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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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## ***NOVAFOODIES PROJECT***

**Michael Brugger**  
**LVA**

**30th April 2026**





NOVAFOODIES

General details & Partners

Main objectives

Work Packages

Main developments and expected results





NOVAFOODIES

General details & Partners

<b>FUNDING PROGRAMME</b>	<b>Horizon Europe</b>
<b>GRANTING AUTHORITY</b>	<b>European Research Executive Agency</b>
<b>START-END DATE</b>	<b>1 May 2023 – 31 Oct 2026</b>
<b>TOTAL BUDGET</b>	<b>6,587,345.00 €</b>
<b>EU CONTRIBUTION</b>	<b>5,999,988.63 €</b>
<b>N° PARTNERS</b>	<b>28</b>
<b>PROJECT COORDINATOR</b>	<b>IDENER R&amp;D</b>



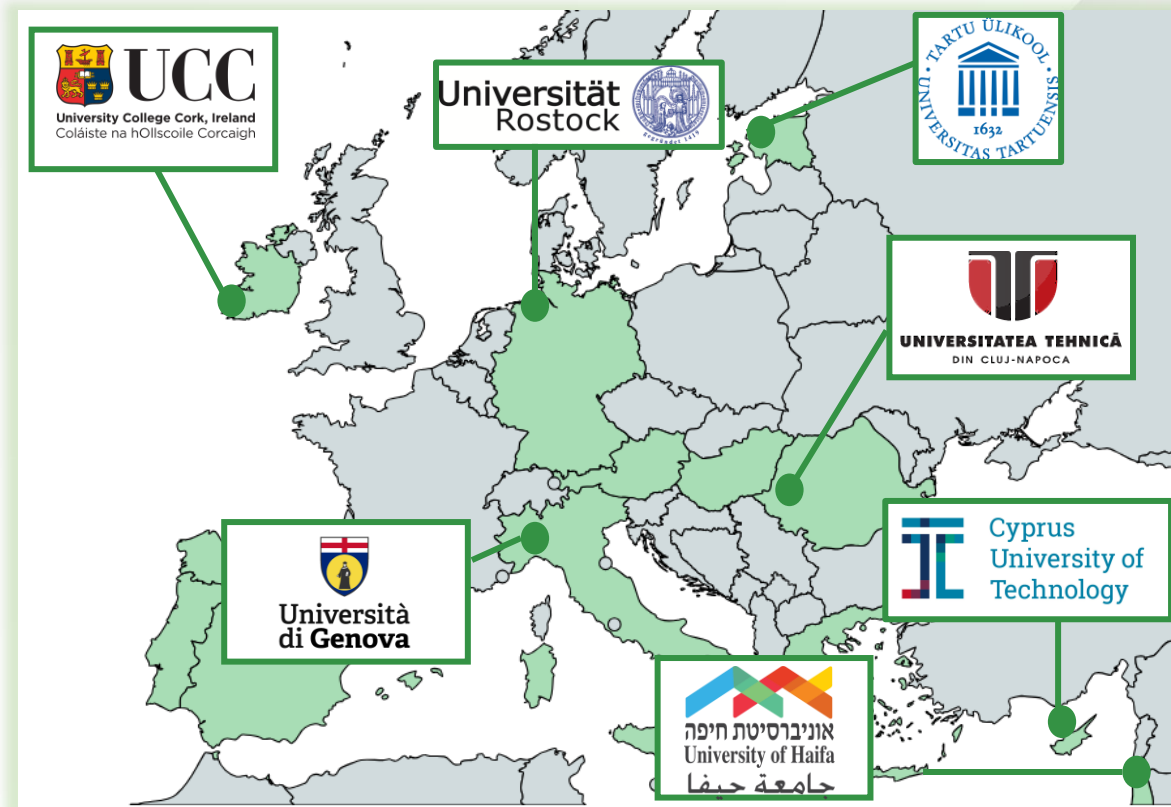
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the European Union



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General details & Partners

7 Universities



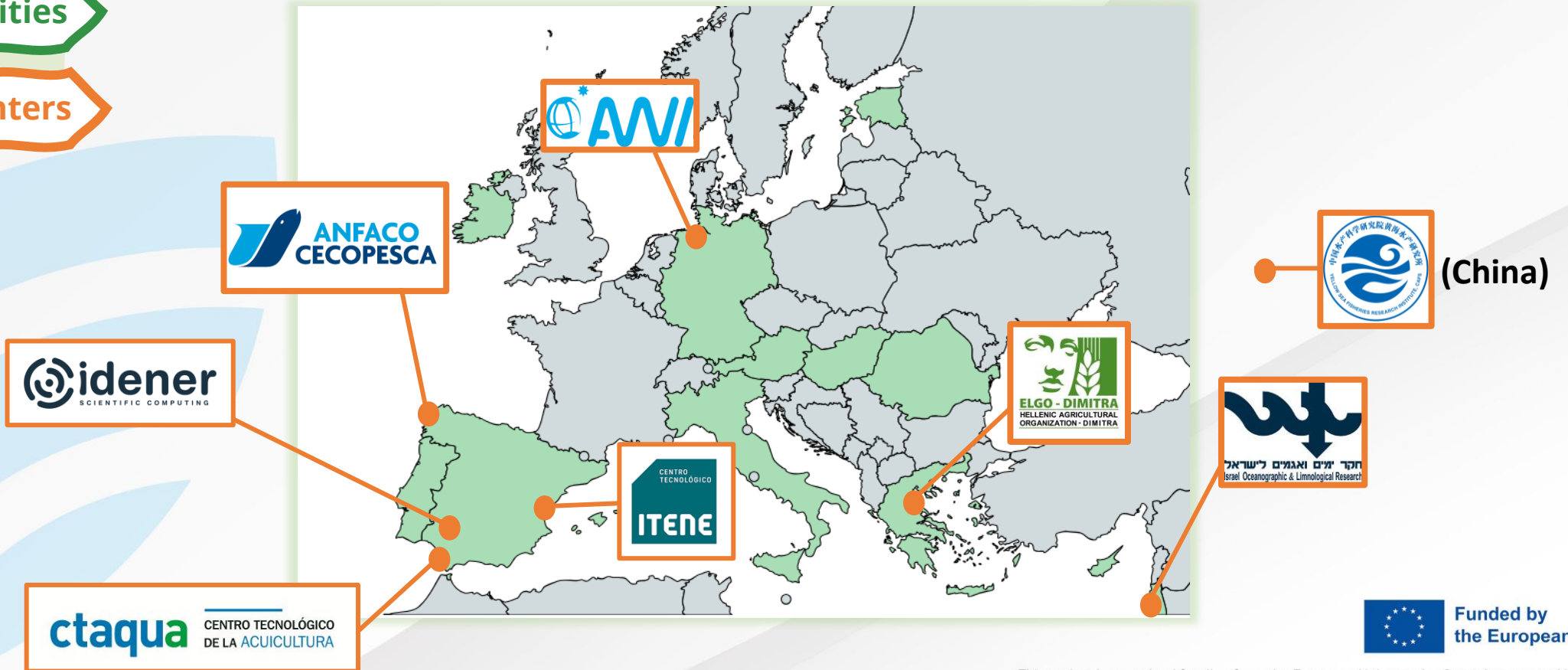


NOVAFOODIES

General details & Partners

7 Universities

8 RTD centers





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7 Universities

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6 SMEs





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7 Universities

8 RTD centers

6 SMEs

2 Large companies





NOVAFOODIES

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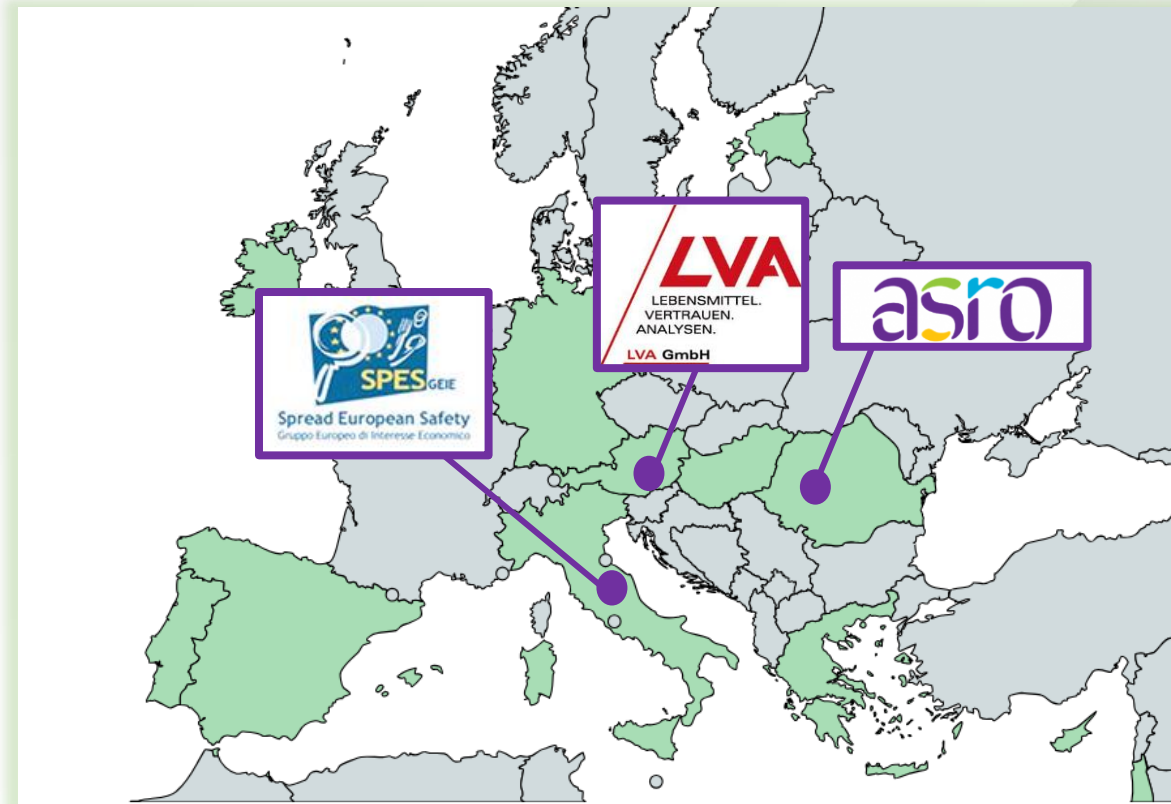
7 Universities

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3 Associations





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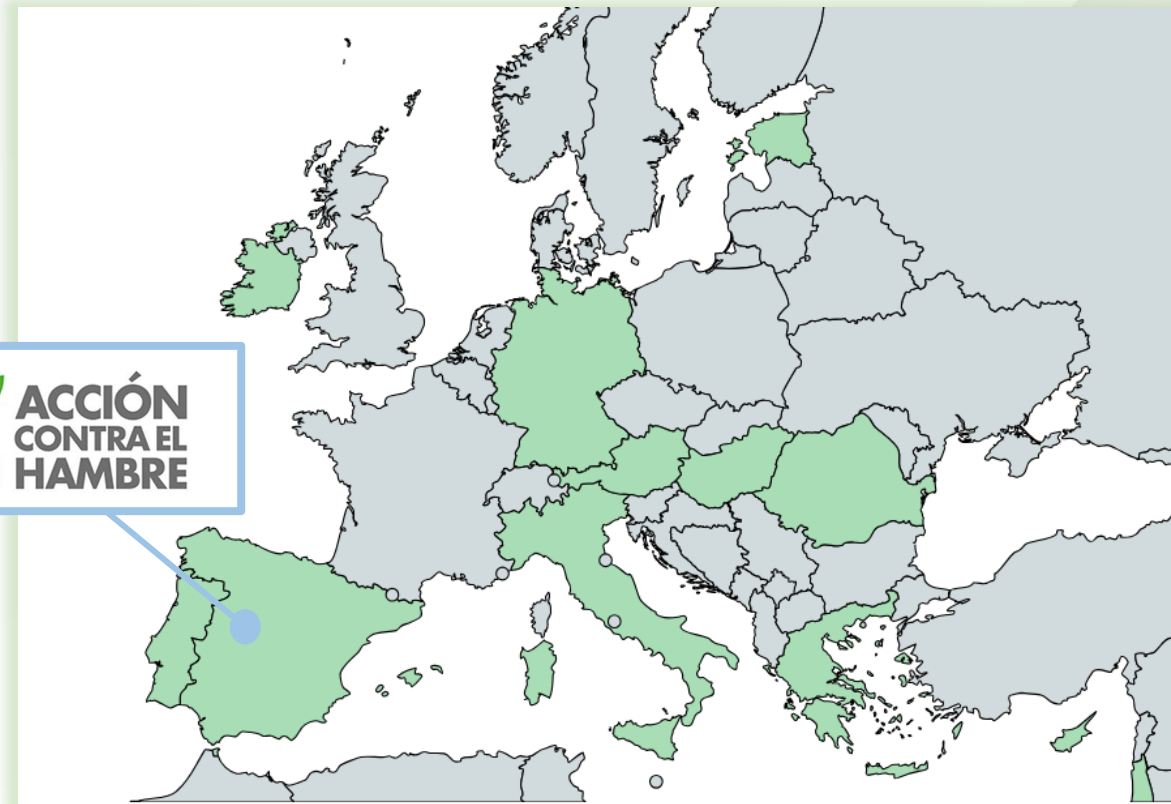
8 RTD centers

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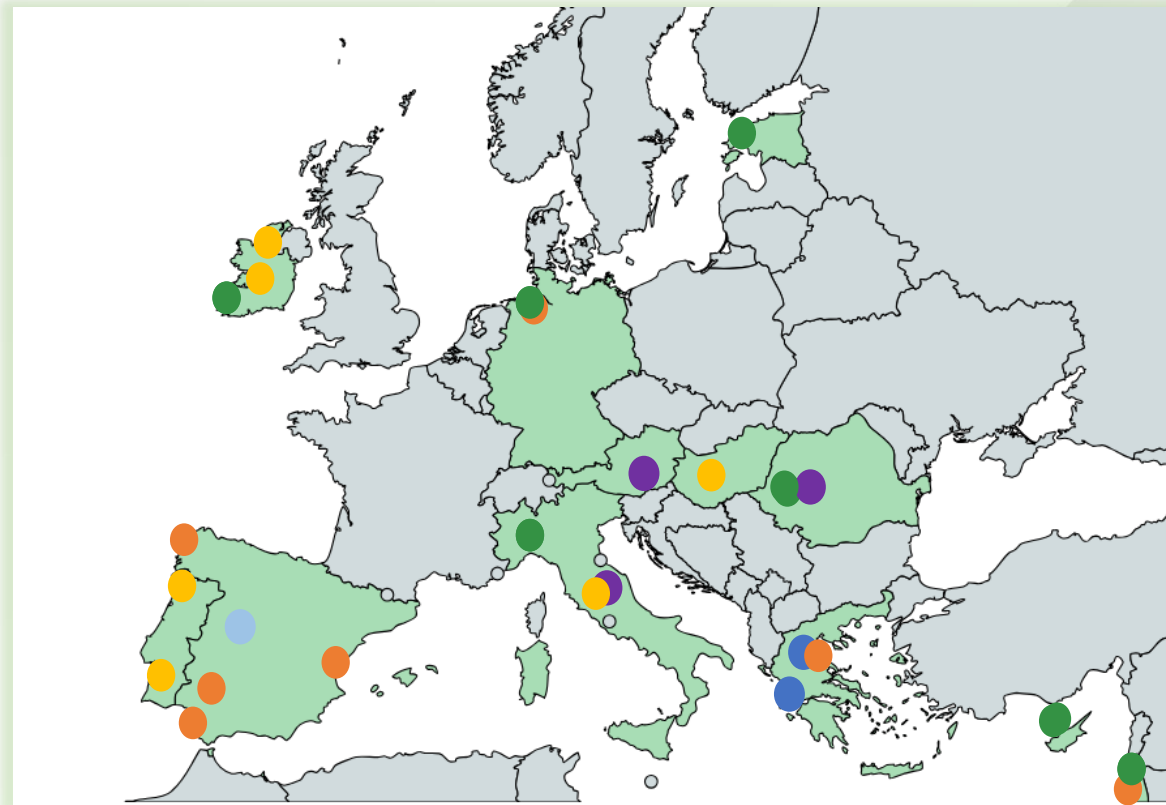
8 RTD centers

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1 NGO



27 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.

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Main Objectives

**COVERING THE  
WHOLE VALUE  
CHAIN &  
SUSTAINABILITY**



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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



NOVAFOODIES

Work Packages

Main developments & Expected results



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)





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**Work Packages**

**Main developments & Expected results**


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


 The Seaweed Company  
 WP2. Operation and evaluation of IMTA upscaled designs



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



Macroalgae cultivation in estuarine systems. Source: CTAQUA

1) Macroalgae cultivation methodologies for packaging purposes



2) Beach wracks valorisation for invertebrate biomass



3) Low-cost microalgae production processes



4) Macroalgae cultivation in liquid wastes



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

5) Seaweed cultivation in earthen ponds



WP8. Dissemination, Exploitation, Clustering and Engagement



Management





**NOVAFOODIES**

**Work Packages**

**Main developments & Expected results**

<p>Università di Genova</p>	<p>WP1. Optimisation and pilot scale designs of IMTA systems (M1-M12)</p>	<p>The Seaweed Company</p>	<p>WP2. Operation and evaluation of IMTA upscaled designs</p>
<p>AWI</p>	<p>WP3. Finetuning of added-value eco-production systems and evaluation of pilot scale operation</p>		
<p>idener</p>	<p><b>WP4. Verification of existing and new developments for processing algae and fish and extraction of compounds</b></p>		
<p>ctaqua</p>	<p>WP5. Evaluation of properties, formulation, novel functional products and biosecurity</p>		
<p>ITENE</p>	<p>WP6. IT tools development monitoring for traceability enhanced trust in the value</p>		
<p>LC Innoconsult International</p>	<p>WP8. Dissemination, Exploitation, Clustering and Engagement</p>		



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

<p>1) Bacterial-based algae decomposition processes</p>	
<p>2) Fish-based protein ingredients</p>	
<p>3) Micro and macroalgae microwave-based drying methodologies</p>	
<p>4) Eco-packaging algae-based</p>	
<p>5) Valorising fisheries discards</p>	





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	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		
	<b>WP5. Evaluation of properties, formulation, novel functional products and biosecurity</b>		
	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**



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WP9. Project Management



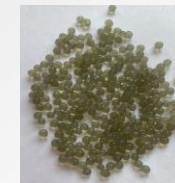
*Spirulina-based Romanian Sarmale (Source: TUCN)*



*Pasta enriched with Chlorella (Source: TUCN)*



*Spirulina Pancakes (Source: TUCN)*



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



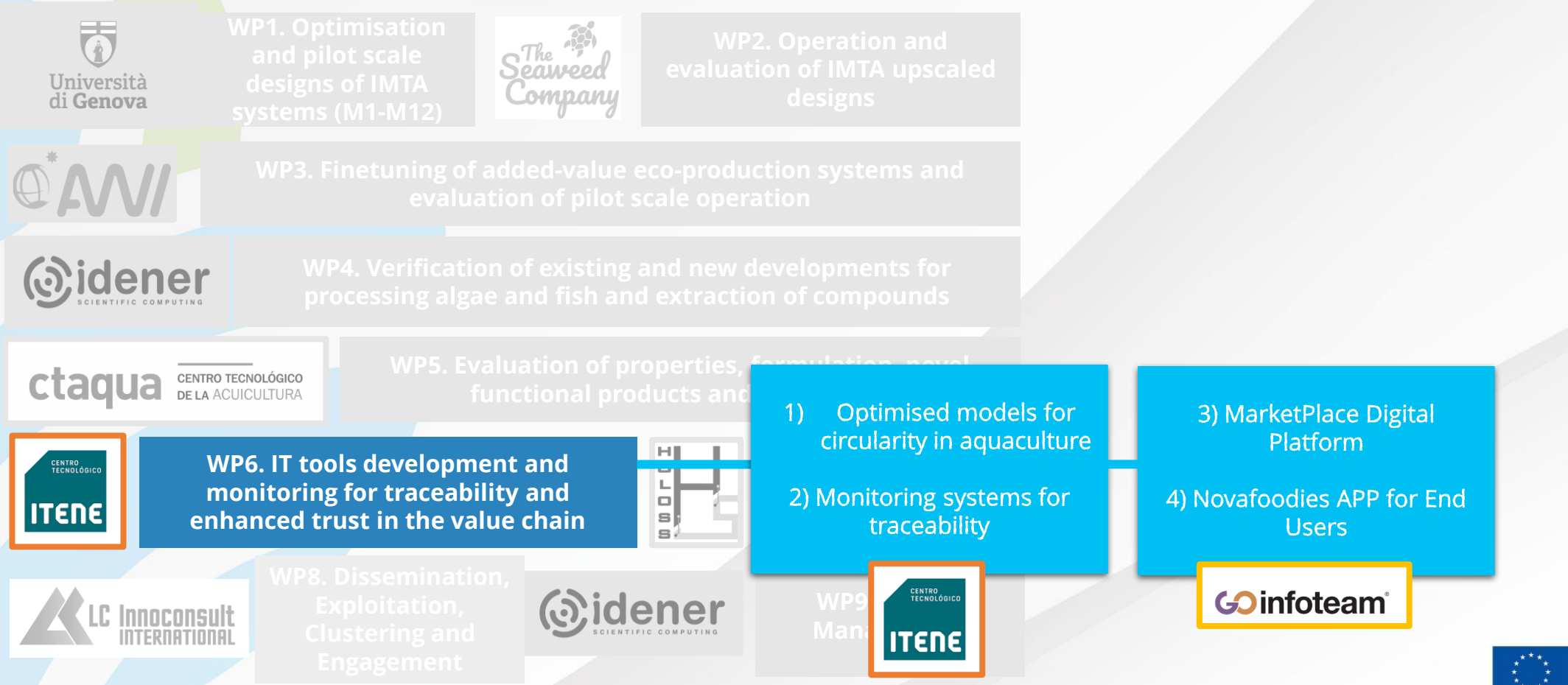
*Red algae (Haematococcus pluviales)- based smoothie (Source: TUCN)*

3) Novel foods for human consumption



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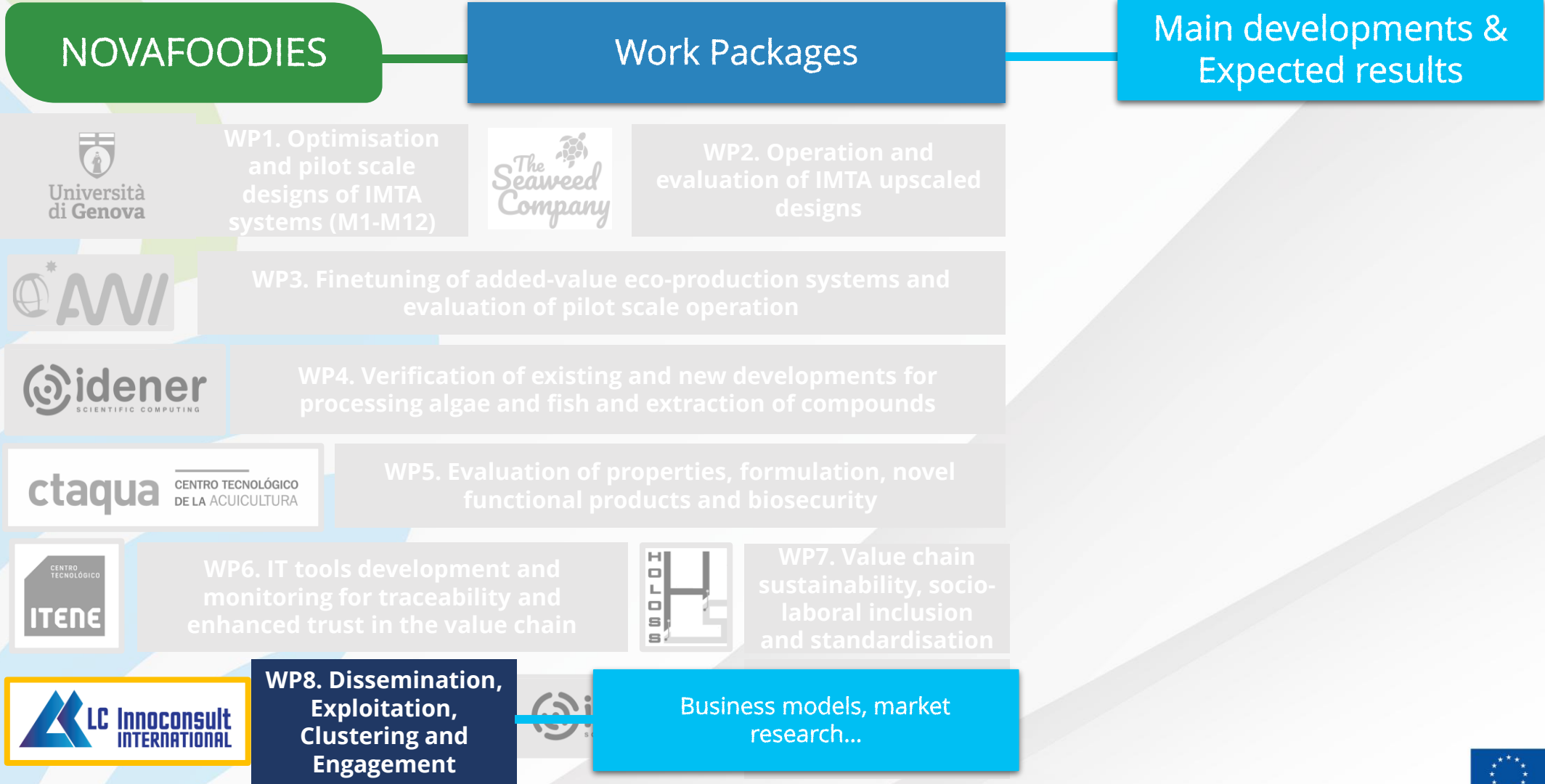


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1) LCA, LCC, Social and Gender Issues		
2) Training courses for unemployed and professionals		
3) Standardisation		



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



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



Implementation of the ecosystem approach for sustainable management of fisheries or in aquaculture development



Verification of existing and development of new seafood processing methods



Microwave-assisted dryers for efficient micro- and macroalgae drying

3. Tools to limit the waste and discarding of seafood during production, processing,



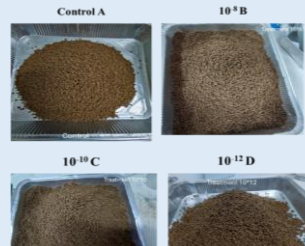
Biomass quality monitoring

Providing wider and more diverse range of aquatic food available to European consumers

Indoor seaweed harvesting at TRL7



Upscaling low-cost microalgae production

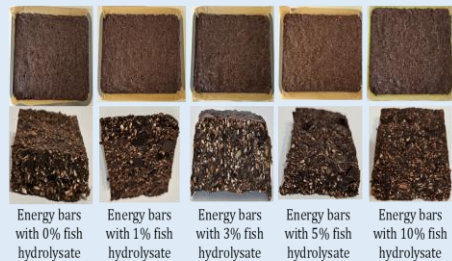
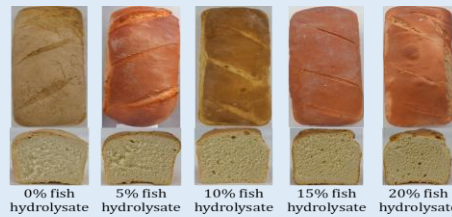


Aquafeeds from fermented algae

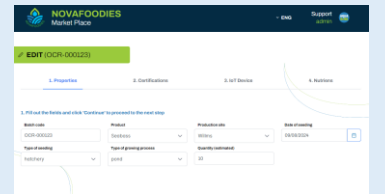
Upscaling seaweed cultivation in earthen ponds



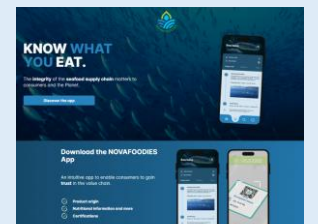
Algae cultivation with liquid wastes



Development of algae-based functional foods for human consumption



NOVAFOODIES MarketPlace



NOVAFOODIES App



Funded by the European Union

European Union under Grant Agreement N° 101084180.



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

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

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**Instagram: @Novafoodies**

**LinkedIn: NOVAFOODIES EU project**

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