

# ROBS4CROPS

## D8.1 Dissemination and Communication Strategy (1)

[robs4crops.eu](http://robs4crops.eu)



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## D8.1 Dissemination and Communication Strategy

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<b>Abstract:</b>	<p>This deliverable (D8.1) outlines the strategy, activities, and tools with which Robs4Crops plans to communicate with a range of stakeholders.</p> <p>This deliverable (D8.1) introduces the Robs4Crops dissemination, communication, and marketing plan, a comprehensive and living document which outlines the tools, channels, and activities to be put in place throughout the project to ensure wide acceptance and sustainability of the Robs4Crops Solutions.</p>

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PU	Public	✓
PP	Restricted to other programme participants (including the EC Services)	
RE	Restricted to a group specified by the consortium (including the EC Services)	
CO	Confidential, only for members of the consortium (including the EC)	

## D8.1 Dissemination and Communication Strategy

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### List of Abbreviations and Acronyms

<b>DCS</b>	Dissemination and Communication Strategy
<b>R4C</b>	Robs4Crops

# Executive Summary

The Dissemination and Communication Strategy explains how the project will communicate its developments and outcomes, and how the consortium will ensure visibility of the project and dissemination of its results throughout its duration. The aim of this document is to present a clear and coherent Dissemination and Communication Strategy which will serve as a cornerstone for all the outreach activities envisaged to be delivered throughout the project. The deliverable is comprised of six main chapters, whose brief explanation is provided below:

**Chapter 1** introduces the main drivers behind the project's general objectives and the major challenges that Robs4Crops aims to address, not only throughout WP8 but over the course of the entire project.

**Chapter 2** establishes the strategic context for planning and delivering the Robs4Crops dissemination and communication activities at the regional, national and pan-European levels. It also introduces the concepts of Content Marketing, Inbound Marketing, Growth Hacking and Pirate Metrics, which will be used to maximise the project's outreach. The main principles and objectives of Robs4Crops dissemination and communication activities, as well as specific target groups and messages tailored to each of these groups, will also be explained.

In **Chapter 3**, the visual identity of the project, namely logo, colour palette and templates, will be provided to ensure the consistency of the communication efforts among partners. The consortium members will be provided with these materials and will be encouraged to use them whenever communicating project-related content to external audiences. This chapter will also discuss the online and offline communication channels which will be utilised over the course of the project.

**Chapter 4** will address timing and schedule. A comprehensive outreach activity calendar will be created for both digital and in-person communication which will ensure the timely delivery of all envisioned stakeholder engagement efforts, and provide an overview of the partner's dissemination and communication-related inputs.

**Chapter 5** introduces a plan for continual monitoring and evaluation of the Dissemination and Communication Strategy. It outlines partners' main responsibilities concerning communication and dissemination, and it presents a methodology which will be used for measuring progress, i.e., KPIs related to communication, engagement with relevant Robs4Crops stakeholders, and the promotion of the Robs4Crops brand.

Finally, **Chapter 6** will provide a full summary of all the topics addressed and the major points presented in this deliverable.

# 1 Context

Agriculture forefronts many challenges to maximize yields while operating in an environmentally sustainable manner. European farmers face growing pressure to produce in a more sustainable way and adapt to strong competition from other regions of the world for both internal consumption and export. Within the paradigm of sustainability in agricultural production – robotics, automation, and artificial intelligence all play an important role, transforming. This evolution from traditional to robotics and AI-based solutions in agriculture presents both a challenge and an opportunity for the sector.

One of the greatest sources of challenges in European agriculture is the cost and scarcity of labour, which affect profitability and threaten the existence of farming. Agricultural workers are often subject to accidents and health problems due to heavy labour and chemical use that are harmful to workers' health and the environment. With the current COVID19 crisis revealing the delicate nature of agriculture in today's day and age, it stresses the importance of people working in the sector. The farmers and agricultural workers who are the driving force behind the agriculture sector remain vulnerable to the virus, which puts an even greater emphasis on labour issues in agriculture. Due to travel restrictions, seasonal workers have been denied the ability to visit and work in the fields across the borders of their country, which is underscoring the need for robots in agriculture.

Crop failures, low crop yields, and the hardships of farming and subsistence farming are sometimes attributed to a lack of farming power. However, this is not the only reason as there are many other factors – climate, seed quality, practices adopted, pests and diseases, etc. also condition the final crop yield. In addition, the pressing need to increase production to feed a growing population within a limited area is placing even more pressure on agricultural systems and their productivity.

The productivity of the agricultural sector is highly affected by the shortage of labour, which can lead to food insecurity and extensive financial losses, as some crops cannot be harvested and must be left on the field. Additionally, weed control and spraying operations are the most demanding and repetitive field operations of crop care with high cost and complexity.

Automation and innovation in the agricultural sector are driven by the desire to eliminate repetitive and endangering operations, simultaneously having positive effects on productivity and the quality of food produced. Agricultural automation provides the power and machinery needed for managing, storing, processing, and handling agricultural crops.

Agricultural robotics can support environmentally sustainable practices by allowing spot weeding and precision management of nutrients, pests, diseases, and weeds through mechanical removal or spot application of chemicals. Agricultural robots also have the ability to replace the arduous work of farmers, particularly in areas of limited resources. This will result in a greater sense of social sustainability.



## D8.1 Dissemination and Communication Strategy

Despite the provided efficiency and productivity benefits of automatised operations, robotics in agriculture have not yet reached widespread acceptance and adoption. In light of societal pressures to improve productivity and contribute to global food and fuel supplies while preserving land and natural resources, access to reliable and trusted information about new production methods would become increasingly important for farmers. Improving information transfer and communication practices plays a significant role in enhancing farmers' trust in robotics and AI-based technologies and solutions.

Thus, the communication and dissemination of Robs4Crops insights into technical and non-technical challenges of mainstreaming robotics and AI are essential for affecting the momentum in which farmers are willing to accept such solutions. To earn farmers' trust and strike widespread adoption of robotics and AI, Robs4Crops relies on the idea of a strong community, which makes the project both people and technology-centric, consequently placing D8.1 Dissemination and Communication Strategy in the light of the leading role of effective ecosystem building.

The strategy set in D8.1 influences a vast community of target groups (described in 2.3.1), aiming to actively engage different groups of stakeholders that will benefit from the innovative approach of Robs4Crops. Communication and dissemination activities are vital to recruit and establish a network of early-adopters and pave the way towards mainstreaming Robs4Crops solutions.

## 2 Strategy

### 2.1 Methodology

#### 2.1.1 Approach

Robs4Crops Dissemination and Communication Strategy has been developed through close interaction among consortium members, and it seeks to create an engaging effect on stakeholders involved. The strategy aims to pave the way towards successful outreach to all food and farming-related stakeholders, target groups, and future collaborators. It seeks to present to them the innovative solutions offered by Robs4Crops effectively.

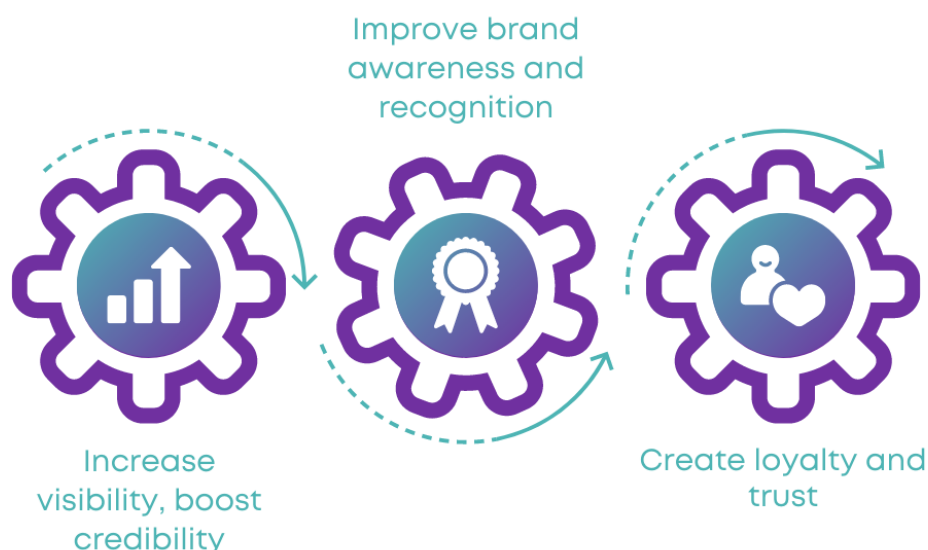
*Table 1: Critical Dissemination and Communication questions*

Activity	Critical questions	Chapter
Targeting	Who is our target audience? What is our message?	2.3
Methods	How are we going to reach that audience?	0
Content development	What types of content does our audience find engaging?	3.2.1.3
Timing	When is the right time to reach our target audience?	0
Evaluation	How effective are our public outreach efforts?	0

Robs4Crops approaches to communication, dissemination, community building and engagement starts with outlining key components that should be considered to increase the effectiveness of the Dissemination and Communication. An effective Dissemination and Communication Strategy requires a deliberate approach and a convenient mixture of marketing techniques. To bring together stakeholders from various sectors, promote networking among them, but also raise a deeper understanding of the benefits of the Robs4Crops, best practices of marketing will be adopted. On that note, Robs4Crops communication and dissemination activities will be carried out using the following methods:

**Content marketing** according to [HubSpot](#) involves the creation and sharing of online material (such as videos, blogs, and social media posts) that is intended to stimulate the interest and engagement of the audience. Content marketing is important because it can improve overall brand awareness, reduce costs, enhance reach, interactions, and last but not least, establish strong loyalty among key stakeholders. Critical reasons for using content marketing are demonstrated below.

## D8.1 Dissemination and Communication Strategy



*Figure 1: Content marketing benefits*

Content creation in Robs4Crops will run continuously throughout the whole project timespan and will be presented on different channels – written news, on paper and internet, radio, television, as well as social media channels, such as LinkedIn, Twitter, Facebook, and YouTube. A strong content strategy will drive traffic and leads to the Robs4Crops website.

The Robs4Crops content marketing strategy will outline a clear plan for reaching Robs4Crops target audiences by means of regular publishing, maintaining, and distributing high-quality content that is both educational and inspirational.

Using content marketing as a part of Robs4Crops methodology approach is expected to educate consumers about the solutions offering, boost conversions to meet the set KPIs, demonstrate understanding of specific problems consumers have and how Robs4Crops is answering to them, increase loyalty and build stronger relationships, and finally create a sense of community around the brand. Content marketing is a powerful approach when it comes to boosting brand awareness and brand preferences of new businesses, which often lack the resources for complex marketing strategies.

***Inbound marketing*** is a comprehensive approach to attracting, qualifying, nurturing, closing, and delighting early adopters and future collaborators. It is a business methodology that aims to create valuable customer-tailored content in various online platforms (e.g., blogs, social media, search engines) and is expected to drive organic traffic to Robs4Crops website from where different stakeholders could take action.

Inbound marketing differs from outbound marketing in a way that the first one focuses on earning customer's attention, and the second one typically involves buying it. While outbound marketing interrupts the audience with content that they do not always need or want, inbound marketing creates such connections they are looking for and solves problems they are currently experiencing. This

## D8.1 Dissemination and Communication Strategy

approach aims to attract the audience, as opposed to disrupting them, which significantly contributes to the long-term leveraging.

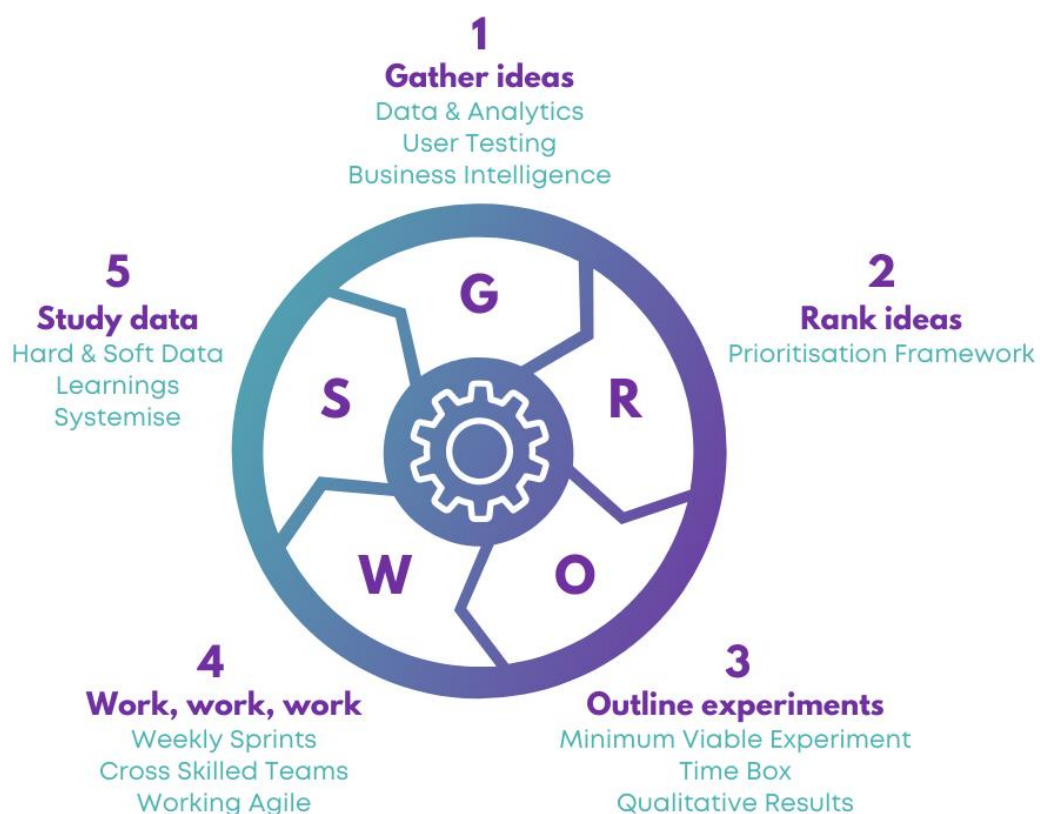
There are several important benefits to inbound marketing. First and foremost, it saves the company money because it doesn't depend on traditional outbound marketing techniques to draw in leads. Search Engine Optimization cuts the advertising expenses since it makes content more visible on search engines and key customer-oriented channels, eliminating the need for paid campaigns. On the other hand, content shared through multiple social channels can produce a word-of-mouth effect. Over time, as the ranking increases, older content can attract more leads. Inbound marketing also simplifies the process of obtaining customer feedback because of customers' comments and conversations that take place on social media channels.

Robs4Crops inbound marketing approach entails innovative strategic planning, content creation, and distribution across the most meaningful channels, including online, print, and in-person, when possible. As an integrated part of inbound marketing, all content is optimised with keywords for search engines to leverage organic growth. The inbound marketing methodology of Robs4Crops will start from identifying personas and their crucial pain points. We will then strive to address these pain points and provide concrete solutions via content specifically tailored to the persons' needs.

**Growth hacking** is an umbrella term for [strategies focused solely on growth](#), mainly for those who need large-scale development in a short amount of time. Simply said, growth hacking is the art of utilising creative, low-cost strategies to acquire and retain early adopters and future collaborators. Growth Hacking's sole focus is growth that is based on a data-driven, iterative process. The secret of successful growth hacking is continual testing and optimisation.

In the light of our growth hacking process, we adopt **the G.R.O.W.S. process** is a 5-step loop for growth hackers to run growth experiments. The abbreviation of the "G.R.O.W.S" stands for the names of the 5-steps: "1) Gather ideas, 2) Rank ideas, 3) Outline experiments, 4) Work, and 5) Study Data". **The framework will be particularly important for our Exploitation and IP Management Strategies in T8.3 (Exploitation Plan development and assessment) and T8.4 (T8.4: Pilot Areas Business and IPR Management Plans).**

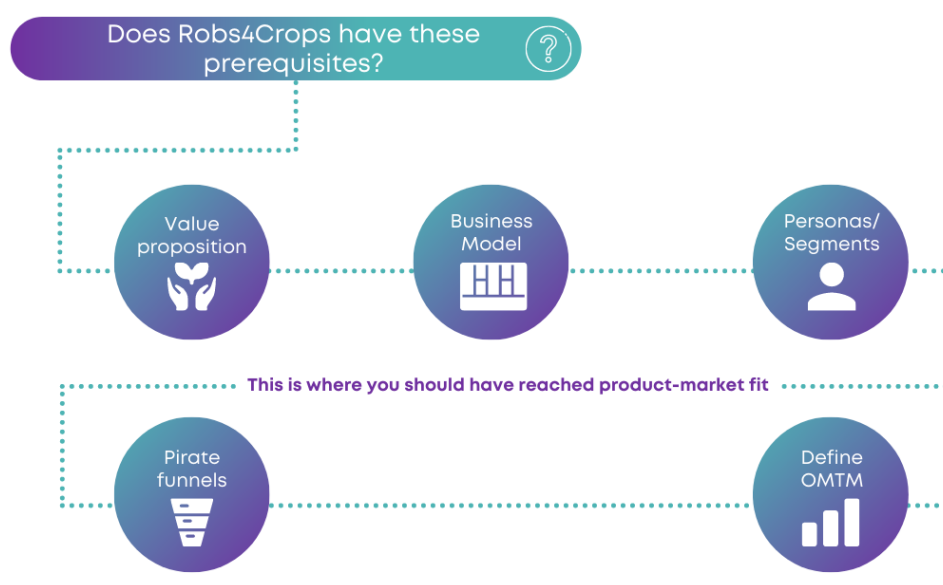
These are the five steps of the G.R.O.W.S. framework:



*Figure 2: The 5-step G.R.O.W.S. Loop*

The roadmap of the G.R.O.W.S. process is presented below. It outlines the certain milestones that a business needs to achieve to secure fast and sustainable growth. The first thing that a business needs to do is to create its value proposition. The next step is to create a robust business model, followed by the definition of target customer segments and personas. After this milestone has been achieved it is expected for business to have reached the product-market fit. Following are the pirate funnels (AARRR metrics which are described in detail under Pirate metrics point). The last step is to define the 'One Metric That Matters' (OMTM). OMTM is the chosen number for which the growth hacking team expects to have the biggest impact on growth in the following 2-4 months.

## THE GROWS PROCESS



*Figure 3: The G.R.O.W.S. Process*

Robs4Crops growth strategy will leverage the existing networks and activities encompassing outreach to the media and general public spaces for maximum stakeholder engagement. One of the primary Growth hacking objectives focuses on building up (and sustaining in the longer term) a close relationship with targeted groups and stakeholders of the project. To ensure all relevant actors participate in creating and building an open and collaborative smart ecosystem, they need to be incorporated into its development and further engaged in its evolution.

**AARRR**, also known as Pirate Metrics, stands for acquisition, activation, retention, revenue, and referral. It looks at how you get users, their conversion journey, how often they use your products/ services, how much money they spend on you, and whether they advocate for you. These metrics are beneficial for better understanding your users and optimising your user-engagement activities. These metrics are simple, actionable, and very effective in measuring a company's growth which is why they are considered to be the most critical metrics for a startup or new project to focus on.

The pirate methodology in Robs4Crops is recognised through 5 phases of AARRR metrics. The first phase is acquiring leads from the large pool of key stakeholders, early adopters and potential collaborators. The acquisition is achieved primarily through social media and the project website, as well as press releases, etc. The activation phase refers to how many people have been engaged i.e., converted into early adopters of Robs4Crops. The retention phase is concerned with how many of the engaged people/ communities come back. This is very well reflected in the number of newsletter subscribers and event attendees, for instance. As the project evolves, it will be critical to ask ourselves whether our business model supports the growth and overall long-term vision of Robs4Crops. The sustainability of the

## D8.1 Dissemination and Communication Strategy

project is expected to be achieved as the referral phase progresses and our early adopters and collaborators spread the message of Robs4Crops through word-of-mouth communication. This last phase will ensure that Robs4Crops solutions go beyond the project’s lifespan.



Figure 4: AARRR Metrics

### 2.1.2 Principles

Throughout all of its dissemination and communication activities, ROBS4CROPS will strive to meet the following principles:



Figure 5: ROBS4CROPS Principles

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One of the first and foremost communication and dissemination principles of ROBS4CROPS is the **quality** of the content provided to its audiences. **Awareness** means that ROBS4CROPS is conscious of the most critical struggles and challenges that its stakeholders are facing. **Integrity** refers to the truthful and straightforward approach ROBS4CROPS adopts whenever communicating. **Timeliness** means that all the key messages will be delivered to key audiences at the right time, without unnecessary delays in communication. **Openness** means that ROBS4CROPS will freely distribute all relevant, non-confidential information to its stakeholders. **Accuracy** refers to the fact that all the content distributed by ROBS4CROPS will be thoroughly checked to ensure that its messages do not provide any inaccurate information. **Relevance** will be demonstrated by making sure that the messages that are being distributed directly to a particular target group correspond to the interests of that group and are significant for its activities. **Clarity** means that ROBS4CROPS communication and dissemination team will leave no room for misinterpretation of the information provided, given that the writing style and the language used will be completely tailored to the specific target audience receiving the message.

## 2.2 Objectives

The overall aim of the project will be achieved by accomplishing the following three specific objectives:

*Table 2: ROBS4CROPS Specific objectives*

01	Build an ecosystem of users and other stakeholders to support all aspects of the practical application of agricultural robots	WP1, WP7, WP8
02	Build a robotic farming system that uses knowledge from industrial manufacturing to achieve full autonomy and that fits with existing agricultural machinery, practices, and standards.	WP2-5
03	Demonstrate the robotic system in diverse large-scale pilots across Europe	WP6

All dissemination and communication activities of Robs4Crops will strive to support the actualisation of these three main objectives of the project. Through its robust outreach strategy, Robs4Crops will aim to draw the attention of all relevant stakeholders, which will eventually lead to building a stable and diverse ecosystem. Constant communication with technology experts, the scientific community and other important projects and initiatives will be of extreme importance for building an autonomous robotic farming system. Through in-person demonstration and live events, Robs4Crops will introduce to the broader community its large-scale pilots.



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The specific objectives of the Dissemination and Communication Strategy are presented in the table below:

*Table 3: ROBS4CROPS DCS Specific Objectives*

01	Attract an adequate number of industry-leading innovators in food and farm (Digital Innovation Hubs, manufacturers, scientists, and researchers...), as well as farmers from all across Europe, to become a part of the ROBS4CROPS ecosystem.
02	Present to Robs4Crops stakeholders the importance of gaining access to novel, beyond the state-of-the-art agricultural robotic solutions and to their supporting ecosystem.
03	Highlight the significance of piloting, testing, and experimentation with fully autonomous robotic systems and business models in an environment that is heavy on collaboration.
04	Raise the awareness of a wide range of stakeholders, on the local, regional, and international level, on the role of Robs4Crops in increasing the competitiveness of existing industries through the autonomous robotic farming system, but also additional business creation.
05	Ensure proper know-how exchange among Robs4Crops partners.
06	Support the organisation of a range of events inside the Robs4Crops ecosystem (e.g., conferences, forums, workshops, business events, Roadshow events).
07	Develop networks and liaison with relevant DIHs and other networks, existing initiatives and other related H2020 projects and projects tackling Agrifood and Robotics to share resources and maximize impact.
08	Support the development and maintenance of the official project's website throughout the project lifecycle.
09	Pave the way for successful exploitation and scalability of Robs4Crops technologies and solutions.

## 2.3 Segmentation, targeting, positioning

### 2.3.1 Target groups

Though the consortium acknowledges the value of communicating project activities and outcomes to a broad audience, this DCS specifies groups to be targeted in order to maximize the efficiency and impact of the communication and dissemination strategy. The main Robs4Crops key groups and the key messages for each target group are presented in the table below.

Table 4: Robs4Crops Target Groups

Target Stakeholder Groups	Targeted Stakeholder Profiles (TO WHOM)	Examples	Expected Impacts (WHY)
End-users	<ol style="list-style-type: none"> <li>1. Farmers and farmers' associations</li> <li>2. NGOs and civil society</li> <li>3. Digital Innovation Hubs</li> <li>4. Large-scale companies</li> <li>5. Food processing companies</li> <li>6. Retailers</li> <li>7. Transporters</li> <li>8. Consumers Associations</li> </ol>	<p>ADAS Farming Associations, NILEAS Associations</p> <p>CEMA - European Agricultural Machinery, FVP house, Belgapom, EUPPA</p>	<ol style="list-style-type: none"> <li>i) Advanced knowledge, usefulness and viability of the variety of policy alternatives to promote agricultural diversity and progress</li> <li>ii) Enhance the pilot's replication (through specific demonstration activities) with the possibility to fine tune to their activities via the 3 MVPs</li> <li>iii) Created media attention and their participation and support</li> <li>iv) Increased support for the implementation of ROB4CROPS structures and approaches across Europe</li> <li>v) Boost the outputs' exploitation</li> </ol>
Manufacturers	<ol style="list-style-type: none"> <li>1. Large Agricultural Corporations</li> </ol>	<p>CEMA - European</p>	<ol style="list-style-type: none"> <li>i) Behavioural change by</li> </ol>

## D8.1 Dissemination and Communication Strategy

	<p>2. Tractor manufacturers 3. Producers of agricultural products, as well as software and platforms</p>	<p>Agricultural Machinery, European Crop Protection Association (ECPA)</p> <p>Deere &amp; Company, CHN Industrial, AGCO, Kubota</p> <p>AVR, Farmplan, FieldTrack, Leaf</p>	<p>stakeholders in the context of current and novel market-based regulation and voluntary instruments</p> <p>ii) Adoption of innovative requirements in agro-robotic industry</p> <p>iii) Access and guidance to adapt their products to disruptive solutions with high potential, thus opening up to new markets</p>
<p>Researchers</p>	<p>1. Individual scientists 2. Academia (robotics, agriculture, environment) 3. EU Research projects</p>	<p>Agriculture and robotics researchers and scientists</p>	<p>i) Improved and encouraged additional scientific and engineering activities, contributions for the next generation of robots</p> <p>ii) Ensure local and international scientific visibility of ROBS4CROPS results</p>

## 2.4 Narrative and key messages

Below are identified and described the main personas reflecting the personalities of the Robs4Crops target groups, alongside the key messages aimed to respond to their “pain points”, as well as the channels through which is expected for a specific persona type to reach Robs4Crops.

## D8.1 Dissemination and Communication Strategy

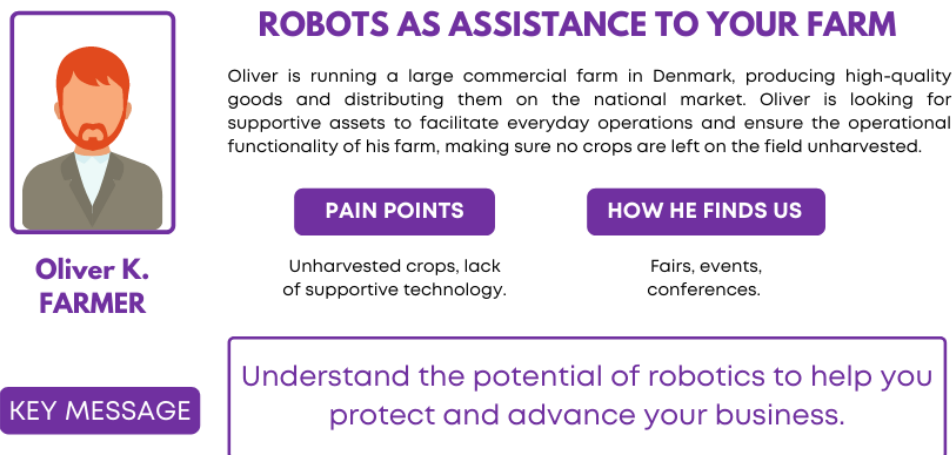


Figure 6: Narrative and key messages – Farmers

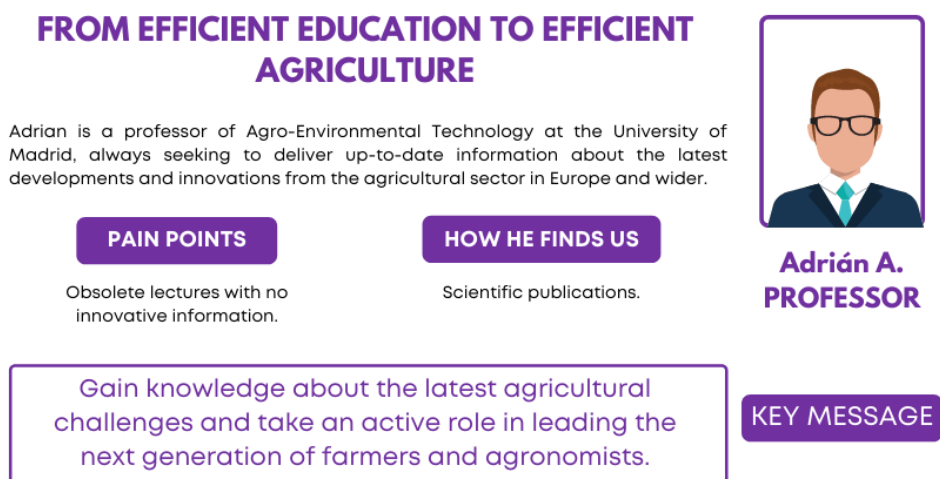


Figure 7: Narrative and key messages - Professor

## D8.1 Dissemination and Communication Strategy

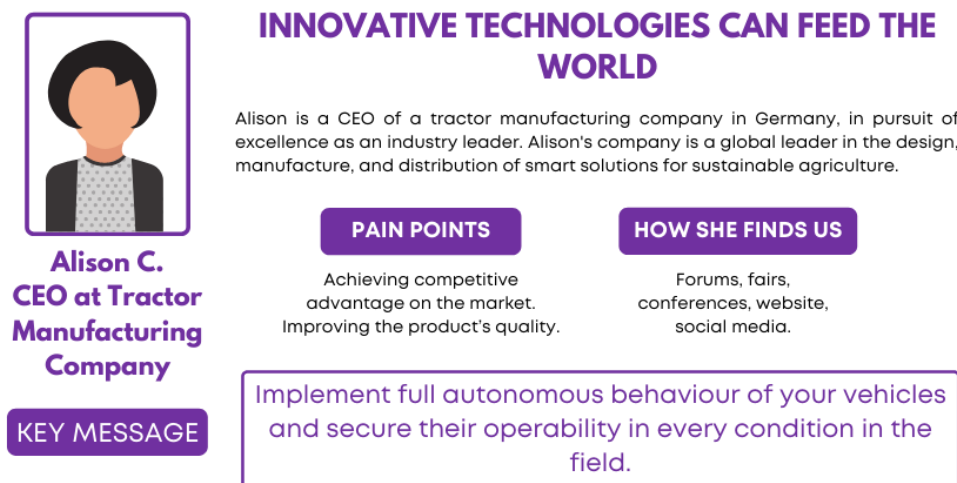


Figure 8: Narrative and key messages – CEO at Tractor manufacturing company

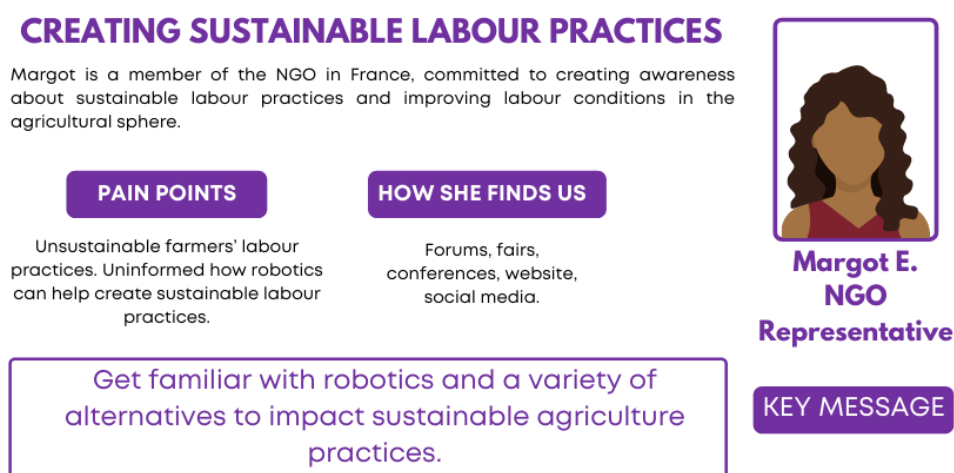


Figure 9: Narrative and key messages - NGO Representative



Figure 10: Narrative and key messages - Innovation Manager

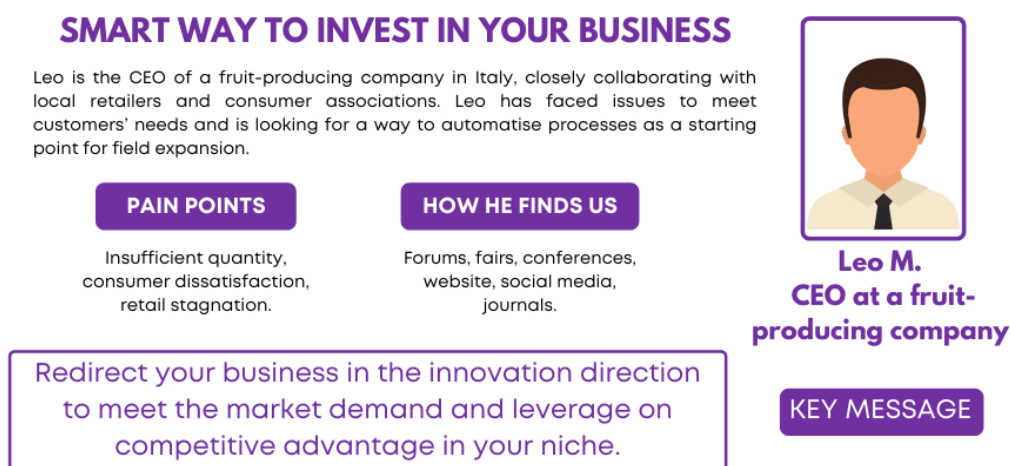


Figure 11: Narrative and key messages - Fruit-producing company

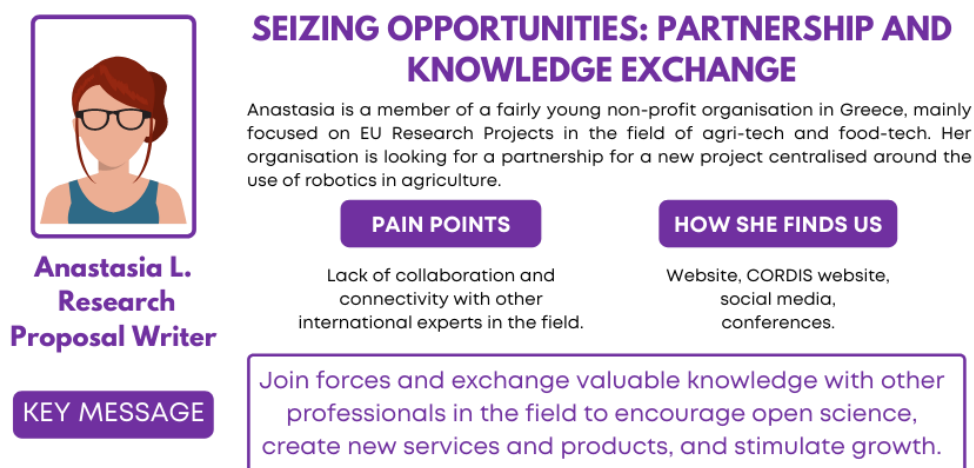


Figure 12: Narrative and key messages - Research Proposal Writer

## BECOMING PART OF THE CHANGE GENERATION

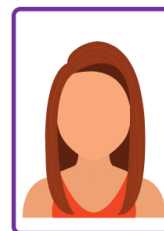
Marija is a third-year student at the University of Agriculture in Serbia. She is interested in pursuing a career in innovative agriculture technologies and is looking to find relevant information sources that would give her more knowledge on the topic.

### PAIN POINTS

Limited information sources and opportunities to gain relevant experience in the field.

### HOW SHE FINDS US

Social media, press releases forums, website, workshops.



**Marija S.**  
Student of  
Agriculture

Learn about the technological innovations in agriculture and join your peers in the effort for creating a sustainable future.

KEY MESSAGE

*Figure 13 Narrative and key messages - Young people*

## 3 Channels, tools and activities

### 3.1 Visual identity

The succinct messaging and a clear, uniform and coherent visual identity were developed during a thoughtful branding exercise. This exercise served to identify and map out the values, principles, and experiences concerning Robs4Crops; align and propose an actionable plan for establishing our voice and form an emotional connection with a target audience.

- **Quality, reliability, efficiency, agility:** bring an aesthetic appeal to Robs4Crops (digital) presence, communicate with a diverse audience, trigger the sense of urgency, tell compelling stories;
- **Uniqueness and differentiation:** bring a cutting-edge character to every aspect of the Robs4Crops robotic ecosystem;

#### 3.1.1 The use of EU emblem

The Robs4Crops logo will be present on all materials related to dissemination and communication.

Furthermore, all dissemination and communication material will contain the official EU emblem, a direct statement on the funding source, and the Grant Agreement number (as shown in the figure below).



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101016807.

*Figure 14: Standard funding source non-disclosure text and European emblem*

For more information concerning the use of the EU emblem, please consult the latest version of the official manuals provided by the EC.

#### 3.1.2 Logo

We chose a bold, modern, minimalistic, yet edgy typographic logo (please, see below). The logo is text-based, incorporating a series of symbols and is based around a set of harmonizing shades of blue and purple.

The main goal behind the logo concept was to create an identity mark that offers a positive uplift; but also triggering the sense of urgency for the shift towards robotics and AI the European farming industry.





Figure 15: ROBS4CROPS Logo

### 3.1.3 Colour palette

At Robs4Crops, we believe that the colour of our logo should not be left to chance or picked solely because it looks good aesthetically.

Based on a common understanding of the psychology of colours, the colour purple represents sophistication and prosperity, while the colour blue represents wisdom and loyalty.

These are the core values of Robs4Crops to be communicated in a credible manner and our focus group testing (i.e., the consortium members), when comparing different colours, have supported our thinking.

As a result, we have chosen the two main colours below for Robs4Crops:

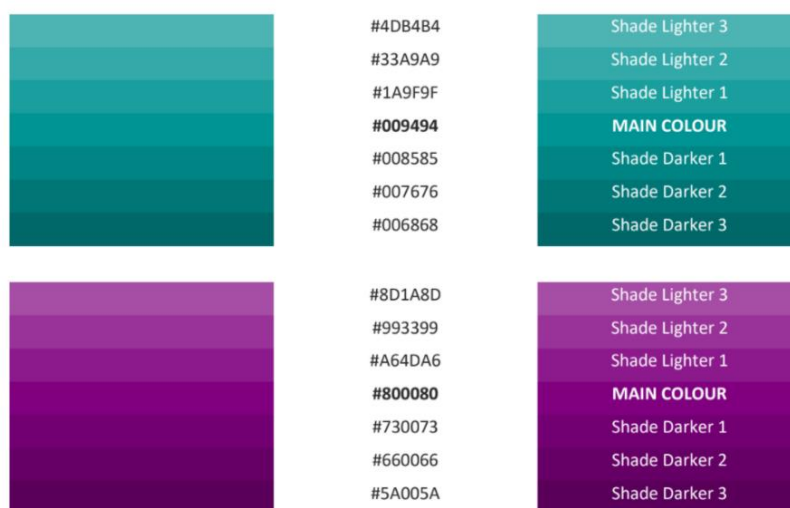


Figure 16: ROBS4CROPS Colour palette

### 3.1.4 Templates

Early in the project lifetime, the following templates were prepared: a .docx memorandum template, .docx deliverable template, and a PowerPoint template to ensure that a standard format will be used for presenting project-related information both internally and externally over the course of the project.

Additional material will be provided by the Dissemination and Communication Manager on a needs-based and ad-hoc basis in the frame of project activities.

## 3.2 ROBS4CROPS channel mix

Robs4Crops will segment its dissemination and communication activities into three categories – online, offline and in-person.

## D8.1 Dissemination and Communication Strategy

Table 5 Robs4Crops Covid-19 response

### ***Adapting our Dissemination & Communication Strategy to COVID-19***

The new operational reality caused by the COVID-19 pandemic presents unique reputational and communication challenges. Tailored communication plans are key to a timely and strategic response to these quickly changing developments. The consortium plans to reduce travel and in-person meetings by turning to online events and digital media—short explainer videos, webinars, and more to raise awareness, foster capacity building and knowledge sharing. The intention is to have at least one webinar every three months for farmers and agribusiness professionals. Our partners will create content while FSH will undertake the logistics of the webinars. We put a lot of emphasis on our Large Scale Pilots in real farming environment; therefore, we will limit physical events to scale up demonstration activities—immersive demonstration events to networks of interest and the full ecosystem (T6.4 and T6.5), focusing on tangible and relevant outcomes. One major event will be organised to promote all results from the trials.

We will mostly focus on digital resources (web, social media, video) during the project's lifespan. Digital marketing is cost-effective, quickly implemented, easily measured, and it allows for great exposure. In this light, we will release short videos (three more generic and four from the trials) as the most effective content marketing tactic. Adequate resources have been assigned to FSH for the final production but also pilot leaders for professional video shooting (and localization) according to guidelines given (GIR, PEG, TER, ABE). These professional videos will be later put together as one final video of the project. Premiered and live video content from demo events will be available to watch on our YouTube channel.

Special attention will be given to the organisation of virtual activities, in forms of webinars and other online events. We plan at least one webinar per trimester open to farmers and practitioners.

Finally, our Newsletter series will be our bright spot, serving frank, realistic discussions about robotics, AI and the future of food. Through our Newsletter, we will offer explainers, stories, and conversations with experts innovating from farm-to-fork (focusing both on technical aspects as well as on the ethics, regulation and the socio-economic impact of robotic farming).

### **3.2.1 Digital channel promotion**

Our digital channels include: Robs4Crops website, content hub/ newsroom (i.e., blog & events section), social media channels, newsletter. Tools to be used to find, monitor, and respond to mentions on social media include [Hootsuite](#), [Explore / Twitter](#), [IfThisThenThat](#), [Buzzsumo](#), [TweetDeck](#), and others.

#### *3.2.1.1 Website*

Having an online presence is a crucial factor for new ecosystems to thrive; hence, the website should be considered as a first step towards the creation of online identity and the overall brand. The website of Robs4Crops is available at [robs4crops.eu](http://robs4crops.eu) and is enhanced with relevant content about our overall concept and methodology, technical approach, pilots, news & events information.

## D8.1 Dissemination and Communication Strategy

Table 6 Robs4Crops Homepage (available at [robs4crops.eu](https://robs4crops.eu))



This hub will provide Robs4Crops with a major opportunity to tap into some of the major concerns that our key stakeholder groups may have concerning technical and non-technical aspects (incl. legal, regulatory, ethical and cyber-security considerations) to boost their awareness, recognition and trust along our way.

### 3.2.1.2 Content hub

The Robs4Crops website features a content hub, which will allow Robs4Crops to address some of the major concerns of our target groups, with a goal to drive regular engagement with our ecosystem and technologies.

Our hub will be a source of valuable content, covering a variety of engaging and relevant topics, e.g., robotics in agriculture, the future of farming automation, the age of robot farmers, AI in agriculture, why ethics is important for robotics and AI technologies in agriculture, regulation of AI in smart farming, etc.

We will regularly publish fresh content on our hub (starting from M4) with proper syndication/ propagation through Robs4Crops social media channels.

### 3.2.1.3 Types of content

The intention behind our Content hub is to offer a dynamic and vibrant meeting point of encounter for all food and farming-related stakeholders, target groups and future collaborators. Besides, our marketing efforts are supposed to encourage loyalty, build credibility and support effective communication.

Table 7: ROBS4CROPS Types of Content

Attract	Engage	Maintain	Galvanize
Infographics & visual content; Media/ influencer outreach; SEO & link building efforts	Blog posts, case studies/ industry reports interviews, webinars	Newsletter, social media marketing, short (explainer) videos	Retargeting campaigns, demo events, networking activities with DIHs and Large-scale Pilots

## D8.1 Dissemination and Communication Strategy

### 3.2.1.4 Outreach to media, industry experts and influencers

As a part of its ecosystem growth strategy, Robs4Crops will regularly run content (re-) distribution campaigns; the goal here is to upscale our ongoing content marketing and outreach efforts, nurture/ expand our ecosystem.

For a successful outreach to reputable and relevant (news) sources, Robs4Crops will follow the next steps:

1. Generate a list of potential industry experts and contacts Robs4Crops can reach out to;
2. Get in touch with the people who oversee content distribution at each of Robs4Crops target sites, and send personalised emails;
3. Actively monitor who links to [robscrops.eu](https://robscrops.eu).

The generation of leads i.e., diverse and relevant contacts who could be valuable to Robs4Crops will mostly be done through the Robs4Crops social media channels (see chapter below for more info). Besides, we make every effort to reach out to media, industry experts and influencers directly.

#### 3.2.1.4.1 Media (incl. specialized and local newspapers)

As mentioned before, Robs4Crops dissemination and communication activities will be focusing on multiple target audiences (see section 2.3). Having in mind the differences between these target groups, as well as the different narratives and key messages that will be distributed to them, distinct media channels will be utilised to raise awareness of Robs4Crops among these audiences.

It is worth mentioning that we will be targeting both regional/ local newspapers (as shown below), and pan-European magazines related to farming, agriculture, technology.



Figure 17 Robs4Crops in the news: Application of robotics systems in table grape cultivations in Greece, starting from October 2021 | YPAITHROS CHORA S.A.

## D8.1 Dissemination and Communication Strategy

U razgovoru sa [AgroSmart](#) ovog jutra pričamo o primeni robotike i automatizacije u poljoprivredi i projektu [Robs4Crops](#) kao katalizatoru održivih promena 🌱



*Figure 18 New roots for agriculture: Robs4Crops as featured on Agrosmart, Serbian agri-magazine*

At the start of the project, all partners received the official Robs4Crops Press Release in the English language. They were kindly asked to translate it into their native languages so that farmers, farmers associations, consumers, etc. in rural areas across these countries will be able to better understand and connect with the vision of Robs4Crops.

Several local media publications have already taken place ([FOOD Navigator](#), [FarmSafely](#), [NieuweOogst](#), [AT-Aandrijftechniek](#), [Agroindustria 360](#), [ypaithros.gr](#)), some in digital, and some in printed form.



*Figure 19 Robs4Crops in FoodNavigator - one of the world's leading resources for the food industry.*

## D8.1 Dissemination and Communication Strategy

A number of publications in local media have already taken place, and one of them is provided below as an example. The rest of the publishing activity will be described in more detail in deliverable *D8.2 Dissemination and Communication activities report (1)*.

For an innovation ecosystem as is the one of Rob4sCrops to become widely accepted, the energy and enthusiasm of the younger generations must be leveraged. Young people (start-up-company members, students, etc.) play an immensely important role in our society as the generation that holds the key to a more sustainable future. Therefore, ROBS4CROPS will strongly focus on engaging this particular target group, primarily through social media, and by delivering tailor-made messages that will spark their interest in Robs4Crops and drive engagement to test Robs4Crops solutions in their immediate ecosystems via our trials.



Figure 20 Robs4Crops in La Robolution

### 3.2.1.5 Social media

There are a number of reasons why Robs4Crops will put a lot of emphasis on social media marketing. The following benefits, among others, have been considered:

- Increase brand awareness and recognition by driving up engagement (comments, likes, shares, and re-posts);
- Foster genuine interactions with the identified target groups;
- Boost lead generation (e.g., by hosting live videos);
- Nurture lasting relationships with key stakeholders;
- Gather knowledge from parallel initiatives/ projects, etc.

Robs4Crops will align its social media activities with its broader communication objectives, effectively meeting the interests and needs of each of the large target groups as well as the differences between the different social media channels. Robs4Crops will seek to showcase the personality behind the brand and the value proposition. With this in mind, Robs4Crops will emphasize stakeholder engagement but prioritise quality over quantity on each social media platform:

## D8.1 Dissemination and Communication Strategy

LinkedIn, Twitter, Facebook and YouTube. Other channels will be taken into account, depending on the context and engagement rates, e.g., the recently launched Clubhouse.

Rob4Crops social media efforts, through Twitter, Facebook, LinkedIn, YouTube, Clubhouse, Instagram, newspapers, and more, will focus on providing trustworthy content in the simple-to-understand format, such as a 2-minute video explainer, to all food and farming-related stakeholders, target groups and future collaborators.

### LinkedIn

A LinkedIn page of Rob4Crops has been set up and it is open to anyone interested in learning about robotics and AI in food and farming, as well as the associated technical and non-technical issues (available at <https://www.linkedin.com/showcase/robs4crops>).

This page will help us strategically connect and professionally engage with our key stakeholders, target groups and especially future collaborators from across the agrifood value chain.

Apart from regular posting on the bi-weekly basis, news and stories from the Rob4Crops ecosystem will be shared in several LinkedIn groups with the focus on 7agrifood and manufacturing industries, such as: [Precision Agriculture](#) with 20,060 members; [Robotics](#) with 9,839 members; [Food Security](#) with 14,613 members; [Global agriculture | Precision Agriculture/Farming; Robotics; UAV; Trading](#) with 46 members; [Agriculture / Agricultural / Agribusiness Professionals - UK & Europe](#) with 9,713 members; [Food and Agriculture Organization of the United Nations](#) with 4,586 members; [Sustainable Agriculture](#) with 95,024 members; [Agritech: Agribusiness; Precision Agriculture; Robotics; Food Security](#) with 24,144 members; [Future Technology: Artificial Intelligence, Robotics, IoT, Blockchain, Bitcoin | Startups \(BIG\)](#) with 165,730 members; [ICT-AGRI ERA-NET](#) with 716 members; [e-Agriculture Community of Practice](#) with 20,456 members; [Agriculture and Environment Researchers](#) with 15,502 members; [Urban Agriculture](#) with 6,904 members; [Sustainable Agriculture Investors](#) with 7,854 members; [Sustainable Agriculture & Rural Development](#) with 9,598 members; [SmartAgriMatics](#) with 839 members; [AGRICULTURE LEGENDS](#) with 39,517 members.

Aside from listed LinkedIn groups, Rob4Crops will enhance its visibility through cooperation with similar projects, such as project [DATADRAGON](#) aiming to overcome main challenges on precision agriculture providing data-driven precision agriculture services and skill acquisition; [SmartAgriHubs](#) aspiring to unleash the innovation potential and digitise European agriculture by building a network of Digital Innovation Hubs (DIHs); [IoF2020](#) dedicated to accelerate adoption of IoT for securing sufficient, safe and healthy food in Europe.

## D8.1 Dissemination and Communication Strategy

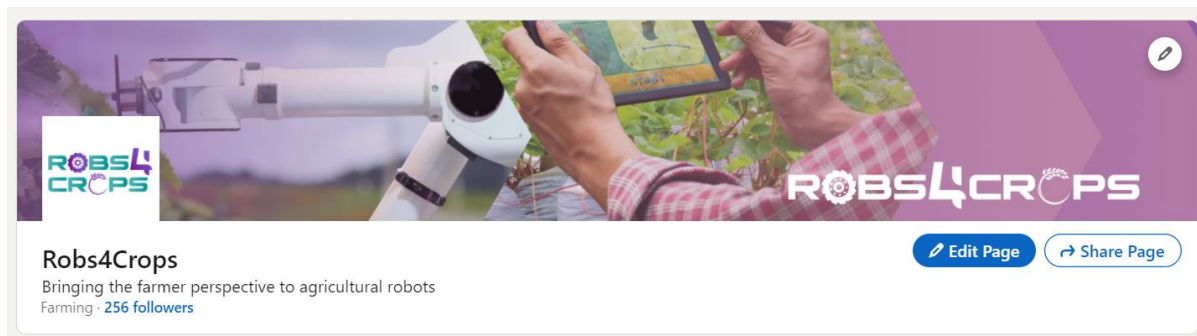


Figure 21: Robs4Crops LinkedIn page

### Twitter

Through a Twitter profile that provides high-quality information and key trends on robotics transformation ([@robs4crops](#)), Robs4Crops aims to establish thought leadership. Robs4Crops will use this networking platform to create a wide community of industry leading innovators who can contribute to the creation, nurturing and scalability of the Rob4Crops ecosystem. Based on insights derived from SproutSocial's Trends Report, trending hashtags relevant for driving Robs4Crops brand awareness include, but not limited to: #AgTech #Robotics #RoboticFarming #AI #precisionAg #FutureOfWork #Automation, #FutureOfFarming, #sustainability, #smartfarming, #GreenDeal, and others.



Figure 22: Robs4Crops a Twitter recent announcement



## D8.1 Dissemination and Communication Strategy



*Figure 23 FIRA\_team sharing our latest feature in FutureFarming on Robs4Crops*

### Facebook

A dedicated Facebook page (available at [@robs4crops](#)) has been set up in the early days of the project. It will deliver messages that are both professional (i.e., speaking in the language of our target groups) and trustworthy, that is, fully trusted by industry. With its sophisticated targeting measures, in the context of Robs4Crops, Facebook represents a massive opportunity for always-on lead generation. Robs4Crops will offer different types of content marketing campaigns (infographics and visual content, short videos, cheat sheets) on a variety of topics (e.g., How robots are defining the future of farming, Agricultural robots: the future of job creation, Reducing the risk in farming with automation and robotics, AI in agriculture – present applications and impact, to name just a few) which appeal to a wide range of needs of our identified target groups, to help build and nurture our ecosystem.

## D8.1 Dissemination and Communication Strategy

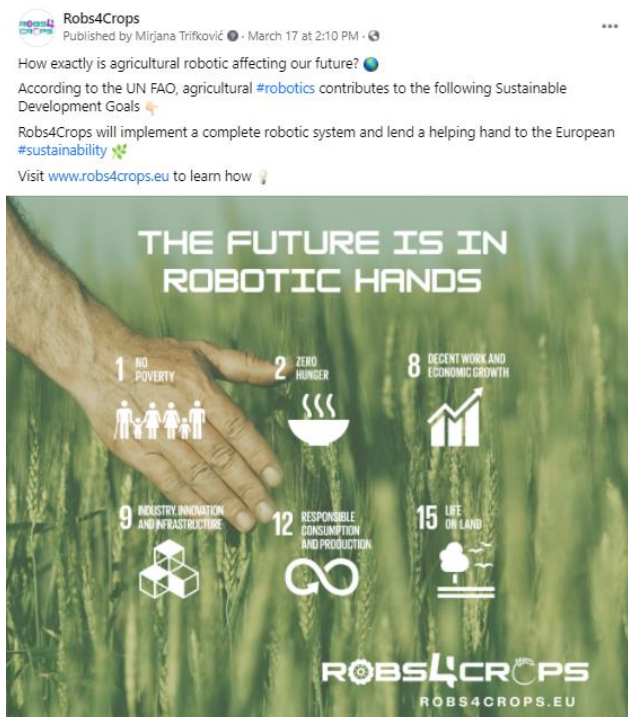


Figure 24: Screenshot of the ROBS4CROPS Facebook Profile

### YouTube

Finally, a dedicated [YouTube](#) channel has been set up and it will feature recorded webinars, demonstration events' videos, videos from pilots, and the final project video. As previously mentioned, several short videos (3 generic and 4 from the pilots) will be compiled as the final video of the project, but they will also be used as stand-alone communication material for social media to drive traction to Robs4Crops solutions.

These carefully planned video materials will enable stakeholders to become more familiarised with the project's activities as well as the project itself. All officially recorded content will be stored on the Robs4Crops official YouTube channel and will be available to those interested in robotics in farming, during and after the project's lifetime.

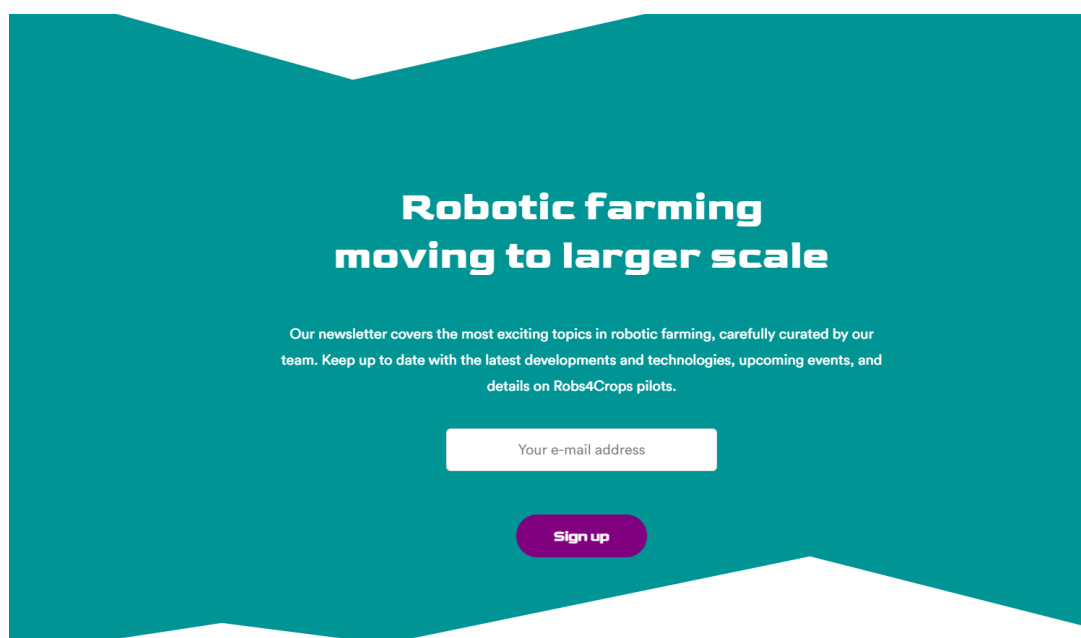
#### 3.2.1.6 Newsletter

Robs4Crops will run bi-monthly email campaigns, from M3 onwards, at regular send times, to communicate the essential pieces of information and news from the Robs4Crops ecosystem. Additionally, the newsletter will include value-added content, such as digital transformation news, trends, analysis, and practical advice. In the long run, our value-based approach to email marketing will foster long-lasting trust and engagement with industry-leading innovators fitting in the Robs4Crops target groups.

To stay engaging and competitive in the inbox, Robs4Crops will consider the following:

## D8.1 Dissemination and Communication Strategy

- **Responsive email design for better engagement** A real-time, automated email marketing service – Mailchimp – will be used to design and distribute responsive, targeted email campaigns, with an enhanced reading experience. The platform will also facilitate reporting and analytics.
- **Dynamic customization and personalization** Robs4Crops email subscription form will be customized with custom required fields (organisation name, organisation type, industry, etc.). This will allow for the creation of customized email campaigns targeting subscriber interests. Our partners will be encouraged to translate Robs4Crops newsletter into their languages and share it within their online channels (incl. the website, social media, and more).
- **Customer lifecycle and multichannel integration** Throughout the entire lifecycle of end-user engagement, Robs4Crops will evaluate the possibilities for email marketing automation. Robs4Crops most important online marketing channels will be integrated with an attempt to encourage people to sign up for email or do a range of follow-up activities.



*Figure 25 Robs4Crops.eu - newsletter sign up form*

As an additional driver of email marketing Return on Investment (ROI), Robs4Crops partners will be encouraged to share their newsletters, as appropriate, within their professional networks. Robs4Crops website will archive any previous newsletters, and they will be made available for download.

### 3.2.2 Offline communication

#### 3.2.2.1 Scientific and technical publication

Scientific and industry journals/ magazines are critical dissemination channels for sharing Robs4Crops results to academic and industrial communities, creating knowledge impact and enabling stakeholders to use the results in their own work.

## D8.1 Dissemination and Communication Strategy

The consortium engages itself to publish the overall project results on the project website, publications and seminars, without charging intellectual property rights. For scientific publications, all consortium members will apply the H2020 Open Access Policy as required by EC and described in OpenAIRE (<http://www.openaire.eu/>). More specifically partners will deposit scientific peer reviewed publications in a centralized repository.

Within Robs4Crops, the consortium partners committed to deliver 10 Scientific publications and conference papers. Research outcomes will be published in the following peer reviewed journals; Journal of Field Robotics (Wiley), Sensors (MDPI), IEEE Transaction on Robotics and Frontiers in Robotics and AI. For the time being, partners who have already committed to the publication of the scientific articles in at least one above-mentioned scientific journals are LMS, UHOH, EUT.

### 3.2.2.2 Promotional material

Print materials for promotional purposes will be created in a variety of formats; these will be available in the digital form whenever possible (as is the case with posters, see Annex). Partners are encouraged to distribute this promotional material on every suitable occasion, making Robs4Crops directly accessible to the right set of key stakeholders and potential future collaborators.

Our partners have received a set of printables which they will be able to print themselves and distribute within their professional circles on relevant occasions. Promotional material is designed to match the visual identity of Robs4Crops with selected colours and logo, including the following categories: Zoom background, T-shirt, stickers, folder, notebook, pen, rollup, poster, cups, beret/ cap, face mask.

*It is important to note that partners are strongly encouraged to avoid the unnecessary printing, and to use exclusively eco-friendly paper or fabric for the material that will be printed, keeping the environment in mind, as this is strongly in line with the Robs4Crops firm commitment to sustainable impact.*

### 3.2.2.3 In-person & events-based outreach

The consortium will seek to promote Robs4Crops at key focus farmer/ research/ industry events that attract high numbers of stakeholders that could benefit from its flexible and modular new-generation system.

These events, at both national and pan-European level, will be leveraged to communicate the core activities and results of the project to its stakeholders, as well as to groups outside of its community.

While it is important to measure impact through metrics, the scope of live events cannot be summarized solely through statistics and numbers. Effort, passion, and excitement are intangible ingredients that contribute to the power of events.

Therefore, Robs4Crops set out to present itself at 30 in-person events, such as conferences, info days, forums, workshops, business events and roadshows, and (co-) organize 20 demonstration large-scale pilots, that attract high numbers of stakeholders.

## D8.1 Dissemination and Communication Strategy

Considering the COVID-19 situation and our sustainability principle, our consortium members will seek to attend physically only the most necessary events.

Some points of Robs4Crops implementation (especially concerning the organization of events) will undoubtedly be affected by the COVID-19 pandemic, events being among those that will be affected the most. For the project to run smoothly in these challenging conditions, many aspects of it have already had to be digitised. Online tools have been of tremendous help in communication and setting up the project's activities. Modern technology will also enable us to successfully implement most of the events planned via online meeting tools.

Some events (e.g., farmer-oriented demonstration events) are, however, expected to be performed in person if the situation allows. The in-person events would in that case be organised in accordance with the concurrent state of pandemic and with respect to the recommended measures for preventing the spread of the virus.

In light of this, two possible scenarios have been envisaged for the implementation of Robs4Crops events:

- **A restrictive scenario** - enables the combination of advantages offered by online activities and those performed offline. However, there is a serious possibility that the pandemic advancement will lead to all events happening online.
- **An intermediate scenario** - no local/ national mobility restrictions, some international restrictions on traveling; low desire for international traveling; gatherings below 50-100 people allowed. For the year 2022 it is expected to also experience an intermediate scenario or even lower (no restrictions, i.e., most people vaccinated).

### 3.2.2.4 *Robs4Crops events*

Robs4Crops will organise farmer- and ecosystem-oriented demonstration events, where an important role will be trusted to the large-scale pilots in demonstrating the robotic systems that were put into practice.

The demonstration events will feature a production of video content to be distributed electronically. FSH together with relevant partners (GIR, PEG, TER, ABE) will develop a series of short videos and they all will be compiled as the final video of the project.

Organise the Final Pan-European Event to promote all results/pilots of the project in a major relevant event (robotics, agriculture, farm automation). Besides serving to present ROBS4CROPS to a wider public and to promote the project, it will as well serve the purpose of collecting feedback.

### 3.2.2.5 *Non-Robs4Crops events*

Robs4Crops sets out to participate in various pertinent international events that are going to be held in an online format or in-person.

## D8.1 Dissemination and Communication Strategy

An event tracking spreadsheet has been created and shared with all the consortium partners. The aim of this sheet is to plan the attendance of Robs4Crops at events and its co-organization of workshops, etc. (either physical or online). Partners will be regularly inserting any conferences, workshops, webinars, fairs or/ and exhibitions happening.

In the next six months, due to travel restrictions and safety measures enacted because of the COVID-19 outbreak, Robs4Crops is considering partaking in online events, such as:

- **FIRA. International Forum of Agricultural Robotics - April 15, 2021**
- **Smart Farming Conference - October 1st, 2021;**
- **Virtual Conference on Agri, Food & Aqua; May 12-13, 2021**
- **3rd Webinar on Agriculture & Food Research; April 29-30, 2021**

 **FIRA**  
March 18 at 10:18 AM · 🌐

🚩 FIRA OPEN DAY: PITCH 🚩

New EU Project Robs4Crops Accelerates Shift towards Robotics, presented by [Wageningen University & Research](#)

From farming controllers and smart implements to fully autonomous farming systems, Robs4Crops (a new project) is helping farmers fill labour shortages — shaking up the farming landscape.

🕒 15-04-21 / 9:45 - 10:05 am (CET)

Free webinar, full program here 👉 <https://www.fira-agtech.com/en/fira-open-day/>  
#FIRAOD #labour #robotics #farming



*Figure 26 Robs4Crops at FIRA Open Day*

Other relevant events to be followed depending on the COVID-19 situation across Europe include:

## D8.1 Dissemination and Communication Strategy

Table 8: Non-Robs4Crops Events

Event name	Event description	Location and dates
Agritechnica	The world's largest trade fair for agricultural machinery and equipment	Hanover, Germany 14-20 November 2021
EU Robotics Week	Various robotics related activities across Europe for the general public	Various locations 19-29 Nov 2020
Cool Farm Alliance Annual Meeting	Sustainability metrics for agriculture, integrated software platforms at farm scale	Cambridge, United Kingdom March/April each year
15th ICAH	International Conference on Agriculture & Horticulture Revolutionizing Agriculture for Future Food Demand	Istanbul, Turkey 16-17 August 2021
ICINCO	International Conference on Informatics in Control, Automation and Robotics	Online streaming 6-8 July, 2021
FIMA	International exhibition for agricultural machinery held biannually	Zaragoza, Spain February 2022

### 3.2.2.6 Networks and liaisons with other relevant initiatives and projects

Robs4Crops will investigate complementarity with other initiatives, projects and programmes, different in size, scale and scope to ensure sustainability of its solutions and contribute to the ecosystem's growth and scalability. The motivation for such activities is a strive to exchange up-to-date significant information within pertinent networks.

With respect to reaching out to wide networks and liaisons, Robs4Crops will aim to participate in international forums, conferences, fairs, collaboration workshops, etc., seek to jointly publish press and news announcements, to exchange best practices, especially in areas of ecosystem building.

All the information shared through all the "multipliers" and networks at the disposal of the consortium, will be planned to correspond with the publication of newsletters and will be followed by targeted e-mails sent to a number of public and private institutions.

Liaison will be set up with the agROBOfood and SmartAgriHubs projects and their regional clusters across Europe, and with other DIHs (TRINITY and RIMA and agile and maintenance).

**agROBOfood** (H2020, 2019-2022) – agROBOfood is an EU funded project aiming to build a European ecosystem for the effective adoption of robotic technologies in the agri food sector, which in turn will become more efficient and competitive. The heart of the project is formed by Innovation Experiments, organized and monitored by Digital Innovation Hubs (DIHs). In 7 Regional Clusters, Initial Innovation Experiments will demonstrate robotics innovations in agri food to ensure replicability and wide adoption across Europe. The network already counts

## D8.1 Dissemination and Communication Strategy

49 Digital Innovation Hubs and 12 Competence Centers and it will be extended and strengthened during the project.

**SmartAgriHubs** (H2020, 2017-2020) is dedicated to accelerating the European agri-food sector's digital transformation. It will consolidate, activate and extend the current ecosystem by building a network of Digital Innovation Hubs (DIHs) that will boost the uptake of digital solutions by the farming sector. This will be achieved by integrating technology and business support in a local one-stop-shop approach involving all regions and all relevant players in Europe.

Other than the projects listed above, Robs4Crops will aim to create synergies with a number of other EU-funded projects whose activities, key technologies, or certain elements of their vision, correspond to those of Robs4Crops.

Brief descriptions of these projects, as well as the potential for synergies between them and Robs4Crops, have been introduced below.

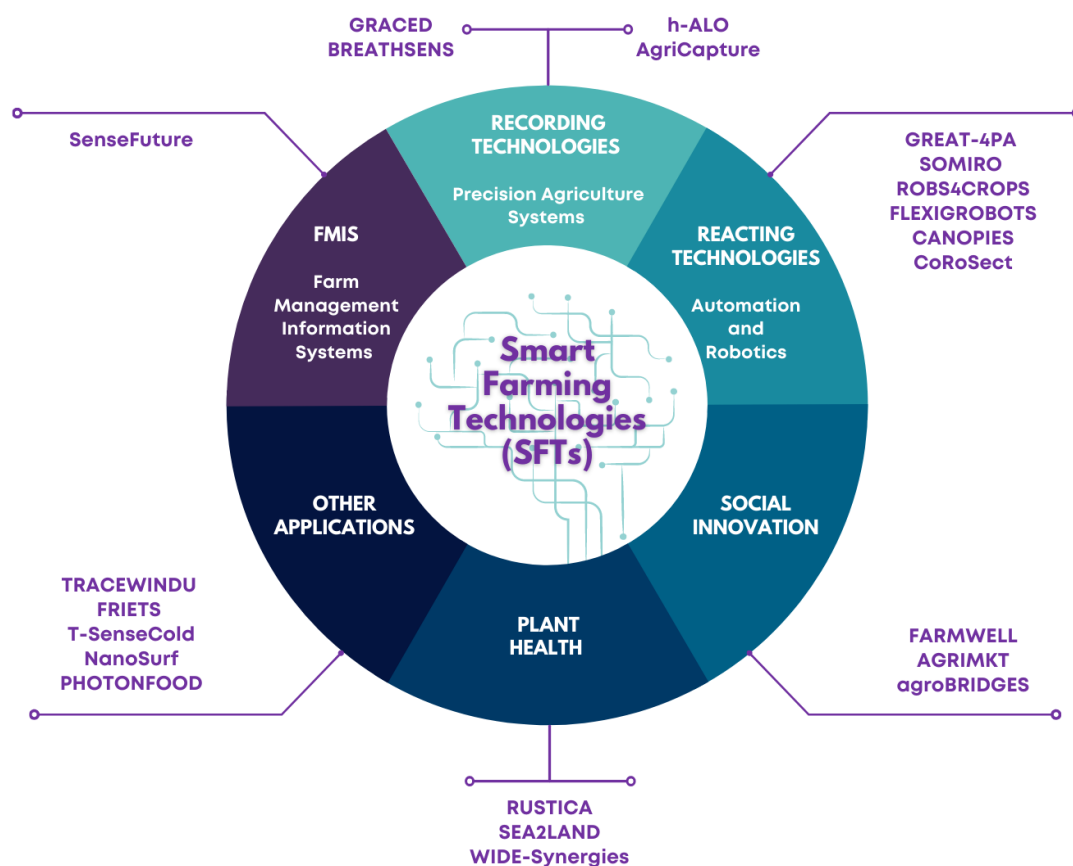


Figure 27: Synergies with other robotics and AI projects

Table 9: Synergies with relevant projects

Project	Brief description	Envisaged synergies
GRACED		



## D8.1 Dissemination and Communication Strategy

BREATHSENSE	<p>The EU-funded BREATHSENS project aims to apply a novel technology based on breath analysis to detect diseases in dairy cattle. The new method will comprise a non-invasive and automated spectroscopic sensor enabling disease detection before its clinical symptoms manifest. The sensor will improve cow health and reduce costs and environmental impacts, in addition to ensuring a better quality of life for the animals.</p>	<p>The ROBS4CROPS robotic farming solution consists of three components: smart implements, autonomous vehicles, and the farming controller, all of which will include some form of sensing technology.</p> <p>This is what ROBS4CROPS has in common with GRACED, BREATHSENS and h-ALO which are all using sensing to apply novel solutions.</p>
h-ALO	<p>h-ALO aims to develop and demonstrate in real-setting a new photonic-based sensor that will allow local food producers and retailers to control food quality and safety, therefore increasing competitiveness in the whole food production value chain.</p>	<p><i>Smart implements</i> aim to prevent run-off of crop protection chemicals by applying them only at the right spots, where weeds are detected by sensors in real-time.</p> <p>ROBS4CROPS will implement full autonomous behaviour for <i>autonomous agricultural vehicles</i>, which will be achieved by sensors, models and software that are implemented on the robot itself.</p> <p>ROBS4CROPS <i>Farming Controller</i> will be designed and implemented for establishing seamless communication of all resources and sensors with a digital representation of the field, under a common framework.</p>
AgriCapture	<p>AgriCapture seizes upon Earth Observation – free and open Copernicus data in particular – to deliver a highly innovative, flexible, and scalable solution for soil C capture projects/initiatives, targeting 1 of the 2 only potential mass C sinks through proven and</p>	<p>ROBS4CROPS aims to help in the reduction of gas emissions with the utilisation of robotic platforms, exploiting the full potential and not wasting power, contributing in the reduction of soil compaction because of the lighter equipment deployed in the</p>

## D8.1 Dissemination and Communication Strategy

	increasingly popular practices (i.e. Reg Agri).	field. The AgriCapture project has a similar mission - to propose an innovative solution for soil C capture. Another common point of these two projects is that to deliver their solutions, both projects will make use of the EU satellite-based systems for observation (Copernicus).
SenseFuture	The EU-funded SenseFuture project will utilise novel approaches for continuous deep water sensing to unprecedented depths. Specifically, it will combine aerial canopy temperature imaging and autonomous root phenotyping using convolutional neural networks (CNN). The findings will contribute to formulation of a better decision-support system for farmers and breeders that can assist in overcoming numerous related challenges.	The ROBS4CROPS robotic farming solution consists of three components: smart implements, autonomous vehicles, and the farming controller, all of which will involve some form of a sensing technology. This is what ROBS4CROPS has in common with SenseFuture and TRACEWINDU which are also using sensing to apply innovative agriculture solutions.
TRACEWINDU	The overall research and technology development goal of TRACEWINDU is to improve productivity of vineyards by using novel combination of Plant Protection Products while simultaneously geographic origin analysis is integrated in a multi-approach strategy to ensure wine traceability/authentication. Such approach will be correlated with the obtained outputs of sensory analysis to generate a labelling score chart data in form of product passport included in smart tags.	
FRIETS	FRIETS project aims in training crossdisciplinary scientists from 5 European countries, in collaboration with international SMEs, for the development and	Throughout the project, ROBS4CROPS will organise a number of training events that will ensure wider acceptance and

## D8.1 Dissemination and Communication Strategy

	<p>marketization of personalized, nutritious and innovative, soft fruit smart snacks that contain no added sugar, sodium or chemical preservatives, as palatable way to increase daily fruit consumption.</p>	<p>understanding of novel robotic technologies. The approach of FRIETS project corresponds to that of ROBS4CROPS in a sense that both projects are providing training services to their target groups in order to accelerate market adoption of their product/ solution.</p>
<p>PHOTONFOOD</p>	<p>PHOTONFOOD aims to develop an integrated solution that combines innovations in smart paper-based sample treatment, mid-infrared (MIR) sensing, and advanced data analysis. To transform MIR sensing from existing lab solutions into a portable solution to broad usage in the food chain, PHOTONFOOD aims to develop novel infrared light sources, specifically interband cascade light-emitting diode (IC-LED), and interband and quantum cascade lasers (ICL/QCL).</p>	<p>The ROBS4CROPS's autonomous vehicles and smart implements that make up the hardware-part of the robotic system will be equipped with many sensors and the data of all these sensors will be logged to examine the performance of the system. The large amounts of data thus collected will in effect demonstrate the power of IoT, and expose farmers to a practical case of Big Data. PHOTONFOOD will also use sensing and advanced data analysis to measure chemical and microbial contaminations along the food chain.</p>
<p>RUSTICA</p>	<p>the EU-funded RUSTICA project is focussing on fruits and vegetables, aiming to develop the technology to convert organic residues from this sector into novel bio-based fertiliser products. The technical solution consists of five conversion processes (carboxylic acid production, microbial biomass production, electro dialysis, insect breeding and biochar production), which can be combined depending on the available waste streams and integrated with state-of-the-art technologies such as composting.</p>	<p>Integrating the ROBS4CROPS systems within farmers' operational processes will lead to substantial resource savings (among which are fertilizers), will protect health of agricultural workers, and will improve crop protection. On the other hand, RUSTICA aims to develop technology for bio-based fertiliser production. Both projects aim to reduce the negative impact of artificial fertilisers on the environment.</p>

## D8.1 Dissemination and Communication Strategy

SEA2LAND	<p>Based on the circular economy model, the EU-funded SEA2LAND project will promote the production of large-scale fertilisers in the EU from own raw materials. This solution is expected to reduce the soil nutrient imbalance in Europe. To test the solution, the project will produce several BBFs for local crops and conditions as well as others for exporting (with high value and effectiveness to ensure a low environmental impact).</p>	<p>Both SEA2LAND and ROBS4CROPS are aiming to decrease soil contamination through innovative technologies and approach, and although ROBS4CROPS aims to do it with the help of robotics, and SEA2LAND through bio-based fertilisers, the ultimate goal of these two projects remains the same.</p>
WIDE-Synergies	<p>The EU-funded WIDE-Synergies project's hypothesis is that there are synergies in the synchronised management of pests and their natural enemies. The project will conduct two field experiments to assess the effects of pesticide-free farming, identify the synergies and estimate the effects on crop yield. Both experiments will compare farming practices of controlling weeds without herbicides known to also affect insects and pathogens.</p>	<p>One of the objectives of ROBS4CROPS is to contribute to the reduction in pesticide/herbicide use. This aligns well with the aim of WIDE-Synergies to assess the effects of pesticide-free farming, as its experiments will provide useful information on controlling pests and weeds without using harmful chemicals.</p>
FARMWELL	<p>Globalisation has been increasing the economic, environmental and social pressures on the agricultural sector, making farmers' lives tougher. It has been shown that the farming community is not immune to mental health struggles or feelings of isolation. The EU-funded FARMWELL project will make social innovation research and practices more accessible to both individual farmers and farming families to boost their wellbeing.</p>	<p>FARMWELL's goal is to boost the farmers' wellbeing, while ROBS4CROPS aims to reduce the negative impact of heavy labour and the use of chemicals on the health and wellbeing of agricultural workers. It is evident that both projects share the desire to improve the overall mental and physical health state of these important value chain actors.</p>
agroBRIDGES	<p>The EU-funded agroBRIDGES project will empower farmers with practical knowledge and</p>	<p>Both agroBRIDGES and ROBS4CROPS are working</p>

## D8.1 Dissemination and Communication Strategy

	<p>tools to set up new business and marketing models based on SFSCs with a focus on reducing intermediaries and linking producers with consumers. To this end, it will follow an integrated methodology to establish regional multi-actor structures for demand-driven innovation, and deliver a combination of communication materials, training programmes, events and digital tools in the agroBRIDGES toolbox.</p>	<p>towards developing novel business models which could significantly influence the agriculture value chain, leading to widespread adoption of innovative technologies and practices, as well as stronger cooperation between various value chain actors.</p>
<p>GREAT-4PA</p>	<p>Bent on setting new node standards, the EU-funded GREAT-4PA project aims to redefine the core electronic components of game-changing nodes for precision agriculture. The proposal focuses on developing green autonomous nodes, allowing them to physically disappear after a period of stable operation so they can be left in the soil after use with zero environmental impact.</p>	<p>The ROBS4CROPS project introduces novel, beyond the state-of-the-art methods and approaches for the development and demonstration of a precision agriculture robotic system.</p> <p>At the same time, GREAT-4PA works towards developing environmentally-friendly precision agriculture components. These two projects together could help redefine the ways in which precision agriculture is being utilized.</p>
<p>SOMIRO</p>	<p>In line with the Digitising European Industry initiative under their description of smart agriculture, the SOMIRO project will develop a flat-worm-inspired mm-scale swimming robot with month-long energy autonomy, local intelligence, and ability to continuously generate data and optically communicate to reduce farming's environmental impact in terms of carbon footprint,</p>	<p>SOMIRO project aims to use robotics to reduce the environmental impact of farming practices. This coincides with one of the ROBS4CROPS important objectives, which is to help farmers switch to more environmentally-friendly cultivation, powered by robotics.</p>

## D8.1 Dissemination and Communication Strategy

	over fertilization, pesticide use, and overfeeding.	
<b>FLEXIGROBOTS</b>	FlexiGroBots proposes a Platform for developing heterogeneous multi-robot systems and applications which allows for i) more versatility by using the same robots for different observation and intervention tasks; ii) more cooperation between heterogeneous (ground and aerial) robots to accomplish more complex missions; iii) more valuable data to generate accurate insights into the fields, crops and robotics operations; iv) more autonomy for real-time adaptation of mission plans as well as robot behaviour at the crop level; v) more precision to carry out specific tasks in a very localized way.	Both FlexiGroBots and Robs4Crops are concerned with robotics and how it can be utilised to improve or simplify the existing agricultural processes, completing complex tasks currently done by humans. By joining forces, these two projects could help build the ecosystem for agricultural robotics and promote its wider acceptance among stakeholders.
<b>CANOPIES</b>	The goal of CANOPIES is to develop a novel collaborative human-robot paradigm addressing the challenges of Human Robot Interaction and Human-Robot Collaboration in the unstructured highly dynamic outdoor environment of permanent crop farming (Agri-Food Area). The project's approach will be demonstrated through an integrated system composed by farming robots and logistics robots with a real-world validation of two economically relevant agronomic operations within a table-grape vineyard: harvesting and pruning.	The vision of ROBS4CROPS is an agricultural sector where robots will replace humans in all heavy and unpleasant work, and CANOPIS aims to address challenges of human-robot interaction and collaboration. These two projects combined could contribute greatly to the mainstreaming of robotics in farming.
<b>CoRoSect</b>	CoRoSect addresses the dramatic need of coupling research on bionomics and life cycle of insects intended to be used as food and feed, with new robotic tools and protocols for mechanization and automation	CoRoSect and Robs4Crops have much in common from both the technical side and the key challenges they are tackling - primarily those related to food security, environment and

## D8.1 Dissemination and Communication Strategy

	of insect farming, which is a critical point stressed by the Technical Expert Consultation on Assessing the Potential of Insects as Food and Feed in Assuring Food Security.	sustainability. Each will tackle similar problems but from a different perspective and angle. Learning from each other and sharing key findings will ensure the success of both projects.
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The connection of ROBS4CROPS and Digital Innovation Hubs, as well as reusable assets are presented in the table below.

At the moment, collaboration is foreseen with [SmartAgriHubs](#) and [Agrobofood](#).

As a first step, our Dissemination and Communication team has already initiated contacts with these relevant initiatives; more specifically, we expect an interview with Robs4Crops coordinator to be published in the SmartAgriHubs newsletter.

*Table 10: The Connection of R4C & DIHs*

From/To	Networks	Reusable assets
From DIH Ecosystem to ROBS4CROPS	<ul style="list-style-type: none"> <li>• Farmers. Agronomists</li> <li>• App developers</li> <li>• Agricultural machinery companies</li> </ul>	<ul style="list-style-type: none"> <li>• Results from similar experiments</li> <li>• Needs identification from farmers</li> <li>• Standards, Protocols</li> </ul>
From ROBS4CROPS to DIH Ecosystem	<ul style="list-style-type: none"> <li>• Farmers' organizations</li> <li>• Industry partners (agricultural machinery)</li> <li>• Agrifood start-up hub</li> </ul>	<ul style="list-style-type: none"> <li>• Results from experiments</li> <li>• Robots-as-a-service (RaaS) Business model tools</li> <li>• Training material</li> </ul>

The initial intention is to support service/ solution provision, for example, in test before investing, ecosystem building or skills development via pilots and demonstrations.

For sure, as our solutions and technologies evolve over the course of the project, we will make them available (based on IPR and agreements between our partners) for further reuse.

Announcements on such collaboration possibilities and opportunities will be shared on a dedicated page on [Robs4Crops.eu](#).

## 4 Schedule and timing

The communication and dissemination intensity is presented on the graph below, with the visible intensity scale, ranging from low, medium, and high intensity, arranged among the three main phases of the project, from M1 to M45. The communication intensity reaches its highest peak in the second phase, gradually decreasing in the third phase.

On the other side, the dissemination intensity is increasing continuously over the three phases of the project, following the development and improvement of the Robs4Crops ecosystem.

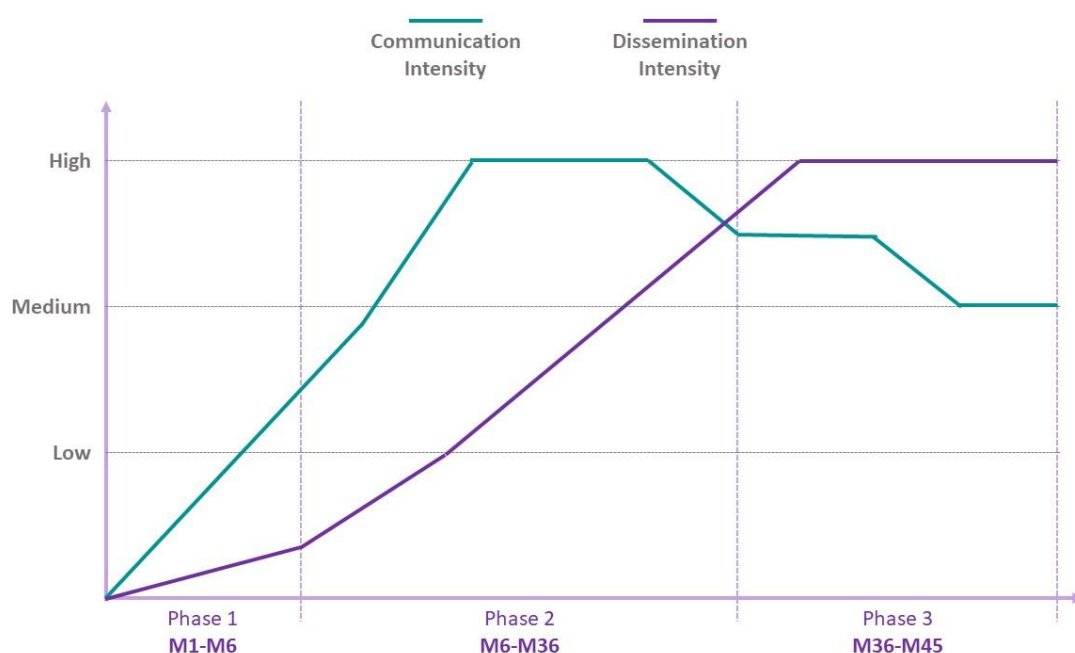


Figure 28: DCS Intensity

Dissemination activities in ROBS4CROPS are designed based on the displayed phases, increasing in intensity as the project progresses.

Table 11: Dissemination Activities according to the Phases of R4C

Phase	Dissemination activities
Phase I	Approach-oriented content: Promotion of the project pilots, dissemination of existing knowledge related to the ROBS4CROPS solutions and initial insights from validated learning.
Phase II	Result-oriented content: project intermediate and final results. Dissemination of the results and achievements of the pilots.
Phase III	Project final results. Dissemination of the results and achievements of the pilots, various analysis and assessment of the project results (mainly through scientific publications and conferences). Research



## D8.1 Dissemination and Communication Strategy

outcomes will be published in the following peer reviewed journals; Journal of Field Robotics (Wiley), Sensors (MDPI), IEEE Transaction on Robotics and Frontiers in Robotics and AI.

# 5 Monitoring and evaluation

To achieve the successful implementation of Dissemination and Communication Strategy, and fulfilment of the relevant objectives, a systematic monitoring will be carried out throughout the project implementation. All the communication and dissemination activities will be regularly monitored with ongoing adjustments whenever necessary.

The weekly and monthly follow-up will ensure that the activities envisaged are being carried out in accordance with the initial communication and dissemination plan.

To monitor the weekly and monthly growth on digital channels, the following tools will be applied:

- Email Campaign Tracking & Reporting
- Google Analytics reporting dashboards
- Social Media Metrics dashboard (Pirate metrics)

These tools/dashboards will be kept and regularly updated on the project's OneDrive. Furthermore, each partner is expected to report on their own public outreach activities, and they are encouraged to do so *once a month* via a dedicated [Typeform](#) questionnaire (please, see Annex below for reference).

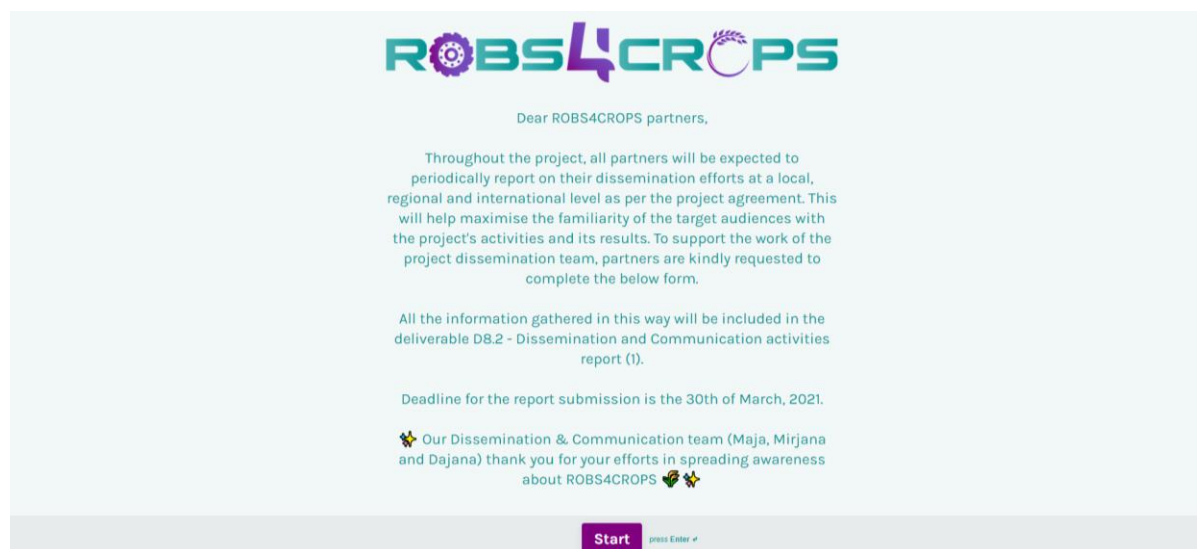


Figure 29 Robs4Crops - Periodic Dissemination and Communication report (available at: <https://79nrntcmuaa.typeform.com/to/M9wQmRrT>)

Dissemination and Communication activities are as good as the individual partners' efforts to implement them; therefore, the project heavily relies on the initiatives carried out by each consortium member.

Therefore, all consortium partners are encouraged to take part in dissemination and communication activities by regularly updating their social media channels with Robs4Crops news and content distribution.

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In order to track and benchmark the KPIs defined in the proposal phase, the Monthly Outreach Reporting Dashboard will be used.

The table below outlines critical KPIs to be tracked and benchmarked to prove the overall value of Robs4Crops outreach activities, and set further guidance regarding marketing, growth hacking and ecosystem building.

The monitoring system (see table below) will provide evidence on whether the Robs4Crops Dissemination and Communication Strategy is being implemented as initially planned and scheduled. It will also address possible implementation problems and identify whether further action is required to ensure that objectives are met.

Table 12: DCS KPIs

ROBS4CROPS Dissemination & Communication KPIs		
Online	Offline	In-person
<p><b>30,000</b> Number of visits to the project website <i>(source: Information registered in Google analytics)</i></p> <p><b>2,000</b> Number of social media followers <i>(source: Information registered in the social media administrator panel)</i></p> <p><b>2,000</b> Number of e-newsletter recipients <i>(source: E-mail record)</i></p> <p><b>10</b> Press releases <i>(source: Regular reporting on dissemination)</i></p> <p><b>10</b> Number of videos released <i>(source: YouTube channel analytics)</i></p>	<p><b>5,000</b> Number of distributed printed/digital promotional materials <i>(source: Regular reporting on dissemination activities)</i></p> <p><b>10</b> Scientific publications and conference papers <i>(source: Regular reporting on dissemination activities)</i></p> <p><b>10</b> Publications in peer-reviewed journals <i>(source: Regular reporting on dissemination activities)</i></p>	<p><b>30</b> Number of project events where ROBS4CROPS is presented (conferences, forums, workshops, business events, Roadshow) <i>(source: Regular reporting on dissemination and communication activities; Event Report)</i></p> <p><b>20</b> Demonstrations of large-scale pilots <i>(source: Regular reporting on dissemination activities)</i></p>

By performing regular monitoring of dissemination and communication activities, it is possible to assess if the action plan is being carried out properly and on time. It will be possible to see which activities had the most significant impact on the stakeholders (both in quantitative and qualitative terms). The conclusions from these monitoring will be considered for the Dissemination and Communication Strategy updates.

To help maximise the familiarity of the target audiences with the project's activities and its results, all partners are expected to periodically report on their dissemination efforts at a local, regional and international level, throughout the

## D8.1 Dissemination and Communication Strategy

project. Once a month, partners are expected to fulfil the questionnaire with the information about the **type of event/activity** they organised or plan to organise to support dissemination and communication plan – workshop, webinar, pitch event, video, press release, etc.; **estimated total funding amount**; **timing & location** of the dissemination activity along with **other relevant information**; **channels used to promote the project** along with the links of the channels used for dissemination; **the number of organisations and people reached** through dissemination activities; which **target groups** were reached through the dissemination activity; and to **upload relevant photos/videos, agenda, screenshot, etc.** to a shared folder. Collecting this information will provide an accurate picture of each partner's dissemination efforts, demonstrating the activities associated with the set Dissemination and Communication Strategy.

All consortium partners will be strongly encouraged to take active participation in the communication and dissemination activities of Robs4Crops. They have already been invited to distribute the translated press releases across relevant local media providers/ magazines. They have also been invited to share and engage with project's posts on social media channels and, in doing so, increase the organic reach of Robs4Crops.

All partners' communication and dissemination efforts will be documented through a [Typeform](#) questionnaire. Periodic reporting done this way will provide the communication and dissemination team of Robs4Crops with a clear overview of the activities that have been undertaken and decide whether their intensity need to be increased.

The results from our activities from M01 until M04 will be presented in detail in the next deliverable - D8.2 Dissemination and Communication activities report (1). This document will also provide a benchmark analysis concerning metrics and KPIs achieved.

# 6 Conclusion

As explained in the chapters above, this strategy, contents and tools for dissemination and communication activities, as envisaged at the very project beginning, will be updated in line with project progress.

The report (D8.1) introduces the Robs4Crops dissemination and communication strategy, a comprehensive document that outlines the tools, channels and activities to be introduced throughout the project to ensure broad acceptance and sustainability of the Robs4Crops solutions.

This document outlines the strategy, activities, and tools with which the Robs4Crops project will communicate with a range of stakeholders, as well as the timing of the various activities throughout the lifetime of the project. A periodic review of this document will be conducted to ensure it includes up-to-date contents and opportunities for disseminating and communicating relevant information on our technologies and solutions. In addition, as strategies are evaluated, updates should be made as needed.

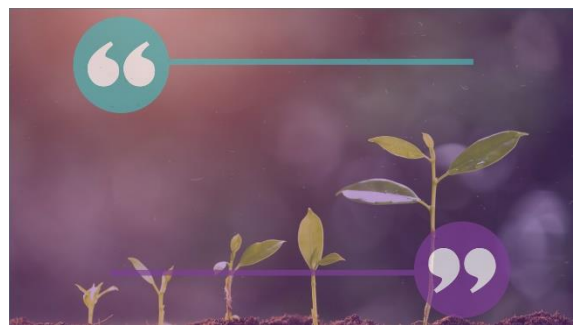
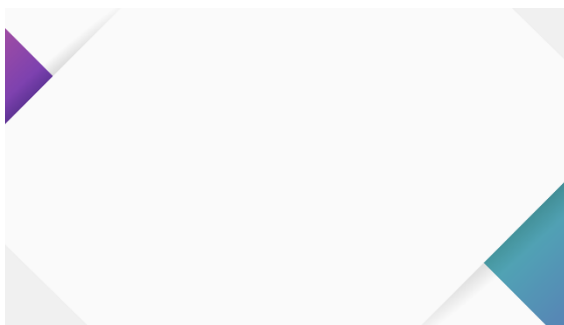
Since the project is still in an early phase, the communication and dissemination plan designed in this report will be considered as a living plan that will go through a number of iterations throughout the project.

As identified in this strategy, there are a number of important avenues to be exploited in the dissemination and communication efforts and Robs4Crops will make sure to reach out to the greatest number of people, creating opportunities for the different targeted stakeholders to participate in value co-creation for the entire ecosystem. This is expected to pave the way to mainstreaming the large-scale implementation of robotics and automation in European farming.

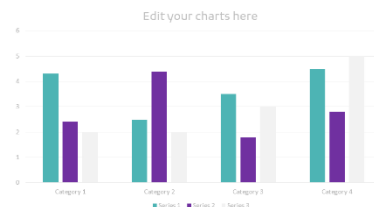
# Annex

## Dissemination and Communication Material material

R4C PowerPoint template



Jk9T	Jk9T	Jk9T
E	S	T
E	S	T



R4C Memorandum template

R4C Deliverable template

## D8.1 Dissemination and Communication Strategy



*R4C Zoom background*

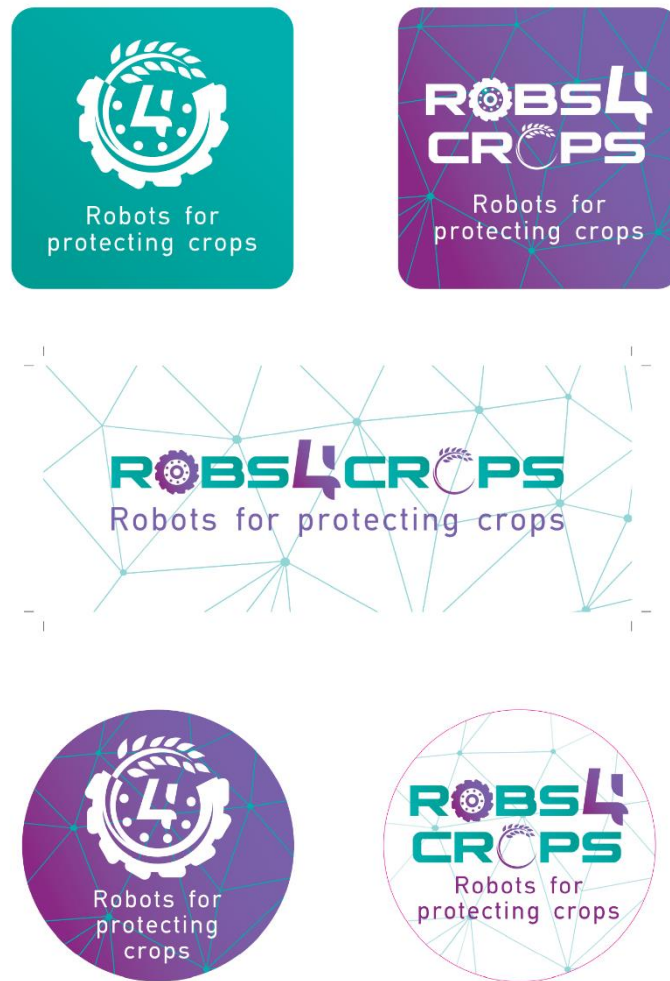


*R4C T-shirts*

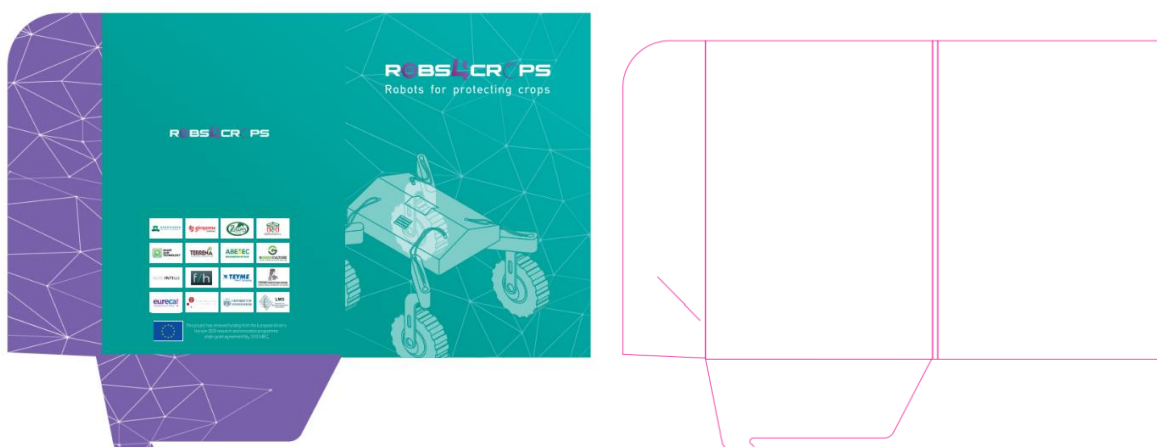


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### R4C Stickers



### R4C Folder





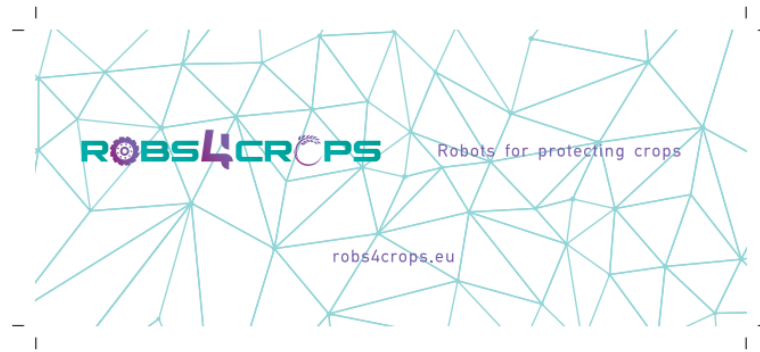
## D8.1 Dissemination and Communication Strategy

### R4C Notebook



R4C Pen

## D8.1 Dissemination and Communication Strategy



## D8.1 Dissemination and Communication Strategy

### R4C Rollup

**ROBS4CROPS**  
Robots for protecting crops

Large scale pilots  
Multidisciplinary ecosystem  
Complete robotic farming system

Partners: AGRONORMA, GIPROMA, FOLAPES, GEB, SMART AGR TECHNOLOGY, TERRENA, ABETEC, BICOM/CAVARE, IASRO/INTELLI, f/h, TEYME, EURECA!, LMS

[robs4crops.eu](http://robs4crops.eu) | [Twitter](#) | [Facebook](#) | [LinkedIn](#) | [Robs4Crops](#)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 1010116807

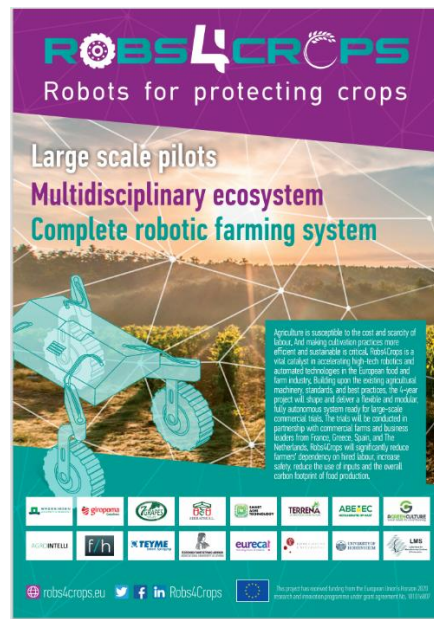
## D8.1 Dissemination and Communication Strategy

### R4C Posters

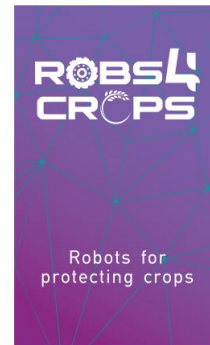
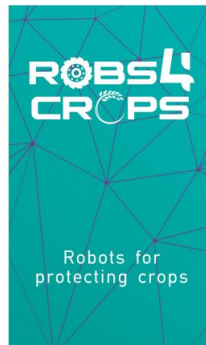
Format A2



Format A3



### R4C Cups



## D8.1 Dissemination and Communication Strategy

*R4C Cap*



ROBS4CROPS



*R4C Face mask*



ROBS4CROPS



## Robs4Crops Press Release #1 (English)

Press Release | *Wageningen, [Date Month Year]*

### New EU project set to accelerate the shift to robotics and automation and fundamentally shake up the agrifood landscape

*From farming controllers and smart implements to fully autonomous farming systems, a new European Commission-funded project, Robs4Crops, is helping farmers fill labour shortages – shaking up the farming landscape.*

The Robs4Crops project will accelerate the shift towards large-scale implementation of robotics and automation in European farming. With a €7.9 million budget co-funded by the European Union, the project represents a high-tech paradigm shift with a tremendous potential impact on productivity, efficiency, and environmental sustainability. Robs4Crops will demonstrate that robotics and related technologies can bring precision and repeatability to a series of mundane, repetitive tasks, thus reducing the need for humans to engage in work that is unpleasant, unhealthy and requires zero thinking. The project will start on 1 January 2021 and will run for four years.

#### *Time for change in our changing times*

The most important challenge in European agriculture is the cost and scarcity of labour. While the cost of labour affects the profitability of farming, the COVID-19 pandemic demonstrates that the scarcity of labour threatens the very existence of our food **supply chains** - from farm to fork. Growers across Europe are reporting limited access to labour. Fields of fruits and vegetables have been left unharvested as thousands of seasonal workers have been unable to reach farms that rely on their work while the virus has struck down others.

Due to coronavirus, **robotics and farm automation technologies have seen a significant spike in interest and investment**, marking the start of a structural change in food and farming. But, for the most part, commercial robotics is still mainly unexploited.

Robs4Crops aims to address and resolve the organizational and technological challenges associated with robotic farming's widespread adoption. By building upon the existing agricultural machinery, standards, and best practices, the project will shape and deliver a fully autonomous system, ready for large-scale commercial trials. Robs4Crops' flexible and modular new-generation system will greatly reduce the dependency of farmers on hired labour, increase **safety**, and **reduce the use of inputs and the overall carbon footprint of food production**. The project will focus on the most demanding and repetitive field operations, namely **mechanical weed control and spraying against pests and diseases**.

#### *Bringing the farmer perspective to agricultural robots*

## D8.1 Dissemination and Communication Strategy

In a bold commitment to **mainstreaming robotic farming**, Robs4Crops will provide a safe testing ground to iterate further and innovate within a nurturing ecosystem. We put the farmers and end-users at the heart of everything we do: from user requirements analysis to iterative testing and the business model experimentation process. The trials will be conducted in partnership with commercial farms and business leaders from France, Greece, Spain, and The Netherlands.

The project will multiply its impact by fostering cooperation and synergies across the growing pan-European ecosystem of Digital Innovation Hubs (DIHs) and flagship EU-funded projects such as SmartAgriHubs, agROBOfood, etc.

**Dr Frits van Evert, Senior Scientist at Wageningen University & Research and Robs4Crops Project Coordinator, commented:** "Agriculture is very sensitive to the cost and scarcity of labour. And making cultivation practices more efficient and sustainable is critical. Robs4Crops is a game-changer in revitalising the European food and farm industry and the vital catalyst in accelerating the adoption of high-tech robotics and automated technologies in agriculture."

### Notes to editors:

#### At a glance - Key facts and figures

- Instrument: Horizon 2020, Information and Communication Technologies, H2020-ICT-2018-20
- Total costs: €7.928.092,50
- Contribution of the European Union: €6.834.121,50
- Duration: 4 years, 2021-2024
- Consortium: A total of 16 partners from 7 European countries



*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 101016807.*

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## D8.1 Dissemination and Communication Strategy

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## Rob4Crops Press Release #1 (NL)

Persbericht | *Wageningen*, (Daum maand jaar)

### Nieuw EU-project zal de overstap naar robotica en automatisering versnellen en de agrarische sector grondig veranderen

*Van landbouwers en slimme werktuigen tot volledig geautomatiseerde landbouwsystemen, een nieuw project, gefinancierd door de Europese Commissie, Rob4Crops, helpt agrariërs met het opvangen van arbeidstekorten – een grondige verandering van de landbouw.*

Het Rob4Crops project zal de overstap naar grootschalige toepassing van robotica en automatisering in de Europese landbouw versnellen. Met een budget van €7.9 miljoen en gefinancierd door de Europese Unie, vertegenwoordigt het project een high-tech revolutie met een enorme potentiële impact op productiviteit, efficiëntie en ecologische duurzaamheid. Rob4Crops zal laten zien dat robotica en aanverwante technieken, precisie en haalbaarheid kunnen brengen in een reeks alledaagse, repetitieve taken, waardoor mensen minder vaak werk hoeven te doen dat onaangenaam en ongezond is en waar niet bij nagedacht hoeft te worden. Het project is gestart op 1 januari 2021 en heeft een looptijd van 4 jaar.

#### *Tijd voor verandering in de veranderde tijden*

De belangrijkste uitdaging in de Europese landbouw is arbeid - zowel de kosten als de schaarste van arbeid. Hoewel de arbeidskosten de winstgevendheid van de landbouw onder druk zetten, toont de COVID-19 pandemie aan dat de schaarste van arbeid nog belangrijker is, en het functioneren van de voedselketen in gevaar kan brengen – van boer tot bord. Telers in heel Europa melden een tekort aan arbeid. Velden met fruit en groentes zijn niet geoogst omdat duizenden seizoenarbeiders door het virus niet in staat waren om naar het werk te reizen.

Als gevolg van het coronavirus wordt er nu sterk geïnvesteerd in robotica en automatisering in de landbouw, dit markeert het begin van een structurele verandering in de agri-food sector. Maar op dit moment wordt robotica nog maar mondjesmaat op commerciële basis toegepast in de landbouw.

Rob4Crops streeft ernaar om de organisatorische en technologische uitdagingen die grootschalige adoptie van landbouwrobots nu nog in de weg staan, aan te pakken en op te lossen. Door voort te bouwen op bestaande landbouwmachines, standaarden en praktijkproeven, zal het project een autonoom systeem vormgeven en opleveren dat klaar is voor commerciële proeven op grote schaal. De nieuwe flexibele en modulaire systemen zullen de afhankelijkheid van arbeid aanzienlijk verminderen, de veiligheid vergroten en de ecologische footprint van de voedselproductie verkleinen. Het project zal zich richten op de meest

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veeleisende repetitieve veldwerkzaamheden, namelijk mechanische onkruidbestrijding en het spuiten tegen ziekten en plagen.

### *Landbouwrobots in het perspectief van de agrariër*

In een gedurfde poging om robotlandbouw te mainstreamen, zal Robs4Crops een veilige proeftuin bieden voor iteratieve ontwikkeling en innovatie in een netwerk van samenwerkende partners. We stellen de agrariërs en andere gebruikers centraal bij alles wat we doen: van een analyse van gebruikersvereisten tot een proces voor nieuwe businessmodellen. De proeven worden uitgevoerd in samenwerking met commerciële boerderijen en het bedrijfsleven van Frankrijk, Griekenland, Spanje en Nederland.

Het project zal zijn impact vergroten door samen te werken binnen het groeiende 'pan-European' ecosysteem van Digital Innovation Hubs (DIH's) en door de EU gefinancierde projecten zoals SmartAgriHubs en agROBOfood.

**Dr. Frits van Evert, Senior Scientist bij Wageningen University & Research en projectcoördinator van Robs4Crops:** "De agrarische sector is erg gevoelig voor de kosten en schaarste van arbeid. En het is van cruciaal belang om teeltmethoden efficiënter en duurzamer te maken. Robs4Crops is een doorbraak in het revitaliseren van de Europese voedsel- en landbouwindustrie en de essentiële 'katalysator' bij het versnellen en de acceptatie van high-tech robotica en geautomatiseerde technieken in de landbouw"

**Opmerkingen voor redacteurs:**

### **In één oogopslag – de belangrijkste feiten en cijfers**

- Instrument: Horizon 2020, Informatie en Communicatie Technologieën, H2020-ICT-2018-20
- Totale kosten: € 7.928.092,50
- Bijdrage van de Europese Unie: € 6.834.121,50
- Looptijd: 4 jaar, 2021-2024
- Consortium: in totaal 16 partners uit 7 Europese landen



*Dit project heeft financiering ontvangen van het Horizon 2020-onderzoeks- en innovatieprogramma van de Europese Unie onder subsidieovereenkomst nummer 101016807.*

## Robs4Crops Press Release #1 (DK)

Pressemeddelelse / *Wageningen (dato, måned, år)*

Nyt EU-projekt skal fremskynde skiftet til robotteknologi og automatisering og grundlæggende forbedre landbrugssektoren

*Fra styresystemer og smarte redskaber til fuldt autonome landbrugssystemer skal et nyt EU-finansieret projekt, Robs4Crops hjælpe landmændene til at modstå mangel på arbejdskraft og generelt forbedre landbrugssektoren.*

Robs4Crops-projektet vil fremskynde skiftet mod implementering af robotter i stor skala og automatisering i europæisk landbrug. Med et budget på 7,9 mio. €, der primært finansieres gennem EU, repræsenterer projektet et højteknologisk paradigmeskifte med en enorm potentiel indvirkning på produktivitet, effektivitet og miljømæssig bæredygtighed. Robs4Crops vil demonstrere, at robotteknologi og relaterede teknologier kan bringe præcision til en række repeterbare opgaver i landbruget, hvilket reducerer behovet for mennesker til opgaver der er usunde og ensformige. Projektet starter den 1. januar 2021 og løber i fire år.

### *Tid til forandring i vores skiftende tider*

Den vigtigste udfordring i det europæiske landbrug er høje omkostninger og mangel på arbejdskraft. Mens arbejdsomkostningerne påvirker landbrugets rentabilitet, viser COVID-19-pandemien, at manglen på arbejdskraft truer selve eksistensen af vores fødevarerforsyningskæder - fra jord til bord. Producenter i hele Europa rapporterer om begrænset adgang til arbejdskraft. Marker med frugt og grøntsager er ikke blevet høstet, da tusinder af sæsonarbejdere ikke har været i stand til at nå ud til bedrifterne.

På grund af corona virus er der kommet en betydelig interesse for robotteknologi og landbrugs automatiseringsteknologier, hvilket markerer starten på en strukturændring i fødevarer og landbrugssektoren. Men for det meste er kommerciel robotteknologi stadig hovedsagelig uudnyttet.

Robs4Crops sigter mod at løse de organisatoriske og teknologiske udfordringer forbundet med robotters udbredte anvendelse. Ved at bygge videre på de eksisterende landbrugsmaskiner, standarder og "best practice" vil projektet udforme og levere et fuldt autonomt system som er klar til store kommercielle forsøg. Robs4Crops fleksible og modulære tilgang vil i høj grad mindske landmændenes afhængighed af lejet arbejdskraft, **øge sikkerheden og reducere brugen af input og fødevarerproduktionens samlede CO<sub>2</sub>-udledning**. Projektet vil fokusere på nogle af de mest krævende og gentagne feltoperationer, nemlig mekanisk ukrudtsbekæmpelse og sprøjtning mod skadedyr og sygdomme.

*At bringe viden til robotterne set fra landmandens perspektiv*

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Ved at forpligtige sig til at integrere landbrugsrobotter i landbrugssektoren vil Robs4Crops skabe et sikkert miljø til test, gentagelser og udvikling i relevante økosystemer. Vi sætter landmændene og slutbrugerne i centrum for alt, hvad vi laver: fra brugerkravsanalyse til iterativ test og processer til forbedring af forretningsmodeller. Forsøgene gennemføres i et partnerskab med kommercielle bedrifter og virksomhedsledere fra Frankrig, Grækenland, Spanien og Holland.

Projektet vil fremme samarbejde og synergier på tværs af et voksende europæisk økosystem af innovationshubs (DIH'er) og store EU-finansierede projekter som eksempelvis SmartAgriHubs, og agROBOfood mv.

**Dr Frits van Evert, seniorforsker ved Wageningen University & Research og Project koordinator for Robs4Crops, udtaler:** "Landbruget er meget følsomt over for omkostninger og knaphed på arbejdskraft. Det er derfor afgørende at skabe mere effektive og bæredygtige dyrkningsmetoder i erhvervet. Robs4Crops kan blive en "game-changer" til at genstarte den europæiske fødevarer- og landbrugsindustri og en vital katalysator for at fremskynde implementering af højteknologisk robotteknologi og automatiserede systemer i landbruget. "

### Noter til redaktøren:

Et overblik - Nøglefakta og tal

- Instrument: Horizon 2020, informations- og kommunikationsteknologi, H2020-ICT-2018-20
- Samlede omkostninger: € 7.928.092,50
- Bidrag fra Den Europæiske Union: € 6.834.121,50
- Varighed: 4 år, 2021-2024
- Konsortium: I alt 16 partnere fra 7 europæiske lande



*Dette projekt har modtaget finansiering fra Den Europæiske Unions Horizon 2020-forsknings- og innovationsprogram under grant agreement nr. 101016807.*

## Rob4Crops Press Release #1 (DE)

Press Release | Wageningen, [Date Month Year]

### Neues EU-Projekt soll den Übergang zu Robotik und Automatisierung beschleunigen und die Agrar- und Ernährungslandschaft grundlegend umkrempeln

*Von landwirtschaftlichen Steuerungen und intelligenten Anbaugeräten bis hin zu vollständig autonomen landwirtschaftlichen Systemen - ein neues, von der Europäischen Kommission finanziertes Projekt, Rob4Crops, hilft Landwirten, den Arbeitskräftemangel zu beheben - und mischt die Agrarlandschaft auf.*

Das Rob4Crops-Projekt wird den Übergang zur großflächigen Implementierung von Robotik und Automatisierung in der europäischen Landwirtschaft beschleunigen. Mit einem Budget von 7,9 Millionen Euro, das von der Europäischen Union kofinanziert wird, stellt das Projekt einen Hightech-Paradigmenwechsel mit einem enormen potenziellen Einfluss auf Produktivität, Effizienz und Umweltverträglichkeit dar. Rob4Crops wird zeigen, dass Robotik und verwandte Technologien Präzision und Wiederholbarkeit in eine Reihe von alltäglichen, sich wiederholenden Aufgaben bringen können und so die Notwendigkeit für Menschen reduzieren, sich mit Arbeiten zu beschäftigen, die unangenehm und ungesund sind und kein Denken erfordern. Das Projekt beginnt am 1. Januar 2021 und hat eine Laufzeit von vier Jahren.

#### *Zeit für Veränderung in unserer sich wandelnden Zeit*

Die wichtigste Herausforderung in der europäischen Landwirtschaft sind die Kosten und die Knappheit von Arbeitskräften. Während die Kosten für Arbeitskräfte die Rentabilität der Landwirtschaft beeinflussen, zeigt die COVID-19-Pandemie, dass der Mangel an Arbeitskräften die Existenz unserer Lebensmittelversorgungsketten bedroht - vom Bauernhof bis auf den Tisch. Landwirte in ganz Europa berichten von begrenztem Zugang zu Arbeitskräften. Obst- und Gemüsegelder wurden nicht abgeerntet, weil Tausende von Saisonarbeitern nicht in der Lage waren, die Betriebe zu erreichen, welche auf ihre Arbeit angewiesen sind, während andere das Virus niedergestreckt hat.

Aufgrund des Coronavirus haben Robotik und Technologien zur Automatisierung von Landwirtschaftsbetrieben deutlich an Aufmerksamkeit gewonnen und einen Anstieg an Investitionen erfahren, was den Beginn eines strukturellen Wandels in der Lebensmittel- und Landwirtschaft markiert. Doch größtenteils ist die kommerzielle Robotik noch weitgehend ungenutzt.

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Robs4Crops zielt darauf ab, die organisatorischen und technologischen Herausforderungen zu lösen, die mit der breiten Einführung der robotergestützten Landwirtschaft verbunden sind. Aufbauend auf den bestehenden landwirtschaftlichen Maschinen, Standards und Best Practices wird das Projekt ein vollständig autonomes System entwickeln und liefern, welches für groß angelegte kommerzielle Versuche bereit ist. Das flexible und modulare System der neuen Generation von Robs4Crops wird die Abhängigkeit der Landwirte von angeheuerten Arbeitskräften erheblich reduzieren, die Sicherheit erhöhen und den Einsatz von Betriebsmitteln sowie den gesamten CO<sub>2</sub>-Fußabdruck der Lebensmittelproduktion verringern. Das Projekt wird sich auf die anspruchsvollsten und repetitiven Feldarbeiten konzentrieren, nämlich die mechanische Unkrautbekämpfung und das Spritzen gegen Schädlinge und Krankheiten.

### *Die Perspektive des Landwirts auf Agrarroboter*

Robs4Crops setzt sich für die Verbreitung der robotergestützten Landwirtschaft ein und bietet ein sicheres Testfeld für weitere Iterationen und Innovationen innerhalb eines förderlichen Ökosystems. Wir stellen die Landwirte und Endnutzer in den Mittelpunkt unseres Handelns: von der Analyse der Nutzeranforderungen bis hin zu iterativen Tests und der Erprobung von Geschäftsmodellen. Die Versuche werden in Partnerschaft mit kommerziellen Landwirtschaftsbetrieben und Geschäftsführern aus Frankreich, Griechenland, Spanien und den Niederlanden durchgeführt.

Das Projekt wird seine Wirkung vervielfachen, indem es Kooperationen und Synergien innerhalb des wachsenden paneuropäischen Ökosystems der Digital Innovation Hubs (DIHs) und der von der EU geförderten Vorzeigeprojekte wie SmartAgriHubs, agROBOfood etc. fördert.

Dr. Frits van Evert, Senior Scientist an der Wageningen University & Research und Robs4Crops Projektkoordinator, kommentierte: "Die Landwirtschaft ist sehr empfindlich gegenüber den Kosten und der Knappheit von Arbeitskräften. Und es ist entscheidend, die Anbaupraktiken effizienter und nachhaltiger zu gestalten. Robs4Crops ist ein entscheidender Faktor für die Wiederbelebung der europäischen Lebensmittel- und Agrarindustrie und ein wichtiger Katalysator für die beschleunigte Einführung von Hightech-Robotik und automatisierten Technologien in der Landwirtschaft."

Hinweise für die Redaktion:

### **Auf einen Blick - Wichtige Fakten und Zahlen**

- Instrument: Horizont 2020, Informations- und Kommunikationstechnologien, H2020-ICT-2018-20
- Gesamtkosten: €7.928.092,50
- Beitrag der Europäischen Union: €6.834.121,50

## D8.1 Dissemination and Communication Strategy

- Laufzeit: 4 Jahre, 2021-2024
- Konsortium: Insgesamt 16 Partner aus 7 europäischen Ländern



*Dieses Projekt wurde durch das Forschungs- und Innovationsprogramm Horizon 2020 der Europäischen Union unter der Fördervereinbarung Nr. 101016807 gefördert.*

## Robs4Crops Press Release #1 (EL)

Δελτίο Τύπου | Wageningen, [Ημέρα Μήνας Χρόνος]

Νέο Ευρωπαϊκό Πρόγραμμα με στόχο την καταλυτική υιοθέτηση της ρομποτικής και των αυτοματισμών αλλά και την θεμελιώδη αναδιαμόρφωση του αγροδιατροφικού τομέα.

Από ελεγκτές γεωργικών μηχανημάτων και δημιουργία έξυπνων εφαρμογών έως και την κατασκευή πλήρους αυτόνομων γεωργικών συστημάτων, ένα νέο έργο το οποίο χρηματοδοτείται από την Ευρωπαϊκή Επιτροπή, το Robs4Crops, βοηθά τους αγρότες να καλύψουν τις ελλείψεις εργασίας – αναδιαμορφώνοντας έτσι τον αγροτικό τομέα.

Το Ευρωπαϊκό έργο Robs4Crops θα επιταχύνει τη μετάβαση προς τη δημιουργία ρομποτικών εφαρμογών αλλά και αυτοματισμών μεγάλης κλίμακας στην Ευρωπαϊκή γεωργία. Με συγχρηματοδότηση ύψους 7,9 εκατομμυρίων ευρώ από την Ευρωπαϊκή Ένωση, το έργο αντιπροσωπεύει ένα υψηλής τεχνολογίας πρότυπο με τεράστιο δυνητικό αντίκτυπο στην παραγωγικότητα, την αποδοτικότητα και την περιβαλλοντική βιωσιμότητα. Το Robs4Crops θα αποδείξει ότι η ρομποτική και οι σχετικές τεχνολογίες μπορούν να φέρουν ακρίβεια και επανάληψη σε μια σειρά από συνηθισμένες, επαναλαμβανόμενες εργασίες, μειώνοντας έτσι την ανάγκη των ανθρώπων να ασχοληθούν με μια εργασία που είναι δυσάρεστη, ανθυγιεινή και δεν απαιτεί πολύπλοκη σκέψη. Το έργο θα ξεκινήσει την 1η Ιανουαρίου 2021 και θα διαρκέσει τέσσερα χρόνια.

### *Ώρα για αλλαγή σε μία περίοδο μεταβολών*

Η πιο σημαντική πρόκληση για την Ευρωπαϊκή γεωργία αποτελεί το κόστος αλλά και έλλειψη εργασίας. Καθώς το κόστος εργασίας επηρεάζει την κερδοφορία του γεωργικού τομέα, η πανδημία COVID-19 αποτελεί παράδειγμα της έλλειψης εργασίας απειλώντας την ίδια την ύπαρξη της αλυσίδας εφοδιασμού τροφίμων – από την παραγωγή στην κατανάλωση. Αποτελεί γεγονός ότι οι γεωργικοί παραγωγοί σε όλη την Ευρώπη αναφέρουν τον περιορισμένο αριθμό εργατικού δυναμικού. Επιπροσθέτως, πολλά χωράφια με φρούτα και λαχανικά αφέθηκαν χωρίς συγκομιδή, όπως και χιλιάδες εποχιακοί εργαζόμενοι δεν είχαν πρόσβαση στα αγροκτήματά τους, ενώ άλλοι αναφέρουν ότι ο ιός αποτέλεσε σημαντική πληγή στην εργασία τους.

Λόγω του κορωνοϊού, ο τομέας της ρομποτικής αλλά και των γεωργικών αυτοματισμών σημειώνει σημαντική συγκέντρωση ενδιαφέροντος αλλά και επενδύσεων, σηματοδοτώντας έτσι την έναρξη μιας διαθρωπικής αλλαγής στα τρόφιμα και την γεωργία. Όμως, ως επί το πλείστον, η ρομποτική σε εμπορικό επίπεδο εξακολουθεί να παραμένει ανεκμετάλλευτη.



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Το Robs4Crops στοχεύει στην αντιμετώπιση και επίλυση των οργανωτικών και τεχνολογικών προκλήσεων που σχετίζονται με την ευρεία υιοθέτηση της ρομποτικής στη γεωργία. Με βάση τα ήδη υπάρχοντα γεωργικά μηχανήματα, τα πρότυπα και τις βέλτιστες πρακτικές, το έργο θα διαμορφώσει και θα προσφέρει ένα πλήρως αυτόνομο σύστημα, έτοιμο για εμπορικές δοκιμές μεγάλης κλίμακας. Το ευέλικτο και αρθρωτό σύστημα νέας γενιάς του Robs4Crops θα μειώσει σημαντικά την εξάρτηση των αγροτών από την πρόσληψη εργασίας, θα αυξήσει την ασφάλεια και θα μειώσει τη χρήση εισροών όπως επίσης και το συνολικό αποτύπωμα άνθρακα κατά την διάρκεια της παραγωγής τροφίμων. Το έργο θα επικεντρωθεί στις πιο απαιτητικές και επαναλαμβανόμενες αγροτικές διαδικασίες οι οποίες είναι ο **μηχανικός έλεγχος ζιζανίων** αλλά και ο **ψεκασμός ενάντια σε παράσιτα και ασθένειες**.

### *Αλλάζοντας την προοπτική των αγροτών στα γεωργικά ρομπότ*

Με μία τολμηρή δέσμευση της **ενσωμάτωσης της ρομποτικής στην γεωργία**, το Robs4Crops θα παρέχει ένα ασφαλές έδαφος δοκιμών για την επέκταση και την καινοτομία ενός αναπαλαιωμένου οικοσυστήματος. Εισάγοντας τους αγρότες αλλά και τους τελικούς χρήστες στην καρδιά όσον πρόκειται να δημιουργηθούν: ξεκινώντας από την ανάλυση των απαιτήσεων των χρηστών μέχρι και τις επαναλαμβανόμενες δοκιμές όπως επίσης και κατά την διαδικασία πειραματισμού ολόκληρου του επιχειρηματικού μοντέλου. Οι δοκιμές θα διεξαχθούν σε συνεργασία με εμπορικά αγροκτήματα και ηγετικές επιχειρήσεις από τη Γαλλία, την Ελλάδα, την Ισπανία και την Ολλανδία.

Το έργο θα πολλαπλασιάσει τον αντίκτυπό του ενισχύοντας και παροτρύνοντας τις συνεργασίες αλλά και τις συνέργειες καθ' όλο του Πανευρωπαϊκού οικοσυστήματος των Ψηφιακών Κόμβων Τεχνολογίας (DIHs), όπως επίσης και άλλων σημαντικών Ευρωπαϊκών προγραμμάτων όπως το SmartAgriHubs, agROBOfood, κ.α.

**Ο Δρ. Frits van Evert, Επικεφαλής Επιστήμων του Πανεπιστημίου & Έρευνας του Wageningen αλλά και Συντονιστής του Έργου Robs4Crops, αναφέρει:** “Η γεωργία είναι πολύ ευαίσθητη όσον αφορά το κόστος και την έλλειψη εργασίας. Η δημιουργία νέων πιο αποτελεσματικών αλλά και βιώσιμων καλλιεργητικών μεθόδων αποτελεί κρίσιμο κομμάτι. Το Robs4Crops είναι ένα ριζοσπαστικό έργο για την αναδιαμόρφωση της Ευρωπαϊκής βιομηχανίας τροφίμων αλλά και της αγροτικής βιομηχανίας, το οποίο έχει καταλυτικό ρόλο στην υιοθέτηση της ρομποτικής και της τεχνολογίας αυτοματισμών στην γεωπονία.”

**Σημειώσεις για τους συντάκτες:**

**Με μία ματιά – Βασικά στοιχεία και Σχήματα**

- Όργανο: Ορίζοντας 2020, Τεχνολογίες πληροφοριών και επικοινωνιών , H2020-ICT-2018-20
- Συνολικό κόστος: €7.928.092,50
- Συμβολή της Ευρωπαϊκής Ένωσης: €6.834.121,50
- Διάρκεια: 4 χρόνια, 2021-2024

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- Κοινοπραξία: Σύνολο 16 εταιρών από 7 Ευρωπαϊκές χώρες



*Αυτό το έργο έλαβε χρηματοδότηση από το πρόγραμμα έρευνας και καινοτομίας «Ορίζοντας 2020» της Ευρωπαϊκής Ένωσης βάσει της συμφωνίας επιχορήγησης αρ. 101016807.*

## Robs4Crops Press Release #1 (ES)

Nota de prensa | Wageningen, [Date Month Year]

### Nuevo proyecto europeo orientado a revolucionar el sector agroalimentario mediante la aceleración en la adopción de la robótica y la automatización

*Desde controladores agrícolas y utillajes inteligentes hasta sistemas totalmente autónomos, un nuevo proyecto financiado por la Comisión Europea, Robs4Crops, está ayudando a los agricultores a cubrir la escasez de mano de obra, sacudiendo el panorama agrícola actual.*

El proyecto Robs4Crops acelerará el giro hacia la implementación a gran escala de la robótica y la automatización en la agricultura europea. Con un presupuesto de 7,9 millones de euros, cofinanciado por la Unión Europea, el proyecto representa un cambio de paradigma con un enorme impacto potencial en la productividad, la eficiencia y la sostenibilidad medioambiental. Robs4Crops demostrará que la robótica y las tecnologías relacionadas pueden aportar precisión y rentabilidad a una serie de tareas mundanas y repetitivas, reduciendo así la necesidad que los seres humanos realicen trabajos desagradables o peligrosos. El proyecto comenzará el 1 de enero de 2021 y tendrá una duración de cuatro años.

#### *Es hora de cambiar en esta época de cambios*

El desafío más importante de la agricultura europea es el coste y la escasez de mano de obra. Esta última, especialmente afectada por la actual pandemia de COVID-19, amenaza la existencia misma de nuestras cadenas de suministro de alimentos, desde la granja hasta la mesa. Los productores de toda Europa informan de la importancia de este problema, hecho que ha propiciado que algunos cultivos no se hayan cosechado, ya que miles de trabajadores de temporada no han podido llegar a sus puestos de trabajo.

Debido al coronavirus, la robótica y las tecnologías de automatización agrícola han experimentado un aumento significativo en interés e inversión, lo que marca el inicio de un cambio estructural en la alimentación y la agricultura. Aun así, en su mayor parte, la robótica comercial y funcional todavía está en desarrollo.

Robs4Crops tiene como objetivo abordar y resolver los desafíos organizativos y tecnológicos asociados con la adopción generalizada de la robótica agrícola.

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Aprovechando la maquinaria existente y siguiendo los estándares del sector, el proyecto dará forma y presentará un sistema completamente autónomo, listo para pruebas comerciales a gran escala. El sistema flexible y modular de nueva generación de Robs4Crops reducirá en gran medida la dependencia de los agricultores de la mano de obra contratada, aumentará la seguridad y reducirá el uso de pesticidas y la huella de carbono general de la producción de alimentos. El proyecto se centrará en las operaciones de campo más exigentes y repetitivas, como el control mecánico de malas hierbas y la fumigación contra plagas y enfermedades.

### *Llevando la perspectiva del agricultor a los robots agrícolas*

En un compromiso firme con la popularización de la agricultura robótica, Robs4Crops proporcionará un campo de pruebas para innovar dentro de un ecosistema enriquecedor. Ponemos a los agricultores y los usuarios finales en el centro de todo lo que hacemos: desde el análisis de los requisitos hasta las pruebas iterativas y el proceso de experimentación del modelo de negocio. Los ensayos se llevarán a cabo en asociación con granjas comerciales y líderes empresariales de Francia, Grecia, España y los Países Bajos.

El proyecto multiplicará su impacto fomentando la cooperación y las sinergias en el creciente ecosistema paneuropeo de Digital Innovation Hubs (DIH) y con proyectos emblemáticos financiados por la UE como SmartAgriHubs, agROBOfood, etc.

El Dr. Frits van Evert, científico sénior de la Universidad de Wageningen y coordinador del proyecto Robs4Crops, comenta: "El ecosistema agrícola europeo es muy sensible y hacer que el trabajo en el campo sea más eficiente y sostenible es fundamental. Robs4Crops es un cambio de paradigma en la revitalización de la industria alimentaria y agrícola europea y el catalizador vital para acelerar la adopción de robótica en estos campos".

### Notas a los editores:

#### De un vistazo: datos y cifras clave

- Instrument: Horizon 2020, Information and Communication Technologies, H2020-ICT-2018-20
- Coste total: €7.928.092,50
- Contribución de la Unión Europea: €6.834.121,50
- Duración: 4 años, 2021-2024
- Consorcio: Un total de 16 partners de 7 países europeos.



*Este proyecto ha recibido financiación del programa de investigación e innovación Horizonte 2020 de la Unión Europea en virtud del acuerdo de subvención núm. 101016807.*

## Robs4Crops Press Release #1 (FR)

Communiqué de presse | Wageningen, [Date Month Year]

### Investissement dans la robotique agricole : l'Europe soutient un nouveau projet pour accélérer la transition

*Projet financé par la Commission européenne, Robs4Crops a pour but de créer une solution aux pénuries de main d'œuvre grâce aux nouvelles technologies telles que les systèmes autonomes et les outils intelligents.*

Robs4Crops veut accélérer la transition vers une implantation de la robotique et de l'automatisation de l'agriculture partout en Europe. Avec un budget de 7,9 millions d'euros, cofinancé par l'Union Européenne, le projet représentera l'exemple de la transition vers les nouvelles technologies avec tout leur potentiel de productivité, d'efficacité et de durabilité environnementale. Robs4Crops démontrera alors que ces technologies sont pour les tâches récurrentes et à faibles valeurs ajoutées, un gain de précision et de répétabilité, réduisant la pénibilité des travaux aux champs. Le projet a démarré le 1<sup>er</sup> Janvier 2021 et durera quatre ans.

#### *Un pas vers la transition*

Un des plus grands défis de l'agriculture européenne est le coût et la pénurie des travailleurs. La pandémie mondiale du COVID-19 a d'autant plus renforcé ces points avec l'impossibilité pour des milliers de travailleurs saisonniers de se rendre dans les exploitations étrangères. Ceci met en péril la rentabilité voire l'existence même des exploitations qui dépendent de cette main d'œuvre spécialisée.

En conséquence, **les nouvelles technologies agricoles ont observé un pic d'intérêt et d'investissement**. Mais, pour le moment, les robots commercialisés sont largement sous-exploités.

Robs4Crops vise alors à relever et résoudre les défis organisationnels et technologiques liés à l'adoption généralisée de l'agriculture robotisée. En se basant sur les machines agricoles existantes (automatisation des tracteurs), sur les standards (norme Isobus pour les échanges de données entre outils, attelage 3 points pour la fixation des outils aux tracteurs), et sur les meilleures pratiques (désherbage mécanique sans herbicides), le projet construira et fournira des systèmes entièrement autonomes, prêts pour des essais commerciaux à grande échelle. Robs4Crops réduira grandement la dépendance des exploitations à embaucher, augmentant la **sécurité, et réduisant les intrants agricoles**. Le projet se concentrera sur les tâches les plus chronophages et les plus répétitives, à savoir le **désherbage mécanique et la pulvérisation contre les insectes et maladies**.

#### *Mettre les agriculteurs au cœur du projet*

Avec l'engagement ambitieux de **généraliser la robotique aux champs**, Robs4Crops testera en conditions réelles (parcelles agricoles) différents robots et tracteurs, sur quatre campagnes culturales. Les utilisateurs finaux, agriculteurs, conseillers et

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techniciens, sont placés au cœur du projet, afin de bien estimer les besoins et ainsi adapter les essais de manière itérative. Ces essais seront conduits en partenariat avec des exploitations viticoles, maraichères, arboricoles et grandes-cultures, dans quatre pays : France, Grèce, Espagne et Pays-Bas.

Pour augmenter son impact, Robs4Crops s'appuiera sur la coopération et les synergies au sein de l'écosystème robotique agricole européen : Digital Innovation Hub (DIH) et autres projets phares financés par l'UE, tels que SmartAgriHubs, agROBOfood, etc.

**Dr Frits van Evert, scientifique sénior à Wageningen University & Research et coordinateur du projet Robs4Crops, commente :** "L'agriculture est très sensible au coût et à la pénurie des travailleurs. Il est essentiel de rendre les pratiques de celle-ci plus efficaces et durables. Robs4Crops est un changement de cap dans la pérennité de l'industrie alimentaire et agricole européenne et un catalyseur essentiel pour accélérer l'adoption de la robotique et des nouvelles technologies automatisées dans l'agriculture. "

**Notes aux éditeurs :**

### En un coup d'œil – Faits et chiffres clés

- Instrument : Horizon 2020, Technologies de l'information et de la communication, H2020-ICT-2018-20
- Coût total : 7 928 093 euros
- Contribution de l'UE : 6 834 122 euros
- Durée : 4 ans, 2021-2024
- Consortium : 16 partenaires de 7 pays européens

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*Ce projet a reçu un financement du programme de recherche et d'innovation Horizon 2020 de l'Union européenne dans le cadre de la convention de subvention n°101016807.*

## Robs4Crops Press Release #1 (RS)

Obaveštenje za javnost | Beograd, [Date Month Year]

### Novi evropski projekat ubrzaće razvoj robotike i automatizacije i transformisati poljoprivrednu industriju

*Od poljoprivrednih kontrolera i pametnih alata do potpuno automatizovanih poljoprivrednih sistema, novi projekat finansiran od strane Evropske komisije, pod nazivom Robs4Crops, pomaže poljoprivrednim proizvođačima da se izbore sa problemom nedostatka radne snage - iz korena menjajući poljoprivredni sektor.*

Projekat Robs4Crops ubrzaće tranziciju ka širokoj primeni robotike i automatizacije u evropskoj poljoprivredi. Sa 7.9 miliona evra budžeta sufinansiranog od strane Evropske unije, projekat uvodi visokotehnološke promene i imaće ogroman potencijalni uticaj na produktivnost, efikasnost i održivost životne sredine. Robs4Crops će demonstrirati kako robotika i srodne tehnologije mogu doprineti preciznosti i ponovljivosti dosadnih, repetitivnih poslova, time smanjujući potrebu da ljudi obavljaju neprijatne i nebezbedne poslove koji ne zahtevaju nikakav mentalni napor. Projekat je počeo sa radom 1. januara 2021. godine i njegova implementacija trajaće naredne četiri godine.

#### *Pravo vreme za značajne promene*

Najveći izazovi sa kojima se suočava evropska poljoprivreda jesu visoka cena rada i nedostatak radne snage. Cena rada utiče na profitabilnost poljoprivrednog sektora, dok istovremeno nedostatak radne snage pretil opstanku lanaca vrednosti proizvodnje hrane, što je potvrdila i pandemija virusa COVID-19. Uzgajivači širom Evrope imaju organičen pristup radnoj snazi. Voćnjaci i povrtnjaci ostaju neobrani jer na hiljade sezonskih radnika ne uspeva da stigne do svih gazdinstava koja zavise od njihovog doprinosa, a mnogi pak nisu u mogućnosti da rade usled posledica zaraze koronavirusom.

Usled pandemije koronavirusa, robotika i poljoprivredne automatizovane tehnologije doživele su značajan porast i po interesovanju i po broju uložениh investicija, time obeleživši početak značajnih promena u domenu poljoprivrede i proizvodnje hrane. Ipak, potencijali robotike i dalje su u velikoj meri nedovoljno iskorišćeni.

Robs4Crops ima za cilj da prevaziđe organizacijske i tehnološke izazove koji su u vezi sa širokim prihvatanjem robotike u poljoprivredi. Kroz unapređenje postojeće poljoprivredne mašinerije, standarda i dobrih praksi, projekat će kreirati potpuno automatizovan sistem, spreman za komercijalnu upotrebu. Fleksibilan i modularan sistem nove generacije značajno će smanjiti zavisnost farmera od najamnih radnika, povećati bezbednost, te smanjiti negativne uticaje na životnu sredinu.

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Projekat će se fokusirati na najzahtevnije, repetitivne poljoprivredne aktivnosti poput mehaničkog uklanjanja korova i prskanja protiv štetočina i bolesti.

### *Poljoprivredna robotika iz perspektive poljoprivrednika*

U nameri da pojam robotizovane poljoprivrede postane širokoprihvaćen, Robs4Crops će kreirati poseban ekosistem u okviru koga će spovoditi testiranje, iteracije i inovacije tehnoloških rešenja i procesa. Interesi i potrebe poljoprivrednika i drugih krajnjih korisnika čine okosnicu svih Robs4Crops aktivnosti: od analize zahteva korisnika to iterativnog testiranja i eksperimentisanja sa poslovnim modelima. Procesi testiranja biće sprovedeni u partnerstvu sa komercijalnim farmama i poslovnim liderima iz Francuske, Grčke, Španije i Holandije.

Projekat će svoj uticaj proširiti kroz povezivanje i saradnju sa mrežom panevropskih habova za digitalnu inovaciju, kao i sa drugim vodećim evropskim projektima poput SmartAgriHubs, agROBOfood, itd.

Dr Frits van Evert, viši naučnik Wageningen univerziteta i istraživačkog centra i koodrinator projekta Robs4Crops, izjavio je: "Poljoprivreda je veoma osetljiva na cenu i oskudicu radne snage. Efikasne i održive aktivnosti uzgoja hrane stoga su od ključnog značaja. Robs4Crops uvodi velike promene kroz revitalizaciju evropskog sistema proizvodnje hrane i predstavlja važan katalizator ubrzavajući usvajanje naprednih tehnologija robotike i automatizacije u poljoprivredi."

**Napomene za urednike:**

### **Kratak pregled ključnih podataka**

- Instrument: Horizont 2020, Informacione i komunikacione tehnologije, H2020-ICT-2018-20
- Ukupni troškovi: €7.928.092,50
- Doprinos Evropske unije: €6.834.121,50
- Trajanje: 4 years, 2021-2024
- Konzorcijum: Ukupno 16 partnera iz 7 evropskih država



*Projekat Robs4Crops finansiran je od strane EU programa H2020 pod ugovorom broj: 101016807.*