



Fresh and pure food from sustainable
highly efficient aquaponics technologies

by

aquaponics Iberia



Recognized as an **R&D** entity by **ANI**, in the technical-scientific domains:

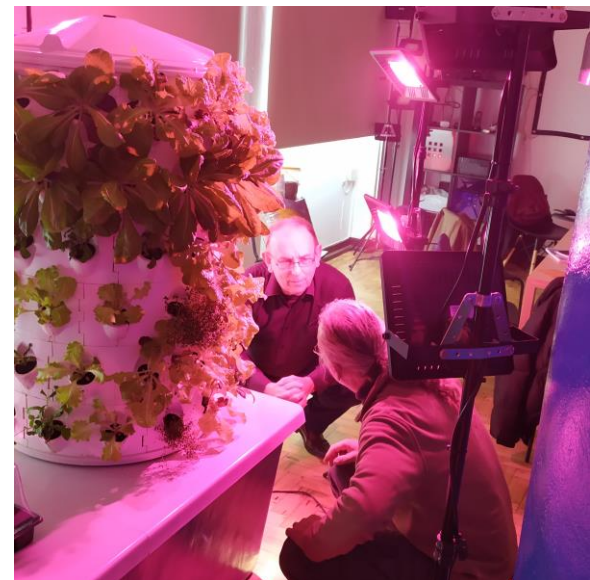
Agri-food – Healthy and sustainable food

Water and Environment – Waste reduction, management, treatment and recovery

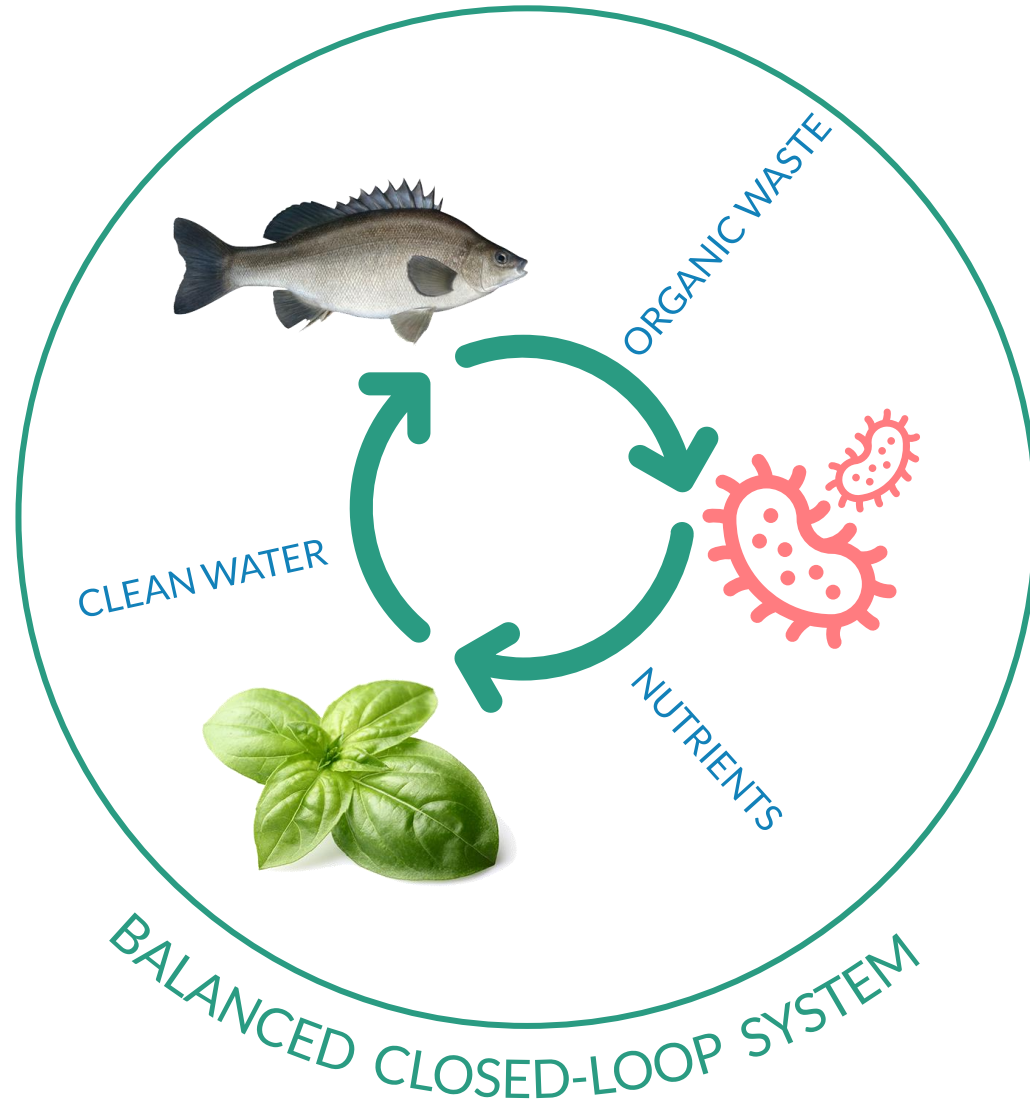
Agri-food – Waste treatment and reuse



INTERNATIONAL BACKGROUND



HOW DOES AQUAPONICS WORK



- SEAFOOD AND ORGANIC VEGETABLES
- NO WATER WASTE
- NO WASTEWATER
- NO PESTICIDES
- NO SYNTHETIC FERTILIZERS
- NO FERTILE SOIL
- NO NEGATIVE IMPACT ON ECOSYSTEMS AND BIODIVERSITY
- NO TRANSPORTATION
- NO GHG EMISSIONS
- FRESHNESS AND PROXIMITY

WHY AQUAPONICS

✘ Demand for fresh (sea)food & greens

Food retailers seek local solutions to avoid supply chain shortages

✘ Water scarcity

The food system is high water-demanding

✘ Aquaculture costs & impact

Aquaculture is investment and infrastructure demanding and not environmentally friendly

✘ Impacts of food transportation

Nonlocal and centralized farming leads to food transportation, which generates GHG emissions and loss of freshness



WHY AQUAPONICS (cont.)

- ✘ **Rising consumer awareness**
of environmental and food safety concerns
- ✘ **Taking advantage of seasonality**
price fluctuations while being able to grow throughout the year
- ✘ **Exemption from emerging EU**
environmental legal restrictions on conventional farming
- ✘ **Being climate-adaptive**
Unpredictable weather has considerable negative impact on the food supply



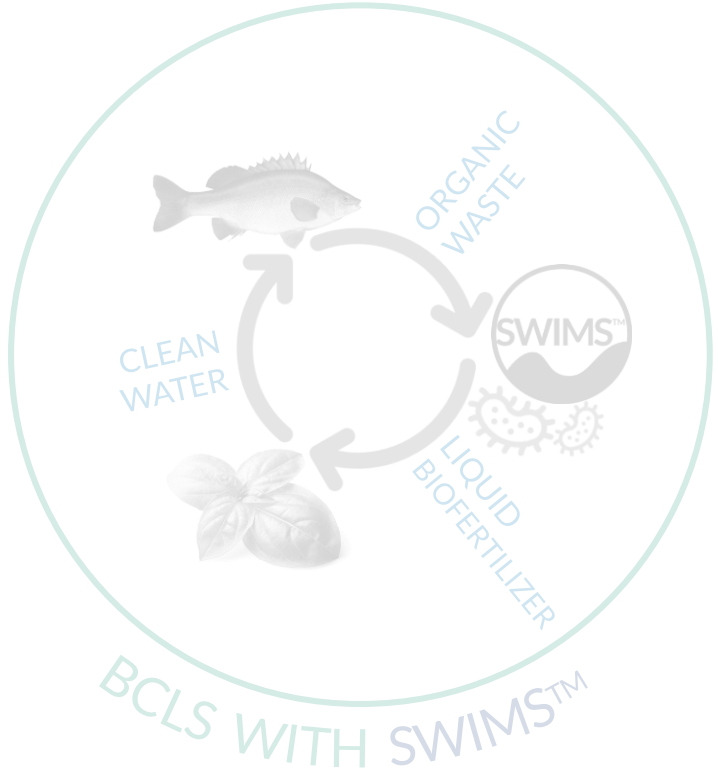
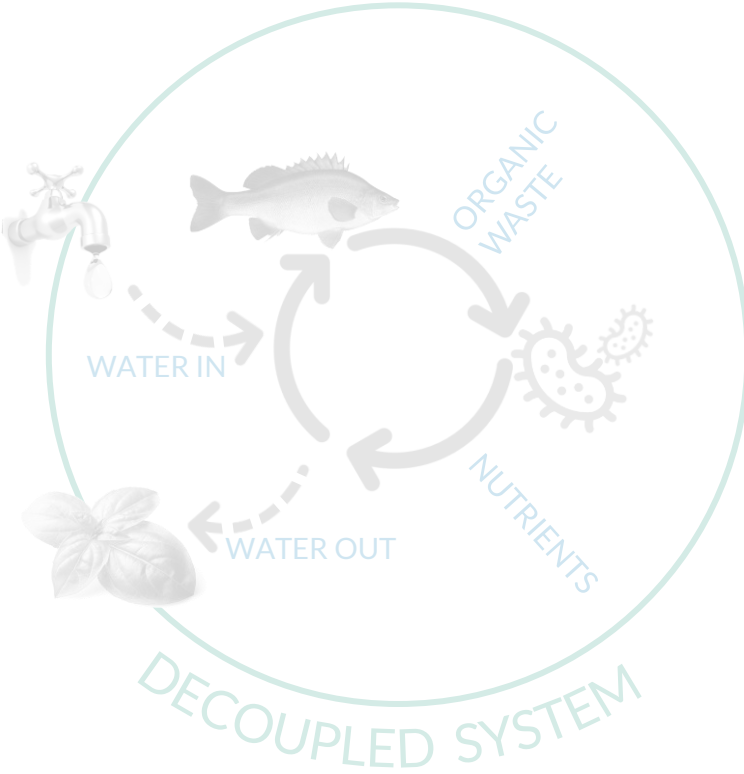
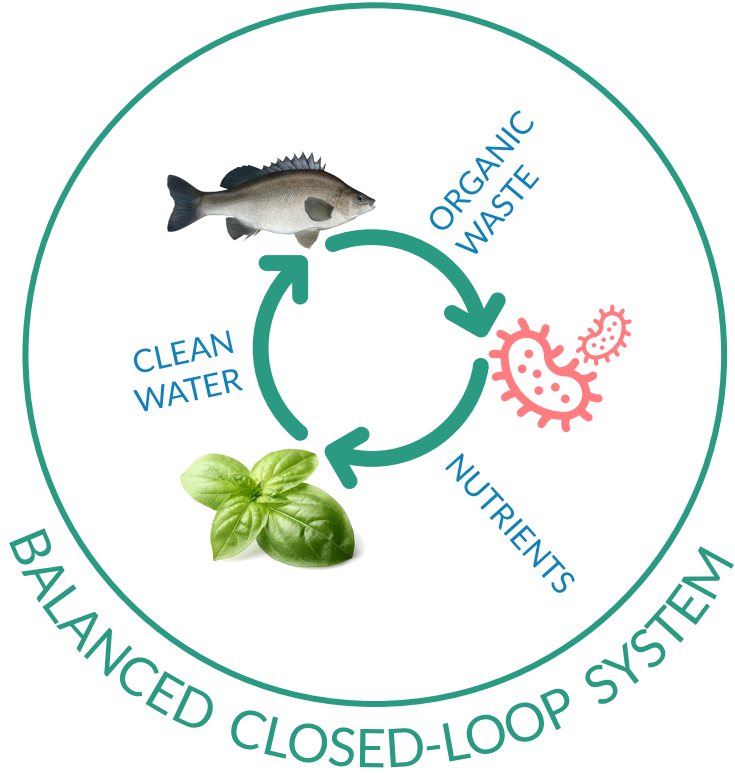
MARKET OPPORTUNITY

Global Aquaponics Market to hit \$1billion by 2031

✘ In 2022 global aquaponics market size was
\$493million

✘ Compound annual growth rate (CAGR) of
9.8% forecast period of 2022-2031

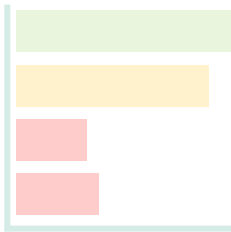
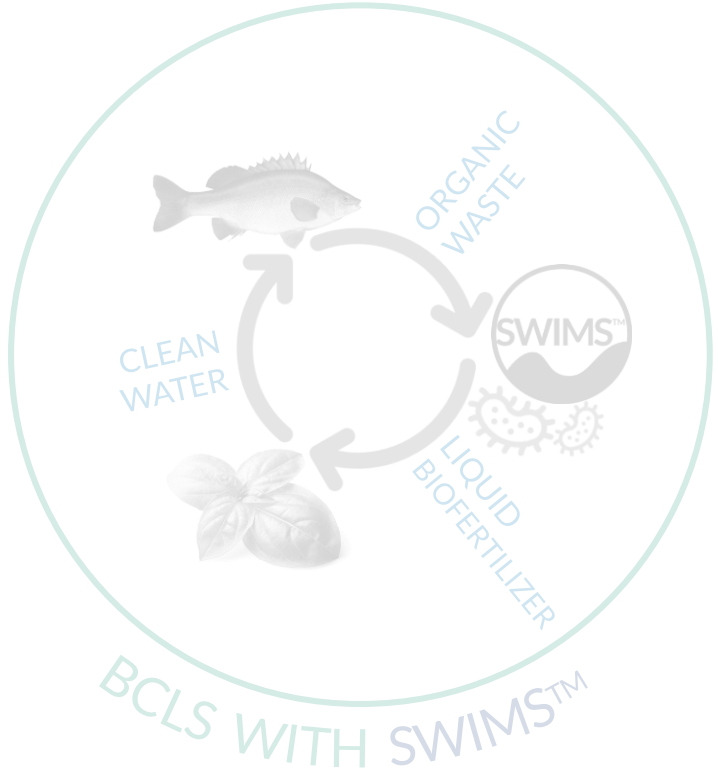
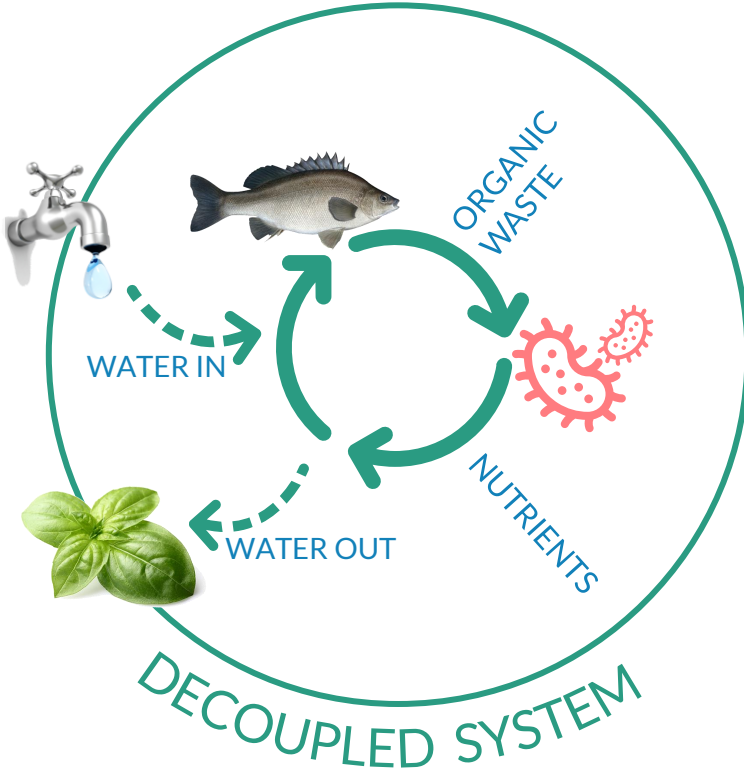
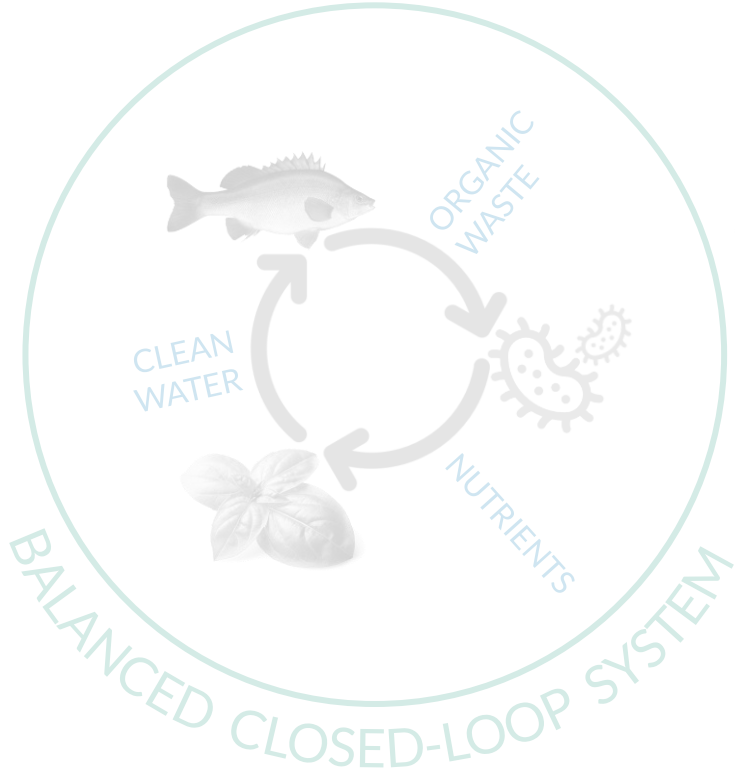
CLASSIC AQUAPONICS



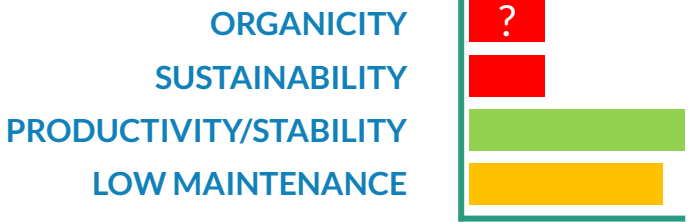
ORGANICITY
SUSTAINABILITY
PRODUCTIVITY/STABILITY
LOW MAINTENANCE



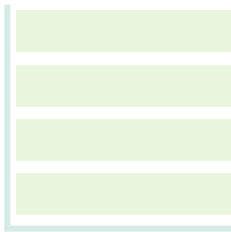
STATE-OF-THE-ART AQUAPONICS



CLASSIC APPROACH



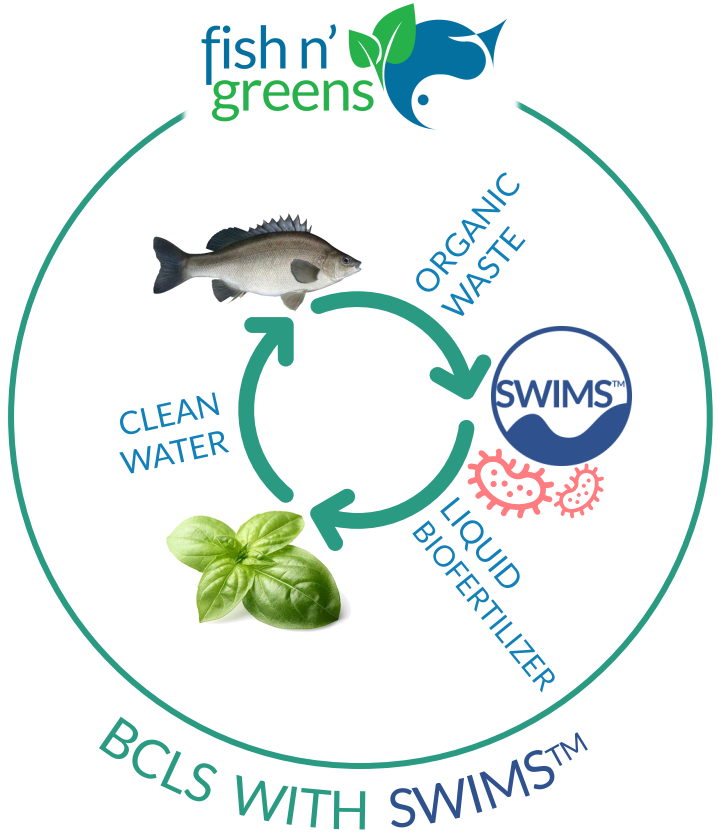
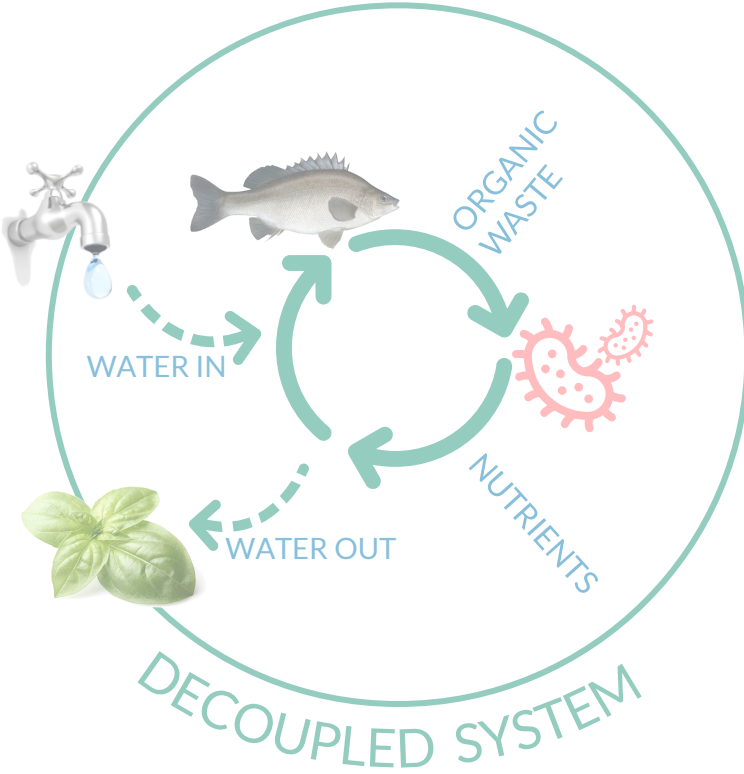
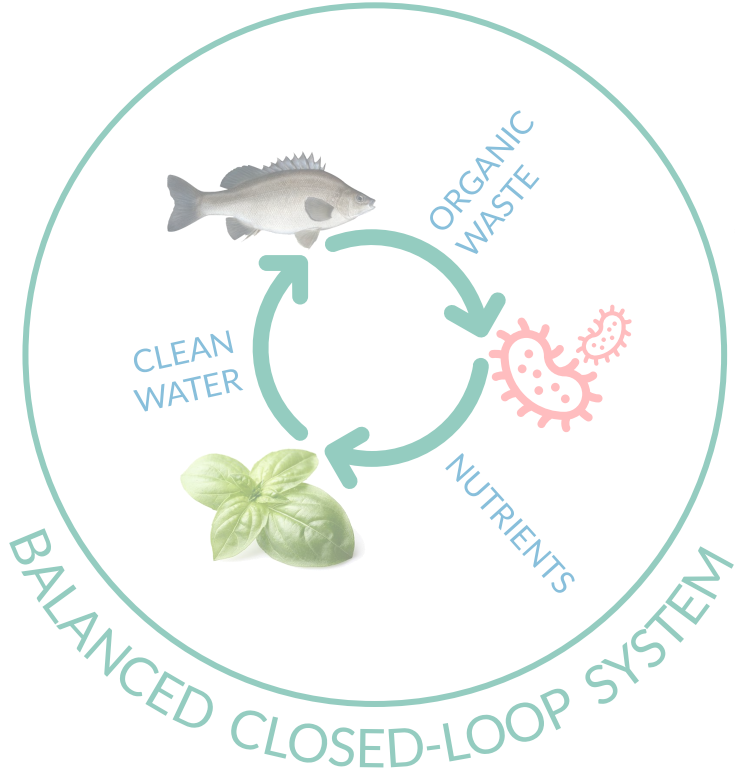
NOWADAYS COMMERCIAL APPROACH



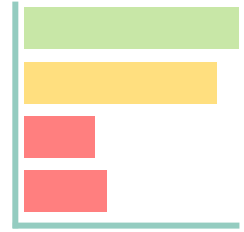
OUR TECHNOLOGY APPROACH



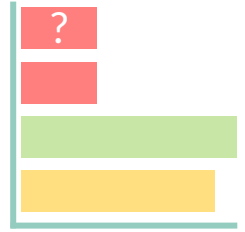
OUR TECHNOLOGY



ORGANICITY
SUSTAINABILITY
PRODUCTIVITY/STABILITY
LOW MAINTENANCE



CLASSIC APPROACH



NOWADAYS COMMERCIAL APPROACH

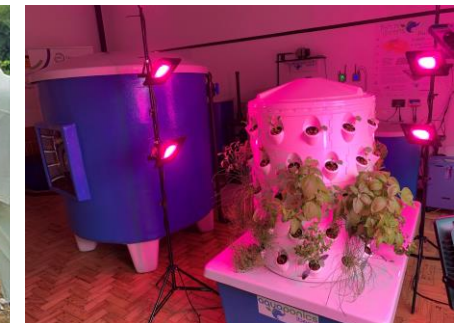
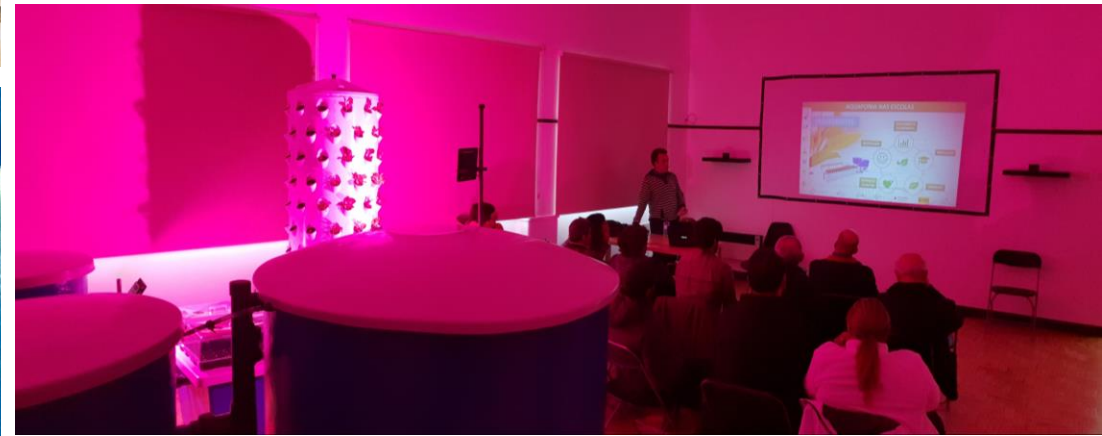
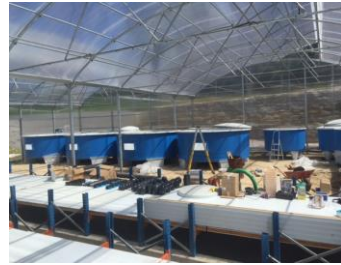
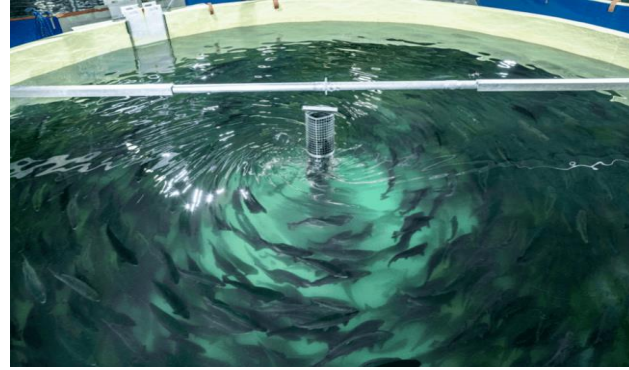


OUR TECHNOLOGY APPROACH



KNOW HOW

RAS, Aquaponics and Water treatment



BUSINESS MODEL

Revenue sources

Fresh, local, tasty,
healthy and sustainable
fish and
vegetables!



100
tons/year



480
tons/year



BUSINESS MODEL

Revenue sources



and by-products (fish waste, organic compost, organic liquid fertilizer, carbon credits)

BUSINESS MODEL



B2B target customers

SECURED

- Municipality schools canteens
- Food Retailers
- Restaurants and hotels
- Local workplace offices
- Other industries



BUSINESS MODEL

B2C target customers

- Online consumers
- Weekly Farmers markets
- *Fish n' Greens* urban fresh food stores



END CONSUMER TRENDS



- 1 Healthy
- 2 Sustainable
- 3 Local

ENVIRONMENT AND IMPACT



No waste residues



No water waste



Environmental education and awareness



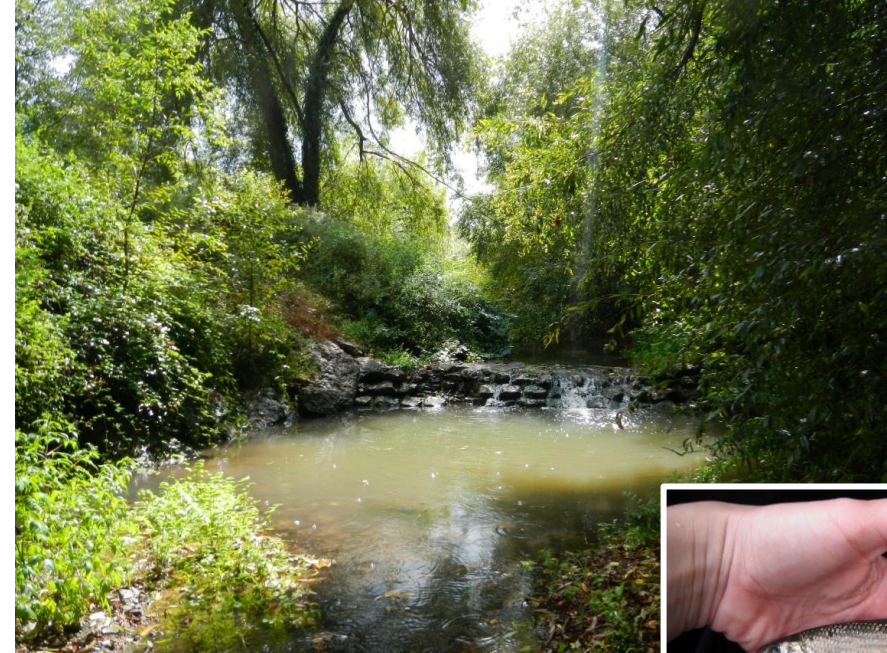
Carbon neutrality



No fishmeal input



Lean & agile scalability and flexibility



OUR CONTRIBUTION TO THE SDGs

2 ZERO HUNGER



4 QUALITY EDUCATION



3 GOOD HEALTH AND WELL-BEING



13 CLIMATE ACTION



5 GENDER EQUALITY



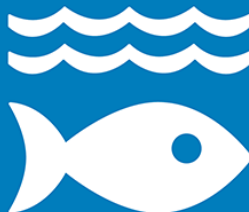
6 CLEAN WATER AND SANITATION



8 DECENT WORK AND ECONOMIC GROWTH



14 LIFE BELOW WATER



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



COMPETITION

Aquaponics small farmers and startups

Tilamur (Spain)

Les Nouvelles Fermes (France)

ECF Farmsystems (Germany)

Seafood importers

Several companies importing cod, Atlantic salmon, Atlantic seabass, gilthead seabream...

General hydroponics

Hydroponics farmers in Portugal and Spain

QUALITATIVE COMPARISON BETWEEN AQUAPONICS TECHNOLOGIES

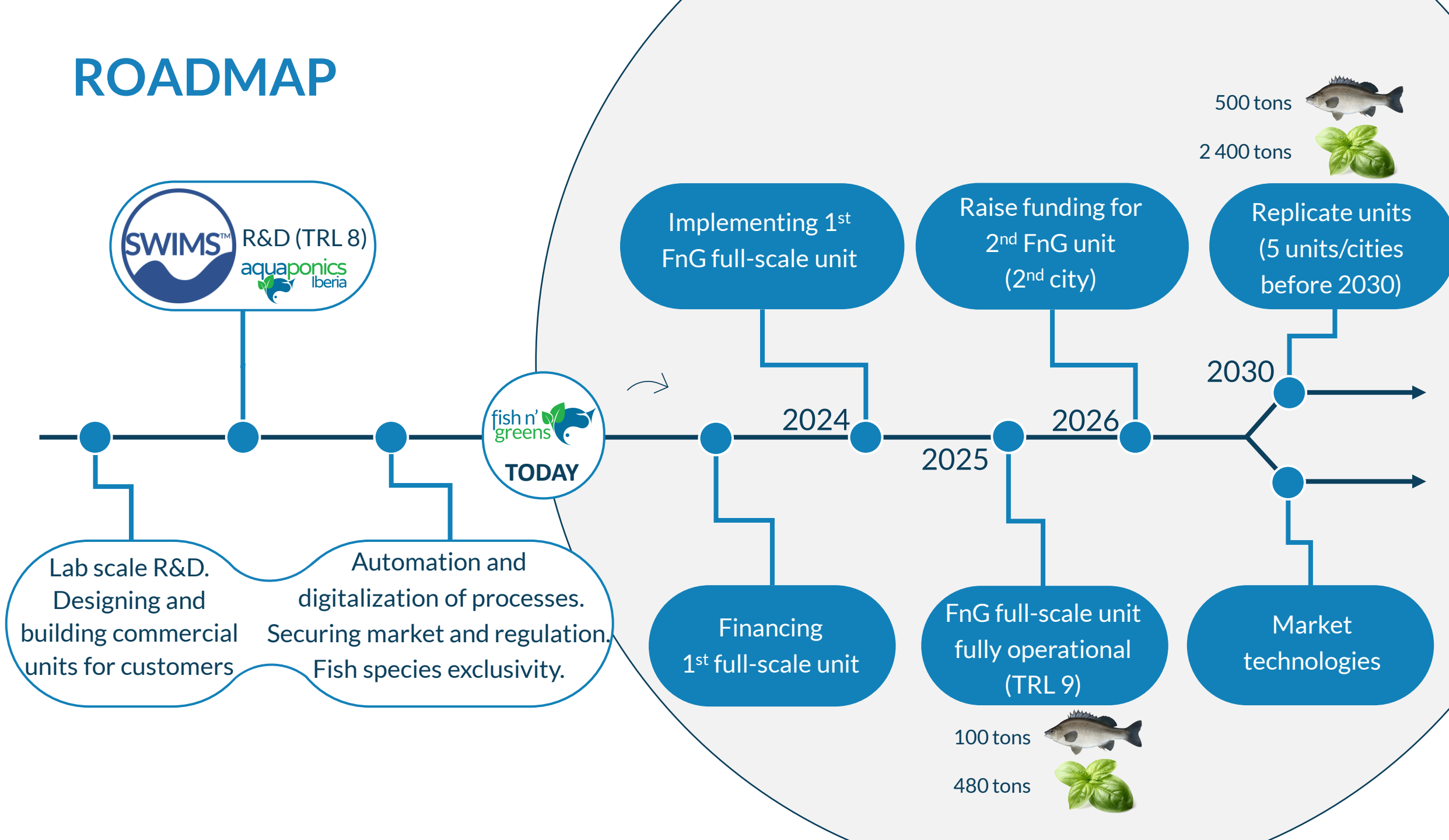
Features	COMPETITORS		SWIMS™
	Standard balanced closed-loop aquaponics system	Decoupled aquaponics system	
Consumer trust in organicity (symbiotic ecosystem)	✓	✗	✓
Free of synthetic fertilizers (< input costs)	✓	✗	✓
Flexibility to increase/reduce plant production capacity	✗	✓	✓
Stability and control of nutrient concentration levels	✗	✓	✓
Long term plant high productivity and stability	✗	✓	✓
Long term dissolved oxygen availability and food safety	✗	*	✓
Low maintenance (cleaning) requirements	✗	✓	✓ ✓
Low water waste/consumption	✓	✗	✓ ✓
Decarbonizing effect in the food industry **	✓	✓	✓ ✓

* Depending on the option to use controlled oxygen input

** Rich CO₂ air from the fish room is pumped to the greenhouse and assimilated by plants; local production and consumption (reduced transportation)



ROADMAP



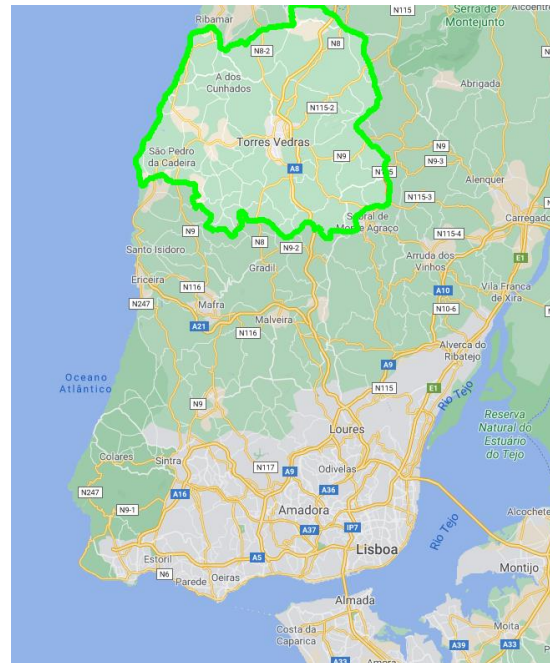
WHERE



Torres Vedras
Câmara Municipal

Torres Vedras

Location of the first production unit. A region of more than 2 million consumers (50 km radius). Less than 30 minutes from Lisbon.



Future expansion to other municipalities in Portugal and throughout Europe.



INVESTMENT (1st FULL COMMERCIAL SCALE UNIT)

Building (2 500 m²)
&
Greenhouse (9 000 m²)

- + project
- + equipment, materials
- + technology
- + implementation and tests
- + team expansion and training
- + 15 month OPEX

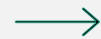
RAISING
5.8 million €



INVESTMENT IN SUSTAINABLE AQUACULTURE



Size



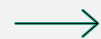
1st full scale unit

11 500 m²

Scale-up

5 x 11 500 m²

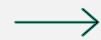
Carbon sequestration



740 tons year⁻¹

3 700 tons year⁻¹

Less overfishing (fish catches)



-420 tons year⁻¹

-2,100 tons year⁻¹

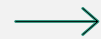
Water savings



32 500 m³ year⁻¹

162 500 m³ year⁻¹

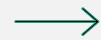
Educational tours (# students)



2 640 year⁻¹

13 200 year⁻¹

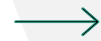
Organic waste/wastewater



0

0

Synthetic fertilizers input



0

0

Inorganic pesticides input



0

0

Medication input

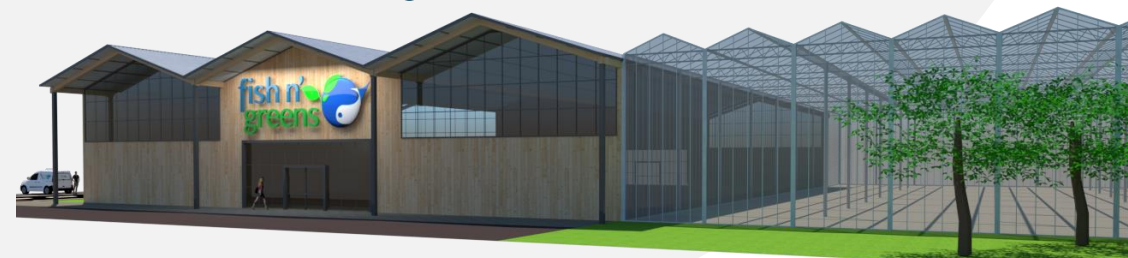


0

0



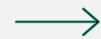
ENVIRONMENTAL/SOCIAL IMPACT KEY NUMBERS



INVESTMENT IN SUSTAINABLE AQUACULTURE



Size



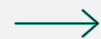
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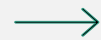
Fresh finfish



100 tons year⁻¹

500 tons year⁻¹

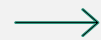
Organic fresh greens



480 tons year⁻¹

2 400 tons year⁻¹

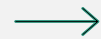
Financing demand



5.8 M€

27 M€

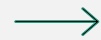
Revenues per year



6 M€

31 M€

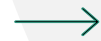
EBITDA-To-Sales Ratio



61%

64%

ROI



44%

47%

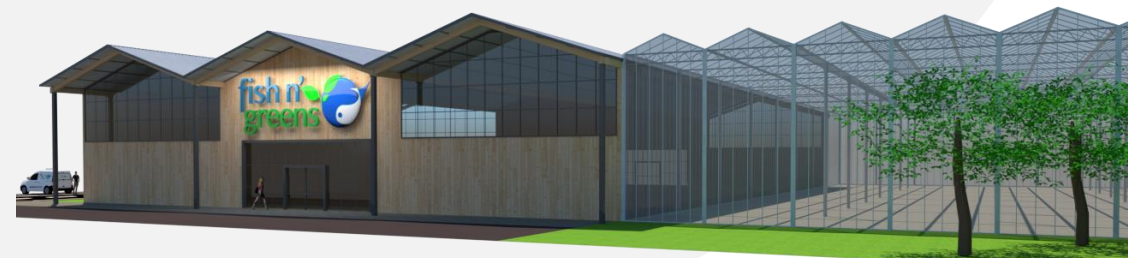
Payback period



3 years (2027)

3 years

ECONOMIC/FINANCIAL KEY NUMBERS



OUR CORE TEAM



Participants in Climate-KIC 2017,
EIT Food FAN Bilbao 2019,
BlueInvest Readiness Assistance 2020,
EIT Innwise Scale Water Scarcity 2022,
Blue Bio Value Edition 2022,
Ignition Programme 2023

JOÃO COTTER



CEO

+20 years of experience in aquaculture & aquaponics

ORLANDO RODRIGUEZ



COO

+40 years of experience in aquaculture & aquaponics

PATRICIA COTTER



CCO

+10 years of experience in sales, food safety & processing

PAULO TORRES



CSO

+17 years of experience in marine biology & aquatic R&D



OUR JOINT VISION



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Partners and supporters

