



e-IRG Communiqué on the e-IRG Workshop under Czech EU Presidency



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The e-IRG Workshop organised in the framework of the Czech Presidency of the Council of the Union was implemented on 12.-13. December as hybrid event in Prague and online. The Workshop continued the long-standing insightful accomplishments of the e-IRG Workshop series. The Workshop series addresses important and relevant topics concerning the European e-Infrastructure landscape, the interconnection of e-Infrastructures themselves, as well as to Research Infrastructures. The e-IRG Workshop is not only an instrument for e-IRG to explore specific e-Infrastructure topics in depth, but also aims to provide views and opinions on topics expected to have an impact on the future developments in the European e-Infrastructure domain and beyond.

The Workshop under the Czech EU Presidency had four sessions addressing the i) interconnection, coordination and cooperation of European e-Infrastructures, ii) the energy crisis and its impact on e-Infrastructures, iii) the interconnection of the European Data Infrastructure and the Common European Data Spaces and finally iv) the Interlinking and interaction between data, publications and persistent identifiers.

The first session was used to explore a topic relevant to e-IRG's vision of integrated European e-Infrastructures and connected services. After the analysis of the role National Nodes play as building blocks of the EOSC (2019, [link](#)), and the subsequent analysis on the coordination and collaboration at national, regional and European level (2021, [link](#)), the coordination and collaboration at European level among major e-Infrastructure providers has been in the main focus, as part of the next e-IRG White Paper (2022). The session involved a presentation of the e-IRG White Paper 2022 findings analysing statements of the leading European e-Infrastructure providers and related organisations, following a corresponding questionnaire prepared by e-IRG. The analysis has been incorporated in the White Paper, along with the actual responses from e-Infrastructures (pending their approvals). The overarching message is that *a lightweight umbrella e-Infrastructure structure by representatives from major e-Infrastructure initiatives could enable a good flow of information, steady dialogue and common understanding among them and be able to identify and proactively resolve issues and frictions among e-Infrastructure organisations and initiatives. The structure could be used to reflect the high-level strategy- and vision-setting, community building, and coordination of the entire e-Infrastructure landscape. Representation of the thematic / user communities in this structure is also vital.* The final version of the e-IRG White Paper 2022 with the proposed approach and recommendations is due to be published in the coming weeks.

The second session was a continuation of previous e-IRG Workshop sessions on e-Infrastructure resilience (e-IRG Workshop during the Slovenian EU Presidency) and the climate impact of e-Infrastructures (e-IRG Workshops during the Portuguese, German and





French EU Presidencies). It was also based on e-IRG internal discussions between delegates during a related *e-IRG Café*. This session addressed the topic of the current energy crisis (both in terms of energy pricing and of energy availability) and its impact on e-Infrastructures, including effects on operation, funding, and sustainability, as well as their future perspectives. *The session provided an opportunity to discuss how the challenge of increased energy costs, apart from being a stimulus for more energy-efficient operations and innovation in greener infrastructures, brings to the forefront the need for keeping track of the costs of e-Infrastructure service provision and the development of lightweight costing methodologies meeting the specificities of the Research Infrastructures ecosystem. The session also provided several paradigms from data centres of different sizes of how the cost can be reduced and the operations optimised.*

The third session addressed the relation between the existing landscape of European data infrastructures and their connection to the upcoming Common European Data Spaces (CEDS), a prototype for all upcoming European Data Spaces. The session also centred around the interconnection of CEDS to EOSC and the existing e-Infrastructures. The session opened by presenting the first Data Space in ECs plans, the European Health Data Space, which can be seen as a prototype for all Data Spaces. Given that this specific domain deals with various cross border data sharing, privacy and interoperability issues (e.g. hospital data), it can set baselines for the related data regulations. Besides this, the Language Data Space (LDS) was presented, being at a more mature state than most others in this field. LDS showcased its efforts to enable the stakeholders to monetize their work. The EC centred their presentation around their effort to turn the current data lakes into data “fish markets” where end users will select and “shop” the data they want, and stakeholders will be compensated. It also explored existing and emerging developments and initiatives around data sharing with Data Spaces to identify data holders of open data who are involved in ongoing data space implementations; and reflect on the role that open data portals could play in these implementations.

The fourth session focused on the issue of interlinking and interaction between the plethora of existing sources and research outputs, such as data and publications and Persistent Identifiers (PIDs). For example, FAIR Digital Objects (FAIRDO), PID Graphs, Open Research Knowledge Graphs (ORKG), and DMPs and the work pertaining to their reusability by third parties, as well as their value to research progress through automation processes was presented. More specifically, the outcome of the first FDO Forum conference, as well as the goals and intentions of the Forum were presented. An overview based on 10 years of experience of the Earth System Science Data efforts on linking articles and datasets was given. Key differences in DMPs and the reason why machine-actionable DMPs can become a tool to help in the management of research data were explained. The value of PIDs along with their metadata, and how these form Knowledge Graphs was also discussed. In addition to this, the value of Open Research Knowledge Graphs and Scientific Information existing in natural language texts and the efforts made to retrieve and reuse them was presented.

The ensuing panel discussion at the session’s end focused on the effort to adapt better policy approaches for their harmonisation and interoperability. Furthermore, the importance of infrastructures was underlined to abstract technical issues from the researchers, but it was also mentioned that researchers should acknowledge the limitations of those systems.

