabling its safe reuse

Suitable for compounding pharmacies, animal research & diagnostic laboratories, hospitals and households



BUSINESS MODEL

B2B MODEL

Printer and cartridges business model



Effective, highly affordable bio-decontamination device

Consumables as the main source of revenue with a circular economy method of “Return and Recharge”





2020

PPE IN HEALTHCARE
FACILITIES

2021

COMPOUNDING
PHARMACIES IN THE USA

2023

ROOM
DECONTAMINATION

2024

BIODEFENSE
AND SPACE

GO-TO-MARKET STRATEGY

A pharmacist wearing a white lab coat, blue hairnet, and a white face mask is working in a compounding pharmacy. They are using a pipette to transfer liquid into small vials. The background shows shelves with various pharmaceutical products.

WHY COMPOUNDING PHARMACIES IN THE USA?

COMPOUNDING PHARMACIES

- play a lifesaving role when commercially available drugs cannot be used for treatment
- prepare drugs specific to individual patients' needs

7,500 facilities in the USA offering advanced compounding services

The Environmental Agency Protection (EPA) regulatory approval achieved 4 times faster than in the EU



Top-ranked private hospitals in the USA and Portugal

A bio-decontamination specialized company based in Erie, PA, USA

Seed investors

Portuguese Army and a UK-based satellite manufacturer

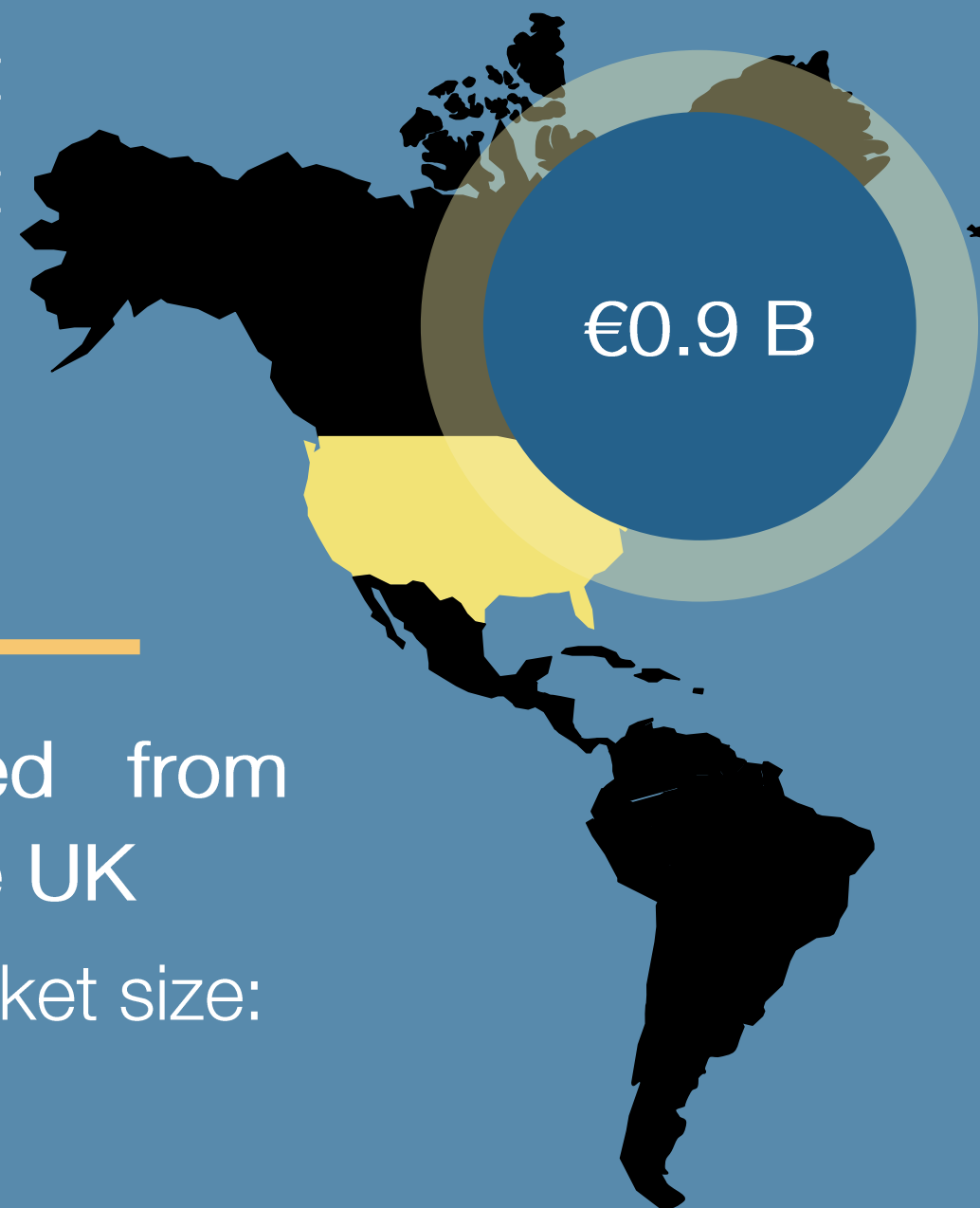
Portugal's largest catering and food logistics group

LETTERS OF INTENT

MARKET SIZE

Beachhead market segment
of laboratory equipment
decontamination in the USA

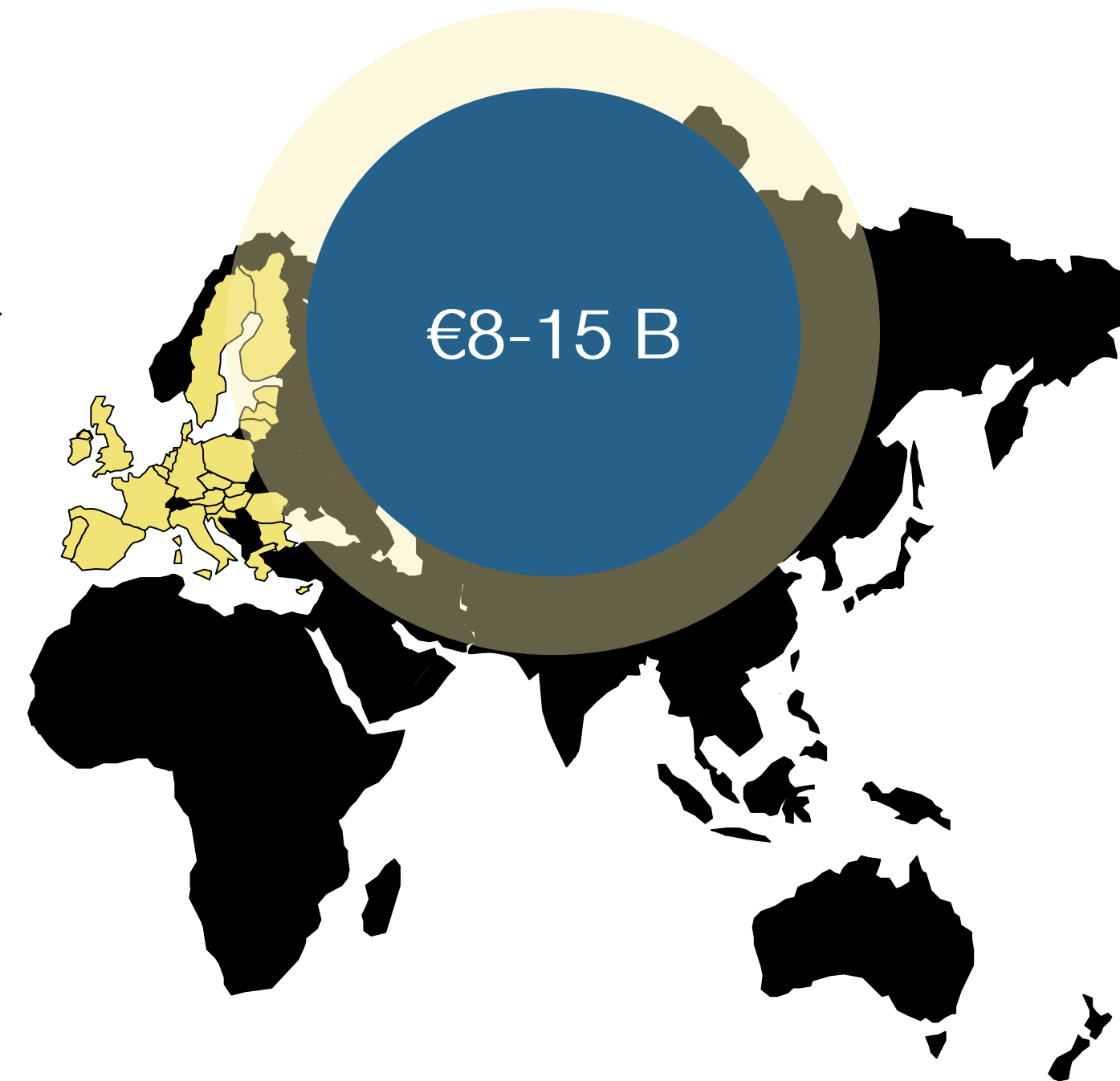
Serviceable Addressable
Market size: €0.9 B



Market segment conceived from
COVID-19 in the EU and the UK

Serviceable Addressable Market size:

- €8 B for Delox System
- €15 B for Delox Personal



FIELD TESTS



At the Laboratory of Bromatology and Biological Defence of the Portuguese Army



June 1 and November 6, 2019



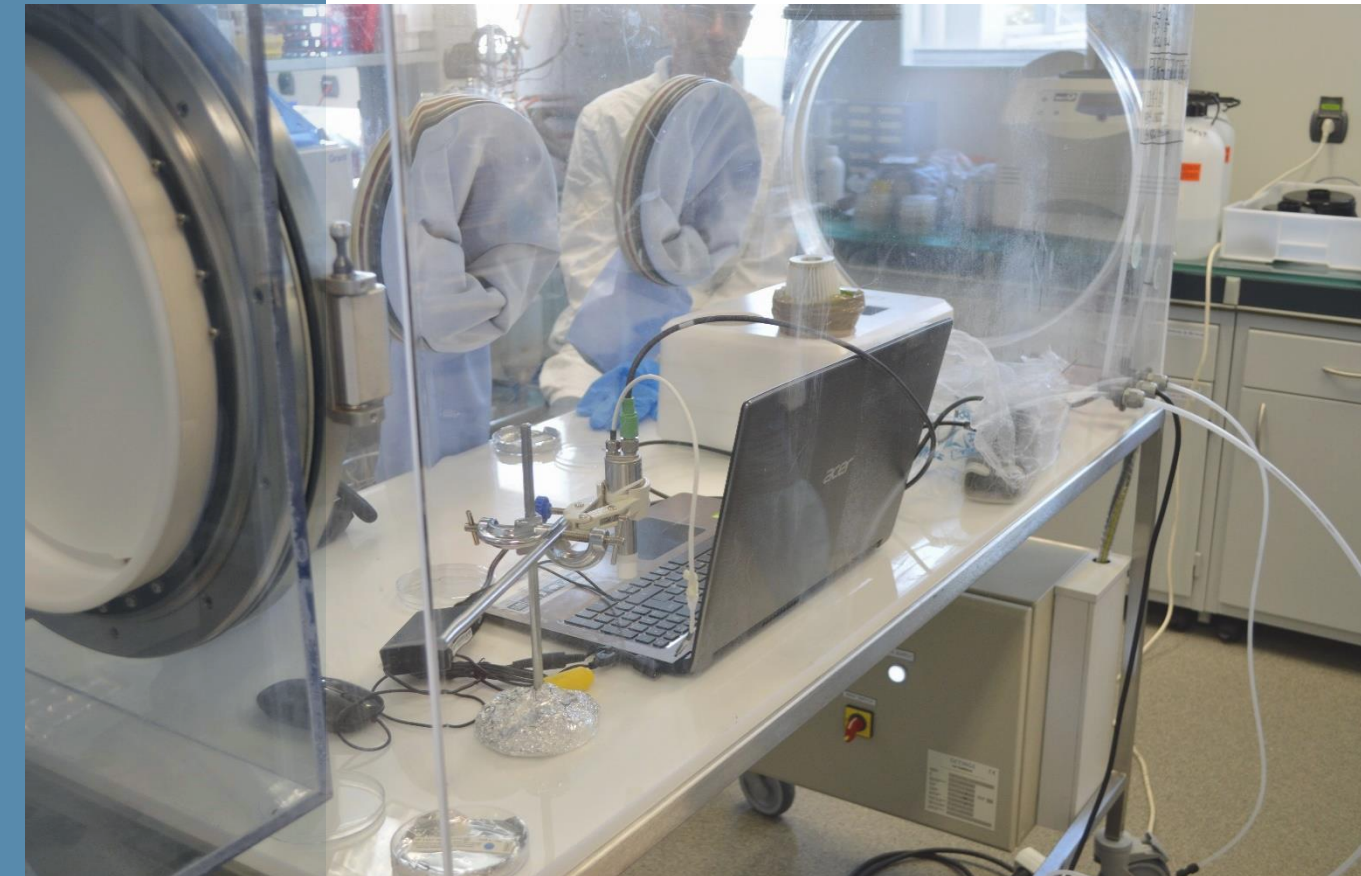
At Decontamination Specialty Equipment, Erie, USA



January 28 and 29, 2020

“The Delox device will meet a variety of market requirements.”

Michael Geanous
President of Decontamination Specialty
Equipment



DIRECT COMPETITORS



VHP technology



Nebulization technology



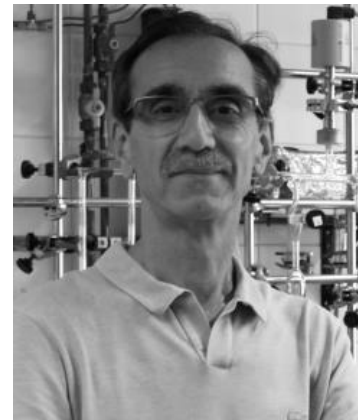
TEAM AND ADVISORY BOARD



FADHIL MUSA, MSc
Co-founder | CEO



FERNANDO ANTUNES,
PhD
Co-founder | CTO



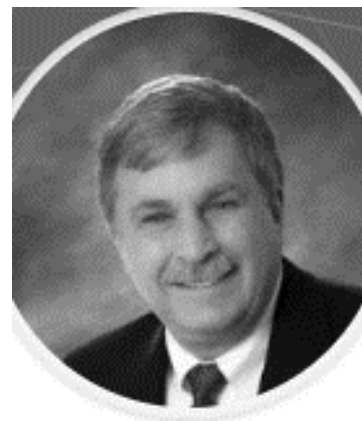
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MICHAEL GEANOUS
President of
Decontamination Specialty
Equipment Inc.



THERESA O'KEEFE, PhD
Managing Partner at
Silladar Consulting

ROADMAP

**June 2018 – company
incorporation**

**Seed-extension Round
€1 M**

January 2020

January 2021

PRODUCT DEVELOPMENT

Product development : final product for lab equipment & prototype for room decontamination

Regulatory body approval – ECHA & EPA

FIELD TESTS & PILOTS

**TechSource
Engineering
(Erie, USA)**

Call to Orbit – technology validation for Space 4.0

**Response to COVID-2019
- hospital's protective masks
decontamination**

**Pilots with US
compounding pharmacies**

**Portuguese Army – military
prototype development**

DRYVHP & CONSUMABLES

Small scale-up of the dryVHP production to sustain field tests & pilots

Shelf life improvement (dryVHP stability)

FINANCIAL FORECAST SUMMARY



P&L (values in k€)	2018	2019	2020	2021	2022	2023	2024
Revenues	-	-	543.71	1,309.35	2,952.14	5,543.31	543.71
Cost of Good Sold	-	-	-	57.1	135.7	303.3	568.4
Gross Margin (%)	-	-	-	0.89	0.90	0.90	0.90
Operating expenses (including Selling, General and Administrative expenses; R&D expenses)	-49.16	-149.57	-515.36	-1,009.89	-1,225.18	-1,813.36	-2,754.07
EBITDA	-49.16	-149.57	-515.36	-523.27	-51.50	835.47	2,220.88
Cashflows from operating/financing activities	53.48	10.14	50.89	125.60	388.08	938.21	2,243.29

FUNDING REQUEST

SEED-EXTENSION ROUND

Currently seeking €1 M for 18 months



MILESTONES

Technological

- Final product
 - For laboratory equipment & PPE (Delox System)
 - For PPE (Delox Personal)
- Small scale-up of the dryVHP production
- Small production of Delox devices

Business

- Pilot programs executed in US compounding pharmacies
- ECHA/EPA regulatory approval for biocide
- EU market entrance in 2021
- US market entrance in 2021

AWARDS AND GRANTS

2020



**REGIONAL FINALIST FOR
SOUTH EUROPE AS THE
BEST SPACE STARTUP**



**SEAL OF EXCELLENCE AS
A HIGH-QUALITY PROJECT
WITH RELEVANCE TO COVID-19**



**WINNER OF BORN FROM
KNOWLEDGE PRIZE**

2019



**SME INSTRUMENTS
PHASE I GRANTEE**



**PORTUGAL 2020
PROGRAM GRANTEE**



**HEADSTART GRANTEE
3RD PLACE AT THE FINAL
PITCH COMPETITION**



**2ND COMPANY TO BE
ACCEPTED IN THE CALL
TO ORBIT PROJECT**

2017 &
2018



BEST FINAL PITCH



**NOVO MUNDO
PRIZE**



**1ST PLACE AT
SCIENCE IN 2 BUSINESS**



**2ND PLACE AT SPACE
EXPLORATION MASTERS**



GRANTEE AND INCUBATEE



An automatic bio-decontamination system for everyone, everywhere



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