



VIDA

value-added innovation  
in food chains

# The second 5 VIDA innovation challenges

*which are selected and supported by the  
VIDA Advisory Board.*

D1.4 of the Work Package 1



The VIDA project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement n° 777795.

Disclaimer

The content of this document represents the view of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the Executive Agency for Small and Medium-sized Enterprises (EASME). The European Commission and the Agency do not accept responsibility for the use that may be made of the information it contains.

The first 5 VIDA innovation challenges which are selected and supported by the VIDA advisory board.

<b>Work Package</b>	WP1 Addressing challenges and exploiting opportunities
<b>Deliverable</b>	D1.4 The second 5 VIDA innovation challenges which are selected and supported by the VIDA Advisory Board.
<b>Due Date</b>	31 January 2020
<b>Submission Date</b>	31 January 2020
<b>Deliverable Lead</b>	NP
<b>Dissemination Level</b>	Public
<b>Document Nature</b>	<input checked="" type="checkbox"/> R-Report <input type="checkbox"/> O-Other
<b>Authors</b>	Luboš Komarek (NP)
<b>Contributors</b>	Matthijs Plijnaar (SWA), Irene Cilla Simón (AFC), Clara Presa (ZNA), Katherina Ulrich (BNPT), Norbert Reichl (FPI), Carmen Disanto (LE2C), Sérgio Ferreira Alves (SPI), Morten Kildahl Sorensen (CLN)
<b>Reviewers</b>	Francisca Medina Pappermann (CEW)
<b>Status</b>	<input type="checkbox"/> Plan <input type="checkbox"/> Draft <input type="checkbox"/> Working <input type="checkbox"/> Final <input type="checkbox"/> Submitted <input checked="" type="checkbox"/> Approved



The first 5 VIDA innovation challenges which are selected and supported by the VIDA advisory board.

## Contents

1. Executive Summary .....	1
2. Identification of the challenges .....	2
3. Additional information and updates .....	3

## 1. Executive Summary

The main focus of the VIDA project is to foster the implementation of new solutions, preferably key enabling technologies that will lead to qualitative and quantitative improvements of the use of resources in the food sector, especially materials, water and energy.

To support the achievement of this goal the consortium partners defined three different types of support voucher schemes. The first scheme is called “Innovation support voucher” and offers up to € 5.000, - for individual services regarding a specific challenge. The second scheme named “Validation Voucher” offers up to € 25.000, - to customized validation of innovative solutions while the third support scheme “Demonstration Voucher” aims to boost demonstration of the innovative solutions in a fully operational environment. All schemes are 100% funded.

This deliverable reveals the innovation challenges that were identified by the advisory board and are being validated by the SME-led innovation projects, especially under the demonstration support scheme. The list of challenges may be further adapted based on the feedback gathered during the execution of supported projects under VIDA voucher schemes and were published on the website. The challenges were made deliberately thematically broad to allow space for more innovative and creative solutions to be implemented.

Further information about the VIDA project: <https://vidaproject.eu>

## 2. Identification of the challenges

Within the VIDA project, the first set of 5 innovation challenges were determined in collaboration with the Advisory Board. These challenges were further validated and extended / adapted in order to specifically enhance their affinity towards the scope of the VIDA project.

These identified challenges are being addressed by the [VIDA Voucher scheme](#), especially by the [Demonstration Voucher](#), but they are also relevant for [Validation Voucher](#) and [Innovation Support Voucher](#).

The table below includes the list of adapted / extended first five innovation challenges together with the new second five innovation challenges which have been identified.

Food Sector	Resource efficiency challenges
<b>Sustainable Aquaculture</b> <i>(includes former challenge - Fish farming)</i>	Decontamination; closing loops; I4.0 (Industry 4.0) solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Sustainable Breweries</b> <i>(includes former challenge - Brewery, wineries)</i>	Closing loops; intensification of the brewing process; innovative water sources; water treatments for industrial processes; improvement of cleaning; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Sustainable Wineries</b> <i>(includes former challenge - Brewery, wineries)</i>	Closing loops; innovative water sources; water treatments for industrial processes; improvement of cleaning; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Efficient Meat processing</b> <i>(includes former challenge Meat processing)</i>	Nutrients valorisation; energy efficiency in cooling and heating; water efficiency—monitoring and water footprint; organic pollutants degradation; zero-toxic residues usage; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Sustainable agriculture and efficient greenhouse management</b> <i>(includes former challenge Greenhouses)</i>	Energy–water efficiency; chemical compounds reduction / reuse; circular economy concepts implementation; addressing diffuse pollution; avoiding clogging pipes/species; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Alternative food production</b> <i>(new challenge)</i>	Production of food from alternative resources; using filtered/separated nutrients for food production; energy and water efficiency; shell-life extension by implementing

The first 5 VIDA innovation challenges which are selected and supported by the VIDA advisory board.

	advanced production/processing methods; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Resource-efficient food processing</b> <i>(new challenge)</i>	Nutrients preservation and valorisation; degradation of persistent organic pollutants in the wastewater; non-chemical treatments; energy and/or water efficiency; sustainable bacterial reduction / sterilisation methods; shelf-life extension by implementing advanced processing methods; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Sustainable Livestock</b> <i>(new challenge)</i>	Manure management; water recycling; decontamination; energy efficiency; addressing diffuse pollution; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Sustainable milk processing</b> <i>(new challenge)</i>	Dewatering; nutrients valorisation; non-chemical treatments; energy and/or water efficiency; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.
<b>Resource-efficient beverages production (other non-alcoholic and alcoholic beverages)</b> <i>(new challenge)</i>	Nutrients preservation and valorisation; efficient filtration processes; non-chemical treatments; energy and/or water efficiency; shelf-life extension by implementing advanced production methods; I4.0 solutions optimizing the overall process including dosing, artificial intelligence, optimized monitoring and control of the process parameters and material flow and quality control.

### 3. Additional information and updates

The summaries of the projects financed by VIDA are updated as the projects progress. The updated information is available in the link.

<https://vidaproject.eu/vida-voucher-scheme/vida-challenges>

In that link, updated information related to the challenges and their connection to the granted projects by the VIDA can be found, specifying the expected and achieved impacts of each project.



clúster aragonés de  
**alimentación**



**wateralliance**

