Europe Policy Perspectives on Data-intensive Agriculture & Food

Joint Policy Workshop of e-ROSA and Big Data Europe

CLORA headquarters, Brussels, 31 March 2017

Agenda

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Scope and objectives

Following the success of the 1st workshop for Societal Challenge 2 “Food and agriculture” co-organised by Big Data Europe and FAO with support from the Global Open Data in Agriculture & Nutrition (GODAN), Big Data Europe and the recently launched H2020 project e-ROSA (Towards an e-Infrastructure Roadmap for Open Science in Agriculture) held a second joint Policy Workshop in order to bring together a selected group of people working on policy frameworks and agendas relevant to the data economy and ecosystem discussion in agriculture and food.

The one-day workshop took place at the CLORA premises in Brussels on 31 March 2017. Key objectives of the workshop were presented by Odile Hologne (INRA) and Nikos Manouselis (Agroknow):

- To present key related projects funded by various DGs within the scope of Open Science/Data Economy and Ecosystem in Agriculture and Food;
- To bring together representatives from the relevant DGs (DG RTD, DG AGRI and DG CONNECT) in order to discuss the project portfolio and agenda, and related policy frameworks with the community representatives as well as their peers;
- To identify potential synergies with and lessons learnt from national and international initiatives.

The workshop was organised around two main sessions as follows:

**Session 1. Data Sharing for Collaboration.** Representatives from DG RTD, DG AGRI and DG CONNECT as well as key stakeholders from national and EU initiatives presented their current activities and progress towards enhancing sharing of and open access to data.

Regarding related EU policy actions and initiatives, Wim Haentjens (DG RTD) presented the progress towards the European Open Science Cloud’s (EOSC) establishment. Ana Cuadrado Galván and Louis Mahy (DG AGRI) presented DG AGRI’s Research & Innovation activities contributing to the Digital Single Market Strategy. Fabrizio Sestini (DG CONNECT) presented the EU CAPS policy (Collective Awareness Platforms for Sustainability and Social Innovation).

In addition, emerging initiatives and success stories were discussed from a national point of view as well as from the EU perspective. Véronique Bellon Maurel (IRSTEA) presented the French project for a national data portal in agriculture. Richard Tiffin (University of Reading) presented the British initiative Agrimetrics for agricultural data.

**Session 2. Building a European Data Economy.** Representatives from DG CONNECT and GODAN as well as stakeholders from H2020 project-related communities discussed how their current and future activities would feed into the European strategic priority of building a data-driven economy.

Saila Rinne (DG CONNECT) presented the EC Communication on Building a European Data Economy published in January 2017 that seeks to provide insights and initiate a more in-depth discussion on how to unleash the EU’s data economy with appropriate EU policies and laws. Nikos Manouselis (Agroknow) presented the rationale and role of the GODAN Data Ecosystem WG as an international strategic platform for discussing issues and aligning objectives regarding data in agriculture and food.

Regarding EU-funded pilot initiatives, Karel Charvat (http://www.lesprojekt.cz/en) and Sjaak Wolfert (Wageningen University & Research) respectively presented the projects H2020 Big Data Lighthouse Pilot DataBio and Internet of Food & Farm (IoF2020).
Presentations

Session 1. Data Sharing for Collaboration

1. The European Open Science Cloud (EOSC – DG RTD)

Wim Haentjens (DG RTD) presented the progress towards the EOSC’s establishment.

EOSC is a valuable instrument that serves the Bioeconomy thematic area within DG RTD, especially the Agri-food sector.

Food 2030, the policy framework related to Bioeconomy, relies on the acknowledgement that up to now investments in R&I have not been up to the challenges that need to be addressed. Thus, a more ambitious R&I agenda and more significant investments are required in order to achieve the desired impact. Four overarching priorities have been identified:

1) Nutrition for sustainable and healthy diets: Reducing hunger & malnutrition, addressing food safety and diet-related illnesses, helping citizens adopt sustainable diets and healthy lives
2) Climate smart and environmentally sustainable food systems: Building a climate and global change-resilient food
3) Circularity and resource efficiency of food systems: Implementing sustainability and circular economy principles
4) Innovation and empowerment of communities: Boosting market-creating innovation and investment, while empowering communities, engaging citizens

In order to address these priorities, new policy actions are required to support the following drivers:

(i) Research (i.e. new breakthroughs),
(ii) Innovation and Investment (including collaboration with the private sector and at a regional scale as part of the EU smart specialisation strategy),
(iii) Open Science (including FAIR data principles, mobility of researchers and capacity building), and
(iv) International collaboration (including the International Bioeconomy Forum).

The EOSC is key for the European Cloud Initiative. So far, its development has focused on the following three main components: (i) building the EOSC App, (ii) developing a relevant governance model and (iii) developing a sustainable (co-)funding model.

A thematic approach has been adopted in order to support the effective development of the EOSC and advance open science in specific research areas of high priority related to Societal Challenges. Thematic clouds are under development based on a bottom-up approach that relies on the already existing support of related scientific communities, allowing a federation and/or integration of resources. This will greatly contribute to reducing fragmentation and unnecessary duplication of research activities and related infrastructures, and increasing their efficiency and long-term sustainability.

Within each thematic community, several issues are to be discussed: improved data stewardship, added value of opening access to data, mapping existing data, FAIR principles, thematic cloud components and sustainability, mapping the needs, etc.
Main steps to come regarding the EOSC initiative as a whole include:

- Further discussions on how the next Framework Programme can support the EOSC
- The next EOSC Summit on 12 June 2017
- The elaboration of a roadmap for EOSC governance and funding models by November 2017
- The integration of related H2020 project outcomes (e.g. demonstrators developed under the EOSC pilot) into the EOSC infrastructure.

**Discussion**

The Bioeconomy Directorate of DG RTD has volunteered to be at the forefront in building the EOSC’s thematic communities and is in the process of developing two thematic clouds:

- Blue Cloud: marine and oceans (already at an advanced stage);
- Food Cloud: agriculture, food and nutrition.

In the Bioeconomy field, specific actions need to be discussed, agreed on and implemented especially in order to advance with the Food Cloud. As such, the EC is willing to provide strong policy support to bring together the related stakeholder communities (agriculture and food, and nutrition).

**Note:** The next Food 2030 Conference will take place on 17-18 October 2017.

2. **DG AGRI R&I activities**


Establishing the European Digital Single Market in the agricultural sector requires:

1) To develop related technologies;
2) To foster the uptake of these technologies by creating the conditions for farmers to invest in them;
3) To achieve impact with these technologies by understanding now what the future will look like if using them.

DG AGRI is organising a series of events in response to this strategy:

- **EIP-AGRI Workshop "Data Sharing: ensuring a fair sharing of digitisation benefits in agriculture"** (4-5 April, Bratislava): aims at discussing an appropriate data governance that supports a win-win situation for industry as well as for smaller firms and individual farmers; will target a broad audience including farmers, scientists, farm suppliers, etc. as well as representatives of DG CONNECT in order to link DG AGRI and DG CONNECT policies
- **EIP-AGRI Seminar "Digital Innovation Hubs: mainstreaming digital agriculture"** (1-2 June, Kilkenny): will rely on a sectoral approach in contrast to DG CONNECT which rather deals with transversal technical issues
- **First Agricultural Innovation Summit "Digitising rural economies"** (11-12 October, Lisbon): aims at raising awareness on the potential of digital agriculture and on possibilities to invest in related technologies at national and regional scale (e.g. European Agricultural Fund for Rural Development)
- **Societal Challenge 2 InfoWeek (14-17 November, Brussels):** includes the "H2020 Digitisation day" (17 November) which will focus on providing an overview of the DSM and related
opportunities for agriculture and food industry, and on showcasing relevant initiatives and projects

Note: The H2020 Work Programme will be published end October.

Discussion

Regarding the EIP-AGRI Workshop:

- Odile Hologne (INRA) highlighted the importance for researchers in the agricultural field to have access to “real” agricultural data (e.g. in order to validate scientific models).
- Johannes Keiser (GODAN Secretariat) discussed the issue of data ownership (especially in the case of precision agriculture and machine-generated data) and potential related policies in order to support individual farmers, benefit from data of high public interest and foster open access to the latters’ data (for specific use and if the farmer is in agreement).
- Sander Janssen (Wageningen UR) mentioned the need to link EU and national laws and policies on open data, and to define related responsibilities: should the EU take the lead or should the responsibility be left to the Member-States?

3. Collective Awareness Platforms for Sustainability and Social Innovation (CAPS)

Fabrizio Sestini (DG CONNECT) presented the EU CAPS policy.

CAPS seeks to address specific societal and sustainability challenges though Digital Social Innovation (DSI). As such, it relies on a society-driven approach rather than on a technology-driven one (indeed, funded projects involve at least two non-ICT-focused partners).

Its goal is to demonstrate DSI-related concepts (i.e. participatory, open, bottom-up, decentralised and multidisciplinary) as well as achieve concrete impact in solving targeted issues in various areas. For instance, regarding the food challenge, a CAPS project is focused on collaborative food consumption and especially on reducing and recycling food waste. Thanks to this project, communities of citizens can share their knowledge, e.g. on ways to reuse food waste, and as such drive social innovation.

One of the key principles of DSI is decentralisation. This approach relies on fostering strong involvement of and cooperation amongst citizens and existing communities. Openness (i.e. open standards, open sources) is a key requirement in order to adopt a decentralised approach and related data governance.

Finally, public support is strongly required in order to develop and use technologies that allow the creation and sharing of knowledge within communities, and support DSI.

Discussion

Nikos Manouselis (Agroknow) highlighted the question of how to avoid centralised and non-transparent data ownership, and move out of the “Black Economy” when dealing with decentralised mechanisms.

4. AgGate

Véronique Bellon Maurel (IRSTEA) presented the French project for a national e-portal gathering and facilitating access to agricultural data in order to promote data-driven innovation in the agricultural sector. The data issue in this field was clearly expressed in the French Innovation Agriculture 2025
Strategy that especially highlighted the challenge of agricultural Big Data. The AgGate project seeks to rely on a win-win ecosystem including not only farmers but also start-ups and larger firms in order to fairly share the gains triggered by open data.

Both technical and organisational aspects have been considered in order to design and implement the project. For instance:

- regarding technical issues, data integration is a key issue. Also, data security is especially required in order to protect personal and sensitive (e.g. financial) data.;
- regarding organisational issues, the proposed legal entity would not be a public one, otherwise farmers may be reluctant in providing their data. The portal is to be governed by private stakeholders (e.g. cooperatives of farmers).

Farmers must be at the heart of the process as they are the ones contributing to the visioning of the future of digital agriculture. This is also why the first implementation phase of AgGate will very likely rely on the French Digital Agriculture Convergence Lab (#DigitAg) which is running for a period of 7 years.

The ambition of AgGate relies on five overarching principles:

1) Collective & collaborative
2) Open to new actors
3) Competitive and sharing value
4) Creating trust
5) International

Discussion

- Wim Haentjens (DG RTD) raised the issue of concealing openness with private interests. Such a compromise is deemed possible when sharing the value of opening data, which is one of AgGate’s main priority. This avoids the monopoly of data ownership by those who are ready to pay expensive fees to access data. IRSTEA is defending a specific business model that relies on fees to use the cloud service and to use the data thanks to related apps and tools for analysis and decision support.
- Derek Scuffel (Syngenta) asked about the financing of the platform:
  - The capital would rely on investments from companies;
  - The development of the infrastructure as well as management and networking activities would rely on subsidies.

5. Agrimetrics

Richard Tiffin (University of Reading) presented UK’s initiative for agricultural data. As the food system we are living in is getting more and more complex, a federated data ecosystem is required in order to support its development and sustainability. Agrimetrics acts as a data collector and aggregator and offers analysis and decision support services in order to target specific agricultural issues (e.g. pest management). It is an independent, non-profit entity allowing to gain trust from users.

*Overall approach:* Data sources ➔ Integrated data ➔ Agricultural models ➔ Decision-making tools
Agrimetrics’ main objective is to provide a pre-competitive added value to raw data, especially by:

- integrating, linking and sourcing data;
- developing apps that are each designed for specific types of data and thematic areas; and
- providing training and consultancy services.

The initiative seeks to show the benefits of opening data to farmers: for instance, Agrimetrics allows to compare the production of different farmers with similar environmental conditions thanks to anonymised data on the farms and related farming practices. As such, farmers get an insight on their production system compared to others and on ways to improve.

6. e-ROSA (Towards an e-Infrastructure Roadmap for Open Science in Agriculture)

Johannes Keiser (GODAN Secretariat) presented the Coordination and Support Action e-ROSA. The e-ROSA project seeks to build a shared vision of a future sustainable e-infrastructure for research and education in agriculture in order to promote Open Science in this field and as such contribute to addressing related societal challenges. Specific objectives include:

- community-building by bringing together the relevant scientific communities and stakeholders;
- improving the knowledge of the landscape (including research infrastructures and e-infrastructures, projects and policies relevant for an e-infrastructure in agriculture);
- co-elaborating an ambitious, practical roadmap that provides the basis for the design and implementation of such an e-infrastructure in the years to come.

**Overall approach:** Mapping the current landscape ➤ Foresight and vision ➤ Roadmap elaboration

The envisioned e-infrastructure should rely on four overarching components: (i) community of users, (ii) business model and governance, (iii) technical backbone and (iv) services.

Stakeholder engagement is at the core of the e-ROSA project. The latter seeks to serve related scientific communities. As such, it also needs to engage with (i) the private sector (i.e. industry and farmers’ organisations) in order to understand the potential benefits of such a cooperation, (ii) policy-makers (e.g. via Policy Workshops with EU DGs such as this one) in order to support an effective governance mechanism for a future e-infrastructure, and (iii) related national and international initiatives that can feed into the e-infrastructure design and implementation.

Mapping the relevant stakeholder communities is hence the first step to be achieved under e-ROSA. This mapping activity has already started via:

- an initial bibliometric study in order to identify key scientists that work in the scope of e-ROSA;
- the elaboration of an online map allowing the identification of data repositories, organisations, initiatives and facilities that can feed into the e-ROSA stakeholder community.

Nikos Manouselis (Agroknow) explained that the H2020 e-ROSA and AgINFRA+ projects work hand in hand: e-ROSA seeks to provide a strategic framework through its community-building and roadmap elaboration process while AgINRA+ acts as a demonstrator of possible services to be developed within a future e-infrastructure for agriculture.
Discussion

- Wim Haentjens (DG RTD) mentioned the community-building process that has taken place in the context of the development of the Blue Cloud (i.e. marine and oceans research), which demonstrated the significant added value of integrating scientific data and which could serve as best practice for e-ROSA.
- Johannes Keiser (GODAN Secretariat) highlighted the clear link between the EOSC’s Food Cloud initiative and the e-ROSA project, which could for instance feed into e-ROSA’s Stakeholder Workshop on 6-7 July in Montpellier.

Session 2. Building a European Data Economy

1. EC Communication on Building a European Data Economy

Saila Rinne (DG CONNECT) presented the EC Communication that was published in January 2017. In the context of a global economy more and more driven by data, this Communication seeks to provide insights and initiate a more in-depth discussion on how to unleash the EU’s data economy with appropriate EU policies and laws.

The Communication focuses on four main issues and highlights possible actions to overcome them:

- **Free flow of data**: this issue is linked to the existence of many data localisation restrictions that hinder free flow of data. Removing these restrictions can provide significant benefits for society at large and would allow high economic gains.
- **Access to and transfer of data**: specific issues include data silos and limited access to machine-generated or anonymised data. Overcoming this issue can take the form of non-legal guidelines to default contract rules, policy frameworks and laws.
- **Data portability**: this right should be strongly and clearly supported when it comes to non-personal data. Interoperability services and standards are required in order to guarantee the technical feasibility of data portability.
- **Data liability**: this issue especially applies to the Internet of Things (IoT) and autonomous systems. There is a need to define responsibilities in case of malfunctioning.

More generally, exploration of these emerging issues will require the implementation of trials in order to test potential solutions.

A public consultation on the released Communication is open until 26 April and gives all stakeholders the opportunity to discuss these issues and related potential actions.

In addition, further studies are being carried out in order to support the dialogue and the policy-making process (see [wwwdatalandscape.eu](http://www.datalandscape.eu)).

2. GODAN Data Ecosystem Working Group

Nikos Manouselis (Agroknow) presented the rationale and role of the GODAN Data Ecosystem WG. In particular, he highlighted the issue of the “Data Ecosystem Anxiety”. This refers to the fact that many initiatives and organisations are investing significant funding amounts into the data issue in agriculture, however it is essential that all of these initiatives and stakeholders are aware of one another in order to align efforts around common objectives and avoid unnecessary duplication.
The GODAN Data Ecosystem WG Group was established in order to provide an international strategic framework to discuss this issue and create the global ecosystem that is required to achieve critical mass and efficiency in addressing related challenges.

It seeks to focus on three overarching issues:

1) Mapping the data ecosystem of today
2) Technology and interoperability of data infrastructures
3) Policy and strategy alignment of data infrastructures

3. H2020 Big Data Lighthouse Pilot DataBio

Karel Charvat (http://www.lesprojekt.cz/en) presented the DataBio project. The latter’s rationale relies on the statement that Bioeconomy could highly benefit from Big Data technologies, especially in regards to raw material production that feed into the Bioeconomy industry.

The DataBio project seeks to provide a platform for different industries and user communities. In particular, one overarching activity of the project is focused on developing targeted pilots in the agricultural sector, including:

1) Precision Horticulture
2) Arable Precision Farming
3) Subsidies and insurance

4. Internet of Food & Farm

Sjaak Wolfert (Wageningen University & Research) presented the H2020-funded project Internet of Food & Farm (IoF2020). The project seeks to foster a large-scale uptake of IoT in the European farming and food sector in order to pave the way for (i) data-driven farming, (ii) autonomous farm operations, (iii) virtual food chains and (iv) personalized nutrition for European citizens.

The project engages with the production side as well as with the entire supply chain and beyond. It covers five different sectors (arable, dairy, fruits, vegetables and meat) through the implementation of 19 uses cases across Europe. Hence its structure seeks to foster clear links between the overall project level and the use case level:

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<th>At use case level</th>
<th>At project level</th>
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<tr>
<td>• Technology Chair: translates emerging needs and feedback from end-users into requirements for modification of technical issues</td>
<td>• Technical development of generic building blocks that can be used and adapted in all use cases</td>
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<tr>
<td>• Business Chair: measures Key Performance Indicators</td>
<td>• Lessons learnt from specific use cases regarding governance and business modelling that can be applied to other use cases</td>
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<td>• Ecosystem Chair: collects feedback and emerging needs from end-users</td>
<td>• Imbedding of use case stakeholders in global ecosystems for up-scaling</td>
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**Discussion**

- Nikos Manouselis (Agroknow) raised the issue of the identification of the various components of an IoT system.
Overarching issues

Overall, the inputs described above that were provided both during the presentations and the Q&A sessions after each presentation can be gathered in the five following main topics:

1. Involved communities
2. Decentralisation and connectivity
3. Data governance
4. Policy support and legal frameworks
5. Technical issues and data services

1. **Involved communities**

Building a European data-driven economy relies above all on the engagement of the communities that produce, share and benefit from the use of data. In the agriculture and food sector, these communities are very diverse as they include all stakeholders “from fork to farm”, i.e. farmers, the food supply chain industry and consumers, as well as the community of data experts and the research communities that support scientific breakthroughs.

Facilitating collaboration between these different communities provides high added value in fostering data-driven innovation and advancement of knowledge in the field of agriculture. For instance, research activities can greatly benefit from data originating from the “real world” (e.g. data on farm management and farming practices) in order to provide relevant, high quality outcomes. Another example is the knowledge sharing activity facilitated amongst citizens (e.g. on ways to re-use food waste) thanks to collaborative technologies, which paves the way for Digital Social Innovation. Thus, fostering sharing of and open access to data is required both within and between stakeholder communities in order to fully benefit from the digitisation of agriculture and food systems.

2. **Decentralisation and connectivity**

In order to tackle the data issue in the agricultural sector, identifying specific agricultural challenges allows to get hands on and address data-related needs of specific communities. For instance, this challenge-driven approach has been explicitly adopted by the EOSC in developing Thematic Clouds, as well as by the H2020 projects DataBio and IoF in implementing use cases. A bottom-up and decentralised approach is key in order to rely on existing resources and communities and address specific needs.

Moreover, decentralisation must be combined with a federation mechanism in order to ensure connectivity and transparency between the various data resources and communities. Indeed, many initiatives and organisations are investing significant funding amounts into the data issue in agriculture. Therefore, it is essential that all of these initiatives and stakeholders are aware of one another, allowing to avoid further fragmentation and unnecessary duplication, and to achieve critical mass by combining efforts for long-term efficiency and sustainability. This is especially required as the challenges that are tackled are global. Hence, relying on international frameworks (e.g. such as GODAN) is crucial.

3. **Data governance**

The increasing wealth of agricultural data and the ambition for openness of data triggers an urgent need to clearly define who governs the access to and use of data. In particular, data governance models
that are being developed for open data initiatives (e.g. AgGate and Agrimetrics) seek to ensure a fair sharing of digitisation benefits within a pre-competitive environment in order to support a win-win situation both for industry on the one hand, and smaller firms and individual farmers on the other hand. Sharing the value of opening data is deemed crucial in order to conceal openness with private interests and ensure open access to data of high public interest. It avoids the monopoly of data ownership by those who are ready to pay expensive fees to access data. In the case of AgGate and Agrimetrics, as core data providers and users are farmers, the latter should be considered as the first beneficiary of the collected data and related data services.

Furthermore, the legal entity that supports such governance structures must reflect the stakeholders they involve. In particular, promoting the access to and integration of data from private stakeholders (i.e. farmers and businesses) requires trust from these data providers. This is why Agrimetrics has chosen to act as an independent, non-profit entity. In addition, developed business models should support related data governance models. For instance, AgGate seeks to defend the open data approach by applying fees to use related data tools and applications (rather than to access the data).

4. **Policy support and legal frameworks**

Policy support is strongly required in order to (i) develop technologies that allow the sharing, curation and re-use of data, (ii) foster their uptake within targeted communities, and (iii) achieve impact thanks to their use. In particular, such support allows to promote the principles and benefits of open data and digital agriculture when it comes to addressing agricultural and food-related challenges. At the European level, several EU policies and strategies have already been elaborated, such as the EOSC (which could provide strong EU support for e-ROSA), the Digital Social Innovation policy and the Digital Single Market strategy.

The EC Communication on Building a European Data Economy highlights the need for a European policy and/or legal framework in order to address and regulate specific issues, including free flow of data, data access and transfer, data portability and liability. In particular, the issue of data ownership and access is the case of machine-generated data should be addressed in order to support the interest of individual farmers and limit data silos in the case of data of high public interest.

The establishment of new policies and laws raises the question of the definition of responsibilities between the EU and Member-States on the elaboration and implementation of these policies and laws on open access and data management. In any case, the alignment between current and future EU and national policies is required.

5. **Technical issues and data services**

Key technical issues for implementing appropriate access to data and develop specific services include data interoperability and integration, and data security especially for personal and sensitive data.

Adding value to raw data through specific services is key to foster effective Open Science, science-based policy-making and data-driven innovation. These services include (i) the integration and linking of data in order to provide a comprehensive data environment, (ii) the development of applications and tools that allow to analyse data, both generic and theme-specific, and (iii) training and consultancy services.
Conclusions

Thanks to the success of Big Data Europe’s first workshop in generating strong interest of participants and related DGs and communities, this second Policy Workshop succeeded in bringing again together diverse, targeted stakeholders that could fuel the strategic dialogue on data in agriculture and food.

- In particular, representatives from the relevant DGs (DG RTD, DG AGRI and DG CONNECT) were key participants in the discussion on the European policy context and on the alignment of the DG’s activities, project portfolios and funding agendas.

- Furthermore, the presentation of related H2020 projects in relation to the work and policy actions carried out by the various DGs allowed to discuss opportunities for policy support as well as expected project results as future inputs towards the Open data movement and the European data ecosystem and economy.

- Lastly, national and global perspectives provided insights on potential synergies between national, European and international initiatives, and on lessons learnt and targeted objectives from emerging and already launched activities at both levels.

Overall, the workshop provided valuable outcomes as it allowed to highlight the benefits of and actions required for enhancing data sharing for collaboration and building a European data economy. Overarching issues emerged from the discussions, including:

1. The diversity of the communities to engage with in order to foster open access to data and data-driven innovation;
2. The need for mechanisms that support both decentralisation and connectivity in order to rely on existing resources and communities, avoid further fragmentation and unnecessary duplication, and enhance critical mass;
3. The development of appropriate, transparent and sustainable data governance models;
4. The need for strong policy support at EU level and for the development of policy and legal frameworks in order to regulate specific data-related issues;
5. The identification of specific technical issues as well as potential data-related services to be developed and provided to user communities.

All workshop presentations are available at: https://www.slideshare.net/tag/erosapolicyws1

Report by Madeleine Huber (INRA)
## List of participants

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<td>1 Ulrich Adam</td>
<td>CEMA-AGRI- European Committee of Associations of Manufacturers of Agricultural Machinery</td>
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<tr>
<td>2 Daniel Azevedo</td>
<td>Senior Policy Advisor, COPA-COGECA</td>
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<tr>
<td>3 Christopher Brewster</td>
<td>TNO</td>
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<td>4 Corina Buruiana</td>
<td>DG Dissemination and Reuse, Publications Office of EU - OP.C.1</td>
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<td>5 Karel Charvat</td>
<td>Pilot coordinator in DataBio</td>
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<td>6 Ana Cuadrado Galvan</td>
<td>DG AGRI.B.2 - Research and innovation</td>
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<td>12 Pythagoras Karampiperis</td>
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<td>18 Pilar Ocon-Garces</td>
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<td>20 Saila Rinne</td>
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<td>21 Simon Scerri</td>
<td>Fraunhofer IAIS (Big data Europe)</td>
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<td>22 Derek Scuffel</td>
<td>Syngenta</td>
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<td>23 Fabrizio Sestini</td>
<td>Senior Expert, Digital Social Innovation, DG CONNECT</td>
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<td>24 Richard Tiffins</td>
<td>University of Reading / Agrimetrics</td>
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<td>25 Sjaak Wolfert</td>
<td>Scientific coordinator of the IoF2020 project</td>
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<td>26 Panagiotis Zervas</td>
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