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Demonstration of Innovative Functional food production systems based on more sustainable value chains of marine and freshwater raw materials for conscientious EU consumers

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A large, stylized graphic on the left side of the slide, featuring a green leaf-like shape at the top with a blue water droplet in the center, and several curved blue lines below it, resembling waves or leaves.

## ***NOVAFOODIES PROJECT***

**Augusto Márquez Maqueda  
IDENER R&D**

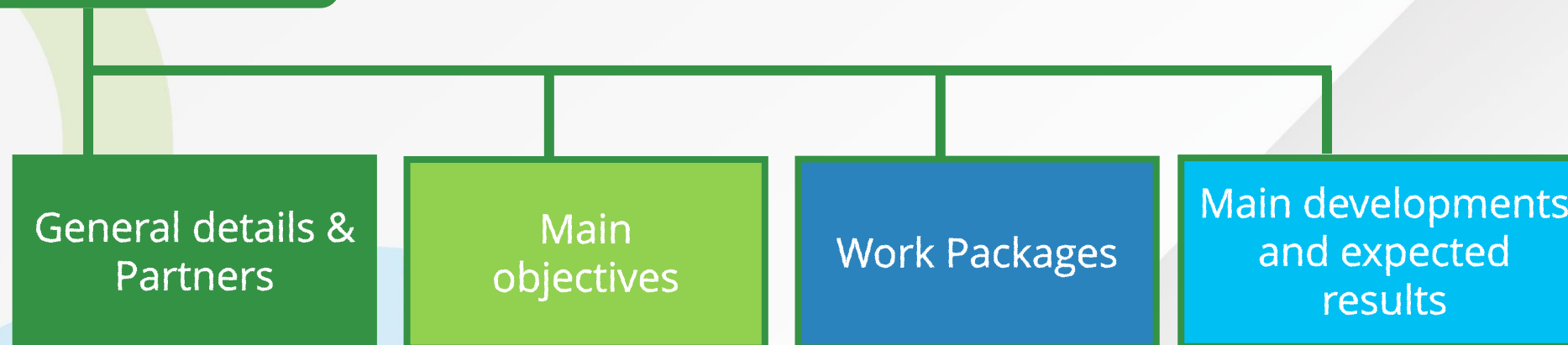
**21<sup>st</sup> August 2024**



*This project has received funding from the European Union under Grant Agreement N° 101084180.*



## NOVAFOODIES





NOVAFOODIES

General details & Partners

FUNDING PROGRAMME	Horizon Europe
GRANTING AUTHORITY	European Research Executive Agency
START-END DATE	1 May 2023 – 30 Apr 2026
TOTAL BUDGET	6,587,345.00 €
EU CONTRIBUTION	5,999,988.63 €
N° PARTNERS	28
PROJECT COORDINATOR	IDENER R&D



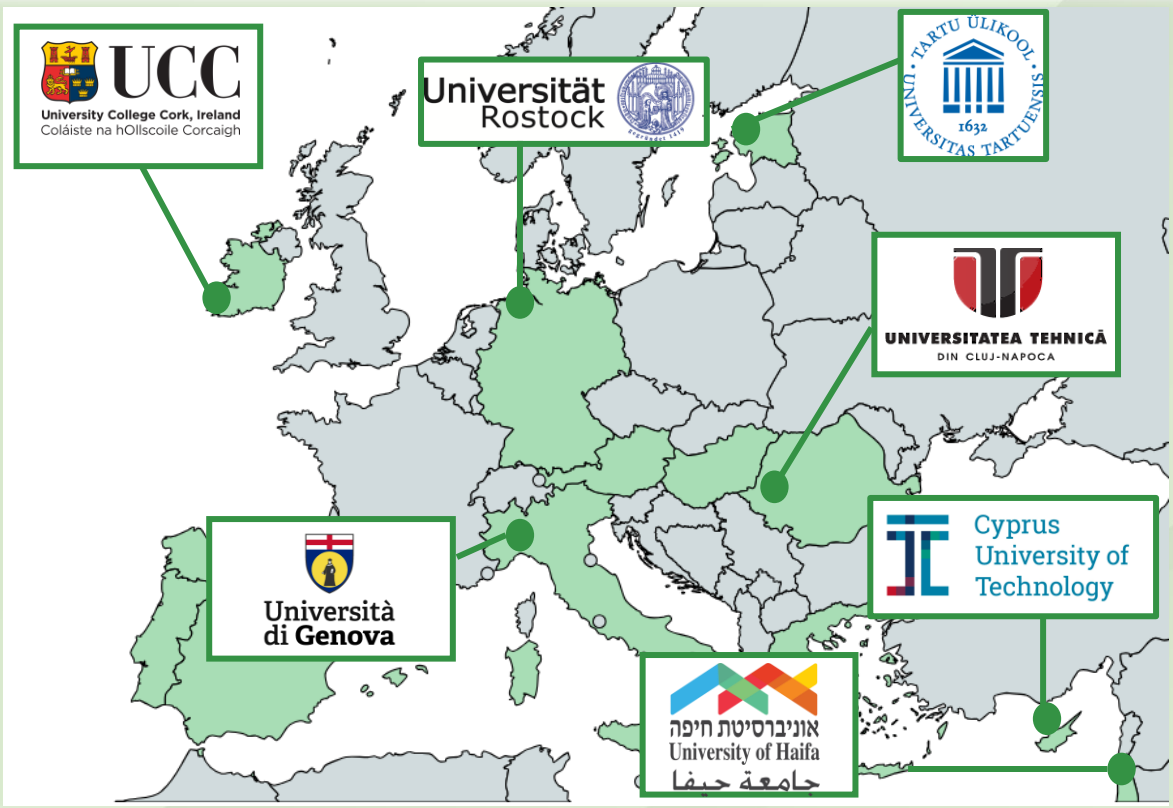
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General details & Partners

7 Universities



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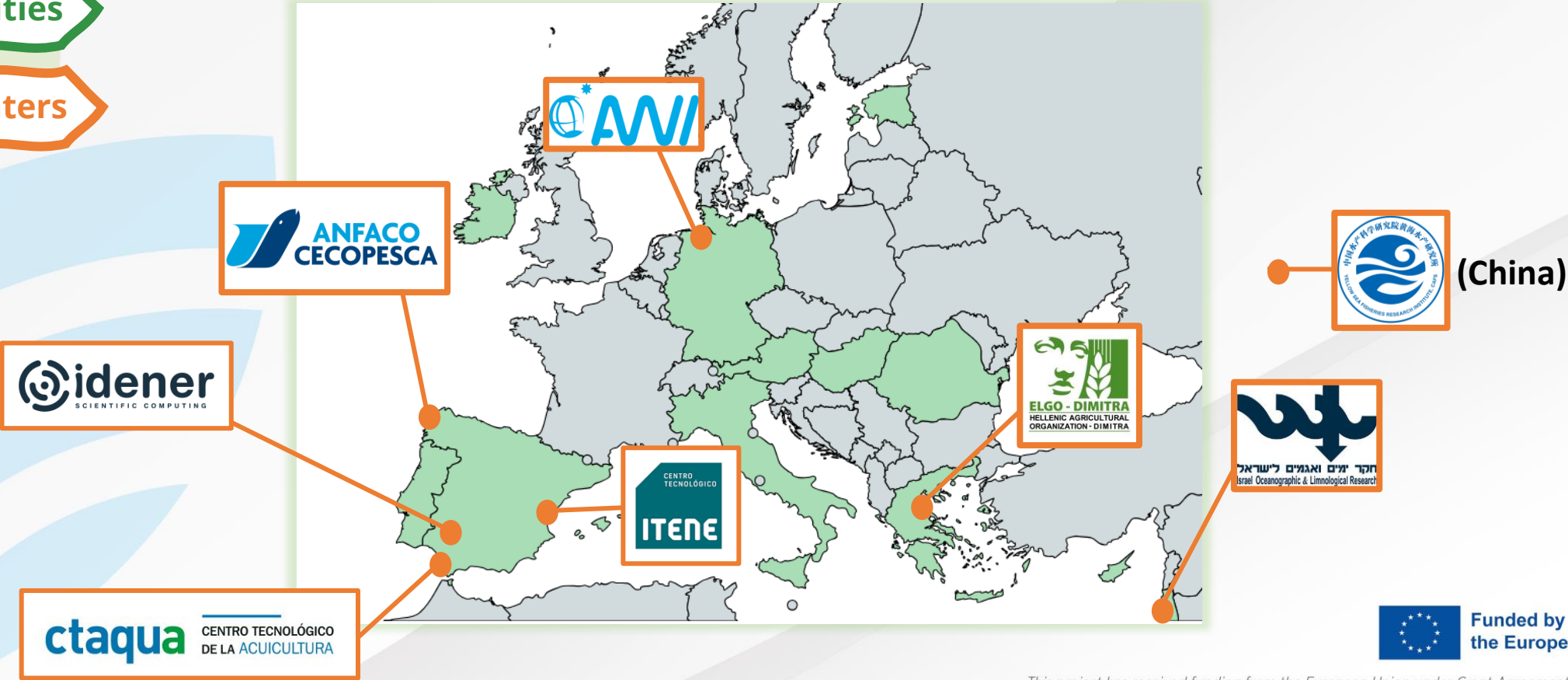


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General details & Partners

7 Universities

8 RTD centers







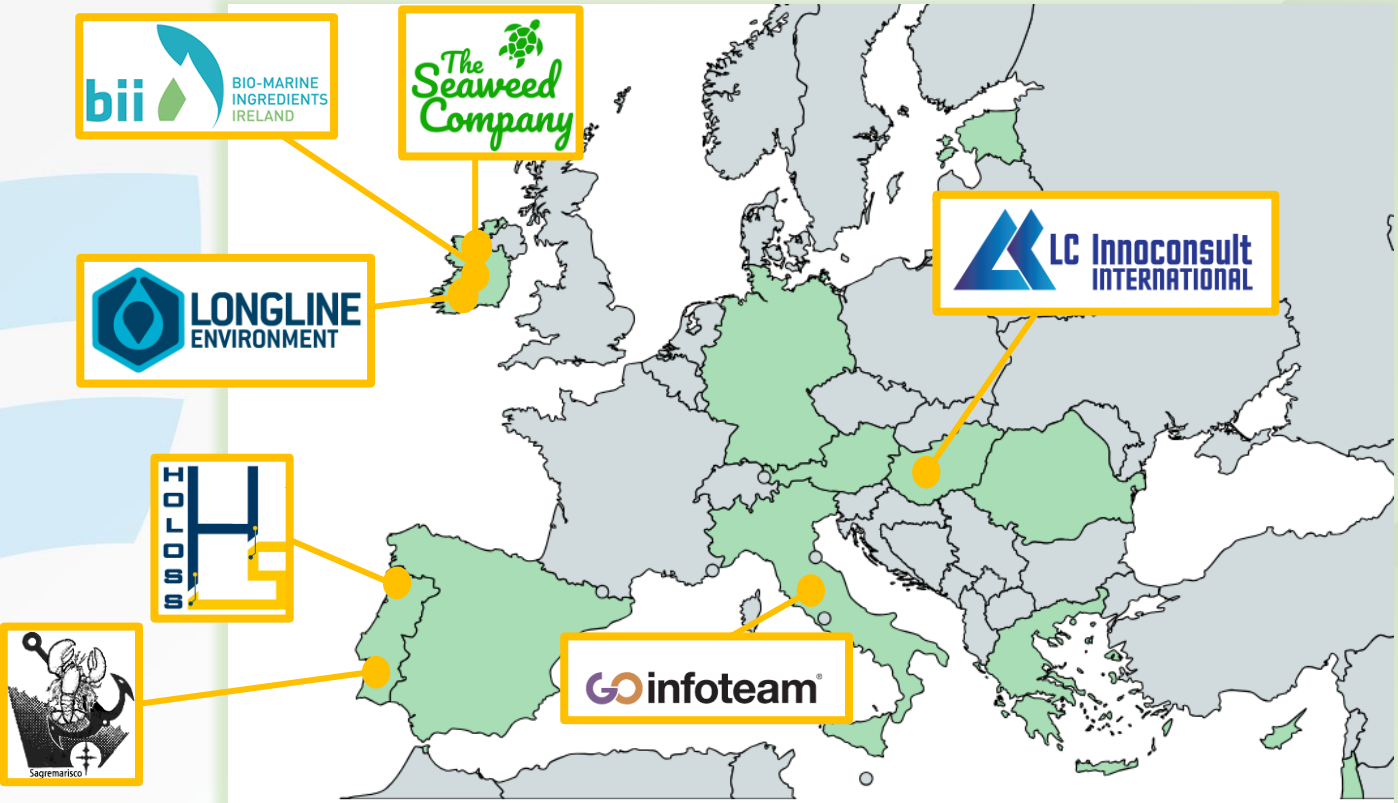
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General details & Partners

7 Universities

8 RTD centers

7 SMEs



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NOVAFOODIES

General details & Partners

7 Universities

8 RTD centers

7 SMEs

2 Large  
companies



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8 RTD centers

7 SMEs

2 Large  
companies

3  
Associations



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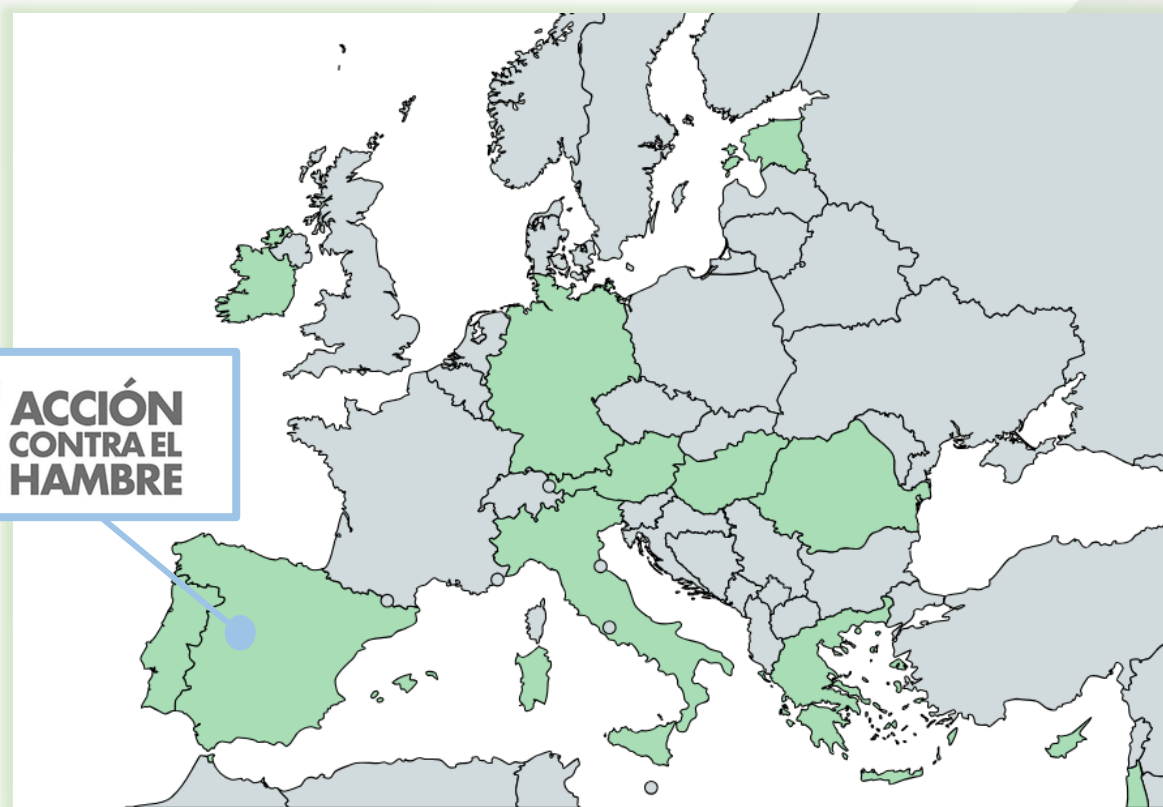
8 RTD centers

7 SMEs

2 Large  
companies

3  
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1 NGO



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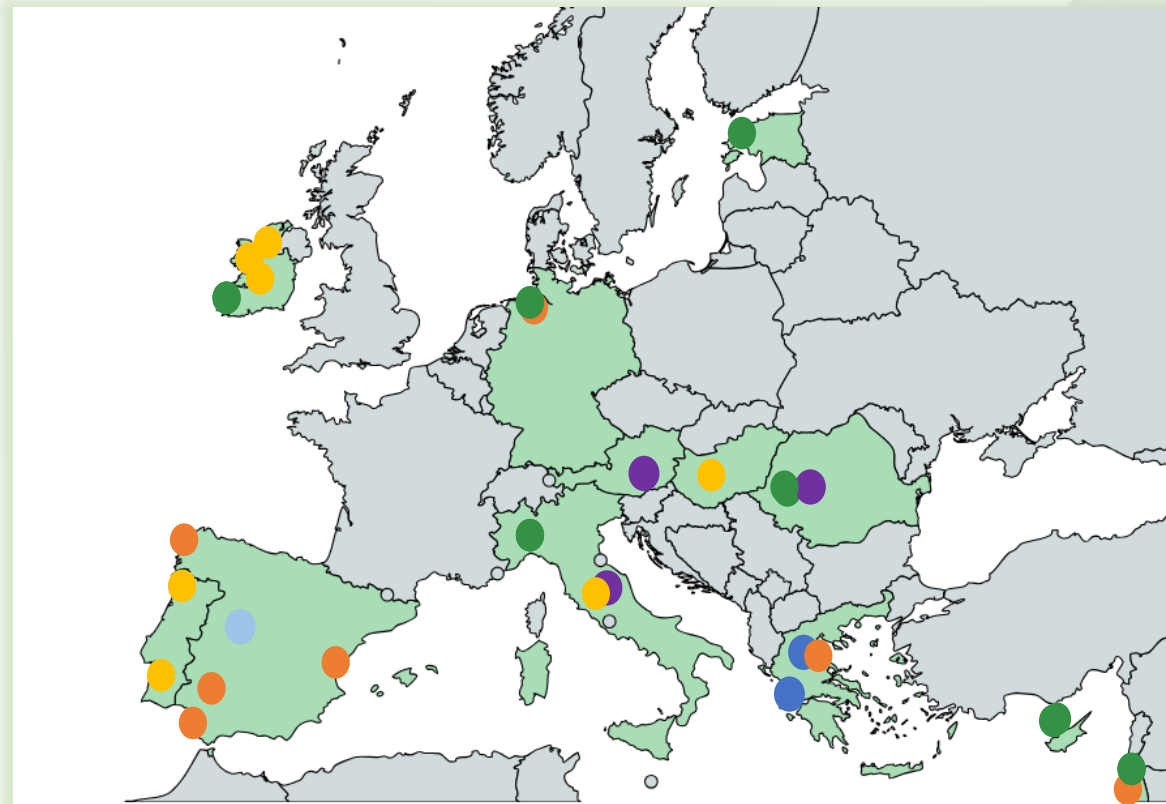
8 RTD centers

7 SMEs

2 Large  
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3  
Associations

1 NGO



28 partners from  
13 countries



#### Demonstrating

the sustainable production of macro and microalgae and other fish species, as a basis for novel functional food and feed production. Case studies will be performed in Europe, Israel and China, for a greater use of local resources and ecosystem services.



#### Working on

the valorization of wastes and fish biomass for a more circular and sustainable value chain. Innovation will focus on decreasing environmental impact of aquaculture, looking for more environmentally and economically friendly best practices.



#### Identifying

more sustainable processing and biorefinery concepts.



#### Formulating and developing

novel functional aquafeeds and food products for human consumption.



#### Ensuring

novel products entry to the market competitively, with consumers trust and confidence, with high quality and traceability, through transparency, and demonstrating greater value chain sustainability to stakeholders. This goal includes finding digital solutions to minimize loss of biomass and enhance shelf life.



#### Improving

workforce skills and competences, through the elaboration of training handbooks, online courses and workshops.

NOVAFOODIES

Main Objectives

**COVERING THE  
WHOLE VALUE  
CHAIN &  
SUSTAINABILITY**



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NOVAFOODIES

Work Packages



WP1. Optimisation and pilot scale designs of IMTA systems



WP2. Operation and evaluation of IMTA upscaled designs



WP3. Finetuning of added-value eco-production systems and evaluation of pilot scale operation



WP4. Verification of existing and new developments for processing algae and fish and extraction of compounds



WP5. Evaluation of properties, formulation, novel functional products and biosecurity



WP6. IT tools development and monitoring for traceability and enhanced trust in the value chain



WP7. Value chain sustainability, socio-laboral inclusion and standardisation



WP8. Dissemination, Exploitation, Clustering and Engagement



WP9. Project Management



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WP1. Optimisation and pilot scale designs of IMTA systems



WP2. Operation and evaluation of IMTA upscaled designs



WP3. Finetuning of added-value eco-production systems and evaluation of pilot scale operation



Optimised upscaled IMTA designs for 7 cases studies: Modelling, implementation & monitoring, Economics & Environmental, Management Systems



Macroalgae cultivation and harvesting. Source: The Seaweed Company

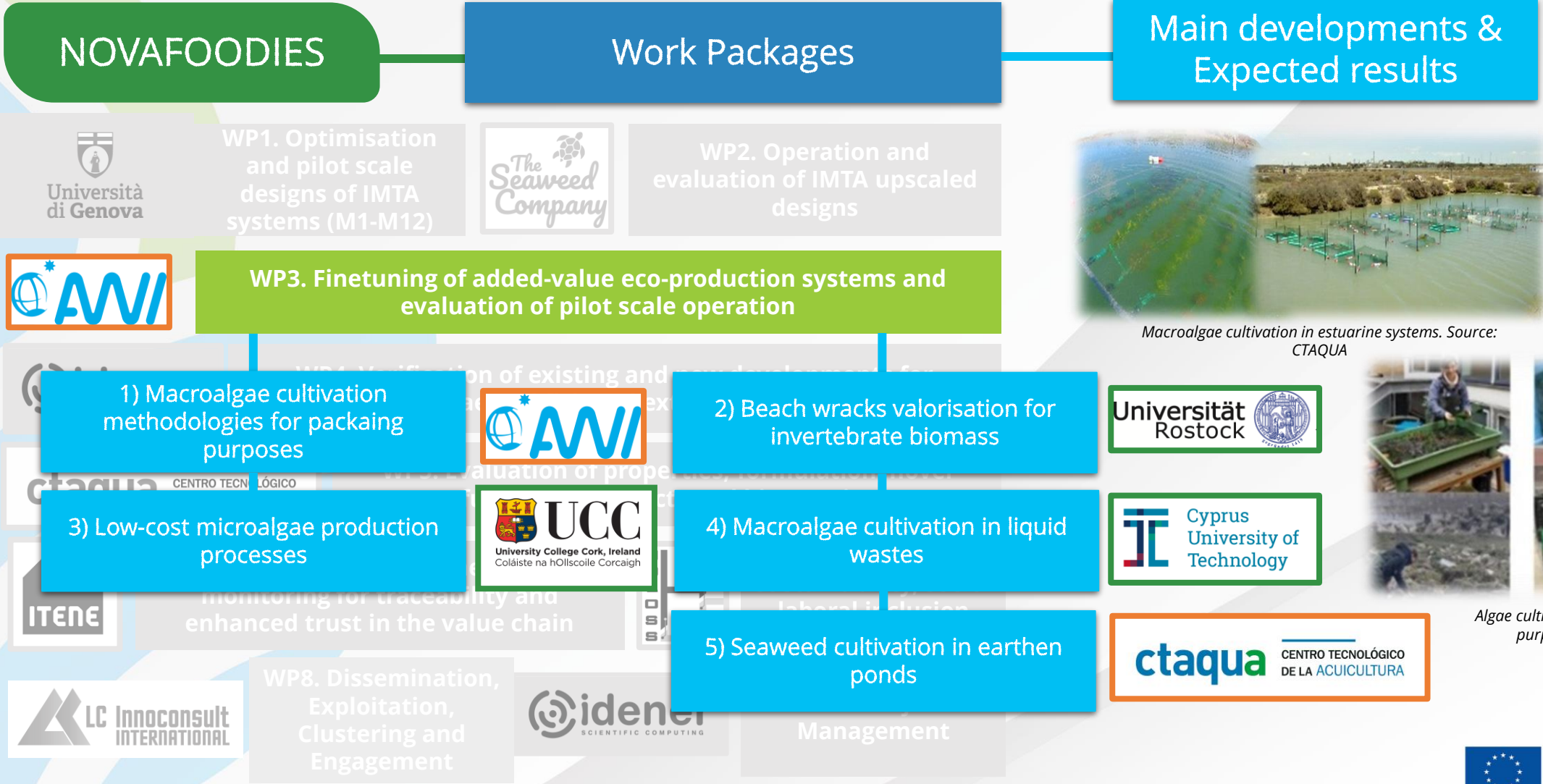
WP7. Value chain sustainability, socio-laboral inclusion  
IMTA in Aquagema (Source: UNIGE)



Main developments & Expected results







Macroalgae cultivation in estuarine systems. Source: CTAQUA



Algae cultivation for eco-packaging purposes (Source: AWI)

## NOVAFOODIES

## Work Packages

## Main developments & Expected results



WP1. Optimisation and pilot scale designs of IMTA systems (M1-M12)



WP2. Operation and evaluation of IMTA upscaled designs



WP3. Finetuning of added-value eco-production systems and evaluation of pilot scale operation



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WP5. Evaluation of properties, formulation, novel functional products and biosecurity



WP6. IT tools development monitoring for traceability enhanced trust in the value



WP8. Dissemination, Exploitation, Clustering and Engagement



Sanlúcar Fishermen Guild and samples of grey weakfish.  
Source: CTAQUA

1) Bacterial-based algae decomposition processes



2) Fish-based protein ingredients



3) Micro and macroalgae microwave-based drying methodologies



4) Eco-packaging algae-based



5) Valorising fisheries discards



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WP6. IT tools development and monitoring for traceability and enhanced trust in the value chain



WP7. Value chain sustainability, socio-laboral inclusion and standardisation



WP8. Dissemination, Exploitation, Clustering and Engagement



WP9. Project Management

1) Assessments of properties, biosecurity



2) Novel aquafeeds



3) Novel foods for human consumption





## NOVAFOODIES

## Work Packages

## Main developments & Expected results



WP1. Optimisation and pilot scale designs of IMTA systems (M1-M12)



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**WP5. Evaluation of properties, formulation, novel functional products and biosecurity**



WP6. IT tools development and monitoring for traceability and enhanced trust in the value chain



WP7. Value chain sustainability, socio-laboral inclusion and standardisation



WP8. Dissemination, Exploitation, Clustering and Engagement



WP9. Project Management



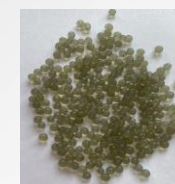
*Spirulina-based Romanian Sarmale (Source: TUCN)*



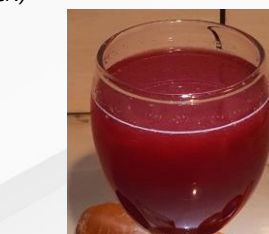
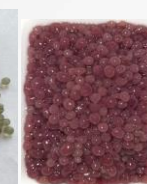
*Pasta enriched with Chlorella (Source: TUCN)*



*Spirulina Pancakes (Source: TUCN)*



*Porphyra powders encapsulated for food subjected to thermal treatment (Source: TUCN)*

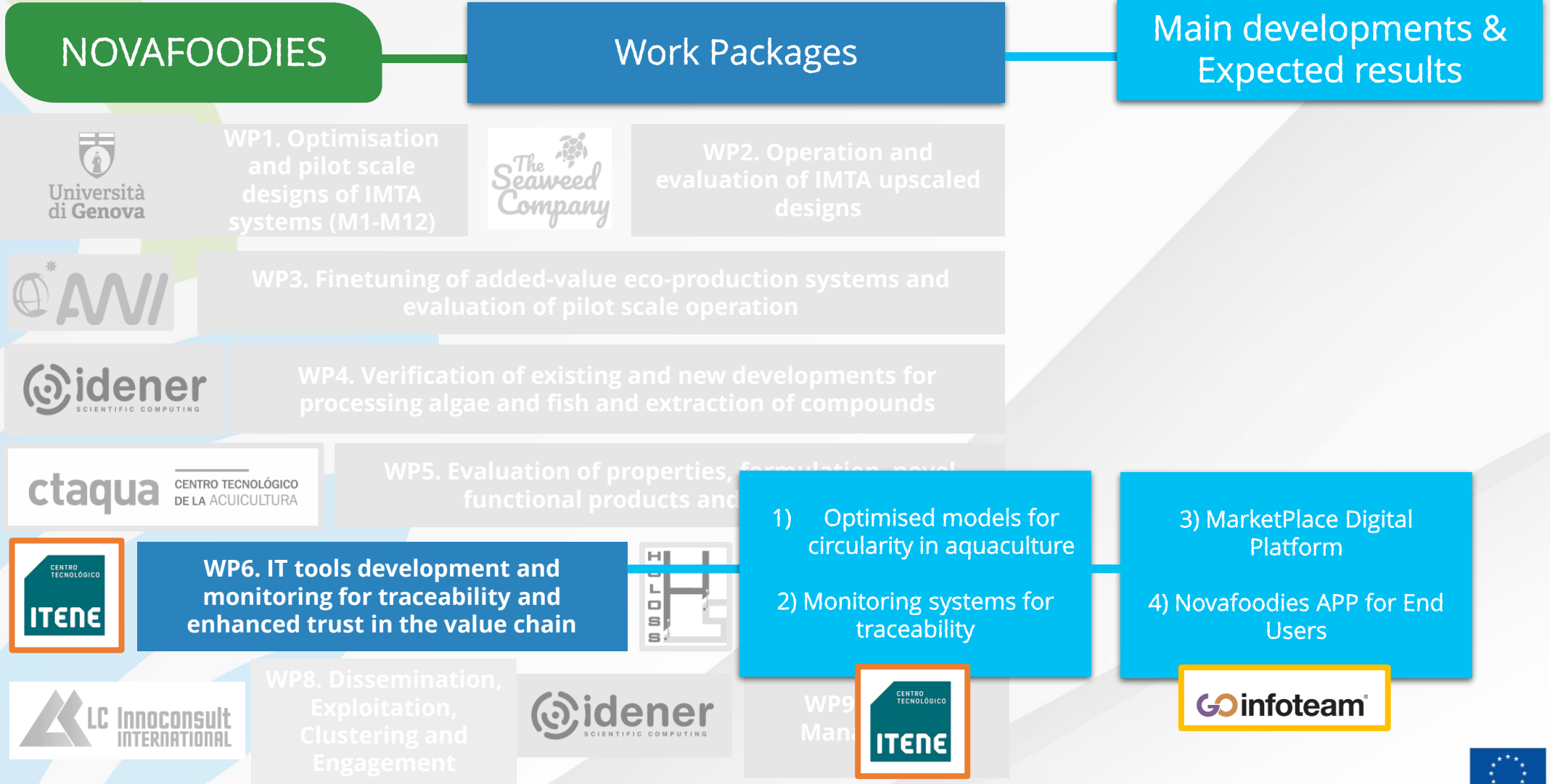


*Red algae (Haematococcus pluviales)- based smoothie (Source: TUCN)*

3) Novel foods for human consumption



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NOVAFOODIES

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Main developments & Expected results



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WP7. Value chain sustainability, socio-laboral inclusion and standardisation



WP8. Dissemination, Exploitation, Clustering and Engagement



WP9. Project Management

1) LCA, LCC, Social and Gender Issues



2) Training courses for unemployed and professionals



3) Standardisation



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Work Packages

Main developments &  
Expected results



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WP3. Finetuning of added-value eco-production systems and  
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functional products and biosecurity



WP6. IT tools development and  
monitoring for traceability and  
enhanced trust in the value chain



WP7. Value chain  
sustainability, socio-  
laboral inclusion  
and standardisation



WP8. Dissemination,  
Exploitation,  
Clustering and  
Engagement

Business models, market  
research...



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**Thank you very much for your attention!**

**[www.novafoodies.eu](http://www.novafoodies.eu)**

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**Instagram: @Novafoodies**

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