Horizon Europe Info Day

Topics HORIZON-CL4-2021-DATA-01-01 and HORIZON-CL4-2021-DATA-01-03

Kimmo Rossi, European Commission, CNECT.G.1
European Strategy for Data – towards a data economy

Communication « A European strategy for data » (COM(2020) 66 final):

• Cross-sectoral **governance framework** for data access and use
  • Data Governance Act (data intermediaries, standardisation, data altruism)
  • Implementing act on high-value data sets (implementing Open Data Directive)
  • Data Act (e.g. B2G&B2B data sharing, data rights, IPR framework…)

• **Common European Data Spaces** in strategic sectors and domains of public interest

Data for responsible and trustworthy AI: the AI regulation (proposal)
Data Spaces

• concrete arrangements in which data sharing and pooling can happen

• significant amount of flexibility for implementing data spaces at sector-specific level – data spaces are all different

• Horizon Europe will fund the technology basis, Digital Europe will fund implementation, deployment, operations, coordination of data spaces

• Synergies & links with national & sectoral data sharing schemes
### European Strategy for Data (and AI)

#### Some relevant instruments

<table>
<thead>
<tr>
<th>Date</th>
<th>Act/Act</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 2020</td>
<td>Data Governance Act</td>
<td>Ensure <strong>TRUST</strong> in data transactions. Public sector data, private sector data and personal data voluntarily made available by data holders.</td>
</tr>
<tr>
<td>Dec 2020</td>
<td>Digital Market Act</td>
<td>Regulate <strong>MARKET POWER</strong> based on data. Personal data and private sector data held by online platforms and originating from the users.</td>
</tr>
<tr>
<td>2021</td>
<td>Artificial Intelligence Act</td>
<td>Implications on <strong>AI data governance &amp; data management</strong>. Examples: Data for “high-risk” AI shall be “…relevant, representative, free of errors and complete…” (Art. 10). Data logging requirements (Art. 11).</td>
</tr>
<tr>
<td>2021</td>
<td>Impl. Act High Value Datasets</td>
<td>Unleash the socio-economic potential of data as a <strong>PUBLIC GOOD</strong>. Public sector data of high value.</td>
</tr>
<tr>
<td>2021</td>
<td>Data Act</td>
<td>Ensure <strong>FAIRNESS</strong> in the allocation of data value among the actors of the data economy. Private sector data, personal data and co-generated (IoT) data.</td>
</tr>
</tbody>
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Some relevant institutions: AI data governance & data management. Examples: Data for “high-risk” AI shall be “…relevant, representative, free of errors and complete…” (Art. 10). Data logging requirements (Art. 11).
New political & societal challenges and opportunities:

- Green transition
- Competitiveness & sovereignty
- Resilience, values, democracy

Result: more integration, cross-disciplinarity, societal dimension, broader innovation (technologic & social), support to regulation.

Need to identify and involve new stakeholder groups & new constituencies.

New HE partnership: AI, data & robotics, building on two H2020 partnerships
Disclaimer

The only authentic and authoritative source of information is the Horizon Europe work programme and call documentation in the Funding & Tenders portal.

In case of discrepancies between this presentation and the information published in the Funding & Tenders portal, the latter will prevail.
Call HORIZON-CL4-2021-DATA-01

Topic HORIZON-CL4-2021-DATA-01-01: Technologies and solutions for compliance, privacy preservation, green and responsible data operations
## Basic characteristics of topic

HORIZON-CL4-2021-DATA-01-01: Technologies and solutions for compliance, privacy preservation, green and responsible data operations

<table>
<thead>
<tr>
<th>Specific conditions</th>
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<tbody>
<tr>
<td>Expected EU contribution per project</td>
<td>8-11 MEUR (indicative)</td>
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<tr>
<td>Indicative topic budget</td>
<td>52 MEUR</td>
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<tr>
<td>Type of Action</td>
<td>Research and Innovation Actions (RIA)</td>
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<tr>
<td>Technology Readiness Level</td>
<td>Start at TRL 2-3, achieve TRL 4-5 by the end of the project – see General Annex B.</td>
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This topic implements the European Partnership on AI, data and robotics.
HORIZON-CL4-2021-DATA-01-01: overall context

Destination 3 – World leading data and computing technologies

Under heading “Data sharing in the common European data space”

Contributes to technologic readiness for the deployment of Common European Data Spaces in key sectors of economy and society

Addresses compliance/societal/regulatory technologies for data spaces

Provides basis for creating trust for data sharing (privacy preserving, responsible, compliant, environmentally sustainable)

Builds on and expands H2020 achievements (Data platforms ICT-13-2018-19)
Project results are expected to contribute to the following expected outcomes:

Improve the efficiency and the use of trustworthy digital technologies to address the requirements of citizens, companies and administrations/public organisations on privacy and commercial and administrative confidentiality as well as responsible, fair and environmentally friendly (e.g. in terms of energy/carbon/material footprint) data operations in data spaces, across the data life cycle.
Digital technologies, methods, architectures and processes for user-friendly, safe, trustworthy, compliant, fair, transparent, accountable and environmentally sustainable collection, storage, processing, querying, analytics and delivery of data facilitate sharing and manipulation of data in compliance with prevailing and emerging legislation

safe and secure data handling, sharing and re-use in the context of common European data spaces
Combination of technological and social innovation, technologies and solutions that enable **environmentally sustainable data operations** (e.g. by optimising/minimising/de-centralising processing, transfer and storage of data and avoiding unnecessary data manipulations, using energy-harvesting sensors/devices etc.)

Technologies and solutions for ensuring **human, fair and ethically sound collection, processing and manipulation of data**, in line with the principles of responsible/trustworthy AI
Actions should liaise with/build on, as appropriate:

- relevant cyber-security actions under Cluster 3.

- Horizon 2020 actions on privacy-preserving technologies and data platforms from topic ICT-13-2018-19

- data-centric Horizon 2020 European Research Infrastructures

- Data Spaces Support Centre, to provide methods and solutions for the emerging common European data spaces (Digital Europe programme).

- relevant national, regional and trans-national initiatives such as Gaia-X and EOSC (interoperability, re-use of common reference models, processes and building blocks for a pan-European data infrastructure)
Call HORIZON-CL4-2021-DATA-01

Topic HORIZON-CL4-2021-DATA-01-03: Technologies for data management
Basic characteristics of topic

HORIZON-CL4-2021-DATA-01-03: Technologies for data management

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<td>Indicative topic budget</td>
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<td>Type of Action</td>
<td>Innovation Actions (IA)</td>
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<tr>
<td>Technology Readiness Level</td>
<td>Start at TRL 5, achieve TRL 8 by the end of the project – see General Annex B.</td>
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This topic implements the European Partnership on AI, data and robotics.
Destination 3 – World leading data and computing technologies

Under heading “Data sharing in the common European data space”

Provides tools to ensure FAIR (findable, accessible, interoperable, reusable) principles in data operations

Supports data sharing and re-use in general (data economy enabler)

Supports common European data spaces in particular
Project results are expected to contribute to the following expected outcomes:

provide new secure and energy-efficient **data management tools** improving the **usability** and **discoverability** of data in different contexts, covering data provenance, **synthetic data generation**, **data quality management** (such as data cleaning, validation, enrichment, co-creation, identification of bias and correlations), improving **data interoperability**, **metadata management** (automated ways of labelling and describing data, data linkage), and ensuring **data security, privacy and integrity**, especially in the context of data spaces.
Practical, robust and scalable tools to improve the interoperability, quality, and integrity of data and metadata, in the context of other topics of the heading “Data sharing in the common European data space”.

Support a holistic approach of the data life cycle and comply with accountability, fairness and confidentiality as well as the FAIR principles (Findable, Accessible, Interoperable, Reusable) for data and metadata management.
Enable, support and/or automate

• creation and maintenance of common ontologies, vocabularies and data models and/or

• structured, standardised and automated authoring, co-creation, curation, annotation and labelling of data,

in view of different later uses (especially AI) made of the data.
Actions should:

- build on relevant past and current data management initiatives
- create links with relevant initiatives collecting/using heterogeneous/linguistic data, including AI initiatives (such as AI4EU, European Language Grid, or the projects from the H2020 topic ICT-48), where appropriate
- liaise with standardization bodies, where appropriate.
Conclusion

Call HORIZON-CL4-2021-DATA-01

Topic HORIZON-CL4-2021-DATA-01-01

Topic HORIZON-CL4-2021-DATA-01-03
Expected impact (common to all topics of Destination 3)

Proposals for topics under this Destination should set out a credible pathway to contributing to **world-leading data and computing technologies**, and more specifically to one or several of the following impacts:

- Improved European leadership in the global data economy
- Maximised social and economic benefits from the wider and more effective use of data
- Reinforced Europe’s ability to manage urgent societal challenges (e.g. data for crisis management, digital for clean energy).
Useful links for guidance, presentations etc.

Two useful webinars on “How to prepare a successful proposal in Horizon Europe” (24/3 and 21/4/2021, recordings and slides available):

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/other/event210324.htm

https://ec.europa.eu/research/participants/docs/h2020-funding-guide/other/event210421.htm
Thank you

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