



## D3.8 - Roadmap Presentation in Brussels






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## EXECUTIVE SUMMARY

Deliverable “D3.8 - Roadmap Presentation in Brussels” is a deliverable of type “Other” and this means that it corresponds to artefacts other than reports. More specifically, this deliverable is about the presentation of the eROSA Roadmap for a European e-Infrastructure for Open Science in Agricultural and Food Sciences to a selected group of people from different units of the European Commission’s Directorates-General (DGs) such as DG for Communications Networks, Content and Technology (DG CONNECT), DG for Research and Innovation (DG RTD) and DG for Agriculture and rural development (DG AGRI) towards receiving their feedback for its further improvement. The presentation of the roadmap was organized as part of the final eROSA Policy Meeting, which was held in Brussels, Belgium on 19<sup>th</sup> of June (full details about the policy meeting can be found also in deliverable D3.6 - Meetings of the Policy Committee).

The presentation of the roadmap corresponds to the draft roadmap document<sup>1</sup>, which was released to the eROSA project web site on 8<sup>th</sup> of June 2018. The presentation was divided into two main parts, as follows:

No	Presentation Title	Presented by	Corresponds to Roadmap document section <sup>1</sup>	eROSA’s Slideshare Link
Part 1	Community and Governance Recommendations for the Future State of an e-Infrastructure in Agri-Food Sciences	Sander Janssen (ALT-DLO)	<ul style="list-style-type: none"> <li>• <b>Section 2</b> on Vision</li> <li>• <b>Section 3</b> on Grand Challenges</li> <li>• <b>Section 6</b> on Recommendations (parts on community and business models)</li> </ul>	<a href="https://goo.gl/pTFnaq">https://goo.gl/pTFnaq</a>
Part 2	Technical Recommendations for the Future State of an e-Infrastructure in Agri-Food Sciences	Panagiotis Zervas (Agroknow)	<ul style="list-style-type: none"> <li>• <b>Section 5</b> on a European e-infrastructure in Agri-Food</li> <li>• <b>Section 6</b> on Recommendations (part on services and technical backbone)</li> </ul>	<a href="https://goo.gl/5La3UH">https://goo.gl/5La3UH</a>

<sup>1</sup> [http://www.erosa.aginfra.eu/sites/default/files/deliverables/Foresight%20Roadmap%20Paper\\_Draft\\_08.06.2018.pdf](http://www.erosa.aginfra.eu/sites/default/files/deliverables/Foresight%20Roadmap%20Paper_Draft_08.06.2018.pdf)

The feedback that has been received from the presentation of the eROSA roadmap, as well as the discussion that was followed has been reported in deliverable D3.6 - Meetings of the Policy Committee.

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# 1 MEETING NOTES

## 1.1 PRESENTATIONS

### 1.1.1 Community and Governance Recommendations for the Future State of an e-Infrastructure in Agri-Food Sciences (Sander Janssen, ALT-DLO)

Sander Janssen pointed out that the Food System is at a turning point with multiple changes with an overarching challenge of “interconnectedness”. The project has considered the food system in three key-themes, related to the underlying scientific communities: (a) Smart farming, food security & the environment, (b) Gene-based approaches from omics to landscape and (c) Food Safety, Nutrition & Health. For these three key-themes analyses was provided regarding societal, scientific, obstacles and expectations aspects. The common point for these communities is that for the development of Open Science for food systems, there is a need to support:

- *Sharing*: of the resources of relevance to the scientific process (data, models, papers, etc.). Open science is only possible if one is able to share one’s research first
- *Connecting*: available resources need to be connected to allow integration, and tackling large scale and more ambitious questions in science
- *Collaborating*: the research community itself needs to collaborate beyond ad-hoc arrangements to create, maintain and supply domain specific resources for open science in a network of regional or domain nodes.

Within this context, the eROSA roadmap has produced some key recommendations that could be summarized as follows:

- There is a need to move from Open Science to Open Innovation in the Food System
- There is a need for Food System e-infrastructures for international development
- It is highly needed to consider data-driven sustainability assessment for SDG<sup>2</sup>-achievement
- There is a need to support Open Food System Science for Agri- Environmental and Nutrition policy making
- There is a need for training the “Food System 4.0” scientists for open innovation towards Food 2030
- Large Scale Public Private Partnership (PPP) on data-driven innovation and research towards Food 2030 needs to be supported

The presentation is available at: <https://goo.gl/pTFnaq>

### 1.1.2 Technical Recommendations for the Future State of an e-Infrastructure in Agri-Food Sciences (Panagiotis Zervas, Agroknow)

Panagiotis Zervas in his presentation described the key components for the future state of an e-infrastructure in Agri-Food in order to implement eROSA’s vision. These components were the outcome from the analysis of how collaborative research was performed in the past and what were the problems, as well as what are the limitations of the current situation. For the future state of an e-infrastructure in Agri-Food the usage of the physical infrastructure should be optimized, the available horizontal services should be enriched with mature technologies in order to accommodate all the needs that a community can request. A critical aspect for achieving this vision is to exploit semantic specifications for data and services that will make available cross-community services and automate the incorporation of existing /

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<sup>2</sup> Sustainable Development Goals



new services. Within this context, the eROSA roadmap has produced some key technical recommendations that could be summarized as follows:

- There is a need for trust and provenance supporting repositories of digital assets
- Robust registration mechanisms for adding such repositories to the ecosystem are also needed
- Trust-enabled repositories for preserving and exposing semantic resources are highly important and need to be in place
- Machine-readable and transparent licensing mechanism for all digital assets are needed
- There is a strong need for secure authentication mechanism for access control in all repositories
- A specification layer (“a common language”) for the creation and preservation of shared and connected semantics for data. Models and services needs to be developed
- Solid research results from big data mining, distributed and large-scale analytics, big data visualization need to be utilized
- There is a strong need for user-friendly and user oriented tools and services

The presentation is available at: <https://goo.gl/5La3UH>

### 1.1.3 State-of-play of FOOD 2030 (Wim Haentjens, EC DG RTD)

Wim Haentjens provided an overview of the EU policy framework Food 2030, which seeks to address the need to step up in terms of investment in the agri-food area. Following the success of the first Food 2030 High Level Event in October 2017, Wim Haentjens presented the results of the 2nd Food 2030 High Level Event, which took place on 14-15 June 2018 in Plovdiv, Bulgaria. Currently, there is a vision for pesticide-free agriculture and carbon neutral. It was also mentioned during the presentation that Food 2030 supports the implementation of the EOSC as a “research data commons” in the agri-food area. Following the EOSC Summit in June 2017, a Declaration and an Action List were published in October 2017. Moreover, the 1st EOSC Stakeholder Forum took place in November 2017 and the EOSC Roadmap has also been published at: [https://ec.europa.eu/research/openscience/pdf/swd\\_2018\\_83\\_f1\\_staff\\_working\\_paper\\_en.pdf](https://ec.europa.eu/research/openscience/pdf/swd_2018_83_f1_staff_working_paper_en.pdf).

### 1.1.4 European Open Science Cloud (EOSC) from the perspective of e-infrastructures Implementation (Georgia Tzenou, European Commission DG CONNECT)

Georgia Tzenou mentioned in his presentation that existing e-infrastructures – transversal and thematic ones – are the starting point to develop the EOSC and integrate and consolidate these e-infrastructures into a single virtual, trusted environment and access channel for the researcher. The EOSC Hub (74 partners, 12 EU e-infrastructures) in collaboration with OpenAIRE-Advance are key H2020 projects that support the implementation of the EOSC by integrating operational services. In addition, other projects are financed to prototype new services: for instance, the project FREYA supports the development of a PID (Persistent Identifier) commons. Moreover, it was mentioned that EOSC Hub will identify needs that could be addressed in the upcoming call on innovative services (INFRAEOSC-02-2019). Finally, it was mentioned during the presentation that rules of participation for EOSC are expected to be published and EOSC portal is expected to be released by the end of year 2018.

## 1.2 REFLECTIONS BY EUROPEAN COMMISSIONS’S DIRECTORATE-GENERAL REPRESENTATIVES

Following the presentations from Sander Janssen (ALT-DLO) and Panagiotis Zervas (Agroknow) regarding the recommendations from the eROSA roadmap, the representatives from the different EC DGs were requested to provide to the eROSA consortium members (present in the meeting) with formal responses regarding the roadmap document in general and specifically for the recommendations presented. To this end, the following responses received:

- **Directorate-General for Research and Innovation (DG RTD):** The vision 2030 of the roadmap is very relevant to the EU policy framework Food 2030. The objectives of share, connect and collaborate are very well described. The recommendation related to the need to move from open science to open Innovation covers many aspects and for this purpose more focus is needed. Additionally, the different use cases need to be considered in depth and identify what open innovation means. It should become more evident in the document that researcher needs are central. More specifically, the document should be able to demonstrate more clearly the researchers needs and how an e-infrastructure are serving them or not
- **Directorate-General for Communications Networks, Content and Technology (DG CONNECT):** The document should be more clear and specific on how existing e-infrastructures will be evolved to support the vision. The link from obstacles to mission should become more evident in the document, especially at the point where the scientific challenges are described. Finally, recommendations could be more practical
- **Directorate-General for Agriculture and Rural Development (DG AGRI):** Data sharing is a crucial issue, but it needs to be backed-up with appropriately defined use cases. Moreover, the engagement of business communities is essential. Moreover, the vision of 2030 has many layers. These different layers can be described with a different macro story-line. It should be become evident in the document how to move to more inter-disciplinarily, more connected and collaborative approaches of doing science in agri-food.

These responses were considered by the eROSA consortium for preparing the final version of the eROSA roadmap that has been documented in deliverable “D3.7 – Foresight Roadmap Paper”.

### 1.3 REFLECTIONS BY ICT AGRI

Following the presentations from Sander Janssen (ALT-DLO) and Panagiotis Zervas (Agroknow) regarding the recommendations from the eROSA roadmap, the representatives from ICT AGRI was requested to provide to the eROSA consortium members (present in the meeting) with a formal response regarding the roadmap document in general and specifically for the recommendations presented. To this end, the following response received:

- There should be some pointers on how the eROSA recommendations can fit within the food supply chain. Moreover, it’s important to clarify that researchers need to be motivated to share data and farmers need to be informed on possible business models that will emerge when sharing data. Thus, it’s behavioural change that also EC should focus on.

This response was also considered by the eROSA consortium for preparing the final version of the eROSA roadmap that has been documented in deliverable “D3.7 – Foresight Roadmap Paper”.

## 2 AGENDA

<b>09:00 - 09:30</b>	<b>Arrivals &amp; coffee</b>	
09:30 - 09:50	Welcome and introductions of the participants	<b>Odile Hologne</b> (INRA)
<b>09:50 - 12:00</b>	<b>Session 1 - The Roadmap for the Future State of an e-Infrastructure in Agri-Food Sciences</b>	
<b>09:50 - 10:20</b>	Community and Governance Recommendations for the Future State of an e-Infrastructure in Agri-Food Sciences	<b>Sander Janssen</b> (WUR)
<b>10:20 - 10:50</b>	<b>Reflections by:</b> DG RTD F3: Agri-Food Chain DG AGRI.B2: Research and innovation	
<b>10:50 - 11:20</b>	Technical Recommendations for the Future State of an e-Infrastructure in Agri-Food Sciences	<b>Panagiotis Zervas</b> (Agroknow)
<b>11:20 - 11:50</b>	<b>Reflection by:</b> DG CONNECT C1: eInfrastructure & Open Science Cloud ICT AGRI	
<b>11:50 - 12:20</b>	<b>Coffee Break</b>	
<b>12:20 - 13:30</b>	<b>Session 2 - Open Science for Agricultural and Food Sciences</b>	
12:20 - 12:40	State-of-play of FOOD 2030	<b>Wim Haentjens</b> (DG RTD F3: Agri-Food Chain)
12:40 - 13:00	European Open Science Cloud (EOSC) from the perspective of e-infrastructures Implementation	<b>Georgia Tzenou</b> (DG CONNECT C1: eInfrastructure & Open Science Cloud)
<b>13:00 - 13:30</b>	<b>Final Reflections and Discussion</b>	
<b>13:30 - 14:30</b>	<b>Light Lunch and Social Networking</b>	