CAPSELLA

COLLECTIVE AWARENESS PLATFORMS FOR ENVIRONMENTALLY-SOUND LAND MANAGEMENT BASED ON DATA TECHNOLOGIES AND AGROBIODIVERSITY

Deliverable 2.1

Dissemination, awareness raising and exploitation plan

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1. Executive Summary

This document provides an overview of the CAPSELLA dissemination, outreach and exploitation strategy, drawn up according to a 30-month plan, to ensure the maximum project visibility, awareness raising on the targeted communities and exploitation of results.

The CAPSELLA dissemination, outreach and exploitation strategy is based on the following principles:

- Conceive dissemination as a knowledge sharing, bi-directional and transversal activity that will support and raise awareness about all WPs activities and results.
- Perform cross-fertilization and liaison with farmers both conventional and organic, agrobiodiversity research and academia players, stakeholders, ICT and data experts and developers, policy and decision makers, food chains/citizens.
- Transfer the CAPSELLA results to end-users and related communities including those belonging to the food chain.
- Establish collaboration with related national and EU funded projects and initiatives.
- Publish CAPSELLA results and tools such as the cloud platform in relevant international scientific journals addressing the agroecology and IT communities.
- Organise focused networking events such as workshops, hackathons and incubation activities.
- Participate at third parties related events in the agrobiodiversity, food and ICT areas, producing press releases, brochures and posters.
- Have a web site dedicated to the project, containing also forms to collect farmers requirements.

CAPSELLA has the ambition to develop a strong brand image, recognised by both farmers' communities and ICT experts, in order to become a quality label and a reference for the application of advanced information technology in agriculture.

At the time of drafting of this document, the Consortium is aware that the nature of the project and its evolution may well dictate changes in the course and enactment of some of the planned activities. In fact, dissemination channels not foreseen here may come into being and may demand exploitation, while some activities deemed promising at present may in the future be found unattractive and/or ineffective. CAPSELLA will nonetheless adhere to the above mentioned overriding principles in its further pursuit of the broadest array of dissemination activities possible.

The document contains two major sections: in Section 2, the communication and dissemination strategy is presented, detailing on the target audience and describing how the project's main products and outcomes will contribute towards its realization. In Section 3, an initial exploitation plan is presented; a deliverable devoted to exploitation itself will be submitted at the end of the project lifespan. A number of Appendixes further illustrates CAPSELLA dissemination identity and channels.

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2. Dissemination plan

Dissemination and communication activities are of paramount importance to a project that addresses heterogeneous communities, ranging from farmers, agrobiodiversity communities and players (such as plants' breeders), data and ICT experts, to food actors in order to maximize its impact and trigger effects across the targeted stakeholders and communities.

2.1 Dissemination objectives, targeted groups and outreach strategy

Through the work that will be carried out during the project, the consortium aspires to establish solid dissemination of the projects' results, allowing for its sustainability and exploitation beyond the end of the project.

Given its ambitious goals, the practical experience and guidance to emerge from the project work will be of relevance to an array of stakeholders and will be of value across different sectors.

To fulfill these aims, CAPSELLA has set up an informal focused group, led by the Dissemination Manager and composed by representatives of ATHENA RC, SSSA and WDT, as clear channels of communication between the project partners themselves as well as with the wider community will play a crucial role in the success of the project. The internal communication infrastructure includes provision of convenient and appropriate mechanisms for facilitating the free flow of information (strategy, administrative and practical) across the project members.

In this section, we identify the main dissemination objectives, target audience of the CAPSELLA dissemination activities, and provide details on the use of the main dissemination channels to realise the dissemination strategy.

2.1.1 Dissemination objectives

The main objectives of the CAPSELLA dissemination strategy are to:

- Promote CAPSELLA project to the widest audience possible and engage the targeted stakeholders from the EU and globally and encourage feedback.
- Emphasize the European aspect of the project and its close collaboration with existing initiatives.
- Encourage cooperation between the various scientific disciplines working on food security topics.
- Promote the multi-disciplinary character of the project to attract wide range of audiences and to showcase how CAPSELLA will innovate and accelerate collaborative research.
- Create a strong and recognizable CAPSELLA brand, identity and key messages to be used on all dissemination material.
- Take advantage of existing networks of influential scientific and technology experts and potential adopters based on partners involvement in other initiatives and associations.
- Build partnerships through intensive networking with core relevant initiatives and relevant projects to share resource/data.

- Liaise with other CAPS projects to work on a shared approach for raising awareness on major societal challenges.
- Generate positive media coverage for the project at a local, national, European and global level.
- Foster the use and deployment of open source systems and open research data management practices.
- Ensure sustainable empowerment of the scientific community through implementation of awareness and capacity building events and knowledge opportunities.
- Develop tailored methodology to measure impact of CAPSELLA communication strategy.
- Receive the best business plans at the incubation award.
- Establish a strong foundation for future exploitation work.

2.1.2 Target groups for dissemination activities

The following are the main target groups of the dissemination activities.

Audience	Description	Who
Farmers from both conventional and organic agriculture	Agricultural players that would like to dig into the new IT technologies to find out available solutions	Farmers, networks such as Aegilops, Arc2020, UR-GENCI, Esapoda
ICT providers	Existing commercial vendors of ICT solutions and new tech startups that are already working or would like to work with agri-food stakeholders and customers.	Startups, ICT consultants or established companies developing software products, tools & apps for agri-food businesses, farmers & other mainstream customers.
Data providers	Representatives of organisations and communities that are producing, collecting, managing, processing, and publishing information/data of relevance and interest agro-biodiversity networks & movements.	Knowledge and data managers in agro-biodiversity institutions (e.g. AGRIS, AIMS)
Agro-biodiversity & sustainability policy and decision makers; representatives of both larger agri-food and agri-tech companies working on agricultural production, processing and retail business, as well as smaller farmholders and producers.	Representatives of governmental and funding agencies, including FAO representatives, that design interventions and fund programmes related to the agri-food research, innovation and extension in Europe and the world.	Agencies and donors funding agri-food research (e.g. European Commission, Gates Foundation, H2020, DFID, USAID, World Bank, etc.)
Stakeholders across the food supply chain	Representatives of organisations, food communities and enterprises working on products and services that connect the food supply chain and exchange feedback in order to improve the quality of	Small scale farmers that produce with respect to the environment and consumers' health, and are keen to

	food.	adopt technologies that enhance transparency in the food supply chain (e.g. the Agricultural Cooperative Stevias Hellas via AK).
Targeted beneficiaries/users	Representatives of the beneficiary grass roots networks & local sustainability communities, in Europe and across the world.	Networks, associations and events of agro-biodiversity networks & movements and consortium members (e.g. the European Learning Network on Functional Agrobiodiversity ELN-FAB, the European forum 'Let's Liberate Diversity')

Table 1: Targeted groups for dissemination activities

2.1.3 Outreach channels

The dissemination strategy includes a variety of tools and ideas to help ensure that Europe's grassroots sustainability movements and communities, local and regional IT developers and startups, as well as open data activists, hackers and policy makers quickly understand and find out about CAPSELLA and how it may help them solve pressing societal challenges. It will also include ways in which the project will communicate to the rest of its important stakeholders, such as the general public (through the media) and the business ecosystem. The following table presents the outreach channels that will be implemented to achieve the target KPIs.

Outreach Channels	Relevant Stakeholders	Target KPIs
Social media such as Twitter, Facebook, LinkedIn and Google+	Targeted beneficiaries	2 social media campaigns around the project per year around relevant events (e.g. GODAN, Terra Madre, EFITA, Foodfilmfestival, etc.)
Open data challenges, hackathons & awards	Targeted beneficiaries Data providers IT companies	1 social media campaign, online challenge & hackathon per year for agri-tech & IT startups on "Solving Big sustainability Challenges using Open Data" (w/ award session at annual GODAN event)
Campaigns for outreach to general press and media	Media, general public	3 press releases per year on project stories & outcomes (in all key languages) 2 interviews w/ local community members per year explaining challenges, stories & successes in simple language (to disseminate through various channels)
Promotion of targeted news items for scientists and experts through specialised channels	Targeted beneficiaries	>10 news items per year on specialised project topics (through existing channels & newsletters such as AIMS, GFSP, IFOAM, GODAN, …)
Editing of special topic	Targeted beneficiaries	1 edited volume or journal special issue on collective

volumes & journal issues		intelligence platforms & open social media knowledge with open contributions from everyone working on such topics
Publication of scientific papers in journals or conferences	Targeted beneficiaries	>3 publications to journals relevant to each of the use cases presenting project outcomes >2 publications to journals related to Computer Science and Information Science topics >5 publications to agri-food science conferences >3 publications to Computer Science and Information Science conferences

Table 2: Outreach channels and target KPIs

2.2 Dissemination channels

2.2.1 Mailing lists

CAPSELLA has already identified a series of stakeholders, initiatives, organisations and communities which have a crucial stake in its activities. The CAPSELLA Dissemination Manager will participate in any relevant mailing lists to better promote the project outcomes to targeted groups.

2.2.2 Website

The CAPSELLA website (www.capsella.eu) is developed on a WordPress platform that is particularly functional to future updates by different referents with different access rights. The website will play a pivotal role in the overall dissemination strategy of the project. Serving as the main means of online communication between CAPSELLA and its established communities, as well as the communities of data and ICT in general, it has been equipped with functionalities that aim to facilitate the project's dissemination activities and the communities' engagement. In this light, the website will be enriched with on-line forms that will facilitate the expression of interest of potential participants that will engage in the incubation activities and a form to collect needs and requirements by farmers and agricultural networks. Moreover it will be linked with the CAPSELLA platform developed during the project life span.

The website includes a News area (Highlights), an Events Calendar, and a dedicated Resources area, where various project results such as public reports, press releases, newsletters, etc. will become publicly available. In the following paragraphs, we describe how these tools will be used by the project for the purposes of communication and dissemination.

The News Area will be accessible through the public area of the website. The mission of this part will be to inform about the main objectives and results of the project as it evolves, as well as to advertise pertinent major events in the fields of interested tackled by the project such as agrobiodiversity, data and ICT tools. Besides, it will also contain interesting news concerning background activities in similar areas, in order to raise its appeal among potential readers.

The Events Calendar is a convenient widget appearing directly in the home page of the CAPSELLA website. Its purpose is to consolidate, organise by date, and advertise well in advance the most important international events (e.g. symposia, conferences, information days, workshops, press releases, etc.) in the fields of agroecology, agrobiodiversity, open data and ICT, including the CAPSELLA networking events. Hence, this tool fits the general "one-stop-shop" philosophy of the CAPSELLA website, and is publicly available to all of its visitors.

The calendar will be maintained on a weekly basis, and will be fed with content and news coming from all project partners, especially the ones that work closely with or are part of the targeted communities.

The website will give public access to publications, selected deliverables and other resources through a dedicated Resources area. The material that will be available for download will consist of documents, such as position statements, reports, newsletters, etc., which will be produced by the various project's activities and networking events. It will also comprise short CAPSELLA video products shot during the networking events, as well as other promotional content that will be prepared by the consortium. Overall, through the public Resources area, the goal is to maximize visibility and accessibility to all the important outcomes of the project.

2.2.3 Social Media

CAPSELLA is aware that not all communities that the project addresses are necessarily and particularly active on social media. Nevertheless, social media presence will be of outmost importance for CAPSELLA, not only for spreading the word about its activities and reaching wider audiences; social media will also offer valuable data for performing users' and stakeholders' requirements analysis and thus shape accordingly CAPSELLA services and applications.

Figure 2-1: CAPSELLA Twitter account

To this end a **Twitter** account, as a real-time channel to share contents in a very brief way, was set up at the early stage of the project and currently collected 31 followers with over 90 tweets. The aim of Twitter will be also to establish connections with related Twitter accounts of interest (e.g. mentioning these accounts and related hashtags in the tweets).

A **LinkedIn group** will be set up and moderated to raise awareness about the project and engage as many IT players, farmers but also citizens to understand their needs and expectations from projects like CAPSELLA. This channel will aim at the professionals who maintain a LinkedIn profile and using it for professional purposes and will offer the possibility to discuss the project related topics in the most business-oriented social media.

The consortium had a brief discussion on the opportunity to set up also a **Facebook** page, that being one of the most popular social networking platforms, will help to keep in touch with the target and will stimulate attendance among stakeholders. Regarding the Facebook page, the consortium might also do also a ppc/ppi campaign to quickly arise interest and visibility.

Finally **Google+** will be useful to improve the positioning of the website in search engines. For every social media we plan to post news, share links and interact with people connected on a basis of 2 posts/week, answering questions and monitoring contributions.

2.2.4 Press Releases, newsletters and publications

Each phase of the project activities will be supported by *ad hoc* communication activities, i.e. press releases, translated into national languages (if necessary) and circulated to pertinent audience and blogs to promote the CAPSELLA activities at the early stage of the project.

Brief, ad hoc articles and newsletters to raise awareness and knowledge of the projects activities will be published in agricultural extension magazines and newsletters.

At this stage the consortium has identified and will liaise with the following journals and magazines to ensure the maximum awareness raising of the industrial and academic players and SMEs.

The consortium will also make use of publication opportunities and tools that several CAPSELLA partners already have, such as weekly personal newsletters or the Newspaper Nieuwe Oogst[1] and the Agrobiodiversity platform[2], the Corallia newsletter and the Agroknow newsletter and blog.

Magazine/Journal	Objectives	Website
ICT in Agriculture	"ICT in Agriculture" provides practitioners within and outside of the World Bank Group with lessons learned, guiding principles, and hundreds of examples and case studies on applying information and communication technologies in poor agriculture.	http://www.ictinagriculture.org/

[1] http://www.nieuweoogst.nu
[2] http://www.agrobiodiversity.science

e-Agriculture	e-Agriculture is a global Community of Practice, where people from all over the world exchange information, ideas, and resources related to the use of information and communication technologies (ICT) for sustainable agriculture and rural development.	http://www.e-agriculture.org/
The Soil association Media	The Soil Association has been working on CSA over the past 10 years to grow the concept and support farmer and communities to take control of their food production. The network is the next step in this development of CSA in the UK.	http://www.soilassociation.org/
Bioversity International	Their mission is to deliver scientific evidence, management practices and policy options to use and safeguard agricultural and tree biodiversity to attain sustainable global food and nutrition security.	http://www.bioversityinternational.org/
Open Data Journal for Agricultural Research	The Open Data Journal for Agriculture Research (ODjAR) acts as a central hub for storing, curating and publishing the data sets as a resource for the future where publications and their authors get appropriate credit through citations and digital object identifiers for future reference.	http://library.wur.nl/ojs/index.php/odjar/
Open Ag Data Alliance Newsletter	Through an open standards software effort establishes secure data exchange protocols. This open software development approach is how Internet, network and web standards have succeeded in providing secure, scalable solutions for businesses and consumers alike.	http://openag.io/
ConnectWorld	The magazine for ICT decision makers	http://www.connect-world.com/
Science Node Newsletter	The Science Node is a free online publication, jointly funded by organizations in the US and Europe. Audience includes experts and non-experts alike, exploring the real-world impact of advanced computing and networks.	https://sciencenode.org/
Research*eu	The magazine that features highlights from the most exciting EU-funded research and development projects.	http://cordis.europa.eu/research-eu/magazine_en.html
Food service Europe magazine	Due to its editorial driven style and journalistic proficiency FoodService Europe & Middle East stands out with its ability to deliver the information that operators want. In-depth analyses of international markets and trends as well as an array of management topics are the key for its high acceptance.	http://www.food-service-europe.com/

Table 3: Target journals and magazines

2.2.5 CAPSELLA events

Events are excellent means for project partners to get in touch with various types of stakeholders of interest to the project, as well as to be aligned with similar efforts of other projects that are working in the same context. Last but not least, events allow the project to present its outcomes to a wider audience and therefore get feedback on its work; sometimes its draws the attention of external experts in this field and their feedback allows the project to re-align its efforts based on them.

CAPSELLA will organize a number of events attracting various types of stakeholders, and at the same time will participate in existing events organized by third parties. The following section presents an indicative list of such events.

2.2.5.1 Awareness raising workshops – Engaging farmers and open data communities

With over 77% of the European territory classified as rural (47% farmland and 30% forest) and around 12 million full-time farmers, agriculture is a vibrant and important sector of the EU economy and welfare. Agriculture and agri-food account for 6% of the EU's GDP, comprising 15 million businesses and 46 million jobs.

The European Commission has hugely invested in a Common Agricultural Policy designed to support farming, ensure food quality and safety and promote sustainable and balanced development across all EU rural areas. EU farmers have to face multiple challenges to meet increasing demands from consumers and the civil society. There is increasing awareness that all these demands can be met by the conservation and wise use of agricultural biodiversity, or 'agrobiodiversity'.

The use of novel ICT solutions is key to meet the present goals of EU agricultural and agri-food policies and to foster knowledge on the importance of agrobiodiversity among EU stakeholders and actors. Targeted ICT-based solutions can promote innovative, knowledge-intensive farming systems and methods based on the optimization of local natural resources and on reduced use of external inputs.

In the light of the aforementioned concepts, CAPSELLA will organise a workshop to bring together EU farmers to collect and understand their ICT needs and requirements, try to answer and provide solutions to them, exchange best practices and use cases and pave the way to exchange of knowledge and future collaborations around the themes of interest.

The event's vibrant environment will be a stage where farming communities with different background (such as conventional and organic) but sharing the interest in agrobiodiversity can openly discuss and compare their points of view, where existing ICT tools will be briefly presented focusing on their benefits to farmers, and where the goals and activities of CAPSELLA will be presented.

The first two-day workshop, will be held in Volterra (Pisa) on May 30th and 31st. It includes outdoor (in field) and indoor sessions, aimed to break the ice among participants and build a smooth and collaborative spirit. The smooth and concrete exchanges between the participants will be fostered and supported by simultaneous translations in English and possibly Greek throughout the event.

Focus groups moderated by a facilitator will ensure a concrete exchange of opinions, knowledge and experiences, the effective collection of requirements by the networks and communities involved, and awareness raising on the importance of collecting and sharing open data and knowledge on agrobiodiversity, the benefits of co-designing ICT tools and of new products such as the cloud platform delivered by the CAPSELLA consortium at the end of the project. The draft agenda was circulated among partners and will be finalized within the next few weeks in order to start the event promotion and ensure also the involvement of all those stakeholders and actors who have shown willingness to be involved in the CAPSELLA events by providing letters of support. At this stage of the deliverable writing, two farmers communities AEGILOPS and ESAPODA, respectively from Greece and Northern Italy have confirmed they participation as speakers, the networking farmers' community URGENCI and Arc2020 will be, most likely, attend as well. Finally two Italian, young entrepreneurial IT companies (Aedit s.r.l and Primo Principio) have been invited to present the ICT tools developed for the agricultural players.

The second CAPSELA workshop will be organized towards the closing of the project and will act as the final event of the project. Most likely, the structure of the workshop will be set up to combine presentations and panels during one plenary session and group sessions that will include all the targeted communities of CAPSELLA, specifically farmers, IT experts and providers, ICT SMEs, food chain players including citizens, policy and decision makers in order to discuss specific issues that had been identified as relevant and to possibly pave the way to future collaborations. The main scope of the event will be to present the CAPSELLA results and to foster their adoption by a wide array of players in the business and agroecology environments.

2.2.5.2 Hackathons and bootcamps

A fundamental shift in the perception of innovation principles and tools has taken place during the last decade. In this new Open Innovation era the pre-existing boundaries in the innovation funnel - from ideation to commercialization- have been removed. The innovation cycle has been opened to the crowd and broader societal groups have the opportunity to contribute to this process.

To facilitate this new massive and open innovation perception, new tools have to be deployed. Innovation platforms, like the CAPSELLA platform, have to be constructed in a way to serve innovation aggregators and innovation contests have to be organized as optimal tools to leverage the platform's innovation capabilities. Hackathons, the most well-known innovation contest form, have already become massive events which have achieved to bring together people with diverse backgrounds to co-create tomorrow's products and services, effectively raising public awareness on selected topics and sectors. In CAPSELLA, hackathons will serve a dual aim: (a) as a bottom-up requirements collection and solutions seeking process, and (b) as an innovation creation contest.

Finally, entrepreneurial bootcamps are a guarantee for successful implementation of the ideas created during the Hackathons, ensuring that all the participants gain the needed skills to make it through the innovation funnel, simultaneously luring capable people from all sectors to become users of the open innovation platform and becoming eminent entrepreneurs and start-uppers.

Being aligned with the crowd-sourced innovation principles, the CAPSELLA project utilises all the above innovation tools to achieve its dissemination and exploitation objectives. A promotional campaign starting early in the project lifecycle will use the massive impact of hackathons to reach out to - and finally attract- existing communities and skillful people active in the primary sector of the economy, IT people and business people, thus creating the early adopters of the platform. An open call will invite everyone to participate, aiming to identify those people that have the technical knowledge, the entrepreneurial spirit and the passion needed to create their own start-up. Tightly related to the platform, the hackathons that will follow will promote knowledge and awareness of the CAPSELLA platform.

Finally, the three month pre-incubation bootcamp, starting in the M21 of the project, offered free of charge, will create an extra incentive for people to join the CAPSELLA journey. Furthermore, at the end of the bootcamp, more than thirty carefully selected participants will have gained the needed platform-related, technical and business knowledge to become the future CAPSELLA ambassadors. The best team with the greatest idea will be also incubated and pampered to bring the idea to a business.

2.2.6 Third party events

With regard to key communication activities, the consortium has a strong expertise in several complementary areas: open data, agro-biodiversity, semantic representation, and other. In all the aforementioned fields, scientific papers, based on the project results, and thereby contribute to an evidence based understanding of the techno-social issues related to key aspects of the networked society, as agri-food, biodiversity and open data will be published also at third parties related events. This activity will offer to the project partners the opportunity to establish links with existing communities and key stakeholders[3].

As active members in the respective communities, consortium members are well aware of all key events that they plan to attend. A no exhaustive list follows.

Event	Date	Location	Audience
GCARD3 Global Event	5 – 8 April	Johannesburg, South Africa	Agroecology, food chain stakeholders
10° European Organic Congress	6 – 7 April 2016	The Netherlands	Agricultural & scientific communities
EIP AGRI WORKSHOP	20 – 21 April 2016	Legnaro, Italy	Interdisciplinary audience
International Conference on Big Data	29 April – 3 May 2016	Alicante, Spain	IT community
World Food Research and	9 – 10 May 2016	Parma, Italy	Food stakeholders, pol-

[3] Scuola Superiore Sant'Anna has submitted an abstract, that was accepted to the **12th IFSA2016 Symposium** that will take place in the U.K. next July 2016.

Innovation Forum			icy & decision makers
9th Annual International Symposium on Agricultural Research	11- 14 July 2016	Athens, Greece	Agricultural playes, scientific communities
EuropeScience Open Forum	23-27 July 2016	Manchester, U.K	Interdisciplinary audience
European Society of Agronomy (ESA)	5-9 September 2016	Edinburgh, U.K.	Researchers
Agroecological approaches to promote banana production	10-14 October 2016	Montpellier, France	Agricultural & scientific communities

Table 4: Target events

2.2.7 Liaison with initiatives, networks and projects

Most of the CAPSELLA partners are already participating in or have already well established links with several key actors of the agrobiodiversity field and data initiatives. Hence during the preparation phase several of these networks were informed about the CAPSELLA's objectives and rationale and showed interest and commitments towards the project by providing letters of support and ensuring their active involvement, if and when possible, to the various activities.

Below is a list of initiatives that have been liaising with CAPSELLA and received the first project press release. Those initiatives and networks will be invited to the CAPSELLA workshops. Specifically, concrete collaboration opportunities (co-location and / or co-organisation of workshops) are established with several ICT/Agricultural projects (e.g. funded by the ICT-Agri ERA-NET, http://ict-agri.eu), IFOAM Organics International, ECO-PB The European Consortium for Organic plant breeding, EIP-AGRI Network, EC-LLD Let's Liberate Diversity, the GODAN initiative and URGENCI, the network of Community Supported Agriculture (CSA) movements.

Project	Objectives	Website
DIVERSIFOOD	Integrate existing networks across Europe, the project will strengthen the "food culture" to achieve local high quality food systems	http://www.diversifood.eu/?page_id=54
FOODIE – Farm Oriented Open data in Europe	Create a platform hub on the cloud where spatial and non-spatial data related to agricultural sector are available for agri-food stakeholders groups and interoperable.	http://www.foodie-project.eu/
FERTILCROP	Fertility building in cropping systems	http://www.fertilcrop.net/fc-home-news.html
SOLIBAM	Strategies for Organic and Low-input Integrated breeding and management	http://www.solibam.eu/modules/addresses/viewcat.php?cid=1

CATCH-C	Assesses the farm-compatibility of 'Best Management Practices' (BMPs) that aim to promote productivity, climate change mitigation, and soil quality.	http://www.catch-c.eu/
Cobra Div	Coordinating Organic Plant Breeding Activities for Diversity	http://www.cobra-div.eu/project/
ACROPOLIS	Aggregate and Cumulative Risk of Pesticides: an on-line integrated Strategy	http://www.acropolis-eu.com/
AGFORWARD	AgroForestry that will advance Rural Development	http://www.agforward.eu/index.php/en/home-redirect.html
TRADITOM	Traditional tomato varieties and cultural practices: a case for agricultural diversification with impact on food security and health of European population	http://traditom.eu/
QuESSA	Quantification of Ecological Services for Sustainable Agriculture	http://www.quessa.eu/
ISOFAR	The International Society of Organic Agriculture Research promotes and supports research in all areas of Organic Agriculture by facilitating global co-operation in research, methodological development, education and knowledge exchange	http://www.isofar.org/isofar/
Big Data Europe	Big Data Europe aims to collect requirements for the ICT infrastructure needed by data-intensive science practitioners tackling a wide range of societal challenges	http://www.big-data-europe.eu
LEO - Linked Open Earth Observation Data for Precision Farming	Developed software tools that support the whole life cycle of reuse of linked open Earth Observation data and related linked geospatial data.	http://www.linkedeodata.eu
RDA Europe - The European plug-in to the global Research Data Alliance	The European plug-in to the Research Data Alliance (RDA). The goal of RDA is to accelerate international data-driven innovation and discovery by facilitating research data sharing and exchange	http://europe.rd-alliance.org/

Table 5: Initiatives, networks and projects liaising with CAPSELLA

Furthermore the dissemination through global open data initiatives for agriculture, food and the environment is of high importance for the CAPSELLA project. More specifically, the representation of the project in global strategic initiatives such as the Global Open Data for Agriculture and Nutrition (GODAN, http://godan.info) initiative, the Interest Group on Agricultural Data Interoperability (IGAD, https://rd-alliance.org/groups/agriculture-data-interest-group-igad.html) of the Research Data Alliance (https://rd-alliance.org), the Knowledge and Learning Systems Working Group of the Global Food Safety Partnership (http://gfsp.org), and the Coherence in Information Agriculture for Research and Development (CIARD, http://www.ciard.net) should and will be explored in the lifetime of the project. Details of those initiatives are included in the Annexes.

One of the most important aspects of the dissemination framework of the CAPSELLA project is the connection with major open data initiatives at a global level. Such liaisons are expected to have multiple benefits for the CAPSELLA project.

- Liaisons will allow the project to be up to date with current advances in the context of open data and therefore to adopt existing work and adapt it in the agrobiodiversity context.
- Liaisons will allow the project to get close to open data pioneers and experts that may be willing to consult the project in its open data related efforts.
- Project partners will be able to communicate open data-related challenges identified by the project to global communities of open data experts and even work on solutions through related events (e.g. hackathons and challenges organized by these communities)
- The project will be able to share its advances in the field of open data, share use cases of interest with the global open data communities.
- The project will be able to participate in large events organized by these initiatives and networks and raise awareness among these global open data communities.

By using domain-specific channels, the project will be in the position to reach targeted stakeholders and speak their own language when it comes to open data; this will differentiate the generic dissemination approach from the open data-focused one.

2.2.8 CAPSELLA liaison and collaboration with open data events

The representation of the CAPSELLA project in open data events will allow partners to be up to date with all related advances in the open data context and get in touch with pioneers in this field that may be willing to contribute to the open data work of the project. Thus, a major aim of the CAPSELLA partners will be not only the participation to existing events but also the organisation of one or more focused workshops (or sessions) in the context of larger events, like the GODAN ones. Especially in the case of GODAN, such events (or sessions) will take place either as part of the GODAN annual conferences and/or as regional GODAN events. These events will bring together the CAPSELLA stakeholders and communities with the members of the GODAN initiative, in order to communicate their identified challenges and open them to the global open data community.

Network open data meetings:

Such meetings are organized on a periodic basis by the open data initiatives targeted by the CAPSELLA project. By participating in these events, CAPSELLA will ensure the awareness of the participants about the CAPSELLA open data approach and outcomes as well as the connection with key stakeholders that may be willing to contribute to the open data work of the project

- **GODAN**: 3 meetings per year.
- **ODI**: An Annual Summit by the end of each year as well as additional events. The CAPSELLA project will also be represented in any relevant event organized by the ODI Athens Node
- **Global Food Safety Partnership (GFSP)**: 1-2 meetings per year, additional related ones organized by major partners of the GFSP consortium

Open Data Conferences:

These events are organized by various organizations and aim at attracting open data stakeholders in general. They are domain-agnostic and usually attract a high number of participants. An example of such event is the International Open Data Conference that is held on an annual basis, while additional ones are also organized.
It is important to ensure that CAPSELLA open data stakeholders, such as organizations, project and initiatives working with open data in the agrobiodiversity sector are also invited and involved in such events.

Open data training events:
There are open data related events that have a training objective, such as to inform participants on specific topics related to open data or even offer hands-on sessions on open data. These events may also be of interest to the Work Package 4 of the project. Some of these events are the following:

- **Workshops organized by open data initiatives:** These events may be organized in the context of bigger events and offer training opportunities to their participants, usually as thematic sessions focusing on the use of specific tools and datasets. CAPSELLA may be represented in such events in order to be able to propose datasets of interest and even the testing of the project's open data outcomes.
- **Webinars on open data:** Using the Webinars@AIMS platform[4], the project will organize a number of webinars on open data. These webinars will be delivered by project partners who will have the opportunity to present the open data approach of the CAPSELLA project, as well as by external experts who are working on open agri-food data and will have the opportunity to present their use cases. In addition, there are various opportunities of webinars on open data topics, organized by third parties.
- **Open Data Competitions and Hackathons:** Such events involve the use of open datasets and tools for the development of applications that address specific and real challenges. Such events can be organized by the project, so that the outcomes of the project, along with datasets of interest can be tested by external users; they can also be organized in the context of other hackathons so that the project may contribute its datasets and tools as specific challenges in these events.

2.2.9 Business outreach

The CAPSELLA consortium is enriched by the expertise of one of the most successful business support organisations in Europe and with SMEs with a strong business oriented profile, which shall facilitate the specific market outreach and take up of the CAPSELLA tools and developments.

Moreover, almost all the activities that will be carried out in WP6 are focused to market outreach and the start-up creation. To this end, the organisation of appathons/hackathons, will pave the way to identify and meet teams and business actors with the highest prospect to create marketa-

[4] http://aims.fao.org/webinars-aims

ble outputs, goods and services. The technical and entrepreneurial bootcamp[5] will further support selected individuals and teams so that preliminary business concepts could turn into concrete business plans.

The business outreach will be ensured also by the incubation of the most promising team/business plan in a co-working space, where they will be offered additional training, mentoring, office space and support services, to allow the business plan to become a successful start-up and gazelle.

2.3 Individual dissemination activities

Apart from the CAPSELLA coordinated dissemination activities the CAPSELLA partners will be carrying out dissemination individual dissemination activities. This section summarises the more relevant of the above-mentioned dimensions for each specific case.

2.3.1 ATHENA RC

ATHENA RC, as a leading research organization in Greece in the area of data management and large-scale information systems, will be actively involved in dissemination activities related to data research aspects of the project. In CAPSELLA, ATHENA plans to prepare and submit publications triggered by the data collected through various project activities, predominantly the WP3, WP4 and WP5 activities. Publications will be submitted to both, Computer & Information Science Journals and Conferences, but also to topic specific journals (agri-food and data).

Moreover, ATHENA RC plans to work on articles and activities that will explain to the general public the importance of data in agriculture and the benefits for small farmers resulting from their use. In this light, CAPSELLA will participate with a booth to the Athens Science Festival, taking place from April 5th to 10th. The Festival promotes and explains science to general public and in 2015 it was visited by more than 33.000 people.

Additionally, the Corallia Unit of ATHENA RC, being the first organisation established in Greece for the structured and systematic management and development of innovation clusters and a pioneer regarding youth entrepreneurship stimulating and promoting initiatives, will utilize its valuable human network built through its 10 years of continuous operation to promote the CAPSELLA activities. With more than 13.000 av. monthly website previews, 3.500 monthly newsletter receivers, a strong social media footprint (Facebook. LinkedIn, Twitter) and more than 250 potential entrepreneurs graduating from Corallia youth entrepreneurship activities at Corallia will ensure CAPSELLA's outreach to a wide network of innovators and entrepreneurs.

2.3.2 Scuola Superiore Sant'Anna di Studi Universitari e di Perfezionamento

In collaboration with other partners, SSSA will ensure the representation of CAPSELLA consortium at key scientific and networking events such as: IFOAM/ISOFAR Congress 2017, European Innova-

[5] Business Bootcamp → Training camp, for learning various types of skills program designed for individuals seeking to develop business skills

tion Partnership agricultural (EIP - AGRI) events, Sustainability Foods Summit, URGENCI events, IFSA 2016 conference.

In particular, in the short term, the project's objectives will be presented in a talk at the session "*ICT to help on participatory approaches for the agroecological transition of agriculture*" of the 2016 IFSA conference (http://www.harper-adams.ac.uk/events/ifsa-conference/). The organising committee of this conference proposed the publication of a full research paper on the special section dedicated to IFSA by the journal *Computers and Electronics in Agriculture*. The CAPSELLA consortium will consider the opportunity of working on such a research product already at this stage of the project. Should it be too early, a similar opportunity will be sought later on, once results from CAPSELLA will be achieved.

The SSSA Team will take part in the project Workshops and promote them within the national and international scientific community and among the Italian formal and informal farmers' networks. This workshop will be promoted within the scientific community active in agroecology and among active farmers' networks in Italy. In this workshop, SSSA will organise a specific session for gathering new entrants into farming and working on the specificities of farms in transition to organic agriculture. This will empower the awareness raising objective of the Workshop by involving farmers with the highest need of networking and knowledge sharing.

CAPSELLA press releases and key outcomes will be published on the portal Agrobiodiversity.science (www.agrobiodiversity.science). The main events of the project will be promoted also on the institutional website of SSSA (www.santannapisa.it). Brief articles and newsletters to raise awareness and knowledge of the projects activities and achievements will be published in Italian on the Agrobiodiversity.science portal and distributed via e-mail to the large SSSA network of contacts (scientists and farmers). This material will be sent as well to farmers' unions and local institutions working in agriculture (e.g., Terre Regionali Toscane). Liaison with the on-farm experiments of the group of agroecology at SSSA will be set by presenting the activities of CAPSELLA to the host farmers. SSSA will take part to local events for farmers (e.g. the summer field days of "Consorzio Agrario di Pisa" and "Cooperativa Terre d'Etruria") for presenting the project's activities.

At a later stage of the project SSSA will actively work on the production of scientific papers, based on the project results. The results will also be published in national agricultural extension magazines such as "L'Informatore Agrario" and "Terra e Vita".

2.3.3 Agroknow

Agroknow has a long experience in the design and implementation of dissemination strategies in the context of various EU-funded projects. In addition, throughout the years Agroknow has established a strong presence and participation in global agri-food communities that are of interest to the CAPSELLA project, such as FAO AIMS (http://aims.fao.org), CIARD (www.ciard.info), the Global Open Data for Agriculture and Nutrition (GODAN; www.godan.info) to name a few, with a high number of active contributors that may be interested in following the updated of the CAPSELLA project. In addition, Agroknow has established a strong presence in social media (such as Twitter, Facebook and blog, among others), with a relatively high number of followers and connections

with other initiatives' social media. Last but not least, the Agroknow newsletter, reaching about 2,000 hand-picked recipients of various types in the agrifood sector, will be used for spreading the word about the project's outcomes.

In this context, Agroknow aims to support the dissemination strategy and plan described in this deliverable using its own social media channels in order to inform its customers and collaborators about the outcomes of the CAPSELLA project. More specifically, the following means will be used:

1. Blog posts: blog posts about the project and its outcomes will be published on a periodic basis on the Agroknow blog (http://blog.agroknow.com), which has received more than 22,000 visitors and 68,000 views since the beginning of 2014. These posts will also be published on the CAPSELLA website/blog in order for them to be accessible through the project's main point of dissemination. Selected blog posts will be reposted on the FAO AIMS platform, which features more than 2,000 members working in the field of agricultural information and knowledge management, domain-specific standards, good practices, open access and open data. Selected posts will also be featured in the Agroknow newsletter (see below)
2. Social Media: Through Agroknow's Facebook page (more than 500 followers) and Twitter account (more than 850 followers), news items on the project and its outcomes will be shared, working in a complementary way with the project's own social media channels. In addition. Agroknow's social media will be used for promoting related blog posts published on the Agroknow blog or the AIMS platform, using the appropriate keywords and hashtags in order to enhance the outreach of these posts, also mentioning the project's official accounts (e.g. @CAPSELLA12 in Twitter). Facebook pages of targeted initiatives, like the joint AIMS/CIARD (https://www.facebook.com/groups/ciard) with more than 780 members and the VOA3R (https://www.facebook.com/groups/voa3r.project) with more than 240 members, will also be used for sharing open data-related outcomes of the project. The Agroknow Twitter account (https://twitter.com/AgroKnow) has established connections with major global open data initiatives, such as GODAN (980 followers), ODI (27K followers), CIARD (330 followers), FAO AIMS (830 followers) and OADA (1500 followers), among others.
3. Newsletter: The Agroknow newsletter, which is published on a monthly basis and received by about 2,000 hand-picked recipients in the agri-food sector, will be used to features news items and blog posts about the project. In addition, one issue per year is expected to be dedicated to the CAPSELLA project. On top of that, selected news items and blog posts will be proposed as news items to the FAO AIMS newsletter which is distributed to more than 2,000 registered members and is also available online.
4. Events: Agroknow participates in the events organized by the networks that it is a member of, as well as major events at global level that attract audiences that are potentially interested about the outcomes of the CAPSELLA project. In this context, Agroknow aims to participate in such events and promote the work of the project, inviting key participants to

contribute to the ongoing work by providing their feedback and expertise. Such events include the GODAN Summit 2016, the 4th International Open Data Conference, the Open Data Institute Summit 2016 as well as additional events that will be identified in the next months.

In any case, these dissemination activities will be aligned with the ones defined in the dissemination plan of the project, supporting the work that takes place using the project's official tools and activities.

2.3.4 Rete Semi Rurali

Rete Semi Rurali has extensive dissemination experience towards farmer communities engaged in sustainable agriculture and agrobiodiversity conservation and sustainable use, as well as towards other food system actors, researchers and the general public. News, updates and achievements of the CAPSELLA project will be shared with RSR's communities of research and practice, thanks to RSR's quarterly newsletter, its web (www.semirurali.net) and Facebook pages and the pages of its ongoing or recently concluded projects (such as Diversifood – www.diversifood.eu, Solibam – www.solibam.eu, Cobra-Div – www.cobra-div.eu); it will be made available to end-users through the numerous face-to-face knowledge sharing events organized in the framework of ongoing projects and networks of European agrobiodiversity-focused organizations (such as the European Coordination Let's Liberate Diversity – EC-LLD and the European Consortium for Organic Plant Breeding - EcoPB).

CAPSELLA-related information can also be disseminated through the scientific information portal "Semi e dintorni" (www.semiedintorni.it), based on a collaboration with communication agency Formica Blu, as well as through the websites and/or social media tools used by most of the 33 current member associations of RSR (19 of these have their own website, 2 manage a Facebook page, and one a thematic blog).

RSR takes part in a few campaigns at national ("Campagna contadina" on small-scale famers' autonomy and sovereignty including around seeds) and international level (such as "No patents on seeds"), which could provide an additional channel for CAPSELLA's outputs, particularly those which touch upon the ongoing public debate on seeds from a technical, social, legal and ethical standpoint.

2.3.5 Zephy s.r.l.

Zephyr is the partner in charge of coordinating WP2 hence all the dissemination activities also in terms of content provision. Moreover its team will support any dissemination activity carried out by the partners, if and when requested. At this stage of the project, Zephyr has delivered the project website, established collaboration with several related projects such as FOODIE – Farm-Oriented data in Europe, that will participate to the first CAPSELLA workshop (http://www.foodie-project.eu/news-zoom.php?id=55) and stakeholders initiatives such as Ars Natura (http://www.arsnatura.net/), that at this stage of the project has already concretely channeled the information about CAPSELLA to its networks. Please refer to the screenshots 1 and 2 below.

Regarding the general spread of the news about the project launch, two press releases (annexed), were drafted and circulated to various networks including the e-Agriculture website (http://www.e-agriculture.org/) that published them both. An interview with the Communications officer of the CERN openlab (www.cern.ch/openlab), who is the European editor The Science Node (formerly iSGTW) www.sciencenode.org was agreed and planned to be carried out by mid/end of March. This interview, through the vast audience of Science Node, shall reach an audience of about 20,000 cloud and IT experts in Europe and U.S. Finally Zephyr, with a strong support of all partners, has finalised the organisation of the first workshop next May.

Figure 2-2: CAPSELLA on Maich Facebook page

Figure 2-3: CAPSELLA on Ars Natura Facebook page

3. Exploitation plan

This chapter is aimed at positioning the project in the landscape of the agrobiodiversity and food scenario and in the data and ICT landscapes. The consortium has foreseen the delivery of an exploitation plan at the end of the project's lifespan. It will also present the market uptake of the CAPSELLA results and their business aspects. Overall, the main axes around which the project exploitation activities will revolve are briefly reported below:

CAPSELLA Software tools & components	IP Owner & involved partners	Protection or licensing actions	Possible exploitation paths
Social media mining & knowledge extraction software components	ATHENA RC	CC-BY (software openly licensed and published at GitHub)	Enhance Data Platform instance supporting operational products of Agroknow (such as AKstem.com) Enhance Data Platform instance supporting the CIARD RING Consulting services on introducing open social media mining & knowledge extraction
New data sources & types for CIARD RING: components and services for cataloguing, discovering & visualising data sets from social media and challenges from local stakeholders	Agroknow (in collaboration with FAO of the UN)	CC-BY (software openly licensed and published at GitHub)	Free service for all sustained by CIARD in collaboration with FAO of the UN Future public/private donor financing
Core Data Management Platform Services and APIs	ATHENA RC	CC BY 3.0	Interaction with the system for developing the UI tools and applications Use of external developers and businesses for interacting with the system
Smart Web applications / pilots	ATHENA RC	CC BY 3.0	Use from specific communities, networks based on the pilot's target
OAI-PMH, OAI-ORE and other interoperability services upon the available data/metadata	ATHENA RC	CC BY 3.0	Harvested by European e-infrastructures OpenAIRE, RING and more External related communities and networks

Table 6: Exploitation opportunities identified during CAPSELLA project setup

3.1 Target audience for exploitation

For an effective exploitation of the CAPSELLA outcomes, the following main target groups and key actors have been identified as the final end-users to adopt or apply the results of the project, and potentially benefit from the knowledge produced:

1. Farmers communities in the agrobiodiversity and conventional agriculture (academic and private researchers, public research bodies, companies in the agriculture value chain), with a focus on the stakeholders all over Europe.
2. Technology providers (such as Startups, IT consultants or established companies developing software products, tools & apps for agri-food businesses, farmers & other mainstream customers).
3. International organisations & local branches working on global sustainability issues (e.g. FAO of the UN, World Bank, UNESCO, CGIAR, GFAR).
4. EU funded projects and initiatives (H2020).
5. Farmers' user communities: Sectors/environments that use/will use ICTs; interaction with them will define priorities and potential obstacles that prevent a wider adoption of their applications concrete collaboration proposals.
6. Data and knowledge providers (such as Knowledge and data managers in agro-biodiversity institutions (e.g. AGRIS, AIMS).
7. Policy and decision makers (including the EC).
8. Networks, associations and events of agro-biodiversity networks & movements and consortium members (e.g. the European Learning Network on Functional Agrobiodiversity ELN-FAB, the European forum 'Let's Liberate Diversity'.
9. Networks, associations and groups working on open data topics (e.g. RDA, OGP) and Networking actions, technology platforms and expert groups harmonising research and practice on agri-tech and knowledge management applications (such as the ICT-AGRI ERANET, the SCAR Committee, etc.).
10. Food chain actors (including restaurants).
11. Students, entrepreneurs-to-be, start-uppers.

In order to ensure a successful and sustainable exploitation of the CAPSELLA results, the exploitation plan will be implemented at two strategic levels, namely the National and International level, with a primary focus on the European countries.

3.2 Engagement of users and stakeholders

The engagement of agricultural actors, IT & data stakeholders and user communities is key to the creation of impact, and forms part of the core activities of CAPSELLA. In short, the project partners will use their networks and additional multiplier channels to raise the visibility of the project. Con-

sidering the ambitious coverage goal of the project, which aims to involve the audience from the broadest economic landscape that include also food startups and social enterprises creating innovative solutions for the food system and restaurants, chefs and food professionals that require access to high quality ingredients for their kitchens, the core communication efforts will be put on the CAPSELLA online communication tools.

In its engagement efforts, CAPSELLA will distinguish between push and pull information:

- **Pull content:** Content that can be accessed and consumed by the users (all target groups). Amongst them will be a Wiki explaining concepts, developments, myths and realities in layman language for the public at large. Furthermore, for the communities involved, findings from the project itself, but also from other related partners/projects, will be displayed on the CAPSELLA website.
- **Push content:** New dissemination channels offered by Web 2.0 tools of the Internet will be used to disseminate messages (please refer to the Social Media presence chapter)

The dissemination material will be produced in English, however translations in national consortium languages will be evaluated in the activities whenever this material might reinforce the penetration of core messages to a wider audience.

3.3 Intellectual property management

To avoid any potential conflicts related to intellectual property rights, a Consortium Agreement was signed at the early stage of the project. This is an important document when it comes to ownership and sharing of Knowledge or project results, as it sets out or further defines how the consortium agrees on the use and exploitation of the project results. The purpose of the CAPSELLA CA is to specify with respect to the Project the relationship among the Parties, in particular concerning the organisation of the work between the Parties, the management of the Project and the rights and obligations of the Parties concerning inter alia liability, Access Rights and dispute resolution.

The intention of the consortium, set at the beginning of the project, is to strive for certain openness. Its products could, thereby, exploited at a good level and contribute to the growth of the open data, agrobiodiversity and food market.

3.4 CAPSELLA end product

The CAPSELLA platform will be the main project end product and will include a rich set of components and a number of added-value functions offered “as a Service” with the intention of gathering and hosting data from the targeted communities. An infrastructure will be offered for building innovative ICT applications, thus enabling and encouraging the development of smart applications either from the project partners in the frame of the pilots or from external communities and industry related to biodiversity in agri-food systems.

The platform that will be developed in the context of WP5, will be exploited in various ways. As a system for handling data, metadata and analysing them, it can be exploited by other projects, acting as the base layer of their infrastructures and supporting data/metadata handling.

The architecture of the platform offers the ability to exploit its subsystems individually, allowing other projects and/or applications to use the ones that cover their needs.

In addition all open data that will be hosted in CAPSELLA's platform can be used for research purposes and for enhancing other infrastructures with agriculture data. This will be achieved by accessing them using the platform's interoperable services or its own API (Application Programming Interface).

CAPSELLA is planning to exploit its results also in collaboration with AGINFRA, a hub for collecting and sharing information related to agriculture & food security. So additionally, by building on the AGINFRA services and using the AGINFRA e-infrastructure, the CAPSELLA outcomes will be integrated in a global infrastructure for agri-food information and data and will be available to a much wider audience at a global level. In addition, by reusing the AGINFRA services and tools, the outcomes of the CAPSELLA project will remain operational and functional even after the end of the project, as AGINFRA is an e-infrastructure that ensures its sustainability through funding from various sources. Details of AGINFRA are included in Annex 5.2. The specific details will be included in the final exploitation plan.

Additionally to the platform, the applications that will be developed in the frame of the pilots will offer concrete exploitation opportunities. These will be of particular importance, as the developed applications will be the result of the exchange with the communities and an effort to provide answers and support to issues that are crucial for them.

3.5 Incubation

Agriculture is a huge market at a global level, with a constantly increasing investment potential and interest in agricultural technologies. At the same time, traditional, intensive agriculture approaches do not seem to provide the solution to the food security issue that is expected to increase within the next years due to the increase in global population. On the other hand, approaches based on open data are being adopted during the last years, allowing researchers to get access to research outcomes that are substantial for their work, developers to build applications that address real agri-food related issues based on open data etc.; this approach allows the optimization of crop yields using existing knowledge without the need for additional inputs. These open data approaches are adopted at a global level by various types of stakeholders, such as governments, SME's, publishers, research centers and funders. Governments such as the UK one have moved a step forward by establishing the Agrimetrics platform (http://www.agrimetrics.co.uk) that aims to facilitate the use of "*big data science in the agri-food industry and contribute to a highly intelligent, productive, efficient, resilient and sustainable system*[6]". For UK alone, an esti-

[6] Agrimetrics Press Release: http://www.agrimetrics.co.uk/attachments/Agrimetrics-launch-press-release.pdf

mated benefit of GBP 7 million per year from opening up agri-food related data has been officially reported[7].

Figure 3-1: Food net production index (source: FAOSTAT)

Thanks to the importance of open data in the agri-food sector, efforts are put in the incubation and acceleration of tech startups in Europe, through initiatives like FIWARE (https://www.fiware.org) and the Horizon 2020 SME Instrument[8] initiative, both of which aim to support SMEs in building innovative applications on open data. Through these funding opportunities, various agri-food applications are being developed; for example, FIWARE accelerators like FIspace (a business-to-business (B2B) collaboration platform; http://www.fispace.eu) and Finish (an accelerator of new business applications for agri-food, and other domains) have funded a relatively high number of mini-projects/applications[9] in the agri-food sector that make use of open data and open source software, among others. A more generic example is the Horizon 2020 ODINE incubator for open data powered startups around Europe (https://opendataincubator.eu). ODINE is a 6-month incubator for open data entrepreneurs across Europe, supporting the next generation of digital businesses and support them to fast-track the development of their products. The Open Data Institute (ODI; http://theodi.org), one of the ODINE consortium members and an independent, non-profit, non-partisan, limited by guarantee company, is working on facilitating the adoption of open data in various sectors (including agriculture). Through the ODI Startup program (http://theodi.org/odi-startup-programme), startups with innovative ideas receive coaching and mentoring, along with other types of support from ODI (such as ad-hoc office space and liaison with key stakeholders in their domain) so that they can materialize their ideas into a product.

The aforementioned initiatives provide an ecosystem that encourages and boosts the implementation of innovative ideas and their transformation into actual products. While the general con-

[7] https://www.gov.uk/government/news/open-data-to-boost-farming-and-feed-the-world

[8] https://ec.europa.eu/programmes/horizon2020/en/h2020-section/sme-instrument

[9] http://www.finish-project.eu/projects-funded-by-finish/

cept remains the same, the incubation of innovative ideas in the aforementioned incubators may be materialized in a different way. For example, ODI facilitates the Open Data Challenge series (http://opendatachallenges.org), a series of seven challenge prizes to generate innovative and sustainable open data solutions to social problems. The active involvement of different types of actors, like organisations, entrepreneurs, designers and experts allows the development of challenges that deliver sustainable products and services with a social purpose. The methodology applied in these challenges is depicted in the following figure.

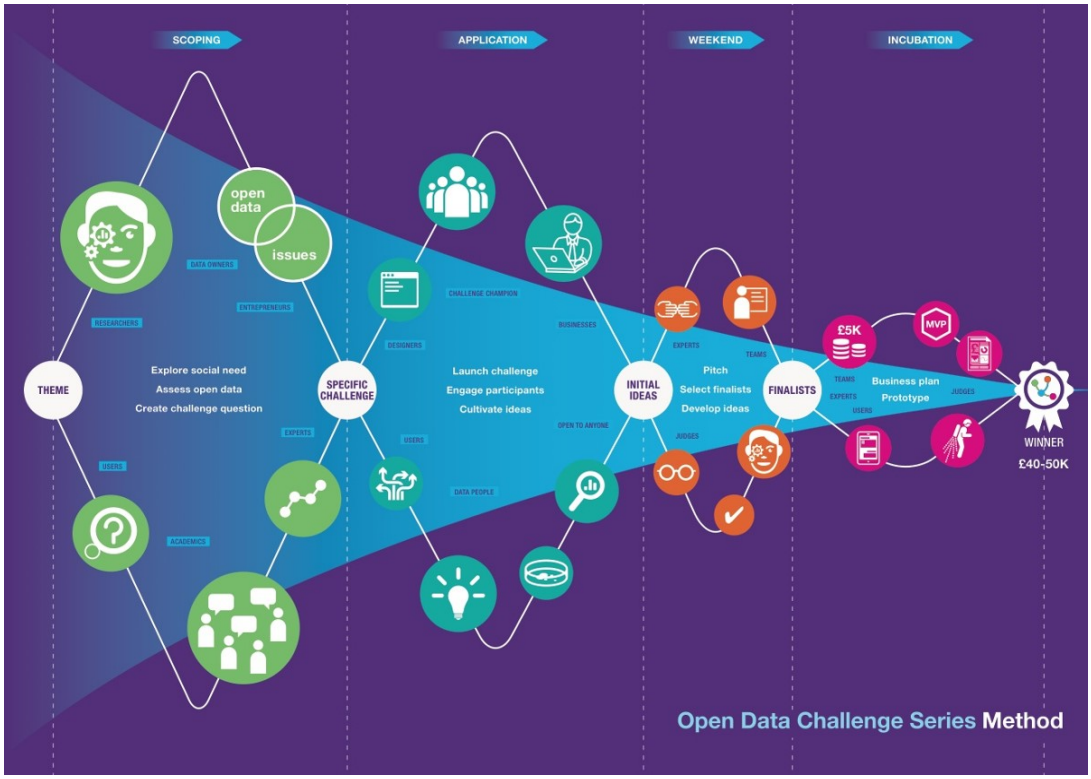

Figure 3-2: Workflow of ODI's Open Data Challenge

A Food Open Data Challenge[10] took place between August 2014 and February 2015 and the winner was the application titled "FoodTrade Menu"[11], which compiles information from food producers, growers and government to produce tailored menus with flagged dishes and recipes that include all the information needed for a consumer to make an informed choice.

In the context of the CAPSELLA project, Corallia (http://www.corallia.org) will design and implement with all the partnership the CAPSELLA start-up generation and incubation process as initially defined in WP6.

[10] http://opendatachallenges.org/challenges/food/
[11] http://www.nesta.org.uk/blog/being-food-open-data-prosumer-foodtrade-menu-winner-food-open-data-challenge

Making use of the partnership experience and the existing open data incubation opportunities the CAPSELLA project aims to use challenges, as they are identified by communities and transform them into new startup ideas, as shown in the following figure.

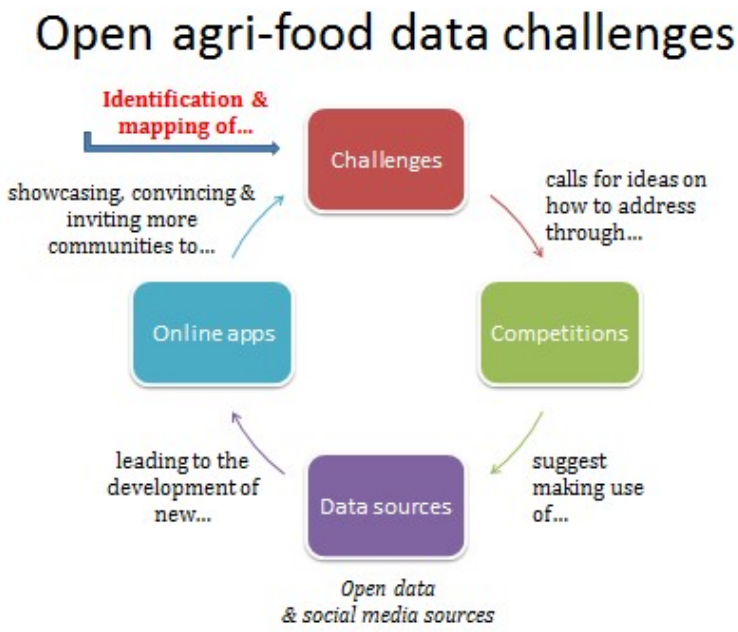

Figure 3-3: The open agri-food data challenge workflow

This design will take into consideration existing work and successful examples of accelerator programs at a global level. A preliminary desktop research has identified the following programs, among others:

- Farm 2050 (http://www.farm2050.com)
- Yield Ag Tech Lab Accelerator (www.theyieldlab.com)
- THRIVE (http://www.thriveaccelerator.com)
- Sprout Agritech accelerator (http://www.sproutagritech.com)
- Royse Law (http://royselawincubator.com)
- Trendines AgTech (http://trendlines.com/agtech)
- Great lakes Ag-Tech Business Incubator (http://www.agtechincubator.com)
- Good Food Accelerator (http://www.goodfoodaccelerator.org)

The design will also take into consideration, and make use of, existing agri-tech investment opportunities that can be used for the funding of the most prominent ideas. A part of this work will focus on the establishment of connections with these funding initiatives and the promotion of the incubated startups with these events and funds. An indicative list of related funding opportunities includes the Village Capital – Agriculture Program (http://www.vilcap.com/agriculture) and the U.S. National Institute of Food and Agriculture (http://nifa.usda.gov).

4. Conclusions

This deliverable presents the dissemination and awareness raising plan of the CAPSELLA project. The conception of dissemination as an exercise of bi-directional "knowledge-sharing", and the continuous endeavor to actively engage and liaise with farmer communities, researchers, users, and IT communities will guide our work towards meeting the specific objectives. By actively involving experts from all the communities, networks and clusters addressed within CAPSELLA, as well as by establishing close collaborative contacts with related projects and initiatives both at a national and European level, the consortium intends to better capture, reflect, and facilitate the exchange of the respective experiences, challenges, and best practices in the use of data and IT applications in the agrobiodiversity and agricultural industry.

Publication of the project results, their dissemination through the CAPSELLA website and other appropriate scientific media channels, along with the organization of the project's networking events will help us reach a wide spectrum of audience, and spread the word about CAPSELLA and its outcomes including the cloud platform.

In its final paragraphs, this deliverable describes exploitation activities as they are planned in this initial phase of the project. These activities aim at ensuring the sustainability of the CAPSELLA project outcomes through the integration with existing related initiatives that will cover such outcomes under their umbrella, such as the case of the AGINFRA e-infrastructure. In addition, the deliverable describes an approach for the incubation of innovative ideas in the agri-food sector, based on existing efforts at a global level and adapted in the case of the CAPSELLA project. The definition and application of such an approach in the case of CAPSELLA will allow data-powered SMEs and other stakeholders in the agrobiodiversity sector, starting with use cases within the project, to have their innovative ideas funded and turned into actual products that will address real needs of their specific community.

5. Annexes

5.1 Global open data initiatives for agriculture and food

The **Global Open Data for Agriculture and Nutrition** (GODAN; www.godan.info) is a global network that currently features more than 200 members, including a variety of stakeholder types, such as national governments, non-governmental organizations, international and private sector organizations. The aim of GODAN is to:

- advocate for new and existing open data initiatives to set a core focus on agriculture and nutrition data;
- encourage the agreement on and release of a common set of agricultural and nutrition data;
- increase awareness of ongoing activities, innovations, and good practices;
- advocate for collaborative efforts on future agriculture and nutrition open data endeavours;
- advocate programs, good practices, and lessons learned that enable the use of open data particularly by and for the rural and urban poor.

Among the key partners and supporters of GODAN are the US Government, the UK Department for International Development (DFID), the Netherlands Government, the Open Data Institute (ODI), the Food and Agriculture Organization of the United Nations (UN FAO), the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA), the Centre for Agriculture and Biosciences International (CABI), CGIAR (the ex-Consultative Group for International Agricultural Research) and the Global Forum on Agricultural Research (GFAR).

One of the latest outcomes of GODAN is the Discussion Paper on Open Data in Agriculture & Nutrition discussion paper[12], jointly developed by GODAN and the Open Data Institute (ODI) in May 2015. This publication highlights the role of open data in the context of agriculture and nutrition, identifies a number of challenges and presents several use cases where open data made an impact in the agri-food sector. This Discussion paper was presented by GODAN partners during the 3rd International Open Data Conference.

The **Open Data Institute** (ODI; www.theodi.org) is an independent, non-profit, non-partisan, limited by guarantee company that aims to "*connect, equip and inspire people around the world to innovate with data*". It is activated in various thematic areas, including agriculture and nutrition[13]; through their contributions, ODI is working toward supporting those who wish to open up their data through guidelines, information on licensing to be applied, training and educational material, use cases and success stories etc.

[12] http://www.godan.info/launch-of-godan-discussion-paper

[13] http://theodi.org/agriculture-nutrition-open-data

ODI maintains and supports a global ODI network of local nodes (currently 25), in the form of small ODI hubs set up around the world to contribute to the development of open data. Community nodes convene local individuals and organisations interested in open innovation, delivering local events and workshops. They raise awareness of data's economic, social and environmental benefits, encourage local collaboration and help build connections through ODI individual membership. Through its established connection with the ODI Athens Node (http://theodi.org/nodes/odi-athens), Agroknow aims to make use of the existing community in order to bring the CAPSELLA project and its outcomes closer to the Greek Open Data community and organize events that will be used for bringing an alternative view (and even solutions) on the open data challenges of the project.

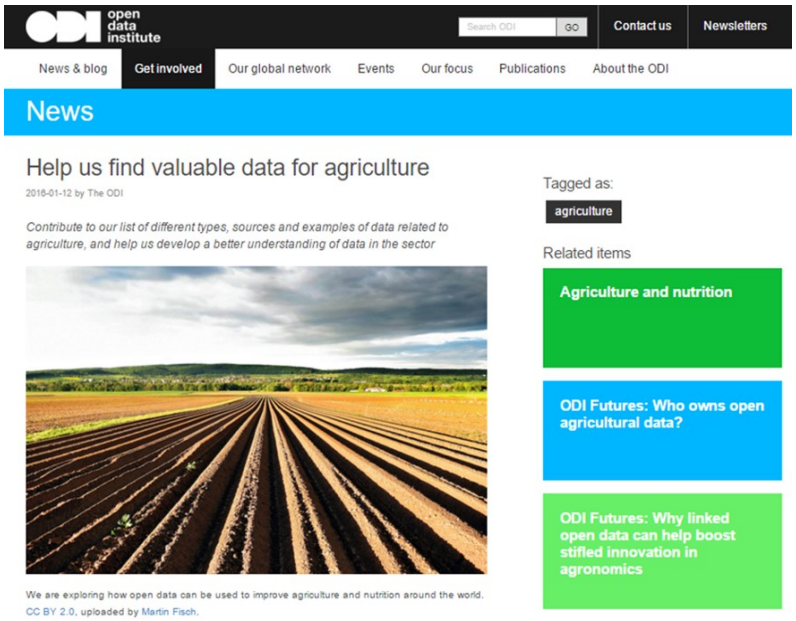

Figure 5-1: The ODI website section on agricultural data

ODI organizes open data challenges in collaboration with various other initiatives and on various topics, including agriculture and food, among others[14]. These challenges are aimed at using open data for addressing real issues and challenges. Such events will allow CAPSELLA to have its open data related challenges addressed by external stakeholders and even have its open data-related outcomes tested by them so similar events will be considered by the project as means for the validation and addressing of these challenges.

CIARD (www.ciard.info) is a global movement for open agricultural knowledge for development, currently consisting of more than 6,200 members; about 440 of which are institutions. The network is working on the advocacy on open knowledge for agricultural development, promoting

[14] http://opendatachallenges.org/challenges/food

open access to agricultural knowledge. CIARD is working mostly on capacity development and in this context, it produces capacity building material in the form of pathways, webinars, e-discussions, working groups and an advocacy toolkit (http://www.ciard.info/capacity-development), all of which aim at facilitating access to agricultural research outcomes so that they become available to all types of stakeholders. In addition, it has published the CIARD Manifesto Towards a Knowledge Commons on Agricultural Research for Development (www.ciard.info/about/manifesto) that supports adoption of the coherent, effective and open institutional approaches to agricultural knowledge.

CIARD is also responsible for and maintaining the RING (http://ring.ciard.info), a global directory of web-based services that provide access to any kind of information sources pertaining to agricultural research for development (ARD). CIARD RING provides access to resources such as providers, services and datasets. CIARD RING is one of the core components of the AGINFRA global agri-food research e-infrastructure.

AIMS (Agricultural Information Management Standards; http://aims.fao.org) is a part of CIARD and supported by UN FAO. It is a portal with information about and access to standards, technology and good practices. It is also a forum for connecting information and knowledge management workers worldwide and for discussing open access and open data. AIMS aims at empowering agricultural information management specialists all over the world in creating access to agricultural knowledge. The platform features more than 2,000 registered users, mostly information, knowledge and data managers from all over the world.

Its VEST Directory (Vocabularies, mEtadata Sets and Tools; http://aims.fao.org/vest-registry) is a registry of resources that can be used within the context of agricultural information management, such as tools, metadata sets, data sets and knowledge organization systems (KOSs), all of which are described using a standard set of metadata.

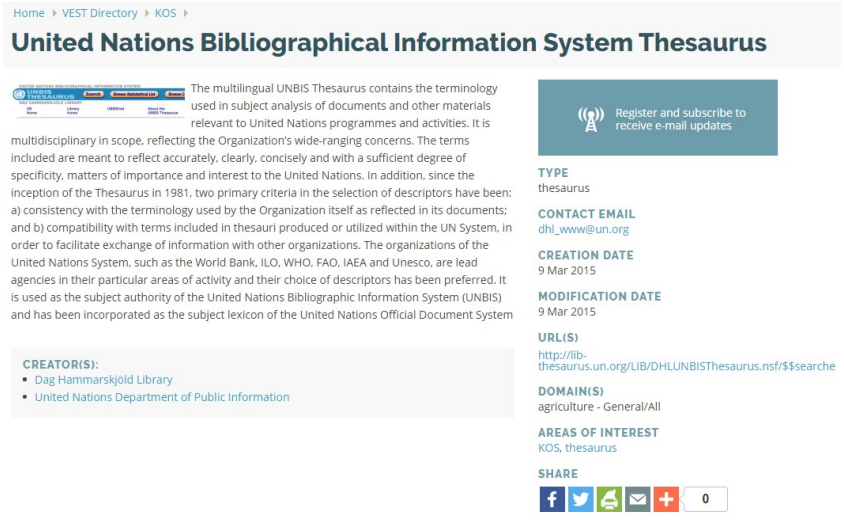

Figure 5-2: View of an entry in the VEST Registry of FAO AIMS

Through its liaison with AIMS, CAPSELLA will have access to a community of agricultural information, knowledge and data managers, as well as up to date information on the standards used in the agri-food sector so that any related work of the project can build on existing widely used standards and therefore benefit from the enhanced interoperability with existing related systems and efforts in general.

The U.S.-based **Open Ag Data Alliance** (OADA; http://openag.io) started as an initiative of the Purdue University, in order to "*help farmers access and control their data, by building an open source framework and a community of commercial vendors, farmers, academics, and developers upon which the emerging ag data market can rapidly grow*". The initiative is constantly expanding and currently consists of 23 partners.

OADA works on addressing issues related to the interoperability, security and privacy to agricultural data, focusing on the ones produced by farmers at a farm level, through e.g. sensors. The outcomes of this work will be, among others, a set of common, extensible REST API specifications, combined with the industry standard OAuth 2.0 authorization protocol (http://oauth.net/2) and successor versions. OADA outcomes will be placed in publicly available source code repositories released under the MIT License (https://opensource.org/licenses/MIT) for everyone to freely contribute and use.

The CAPSELLA project will benefit from the OADA data ecosystem, which enables data security, privacy and interoperability for the entire agriculture industry, by studying the outcomes of OADA and working on the adaptation and adoption of the most appropriate ones, in order to address any open data-related challenges. In addition, a collaboration with the OADA partners may provide the answers to questions related to the use of open data in the context of the CAPSELLA project. Last but not least, CAPSELLA may provide additional use cases for the application of the OADA approach to open agricultural data.

5.2 AGINFRA

AGINFRA, as the global hub for collecting and sharing information related to agriculture & food security, plays multiple roles in the global agri-food research community - including but not limited to the following:

1. a global atlas of agricultural research & extension (including institutions, people, publications, data sets, projects, courses, OERs);
2. a semantic layer of processing, enriching & interlinking research information from distributed, heterogeneous sources & formats;
3. a catalogue of software components (open source software stack & APIs) that anyone may use to process research information;
4. a help desk service to support institutions & projects that wish to publish their research information openly;
5. a set of data-rich service and application demonstrators for specific case studies (food safety, viti, crop composition etc.);

In this context, the AGINFRA infrastructure could be powered by the CAPSELLA platform and it's data management and processing components, so that the project technology contributions are appropriately positioned within the data infrastructure for agriculture and food.

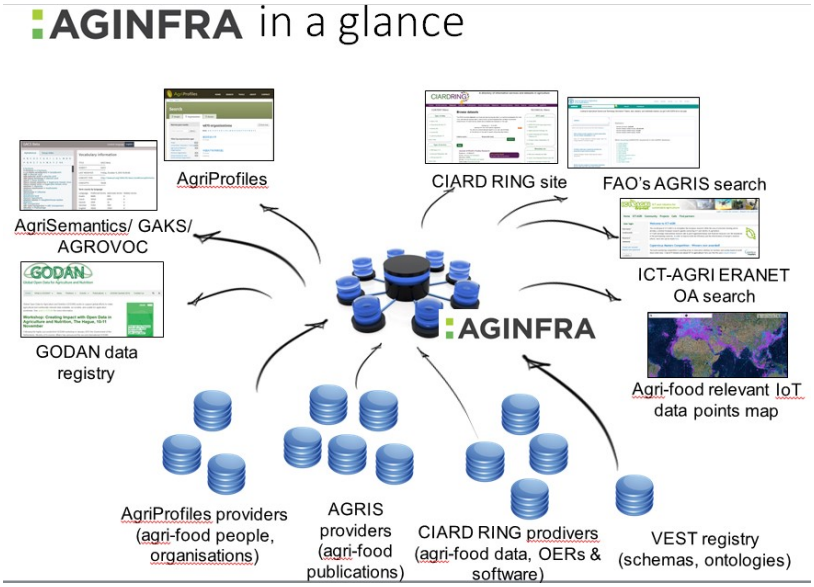

Figure 5-3: AGINFRA agri-food research information hub

In this respect AGINFRA is aiming to build upon the following existing components:

- Federated data registry across community applications
- Registry of Software Services/ Components
- Semantic Enrichment internal services
- Existing Workflows for Metadata Aggregation
- Indexing Services on Metadata
- Services for sharing data through standard programmable interfaces (REST API).

All these services will be considered during the development of the CAPSELLA platform. By using the CAPSELLA platform services, AGINFRA could be able to index, process and make discoverable (by any pilot application) the social data sources and sets that will be extracted and generated by social media. In this way, it will be able to support existing and future applications that will be powered by AGINFRA. In a very similar way, CAPSELLA may also power data infrastructures supporting other community domains.

Through its integration with AGINFRA, the CAPSELLA project could offer services to its existing and potential users, such as catalogues of the members of a specific community, thematic microsites for each community, product etc. with related, focused scientific news & educational materials as well as admin panels/dashboards to support these communities and networks in decision making.

In addition, by building on the AGINFRA services and using the AGINFRA e-infrastructure, the CAPSELLA outcomes could be integrated in a global infrastructure for agri-food information and data and will be available to a much wider audience at a global level.

5.3 Samples of dissemination material

CAPSELLA
COLLECTIVE AWARENESS PLATFORMS FOR ENVIRONMENTALLY-SOUND LAND MANAGEMENT BASED ON DATA TECHNOLOGIES AND AGROBIODIVERSITY

Figure 5-4: Project logo

Figure 5-5: Project ppt templates

5.4 1st CAPSELLA press release

CAPSELLA

PRESS RELEASE

CAPSELLA Project launched on January 1th 2016 under Horizon 2020 will establish a Collective Awareness Platform for Environmentally-sound Land Management based on Data Technologies and Agrobiodiversity

13 February 2016: Since its birth, the European Union has put high priority to its rural development policies that were considered key drivers of social and economical development and wealth. The main tool by which Member States implement their policies for agricultural development is the well known Rural Development Plan (RDP), one of the two pillars on which the Common Agricultural Policy (CAP) rests. Through the CAP, Europe is increasingly recognising the value of farming for the conservation of agricultural biodiversity and the provision of ecological services in farmland, including some of paramount global importance, like the mitigation of climate change.

Furthermore, Europe was one of the most active players in negotiations on the International Treaty on Plant Genetic Resources for Food and Agriculture (IT PGRFA), trying to bridge the gap between the Organisation for Economic Cooperation and Development (OECD) countries and developing nations. Biodiversity is a cornerstone implemented by the European Union in all its policies, since it is one of the key assets for sustainable development.

In the light of the aforementioned framework, a newly project under Horizon 2020, CAPSELLA (Collective Awareness PlatformS for Environmentally-sound Land management based on data technoLogies and Agrobiodiversity) has been funded and took its first steps on 1 January 2016. Just like the tiny yet sturdy little plant it takes the name from, the CAPSELLA project will deepen the roots of sustainability in agri-food systems by harnessing scientific and local knowledge, people's energy, motivation and innovation skills around the theme of agro-biodiversity by making use of novel, improved and demand-driven ICT solutions.

CAPSELLA will focus on two complementary domains: agro-biodiversity and the food supply chain. It will use participatory bottom up data collection and top down data integration to develop solutions for these domains. The project will build from scratch open data repositories concerning regional agro-biodiversity, and will build upon and enhance existing data sets on the agro-biodiversity and food domains. Based on these, the project will develop a number of community-driven data powered ICT solutions, which will be tested by the communities engaged in the project and will result in a number of pilots. At the centre of the CAPSELLA work will be three multidisciplinary, community-driven use cases:

- "field scenario" addressing use of functional agro-biodiversity in cropping systems;
- "seeds scenario" addressing on-farm genetic diversity conservation and informal seed systems;
- "food scenario" addressing the transparency of the food chain in the processes related to the production, distribution and consumption of food.

CAPSELLA will build a sustainable technical prototyping platform, a meeting environment for innovation that democratizes access to big data, cloud computing, open data, open software and pilots. To do so, it will build up on on-line and off-line tools including the organisation of key events to raise awareness about the project and collect information by a button up approach. The project will have a strong societal and business sustainability focus by including incubation activities for selected pilots.

The first open workshop will be held in Volterra (Pisa), Italy in **May 30 & 31 2016.** It will bring together agro-biodiversity stakeholders (farmers, communities and networks) in order to understand and collect their requirements and needs, to encourage them to provide open data and to share knowledge and to raise awareness about CAPSELLA's goals and results such as the delivery of innovative ICT solutions to match communities' needs. Stay tuned, further information about this event will come up soon!

5.5 CAPSELLA workshop press release

CAPSELLA

1st Workshop PRESS RELEASE

The CAPSELLA Project, launched on January 1st 2016 under Horizon 2020, will establish a Collective Awareness Platform for Environmentally-sound Land Management based on Data Technologies & Agrobiodiversity

22 February 2016: With over 77% of the European territory classified as rural (47% farmland and 30% forest) and around 12 million full-time farmers, agriculture is a vibrant and important sector of the EU economy and welfare. Agriculture and agri-food account for 6% of the EU's GDP, comprising 15 million businesses and 46 million jobs.

The European Commission has hugely invested in a Common Agricultural Policy designed to support farming, ensure food quality and safety and promote sustainable and balanced development across all EU rural areas. EU farmers have to face multiple challenges to meet increasing demands from consumers and the civil society. Besides their traditional role of food, feed and fiber producers, farmers are nowadays requested to provide other ecosystem services, such as the production of renewable energy, the conservation of the environment, landscape and rural cultural heritage, and the mitigation of climate change. There is increasing awareness that all these demands can be met by the conservation and wise use of agricultural biodiversity, or 'agrobiodiversity'.

To meet the present goals of EU agricultural and agri-food systems and to foster knowledge on the importance of agrobiodiversity among EU stakeholders and actors, the use of novel ICT solutions is key. Targeted ICT-based solutions can promote innovative, knowledge-intensive farming systems and methods based on the optimization of local natural resources and on reduced use of external inputs. On top of this, ICT can greatly contribute to closing the digital divide between urban and rural areas, thus creating a more inclusive society.

In this light, CAPSELLA is organizing its first workshop, on 30-31 May 2016 in Volterra (Pisa), Italy, aiming at bringing together Northern and Southern EU farmers to collect and understand their ICT needs and requirements. The event will try to answer and provide solutions to them, exchange best practices and use cases and pave the way to exchange knowledge and future collaborations around the theme of agrobiodiversity.

The event's vibrant environment will be a stage where farming communities with different background (such as conventional and organic) but sharing the interest in agrobiodiversity, will openly discuss and compare their points of view, where existing ICT tools will be presented to expose their benefits to farmers communities, and where the goals and activities of CAPSELLA will be presented. The workshop includes outdoor (in field) and indoor sessions, aimed to break the ice among participants and build a collaborative spirit.

Focus groups moderated by a facilitator will ensure a concrete exchange of opinions, knowledge and experiences, the effective collection of requirements by the networks and communities involved, and awareness raising on the importance of collecting and sharing open data and knowledge on agrobiodiversity, the benefits of co-designing ICT tools and of new products such as a cloud platform delivered by the CAPSELLA consortium at the end of the project.

The agenda is available on the CAPSELLA website (www.capsella.eu)