Ação COST CA19134
Distributed Knowledge Graphs (DKG)

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Acknowledgments

Acknowledgments

- ➤ *FCT - Computação Científica Nacional*

- ➤ *Universidade do Minho*

- ➤ *Universidade de Coimbra*

  Instituto de Investigação Interdisciplinar

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➢ *ANACOM*

➢ *LASIGE, Faculdade de Ciências,*

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➢ *ESTG, Instituto Politécnico de Portalegre*

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Distributed Knowledge Graphs (CA19134)

(…) *"*The main aim of the Action is therefore to **create a research community for deployable Distributed Knowledge Graph technologies** that are standards-based, and open, embrace the FAIR principles, allow for access control and privacy protection, and enable the decentralised publishing of high quality data*." (…)*

Areas of Expertise Relevant for the Action	Keywords
● Electrical engineering, electronic engineering, Information engineering: Databases, data mining, data curation, computational modelling ● Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems	● Knowledge Graphs ● Data Management ● FAIR Data ● Data Science

https://www.cost.eu/actions/CA19134/

CA19134 - Distributed Knowledge Graphs

⬇ Downloads

| Description | Management Committee | Main Contacts and Leadership | Working Groups and Membership |

Description

Knowledge Graphs are a flexible way to represent interlinked information about virtually anything. People from a variety of application domains including biomedical research, public and open data, linguistics, journalism, and manufacturing publish, use, and investigate knowledge graphs. As the publication is done in a decentralised fashion across the web, the knowledge graphs form a **distributed** system.

Due to the ever-increasing uptake of Knowledge Graph technologies in recent years, there are **new challenges** for research and development including dealing with the **scale** and the **degree of distribution** of knowledge graphs, while monitoring and maintaining data quality and privacy. Tackling these research challenges will need a stronger collaboration within the research community, and a joint effort to establish a more functional, decentralized Web of Data.

The main aim of the Action is therefore to **create a research community for deployable Distributed Knowledge Graph technologies** that are standards-based, and open, embrace the FAIR principles, allow for access control and privacy protection, and enable the decentralised publishing of high quality data. To this end, the Action connects European researchers and practitioners from: (1) diverse application domains and (2) the whole life cycle of Distributed Knowledge Graphs, from provisioning to finding, accessing, integrating, programming, deploying, enriching, and analytics. The Action will **develop practices** for scalable, privacy-respecting, high quality and decentralised Knowledge Graph publication and consumption, **reach out** to the European **industry**, and **formulate a research agenda**.

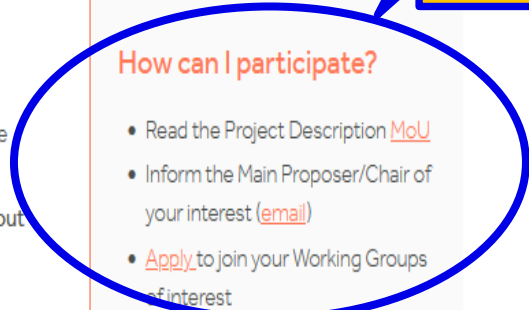### Action Details

📄 MoU - 037/20

⚗ CSO Approval date - 24/03/2020

📅 Start date - 23/09/2020

📅 End date - 22/09/2024

🌐 https://cost-dkg.eu/

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How can I participate?

- Read the Project Description MoU
- Inform the Main Proposer/Chair of your interest (email)
- Apply to join your Working Groups of interest

Distributed Knowledge Graphs (CA19134)

- **Working Groups:**

  - *WG1 – Provider of Distributed Knowledge Graphs*

  - *WG2 – Consumer of Distributed Knowledge Graphs*

  - *WG3 – Prosumer of Distributed Knowledge Graphs*

  - *WG4 – Distributed Knowledge Graph Systems and Dissemination*

    https://cost-dkg.eu/workinggroups

WGs: *Producers & Consumers*

WG1 Producers

WG1 is concerned with how knowledge graphs can be made available from various sources, systems and formats, in a scalable, serviceable, distributed, and FAIR (Findable, Accessible, Interoperable, and Reusable) manner. The WG will define requirements and explore ideas, methods, and tools to make FAIR distributed knowledge graphs, with special attention as to whether the data are offline or online, and what to do when the data are privacy-sensitive.

Join the WG1 Provider mailing list (cost-dkg-wg1@lists.kit.ed) by sending an email to sympa@lists.kit.edu with subject "SUBSCRIBE cost-dkg-wg1 <Firstname> <Lastname>" (filling in the variables for first and last name).

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WG2 Consumers

Bringing together actors dealing with data processing techniques and user-facing solutions, having in common the need for being able to consume data made available by providers. This task will enable data consumers to test and improve their tools and techniques on datasets made available by data providers, and also highlight ways of improving the usability of exposed datasets. This task is concerned with test matching algorithms, interlinking of Distributed Knowledge Graphs for easier integration, and metadata/context/logical deduction use to better determine what KGs are about, what to do with them and what decision to take from them.

Join the WG2 Consumer mailing list (project-dkg-wg2@lists.fau.de) by filling in this form.

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WG3 Prosumers

Prosumers are entities that act as both consumers and providers of data. If sometimes the two roles of prosumers (producers and users) can be dealt with separately, in some cases they are very intertwined: prosumers have specific needs and requirements. WG3 is particularly interested in: 1) replication hubs which consume and publish identically to help balancing load; 2) refinement tasks that consume and improve data; 3) data catalogues that bring together data sets and add metadata on top; 4) provenance tracking that produces complementary information from what is consumed to improve explainability of data processing.
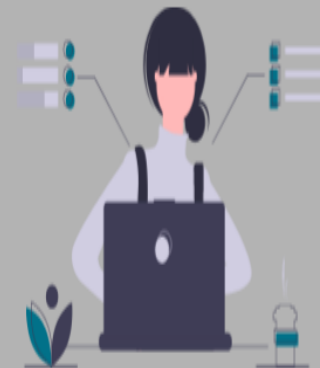
Join the WG3 Prosumer mailing list (cost-dkg-wg3@listes.emse.fr) by sending an email to sympa@listes.emse.fr with subject: "SUBSCRIBE cost-dkg-wg3 <Firstname> <Lastname>" (filling in the variables for first and last name).
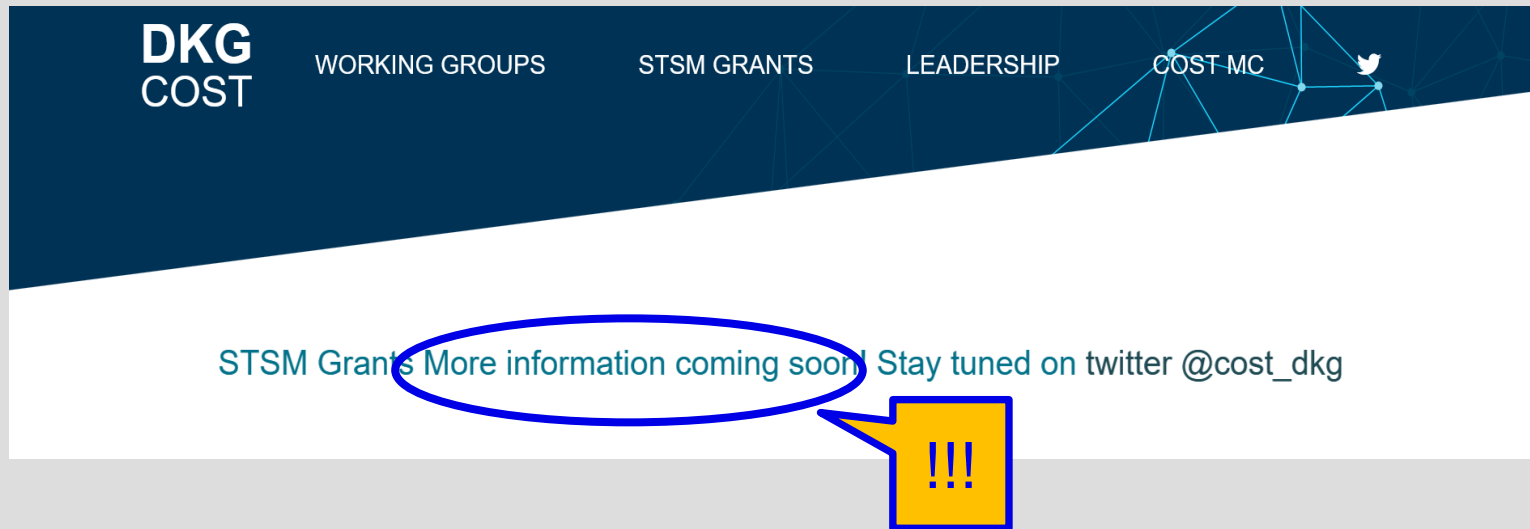
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WG4 Systems

Taking a holistic view on systems built from multiple consumers, prosumers, and providers of Distributed Knowledge Graphs. This task investigates issues that stem from the interplay of consumers, prosumers, and providers of Distributed Knowledge Graphs, and coordinates information regarding new developments made in all aspects of Distributed Knowledge Graphs in/outside the consortium.

Join the WG4 Systems mailing list (cost-dkgs-wg4@lists.liu.se) by filling in this form.

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A Glance & Next Steps

- **COST** - S&T cooperation:

    - Conferences, Workshops (ITC grants);

    - Training Schools (TS);

    - Short Term Scientific Missions (STSM).

DKG
COST   WORKING GROUPS   STSM GRANTS   LEADERSHIP   COST MC

STSM Grants More information coming soon Stay tuned on twitter @cost_dkg

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- **Call For Presentations** (**EasyChair**)

DKG-22: 1st Workshop on Consumers of Distributed Knowledge Graphs in Digital, Industry and Space

Online

Online, Germany, February 22, 2022

| **Submission link** | https://easychair.org/conferences/?conf=dkg22 |

Topics: knowledge graph semantic technologies artificial intelligence internet of things

Call for Presentations: Consumers of Distributed Knowledge Graphs in Digital, Industry and Space

The Distributed Knowledge Graph COST Action working group 2 is about consumers of distributed knowledge graphs. The focus areas of the COST Action in the next grant period will be aligned with the focus area **Digital, Industry and Space** of Horizon Europe.

To continue the work on the scientific program of working group 2, we invite researchers and technology experts from the member countries of the Distributed Knowledge Graph COST Action to submit poster proposals for presentation at the virtual meeting on February 22, 2022.

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Muito obrigado!

References

➢ **Annotated Rules for COST Actions - FAQs**

➢ **Memorandum of Understanding (MoU)** for the implementation of the COST Action "Distributed Knowledge Graphs" (DKG) CA19134, March-2020

**Instituto Politécnico de Portalegre,
41.º Aniversário, 25-Novembro-2021**

Parabéns!