Accelerating data-driven innovation in Europe

BDVA Overview
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on behalf of BDVA Board of Directors
Big Data Value Vision for 2020

**Data:**
40 zettabytes of useful public & private data openly available.

**Technology:**
Real-time, **Integrated** and interoperable datasets across sectors, borders and languages.

**Societal:**
People is aware of the benefits of Big Data in their real life and the positive impact in health, environment, and education among others.

**Skills:**
European Workforce has Data as an asset, integrated into technical and business degrees, and providing 100,000 jobs across Europe.

**Legal:**
A trusted data ecosystem in which Privacy & Security are guaranteed along the Value Chain.

**Business:**
A true EU single Data Market supporting EU companies to become world leaders.

**Application:**
Thousands of specific applications will use, exploit, monetize and benefit from Big Data.
Contributing to the Digital Single Market Strategy Implementation

Digitising European Industry

Developing a European Data Infrastructure

Building a European Data Economy

Digital Skills
BDV PPP Roadmap
The EC and Europe's data industry commit to invest **€2.5 billion** in a PPP that aims to strengthen the data sector in Europe: **€500 million** of EC investment over 5 years (2016-2020) H2020. **€2 billion** from Private partners through sector investments.

### Develop Ecosystem
- **Membership development**: Quantity, balance, diversity and quality. SME participation: over 30% in the Association.
- **Collaborations**: with European and National initiatives, over 25 working groups
  - 4 (+2) major public events / 25 BDVA events

### Data Innovation recommendations:
- **Big Data Value SRIA updates** (v4): Multi-annual roadmap
  - Support to Industry/Industrial sectors, Policy and Research

### Big Data Standardisation priorities
- Official liaison with ISO IEC JTC1 WG9 Big Data Standards
  - Collaboration ISO, ITU, W3C, ETSI, ETSI/oneM2M, IEEE, CEN/CENELEC, NSBs

#### BDVA Reference Model

### Private investments and commitments from Industry
- 280,9MEuro reported in 2015
- 338,5MEuro reported in 2016

### 33 projects:
- 16 started in 2017, 17 new projects starting in 2018
**BDV PPP Implementation projects** (H2020-ICT-2016-2017): **33 projects**

**15 data experimentation / data incubators**: Cross sectorial, cross-lingual data integration and experimentation

**4 Large scale pilots** (Light house projects) in 4 major application domains (vertical data platforms):
- Bio Economy
- Transport, mobility and logistics
- Healthcare
- Smart Manufacturing

**12 Technical projects** covering different **data technical challenges** including **3** focused on **privacy preserving technologies**

**2 CSAs** (skills, entrepreneurship, privacy, ethical issues, comms, ecosystem, coordination, etc)
BDV PPP projects (H2020-ICT-2016-2017)
Industry-driven and fully self-financed international non-for-profit organisation under Belgian law

194 Members
- 35 Large companies
- 63 SMEs
- 82 Research institutions
- 14 Others

Present in 28 countries

BDVA members per country (May 2017)
- 150+ members
- 10 - 14 members
- 5 - 9 members
- 1 - 4 members

BDV BIG DATA VALUE ASSOCIATION
The mission of the BDVA is to develop the Innovation Ecosystem that will enable the data-driven digital transformation in Europe delivering maximum economic and societal benefit, and, achieving and sustaining Europe’s leadership on Big Data Value creation and Artificial Intelligence.
Key enabling technologies and sectors

(Big) Data technologies and platforms + Artificial Intelligence

Cloud, HPC, CPS/IoT, 5G, CyberS

Key Enabling Technologies
BDVA is taking care...of many different aspects of the big data

TF1: Programme
TF2: Impact
TF3: Community
  - HPC – Big Data
  - IoT – Big Data
  - Cyber Security – Big Data
TF4: Communication
TF5: Policy & Societal
  - TF5-SG1: Data Management
  - TF5-SG2: Data Processing Architectures
  - TF5-SG3: Data Analytics
  - TF5-SG4: Data Protection and Pseudonymisation Mechanisms
  - TF5-SG5: Advanced Visualisation and User Experience
  - TF5-SG6: Standardisation
TF6: Technical
  - TF6-SG1: Data Management
  - TF6-SG2: Data Processing Architectures
  - TF6-SG3: Data Analytics
  - TF6-SG4: Data Protection and Pseudonymisation Mechanisms
  - TF6-SG5: Advanced Visualisation and User Experience
  - TF6-SG6: Standardisation
TF7: Application
  - TF7-SG1: Emerging Application Areas
  - TF7-SG2: Telecom
  - TF7-SG3: Healthcare
  - TF7-SG4: Media
  - TF7-SG5: Earth observation & geospatial
  - TF7-SG6: Smart Manufacturing Industry
  - TF7-SG7: Mobility and Logistics
  - TF7-SG8: Smart Cities
TF8: Business
  - TF8-SG1: Data entrepreneurs (SMEs and startups)
  - TF8-SG2: Transforming traditional business (Large Enterprise)
  - TF8-SG3: Observatory on Data Business Models
TF9: Skills and Education
  - TF9-SG1: Skill requirements from European industries
  - TF9-SG2: Analysis of current curricula related to data science
  - TF9-SG3: Liaison with existing educational projects
Big Data Value Reference Model

Data Visualisation and User Interaction

Data Analytics

Data Processing Architectures

Data Protection

Data Management

Cloud and High Performance Computing (HPC)

Things/Assets, Sensors and Actuators (Edge, IoT, CPS)
The need for Partnership (post H2020)

The cPPP provides **a focal point to bring together Industry from across Europe** to tackle a common challenge in a systematic and structured programme of R&D&I. It supports the open innovation data ecosystem with **Large Industry working together with SMEs and Research institutions** in a critical mix needed to deliver impacts.

For next Framework programme BDVA believes that the impact of the cPPP approach can be further strengthened with the following refinements:

- **Stronger involvement of Member States** (and regions) would help to develop synergies between European and Member States actives on Big Data. A close alignment of National and European roadmaps and activities can support a systematic approach to the implementation of a European Strategic Research and Innovation Agenda on Data Value. (e.g i-Spaces as shown in current status)

- **Stronger collaboration is needed between the private side and the EC to maximise success**: mechanism to coordinate Big Data horizontal activities with other sectorial activities where calls are designed to avoid duplication of work, create broader impacts, and drive synergies.
Future Challenges of the European Data Economy and Society

- Secure (industrial) prosperity of Europe in the context of the global data-driven economy
- Industrial leadership in Big Data and AI platforms and technologies (develop, operate, promote its own Data / AI platforms)
- Secure autonomy in Big Data and AI technology
- Interoperable Data ecosystems (open, private, research, personal, …)
- Trusted co-evolution between humans and AI-based systems
- Legal issues with data decisions
- Trust in algorithms and data
- Scalable value chains involving key enabling technologies
- Extracting value from the fusion of technologies
- New data-driven business models across value chains
- Lack of data interoperability. Data sharing and exchange
- Data-driven industrial cooperation across value chains
- Specialisation required (sophistication of the leading-edge tools and algorithms)
- Data will become a significant part of most jobs (Managers, workers and decision makers)
- Retaining talent: driving new forms of academic and industrial research and educational partnerships

Next Generation Data and AI Platforms

Trust in Data-Driven Critical Decision Making

Extract Value from Next Generation Digital Infrastructure (5G, HPC, Cloud, IoT, BD, AI,..)

Scaling Industrial Cooperation Models in the Data Economy

Digital/Data Skills and Know-how
BDVA positioning towards FP9: Main pillars

Citizen-Centric Data Society
Key societal challenges

- Trust in Critical Decision Making
- AI Platforms
- Data platforms

Core BDV cPPP
Core BDV cPPP in collaboration

- Next Generation Digital Infrastructure
- BD/AIOTI/HPC/5G/CyberSecurity

- Personal data
- Public data
- Private data

- Digital skills and Know How
- Industrial collaborations models
- Business and legal frameworks
EUROPEAN BIG DATA VALUE FORUM

SAVE THE DATE
2018 NOV 12-14
VIENNA, AUSTRIA
STAY TUNED!
Further Information:

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