



European Perspectives on Big Data and Data Skills

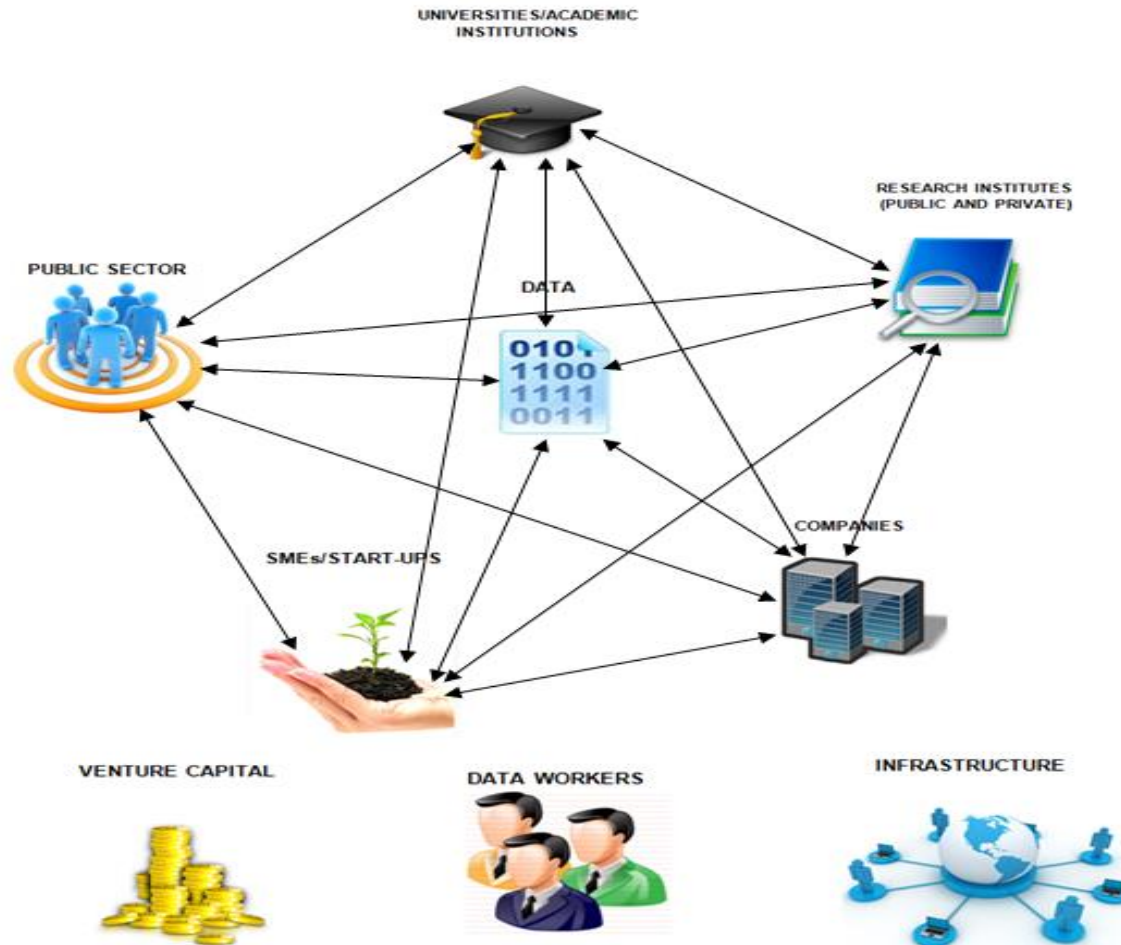
European Network of National Big Data Centers of Excellence
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European
Commission

Europe needs an efficient data ecosystem



Strands of Action Towards a Data-Driven Economy

Community building

- Public-private partnership on data
- Open data incubator for SMEs
- Network of centres of excellence

Framework conditions

- Open data
- Standards and interoperability
- Infrastructures (cloud)
- Legal framework
- **Skills**

DSM Policy context

On 18 April 2016 the European Commission published a [Communication on Digitising European Industry](#), which introduced a set of coherent policy measures as part of a Digital Single Market (DSM) technologies and public services modernisation package.

A part of the Communication is dedicated on digital skills. In particular, it calls for a human capital ready for the digital transformation with the necessary skills.



Grand Coalition for Digital Jobs and Training

The New Skills Agenda for Europe, adopted on 10th June, announced the launch of the

Digital Skills and Jobs Coalition

- Multi-stakeholder partnership (education, business, social partners, Member States) to tackle the digital skills challenge with concrete actions
- Building on achievements of the Grand Coalition for Digital Jobs
- Has a larger scope and scale than its predecessor

What is new



Broadening the scope to the workforce as **all sectors become digital**



Involve Member States and stakeholders in designing and delivering solutions: national digital skills strategies and national coalitions by 2017, joint targets by end of 2016



Best-practice exchange; pledges and joint training programmes; link to sectoral "blueprints"



Better use of European and national **funds**

Data Skills Activities of the EC

The European Commission

- supports the European Network of National Big Data Centers of Excellence
- welcomes the initiative of Germany and Austria
- promotes data skills in RDI projects like
 - **EUCLID**
 - **EDSA**
 - **Upcoming H2020 support action including skills**

EdUcational Curriculum for the usage of Linked Data (EUCLID)

- facilitated professional training for data practitioners, using Linked Data in their daily work
- delivered a curriculum implemented as a combination of living learning materials and activities:
 - As **eBook** series
 - As webinars, face-to-face training,
 - learning material was validated by the user community through continuous feedback
 - <http://euclid-project.eu/>

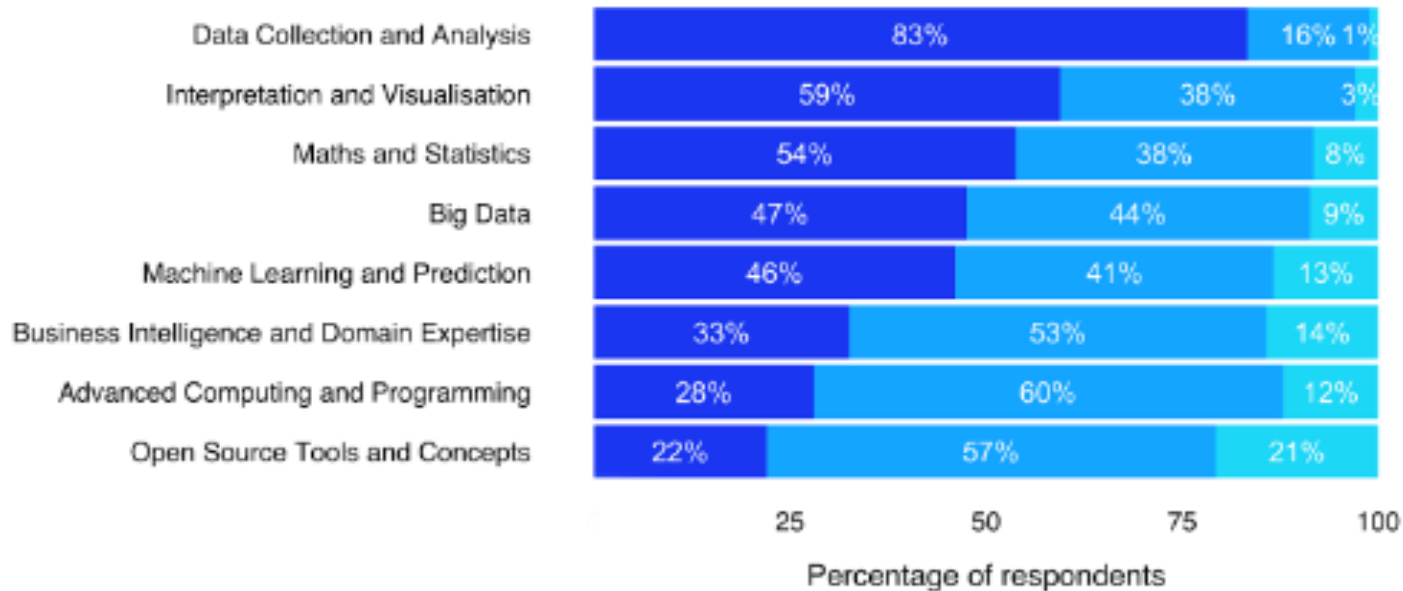
European Data Science Academy (EDSA)



- H2020 project to address the big data skills gap in Europe
- **Demand analysis** of required skillsets for data scientists across industrial sectors in Europe
- **Design of curricula** for data science training across the European Union
- **Provision of courses and training material**, e.g. Massive Open Online Courses
- Contact: John Dominique john.domingue@open.ac.uk
<http://edsa-project.eu/>

Results from EDSA Demand Analysis

Importance of skills: How do you rate the following skills for a data scientist?



Response Essential Desirable Not required

Data basis:
 108 interviews and 584 surveys with data science practitioners and managers across various EU countries and industrial sectors

Support action upcoming (I)

- ICT-17-2016-2017: **Support, industrial skills,** benchmarking and evaluation requested a Co-ordination and Support Action (CSA):
 - to support the establishment of national centres of excellence
 - to exchange knowledge on the universities' data scientist programmes
 - to align curricula & training programmes to industry needs
 - to stimulate and promote exchanges of students, confirmed data professionals and domain experts that would acquire data skills and let them work in another MS

Support action upcoming (II)

- A new H2020 CSA project: **BDVe - Big Data Value ecosystem**, starting January 2017, addresses these objectives during the following years

Specific activities will include:

- ✓ A Network of National BDV Centers of Excellence
- ✓ A Big Data Value Education Hub
- ✓ BDV Certification of Curricula and Training Programmes
- ✓ A Mobility Programme for Data Scientists

Further Information

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<https://ec.europa.eu/digital-agenda/en/towards-thriving-data-driven-economy>



Thank you for your attention!