

**BIG DATA VALUE**  
eCOSYSTEM

## **D3.13: Collaboration with EU initiatives**

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## Definitions, Acronyms and Abbreviations

Acronym	Title
BDVA	Big Data Value Association
BDV PPP	Big Data Value Public Private Partnership
BDVe	Big Data Value ecosystem – CSA project of BDV PPP
EIT Digital	KIC EIT Digital (DG EAC) – ex EIT ICT Labs
ETP4HPC	European Technology Platform for High-Performance Computing
ECISO	European Cyber Security Organisation
AIOTI	Alliance for the Internet of Things Innovation
EFFRA	European Factories of the Future Research Association
SPIRE	Sustainable Process Industry through Resource and Energy Efficiency
RDA	Research Data Alliance

**Table 1: Definitions, Acronyms and Abbreviations**

## **Executive Summary**

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The goal of BDVe project is to support the Big Data Value PPP in realising a vibrant data-driven EU economy.

The first three activities of work package 3 aim at attracting players of the European data landscape to the PPP, ensuring that the PPP is a fully integrated community and avoiding fragmentation that would lead Europe to low quality results. The ambition is that the PPP covers all the steps of the data value chain since it is difficult to establish a fruitful ecosystem if supply and demand do not meet.

In developing the ecosystem and in building collaborations with other initiatives, both the Association and the BDVe project collaborate closely in this topic. We developed together a roadmap (see figure 1). The BDVA members also play a fundamental role in those collaborations with both international and national initiatives.

The first step, even before BDVe proposal was written, is the collaboration with EIT Digital, which is now a core partner of BDVe.

We collaborate with associations related to contractual PPPs, and also with other European or international initiatives of interest for the Big Data Value. Some are formalised and in full operations, others are at an early stage. The roadmap is re-evaluated on regular basis, eventually redefining priorities, adding new actors, etc, aligned with the BDVA Strategic Research & Innovation Agenda.

We will continue to work and develop the established collaborations, expand and formalise others, consider additional ones.

## 1 Introduction

Collaborations with other EU associations, related PPPs and other international organisations, are part of BDVA mission from its genesis, and were therefore naturally included in the WP3 Ecosystem of the CSA BDVe project.

The BDV SRIA (version 4) highlights the importance of building collaborations with other organisations as a crucial aspect to develop the European Big Data Value ecosystem, and to create impact not only at Research and Innovation level but also in Standards, Markets and Society. Collaborations with other PPPs, European and international standardisation bodies, industrial technology platforms, data-driven research and innovation initiatives, user organisations and policy makers have been identified and developed at national, European and international levels since the launch of the PPP and the creation of the Association, influencing the level of maturity of these collaborations.

The BDV PPP contract asks to “leverage on **EIT Digital** to develop skills and competencies”. BDVA, in the person of Laure Le Bars, started the discussion with the EIT Digital CEO in 2015, and suggested to collaborate not only on skills, but also on other aspects like innovation and entrepreneurship. As a result of the discussion, BDVA and EIT Digital signed a Memorandum of Collaboration operationalised today through several activities on data skills, entrepreneurship and innovation ecosystem (see appendix A). The first consequence is EIT Digital being a core partner of the BDVe project!

Soon after, we initiate collaborations with the **ETP4HPC** (European Technology Platform for HPC), **ECISO** (for cybersecurity), **AIOTI** (for IoT), **5G** (through 5G PPP), and the European Factories of the Future Research Association (**EFFRA**). We develop also collaborations with euRobotics, SPIRE, Research Data Alliance and other International organisations.

For each collaboration, the BDVA Board of Directors designates a person to be the contact point between BDVA and the respective association or organisation. This person is usually a member of both parties, and is responsible to define the terms of the collaboration, to execute and reports to the BDVA Board of Directors.

In addition, ongoing projects further enriched the ecosystem by the collaboration established with sectorial user and data communities (verticals), such as those developed by the Lighthouse projects (on bio-economy and mobility, transport and logistics) and the application domains under BDVA Task Force 7 (Health, Media, Energy, Smart Cities, Geospatial Issues, Finances, Smart Manufacturing, etc).

Last but not least, some members of the BDVe Advisory Board are partners of organisations like EFFRA (Željko Pazin) or ETSI (Ultan Mulligan).

The figure 1 shows the map of main collaborations for the BDV PPP. Please note that national initiatives are covered in WP3 Task 3.3.

In this figure, we displayed the different organizations we intend to work with, at national, European or international levels, and indicated on which main aspect the collaboration is intended: research & innovation, standards, regulation & policies,

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market, and society (not exclusive, there could be several aspects or topics).

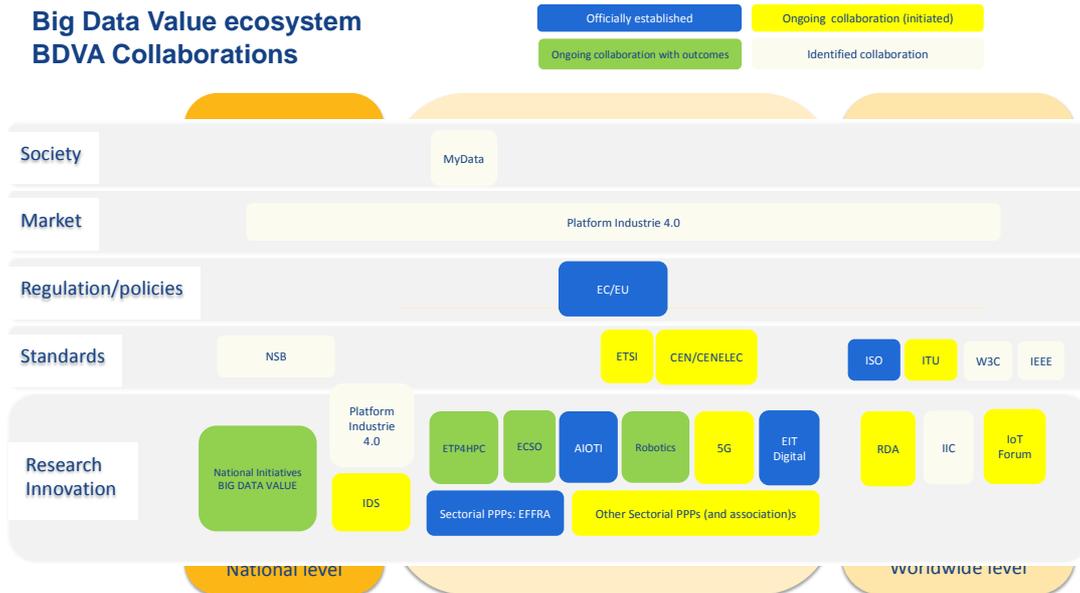


Figure 1: Map of collaborations BDVA / BDV cPPP

The colours indicate the status of the collaboration, as of June 2018: in white, we identified it as important, however not officially started yet; in yellow, we started the discussion and exchange; in green, we actively collaborate with some outcomes; and in blue, there are official memoranda of collaboration between the organisations.

Section 2 and 3 below describe and report in details those collaborations.

## 2 Collaborations with other PPPs

### 2.1 Collaboration with HPC

Increasingly large-scale industrial and scientific systems require the aligned use of Internet of Things (IoT), Big Data (BD) and High-Performance Computing (HPC) technologies to generate real-time and actionable insights. Therefore a more integrated research approach across HPC, IoT and BD platforms is required.

To this end, a new collaboration was initiated between the European associations of ETP4HPC, BDVA, and AIOTI (representing 500+ European organisations across the 3 associations). The HiPEAC and BDEC projects also participate in this collaborative effort – lending their specific domain expertise to the cause. The objective is to enable the creation of a world-class High-Performance Computing & Big Data ecosystem based on European leadership in HPC, Cloud, Edge and Big Data technologies.

Jim Kenneally (Intel), director of BDVA Board, and Maria Perez (UPM) are the contact points for the collaboration between ETP4HPC and BDVA.

During 2017, the collaboration was busy exploring the common challenges through the process of documenting industrial and scientific use cases. To date, 15 use cases

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have been identified as an output of two workshops (standalone workshop in Bologna and side event in Versailles at EBDVF 2017). These use cases are now in a review phase, involving three primary communities, helping to illuminate technical research opportunities across the various compute platforms. The results will be input to the research recommendations offered to the European Commission, for example for the Framework Programme 9.

The following activities happened during 2017:

- BDVA and ETP4HPC co-organised two technical exchange workshops with the intention to improve a common technical language between their HPC and Big Data platforms, and also to clarify the perspective on common topics such as compute infrastructure and requirements. A first workshop was organised within an EXDCI Technical Workshop, in July 2017 in Bologna (IT). The main focus of this workshop was to develop a better understanding of the intersections in scope, research directions and priorities of both platforms, with a central discussion topic on developing a commonly accepted view on the differences between typical HPC compute ecosystems and Big Data ecosystems. A second joint workshop took place at Palais des Congrès (Versailles), organised as part of the European Big Data Value Forum in November 2017. Participation at the second workshop was broadened to include BDEC, HiPEAC and AIOTI – along with BDVA and ETP4HPC. At the Bologna workshop, the conceptual models of the two areas were compared and it was agreed that use cases containing application of both HPC and Big Data technologies should be identified. Versailles workshop objective was to verify the use cases gathered (15 use cases using the same standard) and also begin a discussion on preparations for future joint research priorities and roadmaps.
- BDVA presented at the ETP4HPC SRA Kick-off -meeting (March 2017, Munich).
- BDVA attended European HPC Summit (Barcelona, May 2017); presenting and contributing to workshops and round tables.
- Participation of BDVA in the ETP4HPC Partnership Board meeting held in Barcelona last June 2017.
- ETP4HPC representation has now a formal presence at BDVA Technical Committee meetings.
- Ongoing regular online meetings in between both communities
- BDVA and ETP4HPC proposed a joint HPC-BD session for ICT 2018 “*Common priorities of HPC, Big Data and HiPEAC for post-H2020 era*”. The objective of this session is to present and obtain feedback on the common areas of the future technical and strategic research priorities in the fields of High-Performance Computing, Big Data and High-Performance Embedded Architecture and Compilation.
- BDVA and ETP4HPC are working in a common joint paper (planned to be ready over summer)
- INRIA has kicked off recently a project group on convergence of HPC-BD and it will arrange open-workshops in near future to share latest thinking.
- A joint HPC-BDVA workshop organised in Brussels on 25-26 April 2018.
- BDVA is collaborating with ETP4HPC in the Post-Horizon 2020 Vision for HPC.

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ETP4HPC and BDVA drafted a Memorandum, where they “agree to continue collaborating in the framework of the existing position paper and to further investigate concrete collaboration activities including those regarding the future stages of the BDV PPP and HPC PPP programme, FP9 and contributions to EuroHPC. Such collaboration activities could, e.g., take place in the following domains:

- **Shaping the European Agenda** – joining forces and resources in develop strategic roadmaps, positions papers, pilots and other joint activities in order to ensure a seamless integration of HPC and Big Data Value / Artificial Intelligence (AI) technologies.
- **Innovation ecosystem creation and development – combining ETP4HPC and BDVA assets towards establishing** and growing an EU-wide ecosystem of Big Data Value, Artificial Intelligence, and HPC researchers, developers, innovators and entrepreneurs.
- **Support in a joint manner (and in collaboration with the European Commission) the organization of events** focused on scaling Industrial cooperation models in the Digital Economy and in extracting value from Next Generation Digital Infrastructure (5G, HPC, Cloud, IoT, Big Data, Edge Computing and AI).”

(Please note that this text is extracted from the MoU draft at the time of writing this report, and may be updated later. We are discussing on legal points and expect to sign this MoU early summer)

HPC, BD and IOT communities are expected to continue independently identifying and researching idiosyncratic challenges specific to their respective domains, but not in isolation from each other. Discussions from these collaborations are expected to illuminate research priorities with the potential to amplify synergies and consequently value creation across the computing domains of high-performance, big data and edge. In addition to the collaboration with the ETP4HPC, BDVA has followed up the developments of the EuroHPC initiative in between the European Commission and Member States by:

- Joining and contributing already to the workshop organised during the Digital Day in Rome in March 2017.
- Providing input to the targeted consultation of the EuroHPC last August 2017 representing an important user community.
- Discussing the initiative internally in management meetings and providing a letter supporting EuroHPC last November 2017. This letter of support states expectations in empowerment of the BDVA-ETP4HPC collaboration and expressing willingness to contribute to shape and strengthen European innovation on HPC/Big Data ecosystem and related technologies and services by taking joint efforts in the field of innovation derived from industrial needs.

As a result, BDVA has been identified, together with ETP4HPC, as key “private Members of the EuroHPC Joint Undertaking<sup>1</sup>.

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<sup>1</sup> <https://ec.europa.eu/digital-single-market/en/news/proposal-council-regulation-establishing-european-high-performance-computing-joint-undertaking>

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## 2.2 Collaboration with ECSO

As specified in the BDV PPP SRIA *“Cybersecurity and Big Data naturally complement each other and are closely related: for instance, in using cybersecurity algorithms to secure a data repository; or reciprocally, using Big Data technologies to build dynamic and smart responses and/or protection from attacks (web crawling to gather information and learning techniques to extract relevant information).”*

Géraud Canet (CEA List) is the contact point for this collaboration. BDVA organised the first official joined meeting with ECSO<sup>2</sup> last June 20<sup>th</sup>, 2017. The meeting was joined by representatives from both associations, including on BDVA side, Ana Garcia, BDVA Secretary General, Laure Le Bars (SAP), BDVA president, and Jean-Christophe Pazzaglia (SAP). The target of that meeting was to identify common challenges and areas of work. Common areas of interest identified during this meeting are:

- Cybersecurity to make big data analytics resilient and robust: trustworthy data;
- Big data analytics for cybersecurity to prevent, infer and detect potential attack;
- Leverage big data techniques, artificial intelligence and cybersecurity for application areas and verticals: joint approach.

Those points have been shared with members of both associations and added to the Big Data Value SRIA v4.

This activity was followed up by the organisation of a common workshop during the European Big Data Value Forum 2017 in Versailles. This session was open to all, members and non-members of the associations and aimed at discussing common challenges towards a strategic vision for the European industry, find incentives for companies for sharing use cases in both areas and to foster inter-PPP collaboration building a consistent contribution to both SRIAs. More details can be found here: <http://www.european-big-data-value-forum.eu/program/bdva-ecso-collaboration/>.

There are several topics in the work program that are at the crossroads between data and cybersecurity. BDVA and ECSO keep collaborating closer during 2018 towards the objectives stated above.

## 2.3 Collaboration with EFFRA

BDVA started collaboration with EFFRA back in November 2016 during the Valencia BDVA Summit where EFFRA detailed the five key priorities in seven main Research Headlines concerned with the Big Data and Industrial Analytics domains<sup>3</sup>.

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<sup>2</sup> The European Cyber Security Organisation (ECSO) is a fully self-financed not-for-profit organisation established under Belgian law in June 2016. ECSO members include a wide variety of stakeholders such as large companies, SMEs and start-ups, research centres, universities, end-users, operators, clusters and associations, as well as European Member States' local, regional and national administrations, countries that are part of the European Economic Area (EEA) and the European Free Trade Association (EFTA), and H2020 associated countries (<https://www.ecs-org.eu>).

<sup>3</sup> The materialisation of the EFFRA 2020 Roadmap<sup>3</sup> in the last three years of H2020 (2018–2020) is driven and coordinated by a Consultation Document called 'Factories 4.0 and Beyond' where EFFRA identifies

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Collaboration with EFFRA has been driven by the BDVA TF7 Smart Manufacturing Subgroup (Davide Dalle Carbonare, Engineering), that has been working in matching the BDVA SRIA five Technical Priorities with three main Manufacturing Industry Grand Challenges: Smart Factories; Smart Supply Chains; and Smart Product Lifecycles. This collaboration and technical discussion in between both associations, PPPs and its members, has been documented towards the **BDVA Discussion Paper on Big Data Challenges for Smart Manufacturing**<sup>4</sup> developed during 2017, finalised and presented during the European Big Data Value Forum 2017 and ready for the public during the first quarter of 2018.

The Technical Director of EFFRA was already invited to participate at the consensus meeting that was organized to consolidate the challenges of the paper in a shared view between the two associations (BDVA and EFFRA), during the BDVA Activity Group meeting (Brussels, October 2017) and during the European Big Data Value Forum (Versailles, November 2017) the BDVA SMI subgroup promoted and organized a workshop in order to present the upcoming paper and bring together concrete experiences, in the manufacturing domain, coming from the industry and the research.

Another tangible outcome of this collaboration is **the lighthouse project BOOST4.0** funded by the ICT-15-2017 bringing both the BDVA and EFFRA communities.

**BDVA and EFFRA collaboration has been formalised** with the signature of a **Memorandum of Collaboration (MoC)** between both associations, during the 2<sup>nd</sup> European Stakeholder Forum event in Villepinte (France) on March 27<sup>th</sup> 2018<sup>5</sup>.

Both parties acknowledged that data play an ever-increasing role in manufacturing supply chains, and that both EFFRA and BDVA work in common technical domains such as CPS, Simulation, Data Management, Data Analytics, Artificial Intelligence, Data Protection, Data Processing Architectures, 5G, Cloud and High-Performance Computing, IoT, Edge and Fog Computing, etc, and therefore agreed in strengthening cooperation in the following areas:

- **Contributing to the European Digital Agenda and to the Digitising European Industry Initiative**, by joining forces in developing strategic roadmaps, papers, pilots and other joint activities in order to accelerate the use, the integration and value creation of Big Data and AI technologies in the Manufacturing sector.
- **Work jointly on the identification of migration pathways** from today's industrial state-of-play towards the vision of Factories of the Future, with data processing having an ever-increasing role.
- **Exchanging practices and approaches from existing and future projects** of the Big Data PPP and the Factories of the Future PPP, that involve the collection and processing of large amounts of data for the optimisation of manufacturing, from material processing up to supply network operations.

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five key priority areas and targets which EFFRA proposes for the 'Factories of the Future' work programme 2018-2020

<sup>4</sup> [http://bdva.eu/sites/default/files/BDVA\\_SMI\\_Discussion\\_Paper\\_Web\\_Version.pdf](http://bdva.eu/sites/default/files/BDVA_SMI_Discussion_Paper_Web_Version.pdf)

<sup>5</sup> <http://bdva.eu/node/998>

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- *Common events focused on scaling Industrial cooperation models in the Digital Economy and in extracting value from Next Generation Digital Infrastructure (5G, HPC, Cloud, IoT, Big Data, Edge Computing and AI).*

## 2.4 euRobotics

Collaboration with [euRobotics](#) is mainly driven by the European AI programme, and it is being operationalised during 2018 with an ambition to align roadmaps in areas of common interest. BDVA hosted a first 3-player meeting with euRobotics, AIOTI and the EC last March 2018 for this purpose. The workshop, joined by representatives of the 3 associations and the European Commission (DG CNECT A1) focused on providing an overview on scope of activities and roadmap of the three communities and identify areas of direct contribution to the AI European Programme, and defined an ambition to keep collaborating throughout the year extending the discussion to other PPPs.

A follow up workshop was initially planned to happen during the IoT Week in Bilbao (June 4-7) but it now postponed to September-October 2018. BDVA and BDV PPP organised however a workshop during the IoT Week called “*Creating value by AI and Big Data: Industrial applications, challenges and outlooks*” bringing together the 4 running PPP lighthouse projects and common members of BDVA and euRobotics, to add from an horizontal perspective synergies and complementarities in between big data and robotics capabilities.

As we write this report, we are having already bilateral discussions with euRobotics (whose Board already agreed to move on the direction of signing a Memorandum of Collaboration with BDVA) identifying the main common areas of interest at strategic and operational level. BDVA and euRobotics also submitted in collaboration several proposals for networking sessions for ICT 2018, and are engaging each other in different events. A MoC in between both associations is expected by ICT 2018 event the latest.

## 2.5 SPIRE PPP

[SPIRE](#) invited BDVA to contribute to a session called “Co-creating digitized process industry” that took place in Brussels on September 20<sup>th</sup>, 2017. BDVA engaged Big Data industrial technology players to contribute to that session. This session was a first important connection in between both communities that helped BDVA to identify BDVA members active in Processing Industries.

## 2.6 Collaboration with 5G PPP

Collaboration in between the Big Data Value PPP and the 5G PPP has been managed during 2017 by the BDVA TF7 Telecommunications subgroup. **Specific areas of collaboration have been identified and incorporated to the Big Data Value SRIA and Roadmap.** The 5G PPP and BDVA ecosystems need to increase their collaboration, and could develop joint recommendations related to Big Data. The following areas of collaboration have been identified:

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- 5G provides the opportunity to collect and process Big Data from the network in real time. The exploitation of Data Analytics and Big Data techniques supports Network Management and Automation. This will pave the way to monitor user Quality of Experience (QoE) and Quality of Service (QoS) through new metrics combining network and behavioural data while guaranteeing privacy.
- 5G is also based on flexible network function orchestration, where machine learning techniques and approaches from Big Data handling will become necessary to optimise the network.
- Combinations of 5G infrastructure capabilities, Big Data assets and IoT development, may help to create more value, increased sector knowledge, and ultimately more ground for new sector applications and services.

## 3 Other collaborations

In addition to the above-mentioned PPPs and industrial associations, BDVA has cooperated with other initiatives and stakeholders during 2017 such as AIOTI, Research Data Alliance (RDA), and international Standardisation Bodies, as identified in the map of collaborations showed in Figure 1. This section describes some of those.

### 3.1 Collaboration with AIOTI

For the first time, the BDV SRIA v4 incorporates the collaboration with the IoT community as an important pillar to develop the European Big Data Value ecosystem in particular highlighting the importance of the seamless integration of IoT technology (such as, sensor integration, field data collection, Cloud, edge and fog computing) and Big Data technology (such as data management, analytics, deep analytics, edge analytics, processing architectures) to foster the envisioned market growth in the IoT. Sonja Zillner and Klaus Beetz, both from Siemens, are the contact points for this collaboration.

During 2017 BDVA and AIOTI collaborated mainly through the BDVA TF6 (Technical priorities) and TF6-SG6 (Big Data Standards) and the AIOTI WG3 (IoT standards). Members of AIOTI WG3 were invited to the Big Data Standards workshop organised by BDVA on June 20<sup>th</sup>, 2017 with a follow up in a workshop co-organised in between ISO/EIC JTC1 WG9 and BDVA that took place on August 14<sup>th</sup>, 2017 in Dublin. Both workshops and additional meetings helped to develop alignment in between the BDVA Reference model and the IoT High Level Architecture and to define areas of collaboration to be reflected in both our Strategic Research and Innovation Agendas.

The activities performed during 2017 have crystallised in the formalisation of Memorandum of Collaboration (MoC) in between both Associations (BDVA and AIOTI) with a public signature during the 2<sup>nd</sup> European Stakeholder Forum event in Villepinte (FR) on March 27<sup>th</sup> 2018<sup>6</sup>.

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<sup>6</sup> <http://bdva.eu/node/998>

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The BDVA-AIOTI official MoC is the result of the collaboration activities during 2017, and focuses on the following areas, in full alignment with the Big Data Value SRIA:

- **Standardisation** – to coordinate input towards international standardisation bodies.
- **Skills** - combining AIOTI and BDVA resources to develop skills and competences in Big Data and IoT and to provide technological and entrepreneurship training initiatives.
- **Shaping the European Agenda** – joining forces and resources in develop strategic roadmaps, positions papers, pilots and other joint activities in order to ensure a seamless integration of IoT and Big Data Value / Artificial Intelligence (AI) technologies.
- **Innovation ecosystem creation and development** – combining AIOTI and BDVA assets towards establishing and growing an EU-wide ecosystem of Big Data Value, Artificial Intelligence, and Internet of Things researchers, developers, innovators, SMEs and entrepreneurs.
- **Organisation of common events.**

BDVA and BDVe have also established connections at the level of the large-scale pilots. As a matter of example, DataBio (Big Data) and IoF2020 (IoT program LSP) were invited to discuss and work together in the session Data-driven Food Production organized at EBDVF 2017 in Versailles.

In 2018, BDVA also participates actively in AIOTI WG03 High Level Architecture and leads the work on mapping between the AIOTI High Level Architecture and the BDVA Reference Model. This mapping is part of the AIOTI HLA Report, Version 4.0, which was released in June 2018<sup>7</sup>.

Participation of BDVA in IoT related events and AIOTI in Big data-related events is already a common practice. For example, Damir Filipovic, AIOTI Secretary General, and Jürgen Sturm, AIOTI Steering Board Chair, presented AIOTI and the collaboration at the BDVA Activity Group meeting on March 15<sup>th</sup>, 2018 in Brussels.

BDVA members showed interest in AIOTI Nuances of Trust workshop, see description: [aioti.eu/events/nuances-of-trust-aioti-flagship-event-in-2018-14-15-may-london](https://aioti.eu/events/nuances-of-trust-aioti-flagship-event-in-2018-14-15-may-london)

More recently, BDVA participates actively in **IoT Week** : we started last year in Geneva, and increased our involvement this year in Bilbao (June 4-7, 2018).

Ana Garcia, BDVA Secretary General was moderating a session related to IoT, data and AI in industrial applications ([Next Generation Digital Infrastructure](#) (Big Data, IoT, Edge, 5G, HPC, Cloud, AI), where Nuria de Lama (ATOS) presented the project structure and the BDV PPP, and some PPP Lighthouse projects (like BOOST 4.0), IoT Large Scale pilots (FoF2020 and AutoPilot) and RDA presented their views on different sectors of distributed architecture for intense IoT Data analytics scenarios. Nuria De Lama (Atos), vice Secretary-General was also speaker in:

- WATIFY: [Awareness Raising Campaign for the Modernization of Europe's Industry](#)
- [Integrated & Smart Food Value Chain](#) : establish link between IoT and Big Data challenges in the Agrifood domain; visibility of BDV PPP initiatives such as the TF on

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<sup>7</sup> Published in the actual AIOTI HLA document: <https://aioti.eu/wp-content/uploads/2018/06/AIOTI-HLA-R4.0.7.1-Final.pdf>

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Big Data for Agriculture, DataBio project, DataBench but also data-related initiatives such as SDIL (i-Space), IDS for data sharing or Copernicus for EO data.

Natalie Bertels (KU Leuven, BDVA TF5 lead) conducted a session on [IoT and GDPR compliance](#), and Sergio Gusmeroli (Engineering) was speaker in sessions on IoT in Smart Manufacturing.

Finally, Laure Le Bars (SAP), BDVA President, was panel speaker in the closing ceremony, led by Sébastien Ziegler (IoT Forum President), with Damir Filipovic, AIOTI SG, Roberto Cascella (ECSO), to name a few.

Several BDVA Members, such as IK4, Insight, Tecnalía, Siemens, etc. were also speakers or participants. Also in parallel, several discussions with the Chair of Open and Agile Smart Cities (OASC), with Catapult Future Cities, etc, which may lead to other types of collaborations.

We intend to be more active in next IoT Week edition (Aarhus DK, 17-21 June 2019).

## 3.2 Research Data Alliance

Collaboration in between BDVA and the [Research Data Alliance Europe](#) has been intensified since last June 2017. RDA is very much focused on Research Data, it is global and led by researchers, while BDVA and the BDV PPP has more a focus on Industrial Data (not only). BDVA is European and led by Industry, with a strong focus on adoption of technologies. However, both worlds are becoming closer and BDVA and RDA Europe share challenges, share members and have a common ambition towards supporting data-driven innovation in Europe. BDVA invited RDA Europe to contribute to a Big Data session held last June 2017 as part of the IoT week in Geneva<sup>8</sup>. Collaboration has been intensified since then with the participation of BDVA in several RDA Europe events during 2018, collaboration for IoT week 2018 and discussions to support some of the National nodes.

In addition, the different TF7 subgroups (Application domains) have established collaboration with more sectorial communities such as ERTICO, the Alliance for Logistics Innovation through Collaboration in Europe (ALICE), the Open and Agile Smart Cities Alliance (OASC), or European Space Agency (ESA) to name a few.

Some additional collaboration paths have been explored in the context of BDVe (where no working group or task force in BDVA exists). That is the case of initiatives in the Food Value chain (examples of this are projects in the domain funded by DG CONNECT, RTD and AGRI, the EIP AGRI, the European Technology Platform for organic food & farming (TP Organics), KIC EIT Food) or Public Sector (Big Policy Compass project). To finish this chapter, it is worth mentioning that BDVA and BDVe keep an active connection with other initiatives, studies or associations whose major focus of work is data innovation for better synchronization, coherence and ultimately potential impact. Some examples of this are the Center for Data Innovation, EuDeco project (finished in January 2018), IDC (as leader of the data market study for the EC) and Everis (as leader of the study on B2B Data Sharing also for DG CONNECT).

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<sup>8</sup> <http://iot-week.eu/iot-week-2017/>

### 3.3 Collaboration with Standardisation Bodies

On March 2017, BDVA TF6-SG6 (Big Data Standards) presented to the European Multi-Stakeholder Platform (MSP) on Standardisation results of the work developed during 2016 and Q1 2017, including some initial results in the definition of Big Data Standardisation priorities, a roadmap of activities and objectives. The European MSP on Standardisation provided some recommendations to fine-tune the main priorities for the BDVA Standardisation group as follows:

- Establish an official liaison in between the BDVA Standards Group and the AIOTI WG3. This activity was developed through different workshops during 2017 and implemented in 2018 with the signature of a MoU.
- Further develop the BDVA Reference Model pursuing alignment with others such as oneM2M, BDE Platform, AIOTI, RAMI 4.0, etc. This was implemented through different workshops organised during 2017.
- Open an official dialogue with CEN, CENELEC and ETSI on standards harmonisation, implemented through different workshops during 2017 (work in progress).
- Establish a dialog with CEN to discuss extending the CEN Workshop on Big Data beyond Aquaculture sector to include other sectors e.g. manufacturing.
- Create BDVA Roadmap for Big Data Standards harmonisation and industry engagement in Global Big Data standards development.

During 2018 BDVA has joined different workshops organised by ITU and the EC, and BDVe project in collaboration with BDVA TF6.SG has engaged all the PPP projects in 1) educating in the value of contributing to standards from Research and Innovation purposes; 2) to coordinate activates and efforts at PPP level towards different bodies For this purpose a specific session took place during the PPP meet-up event in Sofia on May 14<sup>th</sup>.

#### 3.3.1 ISO/EIC JTC1

During 2017 BDVA established an official liaison with the ISO/JTC1/WG99 with the main objective of channelling European input into global standards. Also, during 2017 BDVA has organised 3 specific workshops (June, August and November) to engage with other standardisation communities as an important step to create the Roadmap for Big Data Standards harmonisation, and in particular ISO/JTC1/WG9, ETSI, CEN / CENELEC, W3C, OneM2M, and RAMI 4.0.

During 2018 ISO/EIC JTC1 has launched the SC42 on Artificial Intelligence, integrating all activities of WG9, and BDVA is now pursuing and official liaison. There are equally members of BDVA very active in the SC41 (data privacy).

#### 3.3.2 CEN/CENELEC

After several exchanges, and a meeting on May 8<sup>th</sup>, 2018 between BDVA and CEN/CENELEC, the following points have been identified:

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<sup>9</sup> At the time of submitting this report merged with the recently launched SC42 for Artificial Intelligence

### **D3.13: Collaboration with EU initiatives**

1. Willingness to cooperate from both organisations through a MoU around the topics of Big data and Artificial Intelligence.
2. BDVA would like to find ways to link European Research and innovation projects/initiatives, standards and market in a systematic and collaborative way. We think this cooperation could be instrumental on this in particular for emerging and complex topics such as Big data and AI. CEN-CENELEC will check internally the possibility to use an ongoing project focused on this area to support this. We believe there is a need in educating the Research and Innovation community on this.
3. Common interest in having BDVA involved in the first workshop on AI organised by CEN-CENELEC on Sep 18<sup>th</sup>.
4. BDVA is interested in contributing to the CEN/CENELEC Focus Groups related to BD or AI.
5. CEN/CENELEC is interested in organising a standardisation workshop with BDVA in the next European Big Data Value Forum in Vienna (Nov 12-14 2018), also considering the contribution from Austria National Government and the Austrian members of CEN-CENELEC.

### **3.4 Collaboration with ETSI and ITU**

At the moment of submitting this report BDVA has received invitation for Liaison from several FG from ITU and in particular ITU-T FG-DPM (WG1 requirements not only) and ITU-T FG ML5G (request of liaison).

ETSI has participated in all the workshops organised by BDVA, and we expect to develop this further during 2018.

## **4 Conclusions**

In summary, several important collaborations have started, some are formalised with memoranda of collaborations, and are active (and at full speed). All those collaborations will continue in the coming months and years.

The objectives until end of 2020 is to consolidate engaged and confirmed collaborations, and to formalise the collaborations which are still in discussion stage. We would like also to invite all to contribute to the post H2020 vision for Big Data Value in Europe. Also, we will consolidate contribution to the overall landscape of Big data and AI standards. And specifically, we will develop strong collaboration with EuRobotics towards AI programme.

## 5 Appendices

### APPENDIX A: Collaboration with EIT Digital



PRESS RELEASE

Madrid, June 18 - 2015

## BDVA and EIT Digital are joining forces to advance European Big Data Economy

June 18, 2015 - Brussels – EIT Digital and the Big Data Value Association (BDVA) signed on June 17 a Memorandum of Collaboration (MoC) to join forces to support the advancement of European Big Data Economy. The signing, in the context of the first Summit of the Big Data Value Association in Madrid (June 17-19), was done in Madrid via video links to Berlin and Brussels by Willem Jonker, CEO EIT Digital and Jürgen Müller, Head of SAP Innovation Center Network and BDVA president. All in the presence of Giuseppe Abbamonte, director, DG CONNECT, European Commission.

"The collaboration between BDVA and EIT Digital is important and timely. We share partners and topics with BDVA, while we also bring complementary elements like our entrepreneurial education. Timely because, Europe has to strengthen its position in Big Data: Jointly BDVA and EIT Digital will contribute to driving the European Data Economy", says Willem Jonker, CEO EIT Digital.

By combining their resources and assets, the cooperation will target the crucial aspects that will enable the creation of a strong European Big Data Economy: technology-driven Innovation around Big Data technologies and applications; Entrepreneurial Education for the new talents and skills Big Data economy requires; the creation of an innovation ecosystem for the European Big Data economy to flourish within.

"Through this collaboration, we aim to help our partners to realise the benefits expected from the programmes and to more efficiently exploit its results, leading to a flourishing innovation ecosystem for the European Big Data economy", explains Laure Le Bars, Research project director, SAP Research Partners & Startups and proxy acting BDVA president.

