

european
data forum

19-20
march
Athens
Greece

EDF2014 - The meeting place of Data Economy

2014.data-forum.eu

#EDF2014

Big, Open, Linked, Social Data

Under the auspices of the Hellenic Presidency of the Council of the European Union



HELLENIC REPUBLIC
National and Kapodistrian
University of Athens

Welcome to Athens!

Καλώς ήλθατε στην Αθήνα!

The European Data Forum (EDF) is the annual meeting place for industry, research, policy makers, and community initiatives to discuss the challenges and opportunities of data in Europe, especially in light of recent developments such as Open Data, Linked Data and Big Data. The aim of EDF is thereby to bring together all stakeholders involved in the data value chain to exchange ideas, in order to strengthen the European data economy and its positioning worldwide. Discussions at EDF provide input to research, development, and policy activities at the European Commission and those of the EU member states, with the aim of influencing the development of the new European data economy.

An additional goal of the European Data Forum is to establish and foster a truly European data community and ecosystem. This emerging community enables promising ideas to move from the research stage through to successful deployment and market introduction. At the same time, its stakeholders will mutually reinforce their strategies resulting in a forward-looking, dynamic, and well-integrated EU-wide ecosystem.

Because of the strategic importance of multilingualism in Europe, EDF2014 promotes the integration and co-operation of the European data community with the language resources and technology community. The synergy of these communities is critical for new types of multilingual digital services and the creation of a European digital single market without language barriers.

Following two very successful events in 2012 and 2013, this year's edition of EDF offers a rich programme consisting of industry and government keynotes, invited and contributed talks, a panel, networking sessions and a Horizon 2020 LEIT-ICT session. During the event, the Eccenca European Data Innovator Award (EDI Award) will be presented to an individual who has excelled in pioneering Big Data, Open Data or Linked Data technologies in industry or the public sector.

This year's award will go to the former CIO of the City of Vienna: Johann Mittheisz for his outstanding activities in open government and open data in the City of Vienna, in Austria and the whole D-A-CH region.

We are proud to have the following officials from the European Commission and the Greek Government speaking at our event:

Neelie Kroes, Vice President of the European Commission, in charge of the Digital Agenda
Kyriakos Mitsotakis, Minister of Administrative Reform and e-Governance
Evy Christofilopoulou, Deputy Minister of Administrative Reform and e-Governance

Georgios Kaminis, Mayor of Athens

Harry Theocharis, General Secretary of Public Revenue of the Greek Ministry of Finance

Christos Vasilakos, General Secretary for Research and Technology

Giuseppe Abbamonte, Director, Directorate G Media & Data, DG CONNECT

Roberto Viola, Deputy Director General at European Commission, DG CONNECT

In addition to the above highlights, EDF2014 offers a comprehensive Poster Session on Day 1 and an Exhibition Space over both days with many exciting demonstrations providing the possibility to interact with leading vendors, research groups and SMEs from all over Europe.

As General Chairs we would like to thank the Local Chairs Spiros Athanasiou and Theodore Dalamagas and their team at IMIS/“Athena” Research and Innovation Center and the National and Kapodistrian University of Athens for the fantastic work on the ground, our Programme Chairs Nicoletta Calzolari and Jens Lehmann for putting together an excellent conference programme, our Exhibition Chair Yannis Stavrakas for organising a very interesting exhibition, our Sponsoring Chairs Elena Simperl, Peter Haase, Mihalis Hatzopoulos and Kostis Kyzirakos for attracting a significant amount of sponsors, our Dissemination Chairs Sander van der Waal, Deirdre Lee and Zoi Kaoudi for “spreading the word” and helping us attract a large number of participants to EDF2014, and Thanasis Gentimis for his excellent work in managing the conference website.

Finally, we would like to thank the Data Value Chain Unit – G3 of DG CONNECT for advising and supporting us throughout the organisation of the conference, and our sponsors for their generous financial support.

Thank you all and enjoy EDF2014!

Martin Kaltenböck and Manolis Koubarakis

EDF2014 Organizers

Institute for the Management of Information Systems / “Athena” Research Center



The Institute for the Management of Information Systems (IMIS) is a Research Institute of "Athena" Research and Innovation Center, supervised by the General Secretariat for Research and Technology. IMIS was founded in 2007 with the mission to conduct research in the areas of data management and large-scale information systems, and has since grown to over 70 people. Our research excellence, international collaborations, and success in competitive funding have enabled the sustainable growth of IMIS in a challenging national and EU landscape.

IMIS is uniquely positioned in the areas of Database, Knowledge and Information management, focusing on core research topics and cross-disciplinary domains. Our expertise lies in data-driven innovation, applications, and services. In one phrase, 'we love data!' We develop the foundations of EU's Data Economy, working on Big, Open and Linked data technologies, contributing to the growth of EU and Greece. Towards this goal, IMIS cooperates with the industry, SMEs, public sector, the open source and the open knowledge communities.

National and Kapodistrian University of Athens - Department of Informatics and Telecommunications



HELLENIC REPUBLIC
National and Kapodistrian
University of Athens

The National and Kapodistrian University of Athens was founded in 1837 and it is the oldest university in Greece. The Department of Informatics and Telecommunications has been active since 1986 and is widely recognized as the top Computer Science department in Greece. For the years 2009-2011, it has been ranked among the top-100 departments in Computer Science internationally by the Academic Ranking of World Universities. It currently has 42 faculty members covering all areas of Informatics and Telecommunications.

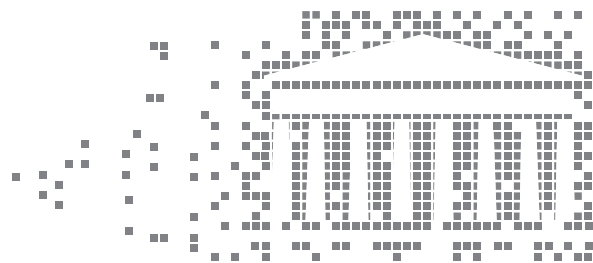
The department has a long standing tradition in research and teaching, and is equipped with a number of contemporary research laboratories. It offers an excellent environment for undergraduate and postgraduate students (M.Sc. and Ph.D. levels). Many faculty members are world leaders in their individual research areas, and have been awarded distinguished professional society fellowships (ACM, IEEE among them), prizes and awards. Five faculty members have recently been awarded the prestigious ERC Starting Grant and ERC Advanced Grant. Many of the department's alumni have gone on to distinguished careers in industry and academia, in Greece, Europe and elsewhere.



The EDF2014 takes place in our breathtaking Athens, a city where hospitality, setting and character are guaranteed to take your breath away. A unique combination of the old and the new, set up against a spectacular Mediterranean landscape; a world famous past; an exciting present: ancient and brand new at the same time, Athens inspires and seduces its visitors, leaving its mark in their hearts and minds.

Innovation and achievement have ushered in a new era for the city, its citizens and its visitors. Mega-infrastructure improvements have made Athens a city that is easy to navigate. Athens is evolving into a hub for innovation, hosting a plethora of creative individuals and a vibrant startup scene.

In Athens, our hospitality, setting and character will take your breath away!



Day 1
March 19, 2014

Time

Main Track

Track II

08.30 - 09.15 Registration & Coffee

09.15 - 10.00 **EDF2014 Opening**

Roberto Viola

Deputy Director General at European Commission, Directorate General for Communications Networks, Content and Technology

Manolis Koubarakis

EDF2014 Conference Chair, National and Kapodistrian University of Athens, Greece

Martin Kaltenböck

EDF2014 Conference Chair, Semantic Web Company

Welcome

Neelie Kroes

Vice President of the European Commission, in charge of the Digital Agenda

Kyriakos Mitsotakis

Minister of Administrative Reform and e-Governance of Greece

Evy Christofilopoulou

Deputy Minister of Administrative Reform and e-Governance of Greece

Georgios Kaminis

Mayor of Athens

Christos Vasilakos

General Secretary for Research and Technology of Greece

Time	Main Track	Track II
10.00 - 10.30	<p>Eccenca European Data Innovator Award - Ceremony</p> <p>Neelie Kroes Vice President of the European Commission, in charge of the Digital Agenda</p> <p>Roberto Viola Deputy Director General at European Commission, Directorate General for Communications Networks, Content and Technology</p> <p>H.C. Brockmann Eccenca (Award sponsor)</p> <p>Talk of Eccenca European Data Innovator Award Winner</p> <p>Johann Mittheisz Former CIO of the City of Vienna, Austria</p>	
10.30 - 11.00	<p>Opening Keynote (Big Data / Data Economy)</p> <p>Stefan Wrobel Institute Director, Fraunhofer IAIS/ Member of the board of BITKOM working group Big Data</p> <p>🔗 The Value of Big Data - From Data-Driven Enterprises to a Data-driven Economy</p>	
11.00 - 11.30	Coffee Break	

•SESSION 1

11.30 - 13.10	<p>Data in Use I: Big Data Best Practice</p> <p>Chair: Christian Dirschl (Wolters Kluwer Deutschland, Germany)</p> <p>Peter Cullen General Manager, Trustworthy Computing, Microsoft</p> <p>🔗 Data protection frameworks fit for 'Big Data'</p>	<p>Open Data (across Europe)</p> <p>Chair: Deirdre Lee (Insight Galway, Ireland)</p> <p>Marta Nagy-Rothengass Head of Unit Data Value Chain, Directorate General for Communications Networks, Content and Technology</p> <p>🔗 Public Sector Information (PSI) at European Commission (EC)</p>
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Time

Main Track

Track II

Abraham Bernstein

Full Professor of Informatics, University of Zurich, Switzerland

🔗 **ViSTA-TV - Online TV Statistics and Dynamic Joint Recommendations**

Franck Cotton

Technology Advisor, Institut National de la Statistique et des Etudes Economiques, France & **Kamel**

Gadouche, Director, Centre d'Accès Sécurisé aux Données / Groupe des Ecoles Nationales d'Economie et Statistique, France

🔗 **TeraLab, A Secure Big Data Platform: Description And Use Cases**

Krzysztof Wecel

Assistant professor, Poznan University of Economics, Poland

🔗 **Advanced Exploration of Public Procurement Data in Linked Data Paradigm**

Stefan Decker

Director, Insight Galway, Ireland &

Anthony McCauley, Head of Research, Fujitsu Ireland

🔗 **KI2NA - Using Linked Data for the Intelligent society**

Nicolas Lemcke Horst

Ambassador of the Danish Basic Data Programme, Agency for Digitalisation, Ministry of Finance of Denmark

🔗 **Danish Basic Data**

Harry Theocharis

General Secretary of Public Revenue in the Ministry of Finance in Greece

José Ignacio Sánchez

Valdenebro

Deputy Director of Digital Public Services Department, Entidad Publica Empresarial Red.es

🔗 **Aporta Project: National Strategy for encourage PSI in Spain**

Taru Rastas

Senior Advisor, Ministry of Communications of Finland

🔗 **Open data for transport and communications**

13.10 - 14:30

Lunch Break

14.30 - 15.00

Government Keynote

Nancy Routzouni

E-Governance Advisor to the Deputy Minister of Administrative Reform and e-Governance of Greece

🔗 **The Data Economy: an opportunity for Greece**

•SESSION 2

Time	Main Track	Track II
15.00 - 16.20	<p>(Open) Data in Use II: Cities - Buildings - Transport</p> <p>Chair: Evangelos Argyzoudis (Intrasoft International, Greece)</p> <p>Ksenia Petrichenko Building Policy Analyst, Global Buildings Performance Network 🔗 Making a 'black box' transparent: role of the open data in the building sector</p> <p>Axel Polleres Full Professor, WU - Vienna University of Economics and Business, Austria 🔗 City Data Pipeline - A report about experiences from using Open Data to gather indicators of city performance</p> <p>Vassileios Tsetsos Chief Technical Officer, Mobics Ltd 🔗 Predicting parking occupancy in a sensor-enabled smart city</p> <p>Frank Kresin Research Director, Waag Society 🔗 City SDK – Smart City Services bases on Open Source Linked Open Data API's</p>	<p>Data Challenges I: Languages, Governance, Business Models</p> <p>Chair: Nicoletta Calzolari (ILC-CNR & ELRA, Italy)</p> <p>Piek Vossen Professor Computational Lexicology, VU University Amsterdam, Netherlands 🔗 NewsReader: recording history by processing massive streams of daily news</p> <p>Daniel Vila-Suero Researcher, Ontology Engineering Group, Universidad Politecnica de Madrid, Spain 🔗 3LD: Towards high quality, industry-ready Linguistic Linked Licensed Data</p> <p>Vedran Sabol Head of the Knowledge Visualisation Area, Know-Center, Austria</p> <p>Florian Stegmaier Senior Researcher, University of Passau, Germany 🔗 Linked Data in Context: Questions Matter</p> <p>Nikolaos Loutas Manager, PwC 🔗 Business models for Linked Government Data: What lies beneath?</p>
16.20 - 16.50	Coffee Break	

•SESSION 3

Time	Main Track	Track II
16.50 - 18.10	<p>Data in Use III: Collaborating on Interoperability to Achieve a Single Market</p> <p>Chair: Jochen Hummel (CEO ETeam AB & Chairman LT-Innovate, Germany)</p> <p>Marta Nagy-Rothengass Head of Unit Data Value Chain, Directorate General for Communications Networks, Content and Technology</p> <p>Inge Buffolo Head of Institutional Relations ad Linguistic and IT Cooperation Projects Sector, OHIM</p> <p>Gudrun Magnusdottir CSO and Chairperson, ETeam AB</p> <p>Rüdiger Eichin Research Manager, SAP AG</p>	<p>Data Challenges II: Personal Data, Standards & Data Roadmaps</p> <p>Chair: Jens Lehmann (University of Leipzig, Germany)</p> <p>Allan Hanbury Senior Researcher, Vienna University of Technology, Austria</p> <p>🔗 Conquering Data in Austria: a technology roadmap</p> <p>Florendia Fourli-Kartsouni Managing Director, Hypercliq EE</p> <p>🔗 Extension of the Scope of Large 3D Anthropometric Data Pools for Product Development – Web 3D data analytics by Hypercliq EE</p> <p>Michele Vescovi Researcher, Semantic & Knowledge Innovation Lab, Italy</p> <p>🔗 Toward Personal Big Data passing through user Transparency, Control and Awareness: a Living-Lab Experience</p>
18.10 - 18.30	<p>Closing Session Day I</p> <p>Yannis Ioannidis Director General, Athena Research and Innovation Center, Greece</p> <p>🔗 Big, Linked and Open Data in Greece: Current Status and New Directions</p>	
18.30 - 20.00	EDF2014 Poster Session	
20:00	Conference Dinner	

Day 2

March 19, 2014

Time	Main Track	Track II
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08.00 - 09.00	Reception & Coffee	
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09.00 - 09.15	EDF2014 Opening of Day 2	
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09:15 - 10.45	PPP on Data & Executive Panel on Big Data	
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Introduction by:

Marta Nagy-Rothengass

Head of Unit Data Value

Chain, Directorate General for
Communications Networks, Content
and Technology

Panelists:

Christian Lindemann

Chief Operating Officer, Wolters Kluwer
Germany

Ralf-Peter Schaefer

Head of Traffic Product Unit, TomTom

Stefan Wrobel

Institute Director, Fraunhofer IAIS
/ Member of the board of BITKOM
working group Big Data

Giuseppe Abbamonte

Director, Directorate G Media
& data, Directorate General for
Communications Networks, Content
and Technology

Josef Urban

Manager, Nokia Siemens Networks

Jan Reichelt

co-founder and president, Mendeley

10.45 - 11.15	Coffee Break	
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•SESSION 4

Time	Main Track	Track II
11.15 - 12.35	<p>The Value of Data in Industry - Best practice session</p> <p>Chair: Antonis Kukurikos (National Centre for Scientific Research "Demokritos", Greece)</p> <p>Christian Lindemann Wolters Kluwer Deutschland & Christian Dirschl, Wolters Kluwer Deutschland</p> <p>🔗 Linked Data and Open Government Data as part of the business strategy of Wolters Kluwer Deutschland</p> <p>Paul Groth Department of Computer Science & The Network Institute, VU University Amsterdam, Netherlands</p> <p>🔗 Open PHACTS: A Data Platform for Drug Discovery</p> <p>Rüdiger Eichin Research Manager, SAP AG</p> <p>🔗 Deriving Value from Big Data for Enterprise Performance Management</p> <p>Dimitris Vassiliadis Head of Unit, EXUS Innovation Attractor</p> <p>🔗 From Carbon to Diamonds: Business cases of data value</p>	<p>Big/NESSI networking session</p> <p>Edward Curry (Session Chair), NUIG, Big</p> <p>🔗 Introduction</p> <p>Harald Schönin Head of Research Software AG / Member of the NESSI Board</p> <p>🔗 A Big Data Value Innovation Ecosystem for Europe - a Business Perspective</p> <p>Nuria De Lama Atos, NESSI, Big</p> <p>🔗 Towards a Big Data Public Private Forum</p> <p>Marta Nagy-Rothengass Head of Unit Data Value Chain, Directorate General for Communications Networks, Content and Technology</p> <p>🔗 Launch of the PPP/Consultation process</p> <p>Edward Curry NUIG, Big</p> <p>🔗 The Big Data Value Chain</p> <p>Helen Lippell PA, Sonja Zillner Siemens</p> <p>🔗 Big Data Transformations of Sectors</p> <p>Questions & Answers</p>
12.35 - 14.00	Lunch Break	
14.00 - 14.30	<p>Keynote (Industry Keynote)</p> <p>Ralf-Peter Schaefer Head of Traffic Product Unit, TomTom</p> <p>🔗 Probe Data Analytics and Processing for Traffic Information, Traffic Planning and Traffic Management</p>	

Time

Main Track

Track II

14.30 - 15.00

Networking Session on Data Issues

Chair: Marta Nagy-Rothengass (Head of Unit Data Value Chain, DG CONNECT)

Adrian Cristal

Barcelona Supercomputing Center,
RETHINK big Project Coordinator

✂ The RETHINK big Project NEEDS YOU

Kush Wadhwa

Senior Partner, Trilateral Research & Consulting

✂ Addressing risks and opportunities engendered by big data: The BYTE project

15.00 - 15.30

An overview of the Horizon 2020 Work Programme 2014-2015 (LEIT-ICT)

Francesco Barbato

Project Officer at European Commission,
Directorate General for Communications
Networks, Content and Technology

✂ Content technologies and Information Management's ICT-15, ICT-16 and ICT-17 funding opportunities for the 'data value chain' stakeholders.

15.30 - 15.45

Closing of EDF2014

Giuseppe Abbamonte

Director, Directorate G Media & data,
Directorate General for Communications
Networks, Content and Technology

Marta Nagy-Rothengass

Head of Unit Data Value Chain,
Directorate General for Communications
Networks, Content and Technology

Manolis Koubarakis

EDF2014 Conference Chair, National
and Kapodistrian University of Athens,
Greece

Martin Kaltenböck

EDF2014 Conference Chair, Semantic
Web Company



ENABLING INTELLIGENT ACTION

EXUS provides specialised software solutions in 20 different countries and for more than 300 customers in the banking, telecoms, utilities and hospitality sectors.

For 25 years, our innovative products have given our customers that vital competitive edge, enabling big organizations to act and react with speed and intelligence.

Through understanding our customers and creating solutions based on real intelligence, we help people work better and achieve success in demanding and competitive markets.

Business Portfolio

Our purpose is to improve business of those we serve, simplifying complexity to **enable intelligent action**.

Financial services

EXUS Financial Suite, EFS, is a comprehensive suite of financial products, aimed at delivering exceptional value through integrated knowhow and superior functionality. The suite includes EFS Collection & Recovery, EFS Origination and EFS Scoring.

Integrated knowhow

Our own EXUS Rightfit Technology™ ensures that EFS solutions are always perfectly tailored to meet your organization's exact requirements. We never use a generic, one-size-fits-all approach.

Superior functionality

The EXUS RapidDeploy Methodology™ shortens deployment times – sometimes spectacularly – to accelerate the return on your investment.

Web and Mobile solutions

Our web and mobile solutions cover a wide range of demanding applications for banks and financial services companies, telecoms operators, utilities and hospitality specialists. These include running transaction-heavy intranets and extranets and e-learning, e-payment and iOS and Android native phone apps. From large, complex systems to straightforward, practical applications, our solutions are complete, innovative and future proof. We deliver the best design and functionality for websites and mobile apps, backed up with SEO, search engine marketing and social media integration to ensure high levels of the right type of traffic. Our work is imaginative, rigorous and award-winning. We have the technical and design skills to create innovative, secure and reliable solutions for both online and mobile systems and devices.

Innovation Attractor

EXUS Innovation Attractor manages a portfolio of activities that pave the way for the introduction and take up of emerging technologies.

We excel in driving innovation in software engineering and intelligent data management to foster advances in our main business sectors of Finance, Telecom and the Internet. On top of that, we work on enriching our business lines by investing heavily on research and development in security, health, creativity and learning.

Currently, our activities focus on harnessing the value of data in the domains of EXUS' interests, identifying opportunities for value creation by tapping into the ocean of information that is generated on a daily basis.

EXUS develops new technologies, investigates new business models, and delivers innovative products and services thanks to our on-going participation in EC co-funded projects and an extensive network of value-added research partners. We leverage this to fuel in-house research and innovation roadmaps that will ultimately deliver new value to our customers.

To achieve the above, EXUS currently manages a project portfolio in excess of 90 Million Euros and collaborates with more than 200 research partners all over Europe.

EXUS enables intelligent action

We have 25 years' invaluable experience in providing innovative and sophisticated data management in diverse application domains, such as security, finance, transport, environment, health and creativity.

EXUS serves more than 300 clients around the world. We hire talented people and help them achieve great results in a work environment that encourages individual and team success, leading to a string of Top Ten Best Workplace rankings.

We have developed close partnerships with global software technology providers, including Microsoft, Oracle and Sitecore, and we were proud to be the first software company in Europe to win EFQM's 5-star Recognised for Excellence rating. We have also been ranked as one of the financially strongest companies, in ICAP's 2010 ratings.



www.exus.co.uk



ESTeam – Experts in Information Infrastructure

ESTeam AB (www.esteem.se), founded in 1995 to develop and market language technology solutions, is a Swedish software company with development sites in Athens and Berlin and an

office in Brussels.

Our **mission** is to provide the means to achieve **data interoperability** through semantic and multilingual information infrastructures, storage and search.

ESTeam has provided software and services for **cross-border interoperability** as well as advanced software solutions including decision support for the IP sector.

ESTeam's spinoff coreon.com is a unique SaaS start-up supporting advanced information and multilingual knowledge processing in enterprises and organizations.

ESTeam is a software provider to EU organizations since 1999. ESTeam language technology software covers **all EU languages** and many of the EU's major trading partners.

ESTeam is actively involved in ground breaking innovation projects within the area of language technology, knowledge management, and multilingual Big Data challenges.

ESTeam is headed by CEO Jochen Hummel and CSO Gudrun Magnusdottir while technical development is managed by CTO Lambros Kranias.



Inktank® is transforming storage with Ceph®, the massively scalable, open source, software-defined storage system that radically improves the economics and management of data management. Launched by leading Ceph developers, Inktank's mission is to help enterprises use Ceph to break free of expensive and proprietary storage systems to decrease their storage costs, increase their operational flexibility, and effectively manage their rapidly growing data. Inktank Ceph Enterprise™ is the market's first enterprise-grade, dedicated Ceph product offering that delivers everything needed to confidently run a production Ceph storage cluster at scale. In addition, Inktank provides best-in-class professional services and Ceph training.



BIG is a Collaborative Project in ICT with the following goals:

- 1) Acquire a sharp understanding of how big data can be applied to concrete environments/sectors and define priorities based on expected impact.
- 2) Push European Big Data research but also the innovation above to contribute in increasing the European competitiveness.
- 3) Build a self-sustainable industrially-led initiative that will go beyond the project duration.

The initiative is coordinated by Atos, with the participation of industrial partners (ATOS, Press Association, SIEMENS, AGT, EXALEAD and STI) academia partners (UIBK, NUIG, INFAl and DFKI) and the German branch of the non-profit organization Open Knowledge Foundation.

The project has a duration of 26 months, from September 2012 until October 2014.

The project is co-funded by the European Commission within the 7th Framework Programme (Grant Agreement No. 318062)



A European Network of Excellence on Large-Scale Data Management

PlanetData, <http://planet-data.eu/>, aims to establish a sustainable European community of researchers that supports organizations in exposing their data in new and useful ways. The ability to effectively and efficiently make sense out of the enormous amounts of data continuously published online, including data streams, (micro)blog posts, digital archives, eScience resources, public sector data sets, and the Linked Open Data Cloud, is a crucial ingredient for Europe's transition to a knowledge society. It allows businesses, governments, communities and individuals to take decisions in an informed manner, ensuring competitive advantages, and general welfare. The PlanetData project is based upon three objectives that together create a durable community made up of academic and industrial partners. This community is supported in conducting research in the large-scale data management area through the provision of data sets and access to tailored data management technology. This community also benefits from a comprehensive program of training, dissemination, standardization, and networking activities, intended to strengthen existing collaborations and establish new ones, to educate organizations in key questions related to open data exposure, and to transfer research results towards industry.

Please check out the project's most recent achievements regarding our

- Healthcare Use case (<http://planet-data.eu/whitepapers/2013/HealthCare>)
- EventRegistry Use case (<http://planet-data.eu/whitepapers/2013/EventRegistry>) and
- SmartCity Use case (<http://planet-data.eu/whitepapers/2013/SmartCity>).



LOD2 – Creating Knowledge out of Interlinked Data

LOD2 is a large-scale integrating project co-funded by the European Commission (Grant Agreement No. 257943). Commencing in September 2010, this 4-year project comprises leading Linked Open Data technology researchers, companies, and service providers (15 partners) from across 11 European countries (and one associated partner from Korea) and is coordinated by the AKSW research group at the University of

Leipzig.

The Linked Data paradigm has evolved from a practical research idea into a very promising candidate for the exploitation of the Web as a platform for data and information integration in addition to document search. In order to realize this vision, the LOD2 project addresses the following research challenges: improve coherence and quality of data published on the Web, close the performance gap between relational and RDF data management, establish trust on the Linked Data Web and generally lower the entrance barrier for data publishers and users. The LOD2 project tackles these challenges by developing:

1. enterprise-ready tools and methodologies for exposing and managing very large amounts of structured information on the Data Web,
2. a testbed of high-quality multi-domain, multi-lingual ontologies from sources such as Wikipedia and OpenStreetMap.
3. algorithms for automatically interlinking and fusing data from the Web.
4. standards and methods for tracking provenance, ensuring privacy and data security as well as for assessing the quality of information.
5. adaptive tools for searching, browsing, and authoring of Linked Data.

The project integrates and syndicates linked data with large-scale, existing applications and showcases the benefits in the three application scenarios of media and publishing, corporate data intranets and eGovernment. The outputs of LOD2 range from sci-tech to socio-economic areas by providing new technologies and an underlying scientific basis and by applying these new technologies to a number of Semantic Web areas experiencing commercial (enterprise search, media and publishing), scientific (extraction, interlinking, ontology classification and fusion methods), and sociological (community knowledge, integration in social networks, eGovernment) success at present. The project contributes high-quality interlinked versions of public Semantic Web data sets, promoting their use in new cross-domain applications by developers across the globe. The new technologies for enabling scalable management of Linked Data collections in the many billions of triples raise the state of the art of Semantic Web data management, both commercial and open-source, providing opportunities for new products and spin-offs, and make RDF a viable choice for organizations worldwide as a premier data management format. The algorithms and (open-source) tools that the project will develop for data cleaning, linking and fusing will help creating and bootstrapping new data sets in domains that go much beyond the direct applications and data sets developed in the context of this project, to reach the overall goal of the project of making Linked Data the model of choice for next-generation IT systems and applications.



Lots of Earth Observation (EO) data has become available at no charge in Europe and the US recently and there is a strong push for **more open EO data**. Open EO data that are currently made available by space agencies such as ESA and NASA are **not following the linked data paradigm**. Therefore, from the perspective of a user, the EO data and other kinds of geospatial data that might be needed in the application can only be found in **different data silos**, where each silo may contain only part of the needed data. **Opening up these silos** by publishing their contents as RDF and **interlinking them with semantic connections** will allow the **development of data analytics applications** with great environmental and financial value.

The European project TELEIOS (<http://www.earthobservatory.eu/>) is the first project internationally that has introduced the linked data paradigm to the EO domain, and developed prototype applications that are based on transforming EO products into RDF and combining them with linked geospatial data.

In LEO, the core academic partners of TELEIOS (UoA and CWI) join forces with 2 SMEs (SpaceApps, VISTA) and one industrial partner (PCA) with relevant experience **to develop software tools that support the whole life cycle of reuse of linked open EO data and related linked geospatial data**. Finally, to demonstrate the benefits of linked open EO data and its combination with linked geospatial to the European economy, **a precision farming application is developed** that is heavily based on such data.

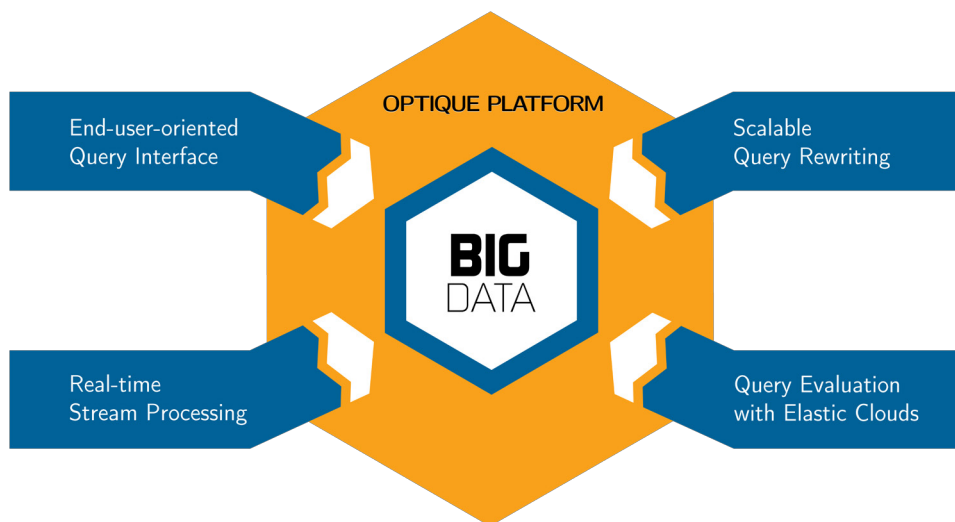
The **expected scientific and technical contributions** of LEO are the following:

1. To develop **publishing tools** that transform open EO data and metadata, made available by space agencies such as ESA, from their standard formats into RDF and make it available on the Web of data.
2. To develop **publishing tools** that transform open geospatial data and metadata from their standard formats into RDF and make it available on the Web of data. Open geospatial data (e.g., digital maps, administrative data, environmental data, etc.) are typically used together with EO data in applications such as precision farming and are made available by public agencies as well (e.g., the Bavarian Topographical Survey for our precision farming application).
3. To develop **tools that interlink open EO data sources and geospatial data sources** published as RDF on the Web.
4. To develop **tools for cross-platform searching, browsing and visualization** of linked EO data and linked geospatial data.
5. To demonstrate the value of the developed tools by:
 - a. Performing **large-scale publication and linking of open EO data** from the GMES Space Component Data Access warehouse managed by ESA, and relevant geospatial datasets made available by other public bodies in Europe.
 - b. Developing a **precision farming application** that shows how geo-information services based on linked open EO data, linked geospatial data and specialized algorithms can contribute to an environmentally friendly increase in the efficiency of agricultural production.

Optique™

Scalable End-User Access to Big Data

<http://www.optique-project.eu/>



Partners: University of Oslo, Siemens AG, Statoil ASA, fluid Operations AG, DNV GL, University of Oxford, Technische Universität Hamburg-Harburg, La Sapienza University of Rome, Free University of Bozen, Bolzano, National and Kapodistrian University of Athens

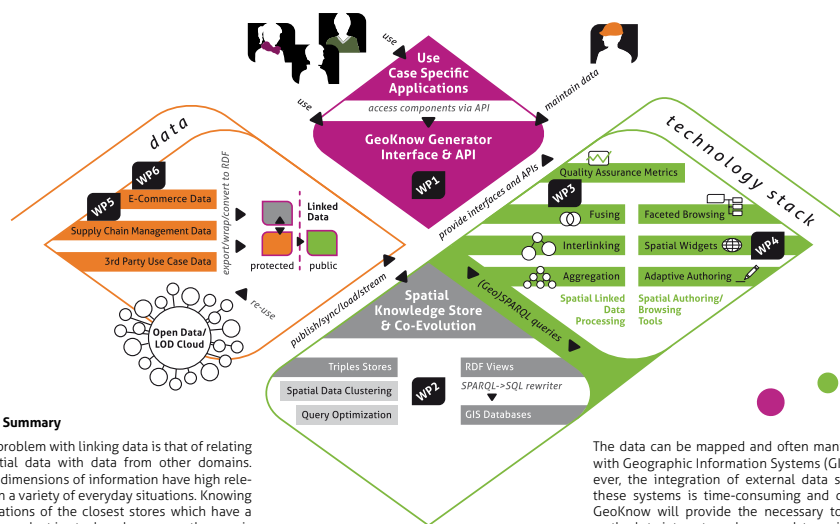


Making the web an exploratory place for geospatial data

Develop tools for exploring, searching, authoring and curating the Spatial Data Web

Integrate linked geospatial data with large-scale, existing applications and services

Derive a testbed and bootstrapping network of high-quality spatial knowledge bases



Project Summary

A core problem with linking data is that of relating geospatial data with data from other domains. Spatial dimensions of information have high relevance in a variety of everyday situations. Knowing the locations of the closest stores which have a specific product in stock and are currently open is a typical example. This geographic dimension of information is normally available, but dispersed among a multiplicity of information sources such as isolated GIS, enterprise warehouses, proprietary data formats such as Excel sheets or simple web pages.

The goal of the GeoKnow project is to make information seeking easier by allowing exploration, editing and interlinking of heterogeneous information sources with a spatial dimension by:

- The creation and maintenance of qualitative geospatial information from existing unstructured data such as OpenStreetMap, Geonames and Wikipedia. Developing quality assessment methods which anticipate geospatial search capability and the acquisition and aggregation of information resources.
- The reuse and exploitation of unforeseen discoveries found in geospatial data. Providing methods to acquire, analyse and categorise data that is rapidly evolving, immense, incomplete and potentially conflicting.

GeoKnow will produce a suite of tools and methodologies for exposing structured geospatial information on the Web. These tools will be packaged in the Linked Data Stack tool repository and include intelligent support querying of spatial information from multiple sources, geospatial-aware query optimisation, geospatial data integration and faceted visualisation of data. These contributions are integrated in the open source GeoKnow Generator framework providing a comprehensive toolset of easy-to-use applications covering a range of possible usage scenarios (e.g. mobility/traffic, energy/water, culture, etc).

Geospatial Data and the Semantic Web

Geospatial data or geographic information is the data that identifies a geographic location of natural or constructed features and boundaries on the earth (e.g. oceans, buildings, countries, rivers, etc). Geographical knowledge bases are among the largest in existence and are highly important in a variety of everyday applications.

The data can be mapped and often manipulated with Geographic Information Systems (GIS), however, the integration of external data sets into these systems is time-consuming and complex. GeoKnow will provide the necessary tools and methods to integrate and process data easily across a wide range of data sources on the web of data.

The GeoKnow Consortium

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	Unister Germany
	Athena Research and Innovation Center Greece
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<http://geoknow.eu>



The goal of the XLike project is to develop technology to monitor and aggregate knowledge that is currently spread across mainstream and social media, and to enable cross-lingual services for publishers, media monitoring and business intelligence.

The aim of XLike is to combine scientific insights from several scientific areas to contribute in the area of cross-lingual text understanding. By combining modern computational linguistics, machine learning, text mining and semantic technologies we plan to deal with the following two key open research problems:

- extract and integrate formal knowledge from multilingual texts with cross-lingual knowledge bases,
- adapt linguistic techniques and crowdsourcing to deal with irregularities in informal language used primarily in social media

The developed technology will be language-agnostic, while within the project we will specifically address English, German, Spanish, Chinese and Hindi as major world languages and Catalan and Slovenian as minority languages. Knowledge resources from Linked Open Data cloud will be used with special focus on general common sense knowledge base CycKB will be used as Interlingua. For the languages where no required linguistic resources will be available, we will use a probabilistic Interlingua representation trained from a comparable corpus drawn from the Wikipedia.

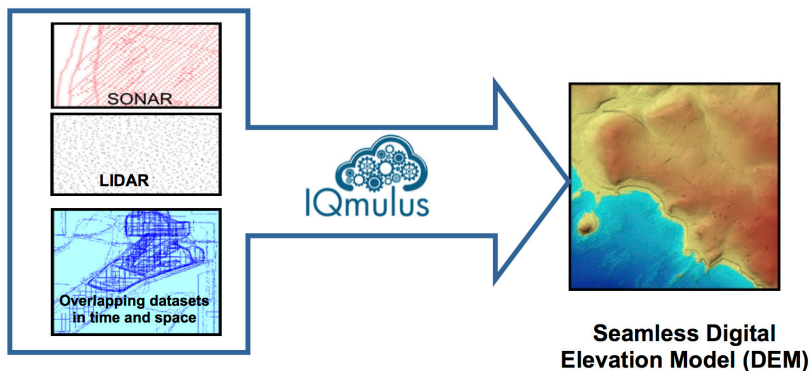
The technology developed in the project will be used to develop solutions for cross-lingual summarization, contextualization, personalization and plagiarism detection of news stories with respect to global mainstream and social media articles. Developed solutions will be applied and evaluated in two use cases: Bloomberg use case, covering the domain of financial news, and Slovenian Press Agency, covering the domain of general news.

For more information, please visit: www.xlike.org

IQmulus: A High-Volume Fusion and Analysis Platform for Geospatial Point Clouds, Coverages and Volumetric Data Sets

<http://www.IQmulus.eu>

IQmulus will leverage the information hidden in large heterogeneous geospatial data sets and make them a practical choice to support reliable decision making.



IQmulus (2012 –2016) is an IP funded by FP7 in the area of Intelligent Information Management in ICT 2011.4.4 Challenge 4: Technologies for Digital Content and Languages.



Non-relational data management is emerging as a critical need for the new data economy based on large, distributed, heterogeneous, and complexly structured data sets. This new data management paradigm also provides an opportunity for

research results to impact young innovative companies working on new RDF and graph data management technologies to start playing a significant role in this new data economy. Standards and benchmarking are two of the most important factors for the development of new information technology, yet there is still no comprehensive suite of benchmarks and benchmarking practices for RDF and graph databases, nor is there an authority for setting benchmark definitions and auditing official results. Without them, the future development and uptake of these technologies is at risk by not providing industry with clear, user-driven targets for performance and functionality. The Linked Data Benchmark Council (LDBC) project is creating the first comprehensive suite of open, fair and vendor-neutral benchmarks for RDF/graph databases together with the LDBC foundation which will define processes for obtaining, auditing and publishing results. The core scientific innovation of LDBC is therefore to define meaningful benchmarks derived from a combination of actual usage scenarios combined with the technical insight of top database systems researchers and architects in the choke points of current technology. LDBC brings together a broad community of researchers and RDF and graph database vendors to establish an independent authority, the LDBC foundation, responsible for specifying benchmarks, benchmarking procedures and verifying/publishing results. The forum created will become a long-surviving, industry supported association similar to the TPC. Vendors and user organizations will participate in order to influence benchmark design and to make use of the obvious marketing opportunities.

<http://www.ldbc.eu/>



PUBLICA MUNDI

SCALABLE REUSABLE OPEN GEOSPATIAL DATA

PublicaMundi is an FP7 project with the aim to democratize open geospatial data publishing and reuse, making easier for publishers to share and for developers to discover and reuse data PublicaMundi originates from everyday problems faced by open data publishers and data consumers. Simply stated, open geospatial data are cumbersome to easily *publish* and *consume* for non-GIS experts.

PublicaMundi will provide reusable tools and technologies for comprehensive, sophisticated and scalable publishing of open geospatial data, with emphasis on streamlining and maximizing their reuse in value added services and applications. Our goal is to **make geospatial data easier to discover, reuse, and share by fully supporting their complete publishing lifecycle in data catalogues**

OPEN SOURCE



PublicaMundi is based on and extends great open source software for geospatial data management: Rasdaman, ZOO Project, GeoServer, CKAN, OpenLayers, PostGIS are among the many we will focus on. Feel free to join in and lend a hand!

OPEN DATA



Open data is one of the pillars of EU's data economy, an enabler for better governance and financial growth. Our goal is to make geospatial data first-class citizens in the data economy, easier to publish, discover and use to build value added services.

OPEN KNOWLEDGE



All deliverables, software, publications, and data from PublicaMundi are offered with an open knowledge license. We believe this will enable the uptake of our work from young SMEs, researchers, and the community.

PROJECT FACTS



PublicaMundi is a research project proudly funded by European Commission's 7th Framework Programme.

Project Full Title: Scalable and Reusable Open Geospatial Data

Instrument: Small or medium scale focused research project (STREP)

Objective: ICT-2013.4.3 SME initiative on analytics

Call: FP7-ICT-2013-SME-DC

Grant Agreement No: 609608

Duration: 24 months (11/2013 - 10/2015)

For more information please visit www.publicamundi.eu

OpenDataMonitor



Monitoring, Analysis and Visualisation of Open Data Catalogues, Hubs, and Repositories

Within a few years, the idea of open data has spread throughout Europe and has produced extensive changes, especially in the understanding of governmental data and how it can be used for better-informed decision making, and for providing greater transparency of public-sector services. However, the rapid and uncontrolled growth of such open data catalogues at local and regional scales, have led to a very fractured open data landscape across Europe. As a result, this disordered situation can result in inefficient and unsustainable strategies for the proper use and re-use of these invaluable open data resources.

As such, The OpenDataMonitor, an initiative funded through the FP7 programme, will provide a comprehensive and organized overview of all open data hubs and repositories within the European network. The project team will create a ground-breaking and customizable framework to harvest metadata from a diverse pool of open data resources. The acquired metadata will be examined in detail to provide a clear understanding of the current fragmented open data landscape. The research team will then develop novel methods to structure, process and subsequently harmonize the metadata. Such research efforts will lead to the delivery of a flexible analytical and monitoring tool of open data repositories. Through the use of unique and intuitive visualisations, the tool will allow end-users to scan, explore, and quantitatively evaluate the composition of open data resources at municipal, national and pan-European scales. The OpenDataMonitor project will not only highlight critical insights into the current open data scene, but also, identify emerging trends and obstacles, so that data users, publishers and a wide range of stakeholders across Europe are prepared for the future of open data innovation.

For further information, please do not hesitate to contact us at: office@opendatamonitor.eu

Project Website: <http://project.opendatamonitor.eu>

Twitter: [@opendatamonitor](https://twitter.com/opendatamonitor)



Managing the Evolution and Preservation of the Data

The Web has not only caused a revolution in communication; it also has completely changed the way we gather and use data. Open data – data that is available to everyone – is exponentially growing, and it has completely transformed the way we now conduct any kind of research or scholarship; it has changed the scientific method. The recent development of Linked Open Data has only increased the possibilities for exploiting public data. Given the value of open data how do we preserve it for future use? Currently, much of the data we use, e.g. demographic records, clinical statistics, personal and enterprise data as well as many scientific measurements cannot be reproduced. However, there is overwhelming evidence that we should keep such data where it is technically and economically feasible to do so. Until now this problem has been approached by keeping this information in fixed data sets and using extensions to the standard methods of disseminating and archiving traditional (paper) artifacts. Given the complexity, the interlinking and the dynamic nature of current data, especially Linked Open Data, radically new methods are needed. DIACHRON tackles this problem with a fundamental assumption: that the processes of publishing and preservation data are one and the same. Data are archived at the point of creation and archiving and dissemination are synonymous. DIACHRON takes on the challenges of evolution, archiving, provenance, annotation, citation, and data quality in the context of Linked Open Data and modern database systems. DIACHRON intends to automate the collection of metadata, provenance and all forms of contextual information so that data are accessible and usable at the point of creation and remain so indefinitely. The results of DIACHRON are evaluated in three large-scale use cases: open governmental data life-cycles, large enterprise data intranets and scientific data ecosystems in the life-sciences.

Project Website: <http://www.diachron-fp7.eu/>



INSIGHT: Intelligent Synthesis and Real-time Response using Massive Streaming of Heterogeneous Data

The goal of the INSIGHT project is to radically advance our ability of coping with emergency situations in smart cities by developing innovative technologies, methodologies and systems that will put new capabilities in the hands of disaster planners and city personnel to improve emergency planning and response. It brings together a strong group of researchers with domain experts in representative case studies of urban transportation, flood

management, and emergency response. Test beds are for the local application of the findings the City of Dublin (Ireland) and for a nationwide application the northern part of Germany. The INSIGHT project is an FP7 European Commission funded project.

Partners: National and Kapodistrian University of Athens, IBM Ireland Product Distribution Limited, Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V, Technische Universitaet Dortmund, Technion - Israel Institute Of Technology, Dublin City Council, Bundesamt für Bevölkerungsschutz und Katastrophenhilfe

More Info: www.insight-ict.eu



Traditionally, Public Sector Information (PSI) has been published in different ways and in whatever format was normative at the time or more convenient for the government organisation in charge of publishing it. Recently, though, the realisation that the power of data comes from the ability to sort, search, interoperate and transform it for a wide range of applications has started to dominate, leading to the so-called open data initiatives. In this context, concepts such as social media collaboration and crowd sourcing carry the potential of bringing unprecedented value to re-usable Public Sector Information.

The main goal of the ENGAGE platform - www.engagedata.eu - is the development and use of a data infrastructure, incorporating distributed and diverse PSI resources, capable of supporting scientific collaboration and research, while also empowering the proliferation of open governmental data towards citizens.

In essence, ENGAGE is a centralized and collaborative PSI e-Infrastructure providing the necessary tools for dataset processing and acquisition and is differentiated from a simple repository of open public datasets. It provides for enhanced rich metadata to allow improved search and utilisation of datasets and it is an intelligent social and collaborative space for researchers, data journalists, citizens and other potential end users, who rely on open public data for professional or personal (re-)use.

By using the ENGAGE platform, researchers and citizens will be able to search, acquire, visualize, transform and share diverse and distributed PSI datasets from all countries of the European Union. Datasets can be anything varying from election results, population statistics, unemployment figures and public spending, to immigration, transportation, fire incidents and crime statistics. As the PSI files are mostly unstructured and in non-machine processable formats (e.g. PDF), the ENGAGE curation community works with integrated tools to make them more structured and with richer metadata. ENGAGE is a stable platform which offers an abundance of features and services to its users, the ENGAGE Community, including automatic multilingual dataset search, integration with OpenRefine, automatic translation of datasets and meta-data, and the ENGAGE Search and Publish APIs.



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