OBJECTIVES

• What is the BDV PPP
• What is Big Data Value (BDV) and BDVA?
• How can you be involved?
WHAT IS THE BDV PPP
The EU and Industry launched the Contractural Public Private Partnership (cPPP) on Big Data Value in 2014-10

The Big Data Value Association represents ‘Private’ side

“In the Commission's view, strategic cooperation through a contractual Public-Private Partnership (cPPP) can play an important role in developing a data community and encouraging exchange of best practices. In line with the principles set out in H2020, the Commission considers that a sufficiently well-defined cPPP would be the most effective way to implement H2020 in this field,...”

Commission Communication "Towards a thriving data-driven economy" - 2 July 2014

“... EU action should provide the right framework conditions for a single market for Big Data ...”

European Council Conclusion – 24/25 October 2013

“Big Data is possibly one of the few last chances for Europe’s software industry to take a true leadership“

CEO Software AG, Karl-Heinz Streibich
BDV cPPP proposal stimulated by NESSI+

Stimulated by the NESSI ETP

- > 450 members
- NESSI Membership
  - Industry-Large: 32%
  - Industry-SME: 17%
  - Universities: 34%
  - Research Institutes: 14%
  - Public Authorities: 2%
  - Other: 1%

…but NOT only NESSI

Non-NESSI Launch Partners include Fraunhofer, INSIGHT and DFKI

Principles

- Openness
- Transparency
- Cooperation
- Inclusion
- Efficiency
- Neutrality
- Fair access
- Cross domain
- Cross stakeholder:
  - Industry – Large
  - Industry – SME
  - Research
  - User
  - Other
Launch of the BDV cPPP
Jan Sundelin
1st President of BDVA
TIE Kinetix CEO

Nellie Kroes
EU Commissioner

Before Big Data! 😞

After Big Data! 😊

The Magic of Big Data
Investment

“The European Commission and Europe's data industry have committed to invest €2.5 billion in a public-private partnership (PPP) that aims to strengthen the data sector and put Europe at the forefront of the global data race.”

“The EU has earmarked over €500 million of investment over 5 years (2016-2020) from Horizon 2020”

Private partners are expected to leverage this through sector investments of four times the cPPP budget (ie €2 billion)
EUROPEAN COMMISSION (‘Public’ Stakeholder)

Big Data Value PPP Board

BDV Stakeholder Community (‘Private’ Stakeholder Community)

Big Data Value Association

‘Private’ Stakeholders

Industry Large

Industry SME

Research

User

Big Data Value Public – Private – Partnership (BDV PPP)
BDV PPP/A - Commitments

- Leverage the cPPP investments through sector investments of 4 times
- Open, transparent and inclusive definition
- Update Strategic Research & Innovation Agenda (SRIA);
- Ensure 20% SME participating organisations;
- Support to the ex-post assessment of the implemented projects;
- Leverage the achieved results in the market
- Develop skills and competences in Big Data Value
- Actively involve all relevant sector players,
- Work with others for alignment of goals and ensure synergies;
- Governance model, which supports openness and efficiency
- Monitoring Impact
BDVA/PPP Benefits

Europe:
• Public / Private cooperation and coordination
• Developing strategic goals of BDV research
• Improving Industrial Competitiveness of Europe
• Promoting BDV Offering in organisations
• Contributing to policy, education etc

You:
• Networking with peers (Proposals, Projects…..)
• Influencing others including EU (eg Work Program input)
• Working with other on technical matters, societal
• Designing the over all BDV PPP ecosystem
Indicative Timeline

› **2014 - October**
  Signing the Contractual Arrangement between European Commission and the Big Data Value Association

› **2015**
  Refinement of the Big Data Value Strategic Research and Innovation Agenda
  Continuing stakeholder community building

› **2016**
  Start of first Big Data Value PPP projects within H2020

› **2021**
  PPP projects ending
WHAT IS BIG DATA VALUE (BDV) AND BDVA?
‘Academic’ View

Big data is an all-encompassing term for any collection of data sets so large and complex that it becomes difficult to process them using traditional data processing applications.

www.powerdata.es/
## Industry View

<table>
<thead>
<tr>
<th>Sectors/Domains</th>
<th>Big Data Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public administration</td>
<td>EUR 150 billion to EUR 300 billion in new value (Considering EU 23 larger governments)</td>
</tr>
<tr>
<td>Healthcare &amp; Social Care</td>
<td>EUR 90 billion considering only the reduction of national healthcare expenditure in the EU</td>
</tr>
<tr>
<td>Transport and Logistics</td>
<td>USD 500 billion in value worldwide in the form of time and fuel savings, or 380 megatonnes of CO2 emissions saved</td>
</tr>
<tr>
<td>Retail &amp; Trade</td>
<td>60% potential increase in retailers’ operating margins possible with Big Data</td>
</tr>
<tr>
<td>Geospatial</td>
<td>USD 800 billion in revenue to service providers and value to consumer and business end users</td>
</tr>
<tr>
<td>Applications &amp; Services</td>
<td>USD 51 billion worldwide directly associated to Big Data market (Services and applications)</td>
</tr>
</tbody>
</table>
How Big is Big?

› “as of 2012, every day 2.5 exabytes \((2.5 \times 10^{18})\) of data were created” - www.ibm.com

BUT

› ‘Big’ is in the eye of the beholder
› ‘Big’ for SME Information Catalyst<<< ‘Big’ for CERN or SAP
› Hence: Big Data VALUE
### When is Data ‘Big’?

<table>
<thead>
<tr>
<th>Volume</th>
<th>Velocity</th>
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<th>Value</th>
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<td>Data at Rest</td>
<td>Data in Motion</td>
<td>Data in Many Forms</td>
<td>Data in Doubt</td>
<td>Data into Money</td>
</tr>
<tr>
<td>Terabytes to exabytes of existing data to process</td>
<td>Streaming data, requiring milliseconds to respond</td>
<td>Structured, unstructured, text, multimedia,…</td>
<td>Uncertainty due to data inconsistency &amp; incompleteness, ambiguities, latency, deception</td>
<td>Business models can be associated to the data</td>
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Adapted by a post of Michael Walker on 28 November 2012
When is Data ‘Big’?

**Volume**

Data at Rest

Terabytes to exabytes of existing data to process

**Velocity**

Data in Motion

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www.bdva.eu
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“Value”

- Creating transparency
- Discovering needs, expose variability, improve performance
- Segmenting customers
- Replacing/supporting human decision making with automated algorithms
- Innovating new business models, products services

_McKinsey Global Institute_

- + Combining data together – Corporate data, Social Data, Sensor Data
- + Privacy, Consumer Protection, Skills
- + Engaging with other to develop together

_BDVA_
Big Data – Not Just Data

Big Data is not only about ‘Big Data’!
• *ie Volume*,
But also about
• *Velocity*
• *Variety*
• *Veracity*
And mainly the **VALUE** achieved from
all this

Big Data Value has **Multiple Dimensions**

Big Data Value requires new **Business Models**, vibrant **Eco Systems** with
strong European players along the entire **Value Chain**

- Data Generation Acquisition
- Data Analysis Processing
- Data Storage Curating
- Data Visualisation & Services
What is the BDV cPPP about

The Objective of the PPP is:

› The cPPP shall create results that have IMPACT on members, participants, industry, economy and society…

The Strategy needs to be:

› The main focus is the transfer of technology and application (new from the PPP and state of the art) via the “instruments” designed for the PPP (i-Spaces/Lighthouse projects)

The Operationalization:

› Establish a coherent set of projects that complement each other without being dependent.
› Define a Framework for projects that ensure that “results” (or even state of the art technology) is fit for the purpose of the next step in the innovation cycle and complies with the end user demand
BDV cPPP - Scope

- Foster European Big Data Value technology leadership for job creation and prosperity by creating a European wide technology and application base and building up competence and the number of European Data Companies including Start-Ups;
- Reinforce the European industrial leadership and capability to successfully compete on global level in the data value solution market by advancing applications transformed into new opportunities for business to achieve a 30% market share by 2020;
- Enable research and innovation work, including the support of interoperability and standardisation, for the future basis of Big Data Value creation in Europe;
- Facilitate the acceleration of business ecosystems and appropriate business models with particular focus on SMEs, enforced by Europe-wide benchmarking of usage, efficiency and benefits;
- Provide successful solutions for major societal challenges Europe is facing such as: Health, Energy, Transport and the Environment;
- Increase awareness about Big Data Value benefits for businesses and public sector and better acceptance by citizen, to engage them as prosumers and accelerate take-up.
BDV cPPP - Objectives for Improved Competitiveness

- To enable European suppliers to achieve by 2020 a **share of 30%** in the Big Data global market;
- To use Big Data Value technology for (increased productivity, optimised production, more efficient logistics inbound and outbound), **effective service provision** from public and private organisations;
- To create **new Big Data ecosystems** and markets between data providers, knowledge providers and consumers that will profit from collaboration between sectors, organizations and individuals;
- To drive **take up and the integration** of Big Data Value services into private and public decision making systems such as Enterprise Resource Planning and marketing systems for optimising the functioning of existing industries and potentially establishing entirely new business models.
BDV cPPP - INNOVATION OBJECTIVES

› To optimize architectures for real-time analytics of both data at rest and in motion enabling data-driven decision-making on the fly with low latency as well as to improve scalability and processing of data validation and information discovery especially in heterogeneous data sets;

› To validate technologies from a technical and a business perspective within cross-organisational, cross-sector, and cross-lingual innovation environments through early trials;

› To integrate advanced visualization of data and analytics for augmented user experience and prepare platforms, technologies and tools for disruptive changes in management of data;

› To develop and provide validated technology and tools for “deep data analysis” to improve data understanding, deep learning and increased meaningfulness of data, by creating the comprehension of the importance of data definition for optimal information content.
BDV cPPP - Societal objectives

› To support **building extensive know-how**, education and skills in Europe by European curricula to support the increase of higher education offerings;

› To **increase the number of European Data Workers** by 100,000 until 2020;

› To **support the societal challenges** that Europe faces through Lighthouse projects and i-Spaces in areas such as personalised medicine;

› To create new personalized and **enhanced product and services** adapted to citizens and organizations needs that will respect security and privacy of individuals;

› To **address European framework aspirations** such as IPR rights, liability etc. within the Digital Single Market and the pan European innovation environments;

› To **address the issue of acceptance** of new Big Data technologies by society and consumers by identifying and remediate potential barriers
R&I Projects
Large Targeted research and innovation projects, delivering foundational Big Data technology

Innovation Spaces
Hubs for bringing data, technology and application developments together; catering for development of skills, competence, and best practices.

Lighthouse Projects
Large scale demonstrations focusing on certain sectors and domains
European Innovation Spaces – a core component of the cPPP

European i-Spaces

• Serve as hubs for bringing the technology and application developments together and cater for the development of skills, competence, and best practices.
• Offer new and existing technologies and tools from industry and open source software initiatives as a basic service.
• Facilitate the access to data assets.
• Allow an interdisciplinary approach along the various dimensions – technology, applications, legal, social, and business, data assets and the building up of skills.
Lighthouse projects – a mechanism for large-scale demos and awareness

Lighthouse Projects

• The major mechanism for Europe to demonstrate Big Data Value ecosystems and sustainable data marketplaces
• Running data-driven large scale demonstrations
• Propose replicable solutions by using existing technologies or very near to market technologies that could be integrated in an innovative way and show evidence of data value
• Create high level impact and broadcast visibility and awareness driving towards faster uptake of Big Data Value applications and solutions
Interaction

R & I Projects

Lighthouse Projects

I-Spaces

Enablers

Governance

BDV MOU

BDV MOU

BDV MOU

BDV MOU

BDV MOU

www.bdva.eu
An Agile Innovation Ecosystem

Enablers
- Governance: Monitoring, Advisory Board, Technical Committees
- Legal Environment
- Business Models
- Skills
- Societal Acceptance

BDV MOU

Lighthouse

R & I Project

BDV MOU

BDV MOU

BDV MOU

BDV MOU

BDV MOU

BDV MOU
BIG DATA VALUE ASSOCIATION
BDVA, INVOLVEMENT
Task Forces and Subgroups

TF0: GA and BOD
TF1: Programme
TF2: Impact
TF3: Community
TF4: Communication

TF5: Legal & Policy
TF6: Technical*
TF7: Application*
TF8: Business*
TF9: Social (Societal)*
TF10: Skills and Education*

Big Data Value SRIA
Task Forces

- **TF1: Programme**: Contributing to the H2020 Programme content of the BDV PPP
- **TF2: Impact**: Maintain the various KPIs defining the expected Impact of BDV PPP
- **TF3: Community**: Big data community engagement and participation
- **TF4: Communication**: Communication plan for creating awareness around the BDVA
- **TF5: Legal**: Bridge Big Data technology with legal and policy matters
- **TF6: Technical**: Identifying and refining the technical challenges of the programme – eg Data Management, Data Protection....
- **TF7: Application**: Domain usage group which can influence others – eg Telecoms
- **TF8: Business**: Examining the business and economic influences and business areas
- **TF9: Societal**: Examining the societal impact on business, citizens
- **TF10: Skills** and Education: What skills are needed for the next knowledge workers
- **TF0: Administrative** and strategic activities requested by BDVA GA/BOD
"New developments such as the cloud, the Internet of Things and big data can thrive in Europe and that citizens, innovative web entrepreneurs and other businesses can take full advantage of their potential."

Jean-Claude Juncker, President of the European Commission

The intelligent use of data will revolutionize decision making in businesses, sciences, and society in the future. Value creation from Big Data could become the major driver of the European digital economy. To put Europe at the forefront of this development, there is need for a strong and vibrant data-driven innovation ecosystem in Europe. The aim of this website is to provide a platform for stakeholders from the Big Data Value community in Europe to easily access information, exchange ideas and respond to activities concerning a Big Data Value initiative that is currently taking form at EU level.
## Participation Classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Nature</th>
<th>Activity Group &amp; Task Forces</th>
<th>Formal Member</th>
<th>BDVA GA</th>
<th>BDVA Board</th>
<th>Partnership Board (With EU)</th>
<th>Yearly Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Mailing List</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>B</td>
<td>Stakeholder</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>C</td>
<td>Associate</td>
<td>Y</td>
<td>Y</td>
<td>Non Voting</td>
<td>X</td>
<td>X</td>
<td>Y</td>
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<td>D</td>
<td>Full</td>
<td>Y</td>
<td>Y</td>
<td>Voting</td>
<td>Y If Elected</td>
<td>X</td>
<td>Y</td>
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<tr>
<td>E</td>
<td>Board Member</td>
<td>-</td>
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<td>-</td>
<td>Y If Nominated</td>
<td>As D</td>
</tr>
</tbody>
</table>
# Fees

- **2015 Fees (per year)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Full Members</th>
<th>Associated Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Industry</td>
<td>12.700 €</td>
<td>1.000 €</td>
</tr>
<tr>
<td>Small or Medium Enterprise</td>
<td>1.900 €</td>
<td>250 €</td>
</tr>
<tr>
<td>Academic and Research</td>
<td>1.900 €</td>
<td>250 €</td>
</tr>
</tbody>
</table>
THANK YOU
Further Information:

BDVA: http://www.bdva.eu/
info@core.bdva.eu

NESSI: http://www.nessi-europe.eu