



Hellenic Republic
Ministry of
Administrative Reform
and E-Governance

European Data Forum Co-Workshop: „Pioneers in data-driven innovation – visions & solutions from EU Member States”

March 21, 2014; 08.45-13.00

The National Centre for Public Administration and Local Government (EKDDA), 211 Pireos Street, Athens

Workshop Report

1) Introductory Remarks

The workshop „Pioneers in data-driven innovation – visions & solutions from EU Member States” has been organized as reaction to several requests of different Member States (MS) (e.g. DE, NL, FR) to coordinate national strategies and programmes on data-driven innovation on a European level to support their mutual exchange, identify complementarities and create synergies. One of its main aims was to start an intensive collaboration between MS and work towards a better coordination, e.g. with regard to funding, pre-commercial procurement, development of required Big Data skills or interoperability issues. The workshop has been set up as collocated workshop to the European Data Forum (EDF) that took place on March 19 and 20, 2014 and was hosted by the National Centre for Public Administration and Local Government (EKDDA). Government representatives and national agents thus had the possibility to attend both events which was highly appreciated by the participants as they also profited from the networking that took place during the EDF. Strong support in preparing and organising the workshop has been given by the German Ministry of Economic Affairs and Energy.

2) Welcome address: European measures in order to foster the creation of data value chains (Márta Nagy-Rothengass)

Today, data is a social asset with an enormous economic value that has exponentially increased in the last decades. Europe strongly needs to develop a sustainable data economy by developing and supporting a functioning data ecosystem with Big Data at its core as Big Data is fuelling the growth of the knowledge economy. The European Council of 24/25 October 2013 has called both the European Commission (EC) and the Members States (MS) to enhance the potential of 'Big Data' and "data-driven innovation" (Digital innovation). Technologies building on 'Big Data' are seen as important enablers for productivity and better services. Public services can become more efficient through e-government, e-procurement, e-health and e-invoicing services. An integrated approach to Research & Innovation and market deployment through better coordination of grants, venture capital and pre-commercial procurement is important to support European competitiveness. The Digital Single Market shall be completed by 2015.

3) Welcome address: The role of data in re-launching the Greek economy (Fedon Kaklamanis)

Data is a dominant driver, not only on European, but also on national level. With the aim of re-launching the Greek economy, both cost savings within the Public Sector as well as an increase in production and services offer to obtain public data are expected by the stronger use of Big and Open Data Technologies. The Greek government follows the "Open by default" approach, which strives towards public sector data being open by default. Besides the economic opportunities, this approach enhances transparency and visibility and shall contribute to better governance. Only in exceptional cases (e.g. national security, personal privacy, etc.) clear rules to deviate from the "Open by default" approach shall be defined. Besides tackling the technological challenges (e.g. open formats, open standards, etc.), it is also important to motivate public sector employees and civil servants to act according to the open data policy. National open data is available under www.data.gov.gr.

4) The research perspective on Big and Open Data: What are the next steps? (Prof. Dr. Volker Markl)

There are 5 dimensions of Big data:

- a legal dimension that covers aspects like ownership of data, privacy, insolvency, etc.
- a social dimension that relates to change of user behaviour or the change of collaboration between humans in the future.
- an economic dimension as new business models that respond to new ways of consuming, transforming and processing information will arise.
- a technology dimension that addresses issues like the value of data, its pricing or the question how open source solutions can be successfully integrated into companies.
- an application dimension that shows the different fields of application (e.g. risk management, genomics, vertically integrated solutions, etc.) where Big Data can make a difference. This application dimension represents a high opportunity for Europe, in particular with regard to Industry 4.0. (based on Internet of Things), but also contains statistical and multilingual challenges.

With regard to the current global landscape, the roles of market dominance and global leadership are currently being mixed anew. Existing technologies are not suitable any longer in particular fields. Traditional big players (including U.S. players) need to adapt to new models and rules. This fast moving environment creates various opportunities, also for European companies. These need to be taken up quickly. Coordination at European level is required, however, to make full use of national strengths. As response to the challenge, Germany has recently set up national Big Data competence centres. It would be useful if every MS set up similar competence centres that should collaborate with each other to work towards a European technological leadership role in Big Data from a technology, analysis and application perspective, addressing all different dimensions of Big Data Value. On a European level, approximately 30 organisations from industry and research have joined forces to work towards improved competitiveness of European companies and towards the vision of European leadership in the global data-driven digital economy by 2020. One of the main challenges that already have been identified both by that group and by national governments is the European need to educate data scientists to create the required talent.

5) Germany: Funding programme "Smart Data – Innovations from Data" (Dr. Alexander Tettenborn)

After having analysed and assessed its market situation and research landscape (https://www.dima.tu-berlin.de/menue/research/big_data_management_report/), Germany has launched, under its "Digital Agenda for Germany", the programme "Smart Data – Innovations from Data" with 30 M€ funding (50%) for 12 to 16 projects running from November 2014 to November 2017. The objectives of the programme are:

- to pilot R&D projects to prove & promote „smart data“ solutions in selected application areas;
- to build Big Data ecosystems & partner networks (technology & analytics providers, service providers with research organisations and technology platforms);
- to create open solutions & frameworks;
- to focus on SMEs (providers; users) to benefit from the programme.

Experience shows the value of networking and collaboration, as several German ministries are involved in Big Data Activities (Economic Affairs, Research, Interior Affairs). Germany thus invites every MS to analyse areas where they are strong and to identify national highlights. MS could even consider setting up national competence centres or one-stop-agencies to combine the individual national strengths and develop a European network of data competence centres to position themselves and Europe as competent solution providers against their global competitors (US, Australia, Japan, etc.). Mr Tettenborn very strongly called the EC to support and coordinate the exchange and collaboration between MS on data driven innovation.

6) Netherlands: An overview on COMMIT and its data-related research projects (Arnold Smeulders)

The Netherlands have set up a national competence centre (Big Data Value Centre) as well as a strategic roadmap under their ICT Breakthrough project Big Data with the main aim of developing a national big data ecosystem. COMMIT, a public-private research community comprising academia, companies and growing high-techs, new SMEs, start-ups, spin-offs and non-profit organisations was launched in 2012 with a budget of 100 M€ over 5 years and is one of the driving national forces.

A better exchange and collaboration with other MS is wished for. Under the umbrella of the EC, the Dutch experience, together with experiences from other MS, can significantly contribute to strengthening Europe's data-driven innovation and competitiveness.

7) Ireland: Open data in Ireland (Evelyn O'Connor)

Ireland has set up different measures to accelerate Open Data in Ireland and advance Ireland's membership of the Open Government Partnership (OGP) as part of their reform to overcome the financial crisis. Its activities in opening data for public uses follow the "Open by default" approach. Challenges currently encountered by the Irish public sector mainly relate to quality of data, standards, ownership, security issues and privacy concerns. Furthermore, public bodies and their staff need guidance on concrete questions on open data policy. National open data is available under www.opendata.ie.

8) United Kingdom: Building a Connected Digital Economy (Maurizio Pilu)

The United Kingdom are currently strongly investing into Big Data Research and Technology Transfer: Connected Digital Economy Catapult, set up by the UK's Innovation Agency (Technology Strategy Board) and operational for 9 months now, is a Non-for-profit organisation, focussed on "data value chain" with a budget of £10m p.a. of core investment from the British government, working in close collaboration with partners on a national level to develop a portfolio of openly accessible platforms & capabilities which unlocks clearly identified industry challenges in the data value chain for the benefit of digital innovators. Furthermore, the British Government has announced in February 2014 to invest £73m to improve access to data and drive data innovation, among which £50m shall be devoted to bioinformatics, £14m to local authorities big data and £4.6m to environmental big data. Additionally, a new institute (the "Alan Turing Institute") shall be set up with a budget of £42m over five years to research new ways of collecting, organizing and analyzing Big Data.

9) The industry perspective on Big and Open Data: What are the next steps? (Alicia Garcia Medina)

The major roadblocks as perceived by the European Industry are:

- European ICT suppliers do not play a significant role among the 60 most profitable global Big Data vendors.
- European companies considered 1-2 years behind US companies.
- Only 30 % of larger companies in Europe consider themselves as ahead of competition.

European companies have identified the following main challenges for successfully creating value of Big Data: Privacy and Security, Budget and priorities, Technical challenges in Big Data management and analytics, Expertise, Lack of knowledge about Big Data management and analytics, Lack of convincing use cases. Nearly 30 European organisations from industry and research (including players like NSN, ATOS, Thales or DFKI) have already joined forces to pursue the vision of European leadership in the global data-driven digital economy by 2020 (see also chapter 4)).

10) Conquering Data in Austria – Technology Roadmap

Under its national programme "ICT of the future" with an annual budget of 20 M€ per year, Austria plans to increase ICT – RTI and competitiveness in the following fields: Systems of Systems, Intelligent Systems, Interfaces of Systems, Trusted Systems and Emerging Technologies. A Technology Roadmap "Conquering Data in Austria" has been published in 2014 (<http://conqueringdata.at>).

11) Denmark – Consultancy Study

Denmark has issued a consultancy study to analyse the potential impact of Big Data. A summary of the study is available under <http://erhvervsstyrelsen.dk/file/453741/big-data-as-a-growth-factor-in-Danish-Business.pdf>. The study is also used by the Danish Government to motivate companies (in particular SMEs) to make more use of Big Data.

12) France

Big Data is seen as opportunity both for providers and users. France is currently engaged in setting up a general environment favourable for the further development of Big Data Technologies. What is

important from a French point of view is that data that is produced in Europe needs to be stored in Europe for security reasons. In 2013, a challenge was launched with up to now approximately 200 propositions from French start-ups and companies to develop Big Data-based solutions for public challenges. 30 M€ have been invested in the last two years. The need to develop convincing use cases for the public and the private sector, especially in the manufacturing process, is highlighted.

13) Discussion

The discussion among the participants shows the following aspects where MS can learn from each other and where more intense collaboration between MS is fruitful:

- The question which economical or non-economical incentives can be set up to motivate organisations to open and share their data is one of the basic elements to foster dynamics in a Big Data Ecosystem. In the UK, the requirement to share one's own data with others is one basic presupposition to receive public funding. As there are technologies available that make data sharing secure, this might be a solution to be taken up by other MS as well.
- Opening data challenges to companies who help governments on how to tackle particular policy challenges with the help of Big Data Technologies is a valuable way of collaborating with innovative companies.
- It needs to be borne in mind that simply publishing data on an open data portal is not sufficient. Further efforts need to be made by public sector to enhance the quick and coherent take up of Big Data technologies.
- Not only the tools, but also the required infrastructure (e.g. a public cloud infrastructure), giving access to storage capacity is required.
- Convincing use cases are required, both for public and private sectors to demonstrate the different opportunities of Big Data.
- MS must have a common way of sharing knowledge. Results of research projects need to be better exploited.

14) Follow-up

MS appreciate the organisation of this workshop and support unanimously the initiative of the EC to exchange experience and strengthen the collaboration between MS in data driven innovation. The need to coordinate the different national initiatives and European activities with the aim of achieving synergies was highlighted. It has been agreed that the mutual dialogue shall continue under the coordination of the EC. MS participants are asked to inform their peers (in particular those from not represented MS) to participate in the next workshop (planned for summer 2014). Questionnaires to identify national challenges and opportunities and future topics for the next workshops will be circulated as follow-up.

Luxembourg, 31.03.14

Annexe 1: Agenda of the workshop

- 08.45 Registration, coffee
- 09.00 Welcome address: European measures in order to foster the creation of data value chains
Marta Nagy-Rothengass, European Commission
- 09.20 Welcome address: The role of data in re-launching the Greek economy
Fedor Kaklamanis, Head of the Greek Informatics Development Agency
- 09.40 The research perspective on Big and Open Data: What are the next steps?
Prof. Dr. Volker Markl, Technical University of Berlin
- 10.00 Germany: Funding programme “Smart Data – Innovations from Data”
Dr. Alexander Tettenborn, German Federal Ministry of Economics and Energy
- 10.20 Netherlands: An overview on COMMIT and its data-related research projects
Arnold Smeulders, COMMIT
- 10.40 Ireland:
Evelyn O'Connor, Irish government department for Public Expenditure and Reform
- 11.00 United Kingdom: Building a Connected Digital Economy
Maurizio Pilu, Connected Digital Economy Catapult, UK
- 11.20 The industry perspective on Big and Open Data: What are the next steps?
Ms. Garcia Medina, NESSI
- 11.35 Coffee break, networking
- 12.00 Open discussion
- Summing up: What are the major benefits of investing in big data and open data research?
- How can we stimulate Big & Open Data innovation in other European Member States
- How to organize exchange between Member States and with the European Commission?
- 12:55 Wrap-up and closing remarks
- 13.00 Close of the workshop

Annexe 2: Participants

Abbamonte	Giuseppe	European Commission	EU
Agoulmine	Nazim	Agence Nationale de la Recherche	France
Angeletopoulos	Kalliopi	Ministry of Administrative Reform and E-Government	Greece
Barbato	Francesco	European Commission	EU
Cejmillers	Toms	Development of the Republic of Latvia, Electronic Government Department	Latvia

Chernaeva	Totka	Ministry of Transport IT and Communications	Bulgaria
De Lama	Nuria	ATOS/NESSI	Spain
Farmaki	Dora	Ministry of Education and Religious Affairs	Greece
Garcia Garcia	Emilio	Minetur	Spain
Garcia Medina	Alicia	ATOS/NESSI	Spain
Germanaitė	Indraja E.	Information Society Development Committee under the Ministry of Transport and Communications	Lithuania
Gernert	Regine	PT-DLR	Germany
Gongolidis	Vasilios	Ministry of Education and Religious Affairs	Greece
Hart	Laura	Department for Business, Innovation & Skills (BIS)	U.K.
Hitzelberger	Patrik	Centre de Recherche Public - Gabriel Lippmann	Luxemburg
Jankovski	Michal	Poznan Supercomputing and Networking Center (PSNC)	Poland
Kaklamanis	Fedon	Greek Informatics Development Agency	Greece
Konstantinou	Ioannis	National Technical University of Athens	Greece
Konstantinou	Nikolaos	Hellenic Academic Libraries Link	Greece
Kumetaitiene	Aušra	Ministry of Transport and Communications of the Republic of Lithuania	Lithuania
Markl	Prof. Volker	Technical University of Berlin	Germany
Mattauch	Walter	PT-DLR	Germany
Mosnik	Lisbeth	Federal Ministry for Transport, Innovation and Technology	Austria
Nagy-Rothengass	Marta	European Commission	EU
O'Connor	Evelyn	Department for public expenditure and reform	Ireland
Pilu	Mauricio	Connected digital Economy Catapult	U.K.
Routzouni	Nancy	Ministry of Administrative Reform and E-Government	Greece
Skaliotis	Michail	European Commission / Eurostat	EU

Straumdal	Anne-Lena	Norwegian Ministry of Local Government and Modernisation	Norway
Smeulders	Arnold	COMMIT	Netherlands
Terailot	Fabien	DGCIS – Service des Technologies de l’Information et de la	France
Tettenborn	Alexander	Ministry for Economic Affairs and Energy	Germany
Treinen	Wolfgang	European Commission	EU
Tsonis	Petros	KtPae	Greece
Turki	Slim	Public Research Centre Henri Tudor	Luxemburg
Vaz	Vasco	Fundação para a Ciência e e Tecnologia I.P.	Portugal
Welp	Jennifer	Ministry for Economic Affairs and Energy	Germany
Wilbeck	Sigrid	Danish Business Authority	Denmark

Moderation: Prof. Dr. Volker Markl, TU Berlin

Annexe 3: Data as the new oil – analogy used by Prof. Dr. Markl during the workshop

<https://infra.dima.tu-berlin.de/tool/news/view/detail/id/252>