GLACIATION: Green responsibLe privACy preservIng dAta operaTIONs

Aidan O Mahony[1], Guangyuan Piao[1,*]

[1]Dell Technologies, Ovens, Cork, Ireland

Abstract

The rapid maturation of edge technologies coincides with an escalating deployment of distributed applications handling dynamically changing, heterogeneous data across a growing number of users, devices, and infrastructures [1]. This trend, while enabling new capabilities, presents significant challenges, particularly concerning the energy consumption associated with large-scale data analytics and the imperative to ensure privacy and security in distributed data operations [2, 3]. Current optimization strategies, often rooted in traditional cloud paradigms, prove insufficient for the complexities of the edge-core-cloud continuum, failing to adequately address efficient data movement, placement, and lifecycle management [1, 4].

GLACIATION addresses these critical challenges by developing an innovative platform designed to enhance the efficiency and trustworthiness of digital technologies for data operations spanning the edge-core-cloud architecture [1, 5]. Central to the project is the creation of a novel Distributed Knowledge Graph (DKG) that provides a semantic representation of the entire ecosystem [1, 2]. Leveraging this DKG, Artificial Intelligence (AI) techniques are employed to enforce minimal data movement and optimize the placement of analytics workloads, thereby significantly reducing energy consumption while upholding stringent privacy and confidentiality requirements demanded by citizens, industry, and public administrations [3, 4].

Keywords

Distributed Knowledge Graph, AI, Edge Computing, Cloud-Edge Continuum, Energy Efficiency, Green Computing, Data Privacy, Privacy-Preserving Technologies, Data Management, Data Operations, Semantic Web, Metadata Management, Horizon Europe

1. Project information

- Project short name/acronym: GLACIATION
- Project full name: Green responsibLe privACy preservIng dAta operaTIONs [2, 3]
- Project website link: https://glaciation-project.eu/ [2, 6]
- Start date: 01/10/2022 [2, 3]
- End date: 30/09/2025 [2, 3]
- Project status: Ending project (Project concludes in September 2025)
- Funding agency: European Commission [3]
- Funding programme: Horizon Europe [3]
- Call identifier: HORIZON-CL4-2021-DATA-01-01 [3]
- Project partners: The consortium comprises 16 organizations from across Europe, listed in Table 1.
- Project logo: A high-resolution image of the project logo is available for download here [2].
- Project video (optional): A public link to the main project introductory video is available here [7, 8].

ESWC 2025: Project Networking track, June 1–5, Portoroz, Slovenia.

*Corresponding author(s).

aidan.omahony@dell.com (A. O. Mahony); guangyuan.piao@dell.com (G. Piao)

https://www.dell.com (G. Piao)

0000-0001-8413-9656 (A. O. Mahony); 0000-0003-0516-2802 (G. Piao)

Table 1
GLACIATION Consortium Partners

Partner Organisation	Country
Ministry of Economy and Finance (MEF) (Coordinator)	Italy
Dell Technologies	Ireland
Hiro Microdatacenters B.V.	Netherlands
Leibniz University Hannover (LUH)	Germany
The Lisbon Council for Economic Competitiveness ASBL	Belgium
Università degli Studi di Milano (UNIMI)	Italy
Università degli Studi di Bergamo (UNIBG)	Italy
ERCIM (GEIE)	France
EURECOM	France
SAP SE	Germany
University College Cork (UCC)	Ireland
Sogei - Società Generale d'Informatica S.p.A.	Italy
Lakeside Labs GmbH	Austria
Engineering - Ingegneria Informatica S.p.A.	Italy
Independent Power Transmission Operator S.A. (IPTO)	Greece
ETH Zurich	Switzerland

2. Project summary

The proliferation of big data analytics, coupled with the architectural shift towards edge computing, presents a complex set of challenges for modern digital infrastructures. As data generation and processing increasingly occur closer to the source at the network edge, concerns regarding energy consumption escalate, contributing significantly to carbon emissions and straining national grids [2, 3]. Simultaneously, operating within this distributed and heterogeneous environment necessitates robust mechanisms to ensure data privacy, security, and administrative confidentiality, meeting the stringent requirements of citizens, industry, and public administrations [1, 5]. Existing optimization approaches, largely designed for centralized cloud environments, are often inadequate for managing the dynamic and distributed nature of the edge-core-cloud continuum, lacking sophisticated considerations for efficient data placement, movement, and lifecycle management based on relevance and resource availability [1, 4].

The GLACIATION project directly addresses these pressing issues by envisioning and developing a novel framework for energy-efficient, privacy-preserving, and trustworthy data operations across the entire data lifecycle [1, 4]. Its mission is to enhance the utility of digital technologies by enabling responsible, fair, and environmentally sustainable data handling, thereby contributing to key European initiatives such as the European Green Deal and the vision of a Europe fit for the digital age [5, 6]. The project aims to deliver a platform that empowers organizations to manage and analyze data across distributed infrastructures securely, efficiently, and with reduced environmental impact [4].

At the heart of the GLACIATION solution lies the synergistic integration of two core technologies: a Distributed Knowledge Graph (DKG) and Artificial Intelligence (AI). The DKG serves as the semantic backbone, providing a unified, flexible, and extensible representation of the entire edge-core-cloud ecosystem [1, 2]. This knowledge graph captures rich metadata about datasets, computational and storage resources, energy consumption profiles, network characteristics, data flows, and applicable policies (e.g., privacy regulations, security constraints) [3, 4]. It establishes an "interoperability backbone" or "metadata fabric" that allows diverse components and data sources across organizational and infrastructural boundaries to be understood and managed coherently within an open, vendor-neutral architecture [2]. This semantic layer provides the necessary context for intelligent decision-making in a complex, distributed environment.

Building upon the DKG's semantic foundation, the AI engine acts as the optimization layer. Sophisticated AI algorithms leverage the knowledge encoded in the DKG to make informed decisions about

data operations [2, 4, 9]. Key functions include enforcing minimal data movement by intelligently determining the optimal location for data processing and analytics execution – whether at the edge, core, or cloud – based on a multi-objective optimization considering energy consumption, latency requirements, data relevancy, computational needs, and privacy constraints [3, 4]. The AI engine is designed to handle the dynamic nature of data flows and resource availability, enabling continuous learning and adaptation to optimize resource utilization and workflow allocation over time [4]. Furthermore, swarm intelligence techniques are explored to coordinate distributed applications at the edge, enhancing the platform's overall efficiency and data-centric operation [4]. This combination of semantic understanding (DKG) and intelligent optimization (AI) allows GLACIATION to tackle the inherent complexity of managing data responsibly and efficiently across the continuum.

The primary technical objectives of GLACIATION encompass: achieving significant reductions in power consumption through optimized data placement and analytics execution [3]; developing and integrating robust privacy-preserving models and techniques (including policy definition and data sanitization) suitable for distributed processing [2, 5]; creating a standardized framework for measuring power consumption associated with data operations [2]; ensuring scalability, dependability, and transparency in the data-centric platform [4]; and fostering interoperability through the DKG and associated metadata models [2].

The viability and effectiveness of the GLACIATION platform are being rigorously validated through four diverse, high-impact pilot applications spanning different sectors [2, 10]:

- **Public Service (Italy):** Led by the Ministry of Economy and Finance (MEF) and Sogei, this pilot focuses on edge-decentralized data management for a national human resources platform, emphasizing resource efficiency and high privacy standards in a public administration context [10].
- **Smart Manufacturing (Ireland):** Led by Dell Technologies, this pilot applies GLACIATION to optimize data analytics for tugbots and cobots in a highly digitized manufacturing environment, targeting energy efficiency and resource optimization [10].
- **Enterprise Analytics (Germany):** Led by SAP SE, this pilot addresses the challenge of enabling privacy-preserving cross-company data sharing and analysis within a distributed architecture, ensuring compliance and confidentiality [10].
- **Smart Grid (Greece):** Led by the Independent Power Transmission Operator (IPTO), this pilot integrates smart IoT devices into the electrical grid, using GLACIATION to optimize energy consumption, enhance performance, ensure data privacy, and improve grid resilience by bridging operational and information technology [10].

These real-world use cases demonstrate the platform's versatility and its potential to deliver tangible benefits across critical domains facing complex data management challenges. The successful deployment in these varied settings underscores the broad relevance and applicability of the GLACIATION approach.

Ultimately, GLACIATION is expected to deliver significant impact by providing a validated framework and associated tools that enable substantial reductions in the energy footprint of data operations, enhance data privacy and trustworthiness, and improve the overall efficiency of data management across the edge-cloud continuum [2, 10]. The project contributes a reusable blueprint for building more sustainable and responsible digital infrastructures.

3. Project available results

GLACIATION adheres to open science principles, making key results publicly available to facilitate reuse, collaboration, and further research. The project's outputs span conceptual designs, software implementations, and scientific evaluations.

Open Source Software & Models: The core software components and data models developed within GLACIATION are available through the project's public GitHub organization:

- Main GitHub Organization: https://github.com/glaciation-heu [11]. This organization hosts over 30 repositories containing various modules and tools developed during the project [11].

- Highlighted Repositories include [11]:
  - `IceStream`: Implementation of the novel Metadata Fabric, a key component for enabling energy-efficient and privacy-preserving data movement based on semantic descriptions.
  - `models`: Contains the GLACIATION Reference Data Model [12] and associated ontologies, providing the semantic schema for the Distributed Knowledge Graph.
  - `Components`: Code realizing various architectural components defined in the project's design phase (T2.2).
  - `energy-measurement`: Software and examples related to the power consumption measurement framework developed in the project.
  - AI/Optimization Services: Repositories such as `glaciation-prediction-service`, `forecast-service` (workload prediction), and `swarm-agent` (swarm intelligence for data movement) represent parts of the AI-enabled optimization engine.
  - Use Case Specific Repositories: Code related to specific pilots, e.g., `mef-sog-uc1`, `DELL-UC`.

This open repository structure provides tangible assets for researchers and developers interested in exploring or extending the GLACIATION platform [11].

Public Deliverables: Official project reports documenting methodologies, designs, and intermediate results are accessible via the project website:

- Public Deliverables Page: https://glaciation-project.eu/outcomes/public-deliverables [2, 13].
- Key available deliverables include [13]:
  - D2.1: Architecture design and component definitions [14].
  - D4.1: Policies and techniques for data protection in modern distributed environments [15].
  - D5.1: GLACIATION power measurement framework software description [16].
  - D3.1: Secure AI Enabled Placement Engine (Intermediate report) [17].
  - D7.2: Use Case Integration, Validation, and Demonstration Report (Intermediate) [18].
  - D8.6 / D8.7: Data Management Plan (Initial and updated versions) [19, 20].
  - D8.1 / D8.2: Communication, Networking and Dissemination Plan and Activities (Initial and intermediate) [21, 22].

These documents provide detailed insights into the project's approach, technical specifications, and progress [13]. Note that as the project is nearing completion, final versions of some deliverables may still be under review or preparation.

Scientific Publications: Research findings from the GLACIATION project have been disseminated through peer-reviewed scientific publications, many of which are available via open access:

- Scientific Publications Page: https://glaciation-project.eu/outcomes/scientific-publications [2, 23].
- Publications cover a range of topics aligned with the project's work, including: Distributed Knowledge Graphs [9], AI for systems optimization (e.g., Graph of Thoughts [24], workload forecasting [25, 26]) and operations [27, 28], privacy-preserving techniques (e.g., sandboxing [29], data anonymization [30]), high-performance computing aspects relevant to data processing (e.g., sparse matrix multiplication [31], network design [32]), and specific component evaluations [2].

This collection represents the scientific contributions of the project and offers detailed analyses and evaluations of the developed techniques. The availability of results across design documents, open source code, and peer-reviewed publications provides a comprehensive view of the project's outcomes and facilitates engagement with the research community.

4. Relevance to ESWC conference

The GLACIATION project aligns strongly with the core themes and objectives of the ESWC conference, particularly the interests of its research and practitioner community. The project's central innovation lies in the development and application of a **Distributed Knowledge Graph (DKG)** as the semantic foundation for managing complex data operations across the edge-core-cloud continuum [1, 2]. This directly addresses ESWC's focus on Knowledge Graphs, Semantic Web technologies, and their application to real-world problems [33, 34]. GLACIATION advances the state-of-the-art by demonstrating how KGs can be effectively utilized not just for data representation, but as an active component in optimizing system behaviour, specifically targeting the critical challenges of energy efficiency and data privacy [3, 4]. The development of associated **ontologies and metadata models** (available in the project's 'models' repository [11]) for interoperability further strengthens this connection to semantic technologies. Furthermore, the project incorporates **AI and reasoning techniques** operating over the DKG to drive intelligent data placement and workflow allocation [4], linking GLACIATION to the growing intersection of AI, Machine Learning, and Semantic Web research frequently showcased at ESWC [34].

Specifically for the Project Networking track, GLACIATION represents an ideal candidate. As an **"Ending project"** (concluding September 2025 [3]), it is perfectly timed to align with the track's objective of featuring projects ready to **disseminate final results and transfer knowledge and technology** [35]. The project has generated a wealth of outputs, including its architecture, DKG framework, AI optimization engine, privacy tools, and validation results from industrial pilots (as detailed in Section 3), which it is eager to share with the ESWC community. Participation in this track offers a prime opportunity to present these outcomes, discuss lessons learned, and engage with researchers and practitioners working on related challenges. The project's focus on applying semantic technologies to solve concrete, large-scale systems problems in critical areas like green computing and trustworthy AI resonates with ESWC's emphasis on impactful research and innovation [2, 5].

5. Value brought by the project to ESWC participants

Participation in the ESWC Project Networking track allows GLACIATION to offer significant value to conference attendees across several dimensions:

- **Knowledge and Practical Insights:** Attendees will gain insights into the challenges and state-of-the-art solutions for managing data operations sustainably and privately across distributed edge-cloud environments. GLACIATION can share practical experiences and lessons learned from designing, implementing, and deploying its DKG-based platform within demanding industrial settings, covering public administration, smart manufacturing, enterprise analytics, and smart grids [10]. This includes insights into effective AI techniques for optimizing data movement and placement based on semantic context [4].
- **Reusable Technologies and Tools:** The project provides access to its open architecture design (D2.1 [14, 13]) and a suite of open-source software components hosted on GitHub [11]. This includes the 'IceStream' metadata fabric, AI-driven services for workload prediction and data placement, tools supporting privacy preservation (based on D4.1 [15, 13]), and the energy measurement framework (D5.1 [16, 13]). These components offer tangible assets that ESWC participants could potentially adopt, adapt, or build upon in their own research or development projects.
- **Semantic Models and Data Representations:** GLACIATION offers its reference data model and ontologies developed for describing the edge-cloud data ecosystem ('models' repository [12]). Sharing the structure, design principles, and experiences gained from implementing the Distributed Knowledge Graph provides a valuable semantic framework and practical knowledge for attendees working with KGs in complex systems.

- **Methodologies:** The project can present methodologies developed for key tasks such as energy-aware workflow allocation, conducting privacy impact assessments in distributed settings (D3.3 [36, 13]), and effectively integrating semantic knowledge (from the DKG) with AI-based optimization algorithms.

Collectively, these contributions represent a comprehensive framework – encompassing architecture, open components, semantic models, and methodologies – for building next-generation distributed data systems that prioritize both efficiency and responsibility. The grounding of this framework in real-world industrial validation provides practical relevance and credibility [10].

6. Value gained by the project from ESWC participation

As the GLACIATION project approaches its conclusion, participation in the ESWC 2025 Project Networking track is strategically important for maximizing its impact and fostering future developments. The project expects to gain significant value in several key areas:

- **Effective Dissemination and Visibility:** ESWC provides a premier venue to present the final outcomes, architecture, and key results of GLACIATION to a highly targeted and influential audience of experts in Semantic Web, Knowledge Graphs, AI, and data management. This ensures broad visibility for the project's achievements [35].
- **Targeted Expert Feedback:** Engaging with the ESWC community offers an invaluable opportunity to receive critical feedback on the GLACIATION framework, particularly on the novel integration of the Distributed Knowledge Graph with AI for optimization in edge-cloud environments. Feedback from leading researchers and practitioners on the DKG design, scalability, applicability, and overall approach will be crucial for refining the final project conclusions and identifying areas for future research [35].
- **Identifying Future Collaborations:** The networking aspect is paramount for an ending project seeking sustainability for its results. GLACIATION aims to connect with potential partners for follow-on research initiatives, joint proposals (e.g., future Horizon Europe calls), or researcher exchanges, building upon the project's foundations and exploring new application domains or tackling related challenges [35]. Identifying complementary expertise within the ESWC community is a key goal.
- **Exploring Standardization Potential:** Discussions with ESWC attendees, including representatives from relevant bodies or projects (potentially facilitated via partners like ERCIM [5]), could help assess the potential for standardizing aspects of the GLACIATION metadata fabric, DKG architecture, or developed ontologies, thereby promoting wider adoption.
- **Fostering Exploitation and Adoption:** The track provides a platform to connect with potential early adopters from industry and academia who might be interested in utilizing the GLACIATION platform, its open-source components, or its methodologies. This interaction can help identify concrete pathways for the exploitation and real-world uptake of the project's results [35].
- **Strengthening Community Engagement:** Participation allows the GLACIATION team to engage actively with the broader research community focused on sustainable computing, privacy-enhancing technologies, knowledge graphs, and edge-cloud systems, sharing knowledge and contributing to ongoing dialogue.

Securing these opportunities for feedback, collaboration, and future impact is essential as GLACIATION concludes its funded period, ensuring that its contributions have a lasting effect on the field.

Acknowledgments

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant No 101070141 [3].

References

[1] GLACIATION Project Consortium, Periodic Reporting for period 1 - GLACIATION (Green responsibLe privACy preservIng dAta operaTIONs), CORDIS EU Research Results, 2024. URL: https://cordis.europa.eu/project/id/101070141/reporting, accessed: 2025-04-14. URL: https://cordis.europa.eu/project/id/101070141/reporting.

[2] GLACIATION Project Consortium, GLACIATION - Green responsibLe privACy preservIng dAta operaTIONs, 2025. URL: https://glaciation-project.eu/, official Project Website.

[3] European Commission, GLACIATION - Green responsibLe privACy preservIng dAta operaTIONs, CORDIS EU Research Results, 2023. URL: https://cordis.europa.eu/project/id/101070141, grant agreement ID: 101070141. Accessed: 2025-04-14. URL: https://cordis.europa.eu/project/id/101070141.

[4] GLACIATION Project Consortium, Description of the project - GLACIATION, 2024. URL: https://glaciation-project.eu/project-description, project Description Page.

[5] ERCIM, GLACIATION - Green responsible privACy preserving dAta operaTIONs, 2025. URL: https://www.ercim.eu/activity/projects/glaciation, eRCIM Project Page.

[6] ERCIM, Launch of the New Horizon Europe Project GLACIATION, ERCIM News, 2022. URL: https://www.ercim.eu/news/518-launch-of-the-new-horizon-europe-project-glaciation, also see ERCIM News 132 announcement: https://ercim-news.ercim.eu/en132/announcements/launch-of-the-new-horizon-europe-project-glaciation.

[7] GLACIATION EU, GLACIATION PROJECT: The future of green Data Management, 2023. URL: https://www.youtube.com/watch?v=Pf_tw9ZUmes, youTube Video.

[8] GLACIATION EU, GLACIATION EU YouTube Channel, 2024. URL: https://www.youtube.com/@glaciation-project, youTube Channel.

[9] O. Chepizhko, P. Forgács, M. Schranz, Ant-search algorithm for distributed knowledge graphs, in: Swarm Intelligence: 14th International Conference, ANTS, 2024.

[10] GLACIATION Project Consortium, Pilots - GLACIATION, 2024. URL: https://glaciation-project.eu/, pilot descriptions on homepage.

[11] GLACIATION Project Consortium, GLACIATION GitHub Organization, 2025. URL: https://github.com/glaciation-heu, gitHub Organization.

[12] Mountantonakis, Michalis and Papadakos, Panagiotis and Wenning, Rigo, The Metadata Reference Model for the EU GLACIATION Project, 2024. Accessed via https://github.com/glaciation-heu/MetadataReferenceModel.

[13] GLACIATION Project Consortium, Public Deliverables - GLACIATION, 2024. URL: https://glaciation-project.eu/outcomes/public-deliverables, public Deliverables Page.

[14] GLACIATION Project Consortium, D2.1 Architecture design and component definitions, Technical Report, GLACIATION Project, 2023. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.

[15] GLACIATION Project Consortium, D4.1 Policies and techniques for data protection in modern distributed environments, Technical Report, GLACIATION Project, 2023. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.

[16] GLACIATION Project Consortium, D5.1 GLACIATION power measurement framework software, Technical Report, GLACIATION Project, 2023. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.

[17] GLACIATION Project Consortium, D3.1 Secure AI Enabled Placement Engine – intermediate, Technical Report, GLACIATION Project, 2024. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.

[18] GLACIATION Project Consortium, D7.2 Use Case Integration, Validation, and Demonstration Report – intermediate, Technical Report, GLACIATION Project, 2024. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.

[19] GLACIATION Project Consortium, D8.6 Data Management Plan - Initial, Technical Report, GLACIATION Project, 2023. Accessed via https://glaciation-project.eu/outcomes/

public-deliverables.
[20] GLACIATION Project Consortium, D8.7 Data Management Plan, Technical Report, GLACIATION Project, 2024. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.
[21] GLACIATION Project Consortium, D8.1 Communication, Networking and Dissemination Plan and Activities, Technical Report, GLACIATION Project, 2023. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.
[22] GLACIATION Project Consortium, D8.2 Communication, Networking and Dissemination Plan and Activities - Intermediate, Technical Report, GLACIATION Project, 2024. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.
[23] GLACIATION Project Consortium, Scientific Publications - GLACIATION, 2024. URL: https://glaciation-project.eu/outcomes/scientific-publications, scientific Publications Page.
[24] M. Besta, N. Blach, A. Kubicek, R. Gerstenberger, M. Podstawski, L. Gianinazzi, J. Gajda, T. Lehmann, H. Niewiadomski, P. Nyczyk, et al., Graph of thoughts: Solving elaborate problems with large language models, in: Proceedings of the AAAI Conference on Artificial Intelligence, volume 38, 2024, pp. 17682–17690.
[25] D. Carraro, A. Rossi, A. Visentin, S. Prestwich, K. N. Brown, Performance and energy savings trade-off with uncertainty-aware cloud workload forecasting, in: 2023 IEEE 31st International Conference on Network Protocols (ICNP), IEEE, 2023, pp. 1–6.
[26] A. Rossi, A. Visentin, D. Carraro, S. Prestwich, K. N. Brown, Forecasting workload in cloud computing: towards uncertainty-aware predictions and transfer learning, Cluster Computing 28 (2025) 258.
[27] G. Piao, M. Mountantonakis, P. Papadakos, P. Sonawane, A. OMahony, Toward exploring knowledge graphs with llms, in: Joint Proceedings of Posters, Demos, Workshops, and Tutorials of the 20th International Conference on Semantic Systems, 2024.
[28] G. Piao, P. Sonawane, S. Gupta, A. OMahony, Exploring the underlying questions of sparql queries with llms, in: Extended Semantic Web Conference, 2025.
[29] M. Abbadini, M. Beretta, D. Facchinetti, G. Oldani, M. Rossi, S. Paraboschi, Lightweight cloud application sandboxing, in: 2023 IEEE International Conference on Cloud Computing Technology and Science (CloudCom), IEEE, 2023, pp. 139–146.
[30] S. Barezzani, S. D. C. di Vimercati, S. Foresti, V. Ghirimoldi, P. Samarati, Ta_da: Target-aware data anonymization, IEEE Transactions on Privacy (2025).
[31] L. Gianinazzi, A. N. Ziogas, L. Huang, P. Luczynski, S. Ashkboosh, F. Scheidl, A. Carigiet, C. Ge, N. Abubaker, M. Besta, et al., Arrow matrix decomposition: A novel approach for communication-efficient sparse matrix multiplication, in: Proceedings of the 29th ACM SIGPLAN Annual Symposium on Principles and Practice of Parallel Programming, 2024, pp. 404–416.
[32] N. Blach, M. Besta, D. De Sensi, J. Domke, H. Harake, S. Li, P. Iff, M. Konieczny, K. Lakhotia, A. Kubicek, et al., A {High-Performance} design, implementation, deployment, and evaluation of the slim fly network, in: 21st USENIX Symposium on Networked Systems Design and Implementation (NSDI 24), 2024, pp. 1025–1044.
[33] ESWC 2025 Organizers, Call for Project Networking Session Profiles - ESWC 2025, 2024. URL: https://2025.eswc-conferences.org/call-for-project-networking/, eSWC 2025 Conference Website.
[34] ESWC 2025 Organizers, ESWC 2025 Conference Information, 2025. URL: https://kmeducationhub.de/european-semantic-web-conference-eswc/, information about ESWC scope and topics.
[35] ESWC Organizers, Project Networking Track Goals, 2024. Information derived from ESWC 2025 Call (https://2025.eswc-conferences.org/call-for-project-networking/) and previous calls (e.g., ESWC 2022 via Ontolog Forum: https://groups.google.com/g/ontolog-forum/c/H-mykOLFBCM). Accessed: 2025-04-14.
[36] GLACIATION Project Consortium, D3.3 Ethical and Privacy Impact Assessment and Recommendations – intermediate, Technical Report, GLACIATION Project, 2024. Accessed via https://glaciation-project.eu/outcomes/public-deliverables.