



BIG DATA VALUE ASSOCIATION ANNUAL REPORT 2019

Activity report of the Association

Progress Monitoring Report 2019 of the Big Data
Value Public Private Partnership (Short version)

July 2020



BDV BIG DATA VALUE
ASSOCIATION

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EXECUTIVE SUMMARY

The Big Data Value Association (BDVA)¹ is an industry-driven international not-for-profit organisation with over 220 members all over Europe and a well-balanced composition of large, small, and medium-sized industries as well as research and user organisations. **BDVA was established in 2014 as the private counterpart to the European Commission to implement the Big Data Value Contractual Public Private Partnership (BDV cPPP) programme².** Today BDVA is also **one of the private members of the EuroHPC Joint Undertaking³ (together with ETP4HPC), and is the main promoter of the AI, Data and Robotics partnership⁴,** one of the candidates for European Partnerships in digital, industry and space in Horizon Europe, developed in collaboration with euRobotics and the AI Research communities CLAIRE, ELLIS and EurAI.

Since the launch of the first projects under the PPP, this Big Data ecosystem has already grown substantially and has become stronger as also testified by the diverse and rich project portfolio of which the Partnership disposes today. Currently, the PPP counts more than 40 active projects in many different application domains and involving many players. While some BDV PPP projects started only recently and will run up to 2023, many have already produced particularly important outcomes, contributing to ensure the economic and societal impact of the PPP.

Key figures and highlights on BDVA and the BDV Partnership

- **310,1 M€** have been allocated by the European Commission to Horizon 2020 calls directly linked to the Big Data Value PPP (in the period going from the beginning of the Partnership until end of 2019). The PPP has funded **around 50 projects since its establishment and counts over 40 active projects today.**
- BDVA membership has grown from slightly less than 190 to **more than 220 members** in the period going from end 2018 to mid-2020. **75% of BDVA members work both on Big Data and Artificial Intelligence** and the vast majority has expertise in several areas (data analytics, data management, data visualisation, etc.).
- BDVA is involved in **3 Public Private Partnerships at the European level:** on top of being the private counterpart of the European Commission for the BDV PPP, BDVA plays also a pivotal role in 2 other strategic Public Private Partnerships: the EuroHPC Joint Undertaking and the AI, Data and Robotics partnership.
- BDVA has organised **7 Activity Group Meetings** for its members in 2019 and early 2020, which were attended by **50 participants** in average. Through these meetings, but not only, BDVA members have shaped the development of **2 versions of the Strategic Development Research Innovation and Deployment Agenda** for the upcoming AI, Data and Robotics Partnership.
- In 2019 and early 2020, the community organised **2 major events** (the European Big Data Value Forum and the BDV PPP Summit in Riga) attended by several hundreds of participants and **more than 30 webinars** (with several hundreds of attendees as well). BDVA and BDV PPP social media and website activities reach **several thousands of stakeholders** each month.
- In 2019 and early 2020, BDVA has published **10 new papers** including on important topics such as data protection in the era of Artificial Intelligence or use of data in Smart Manufacturing.
- BDVA has established **4 new formal collaborations in the past 18 months** and consolidated many of the existing partnerships.

1 <http://bdva.eu/about>

2 <https://ec.europa.eu/digital-single-market/en/big-data-value-public-private-partnership>

3 <https://eurohpc-ju.europa.eu/index.html>

4 <https://ai-data-robotics-partnership.eu/home/>

This document provides a condensed summary of all activities carried out by BDVA in 2019, and during the first months of 2020, and it highlights the key achievements of the Partnership and the community during this period. The document does not represent a full Progress Monitoring Report (PMR) for the PPP which is required every two years by the European Commission since 2019. Nonetheless, this paper offers an overview of everything that has been done by the association and the Partnership focusing in particular on a) the progresses of the Big Data Value PPP at the project and programme level, b) the community building efforts which took place during the last year, and c) the work done by BDVA towards the AI, Data and Robotics Partnership (candidate partnership for Horizon Europe) in collaboration with other European players⁵.

As illustrated in the document, the year 2019 has been pivotal in terms of activities and milestones for the Big Data Value Association and the Big Data Value Public Private Partnership. As fifth year of existence of the partnership and penultimate year of the Horizon 2020 programme, it involved not only the delivery and consolidation of many initiatives aimed at continuing the success of the Partnership (i.e. Task Forces, major events, Activity Groups) but also the development of new initiatives, looking beyond the horizon of 2020, and in particular concerning the upcoming AI, Data and Robotics Partnership. In this context, BDVA, in collaboration with euRobotics (and SPARC PPP), has developed **a Vision Paper for the new partnership and two versions of the Strategic Research, Innovation and Deployment Agenda** (first version in June and updated version in September 2019). It has also worked on the two releases of the **Partnership Proposal (December 2019 and May 2020)**.

The success of the many activities carried out in 2019 and early 2020 can be attributed to the high levels of engagement of BDVA members and of the BDV PPP ecosystem. A highly motivated and mobilised ecosystem has been crucial for entering in the last year of Horizon2020 with a solid basis in terms of projects but also and especially in terms of knowledge, initiatives and collaborations. This active community and ecosystem of organisations and projects, which remained very engaged even through the COVID 19 crisis, is one of the major strengths of the Big Data PPP and BDVA, and one that should be leveraged for the future.

⁵ euRobotics and the AI Research communities (in alphabetical order CLAIRE, ELLIS, EurAI).

1 INTRODUCTION

This document represents the 2019 Annual Report for the Big Data Value Association (BDVA) and a short version of the Progress Monitoring Report (PMR) for the Big Data Value Public Private Partnership (BDV cPPP). BDVA and the Partnership were established under Horizon 2020 in October 2014 with the objective of **building a data-driven economy across Europe, mastering the generation of value from Big Data and creating a significant competitive advantage for European industry, thus boosting economic growth and job**⁶. The BDV cPPP started in 2015 and was operationalised with the launch of the Leadership in Enabling and Industrial Technologies (LEIT) work programme 2016/2017 of Horizon 2020 (H2020)

The Big Data Value Association is the private counterpart to the European Commission in implementing the BDV cPPP and is responsible of providing a full monitoring report on its activities. Since 2019 and in accordance with the European Commission, the full monitoring report of the Partnership will only be submitted every 2 years⁷. The most recent version was delivered in 2019 covering the period going from beginning 2018 to beginning 2019.

This document therefore combines BDVA 2019 Annual Report with a more condensed overview of the PPP activities for the year 2019 and beginning of 2020 and illustrates the main achievements coming both from the association and the Partnership during this period. The report is structured as follows:

- Chapter 1 provides a short introduction for the context and purpose of the report;
- Chapter 2 offers an overview of BDVA activities and achievements during the reporting period and especially in terms of Task Forces, collaborations, and publications;
- Chapter 3 summarises the 2019 activities of the BDV PPP at the programme level and includes some highlights on the implementation of the 2019 calls and the achievement of the cPPP goals.
- Chapter 4 contains a description of the progresses made towards the new partnership on Big Data, AI and Robotics and the role played by BDVA in this context;
- Chapter 5 offers a short overview of the activities carried out under the High-Performance Computing Public Private Partnership;
- Chapter 6 includes a summary of the communication and outreach activities performed, both by the association and the BDV PPP, including the organisation of large events and the online activities.

6 BDV Contractual agreement and BDV cPPP SRIA

7 For MR2017: http://www.bdva.eu/sites/default/files/MR2017_BDV_PPP_Main%20Report_September%202018_1.pdf and MR2018: <http://www.bdva.eu/MonitoringReport2018>

2 BDVA ACTIVITIES, TASK FORCES AND COLLABORATIONS

2.1 BDVA Membership

Since its establishment in 2014, BDVA membership has been very well balanced in terms of types of organisations (large industry, Small and Medium Enterprises, Academia and other organisations) geographies and sectors represented. The number of BDVA members kept growing over the years and the community was strengthened by the addition of more members with a clear sectorial focus (i.e. specialised in transport, energy, finance, media...). Furthermore, many PPP project participants recently joined the association especially in order to be involved in some of its flagship activities, such as the Task Forces (see Section 2.3, and the example of the newly established Task Forces on Finance). These trends prove the **capacity of the association to integrate project participants into the wider ecosystem and to go beyond the technology community by attracting sectorial organisations.**

During 2019, BDVA membership grew from slightly less than 190 to more than 220 members, while keeping the good balance in terms of geography (with 28 countries covered), types of organisations and sectorial specialisations. In total, more than 25 new members joined the association all along the year from more than 10 European countries. At the end of 2019, the association included over 200 organisations and this number kept growing in the first months of 2020, with several new organisations applying for membership in January, March and June 2020.

The chart below illustrates the proportions of different types of organisations within BDVA as of today (June 2020, 214 members), differentiating between large industry, Small and Medium Enterprises (SMEs) and start-ups, academia and research organisations and others (i.e. industry/user associations, digital innovation hubs, development agencies, governments, other associations etc.).

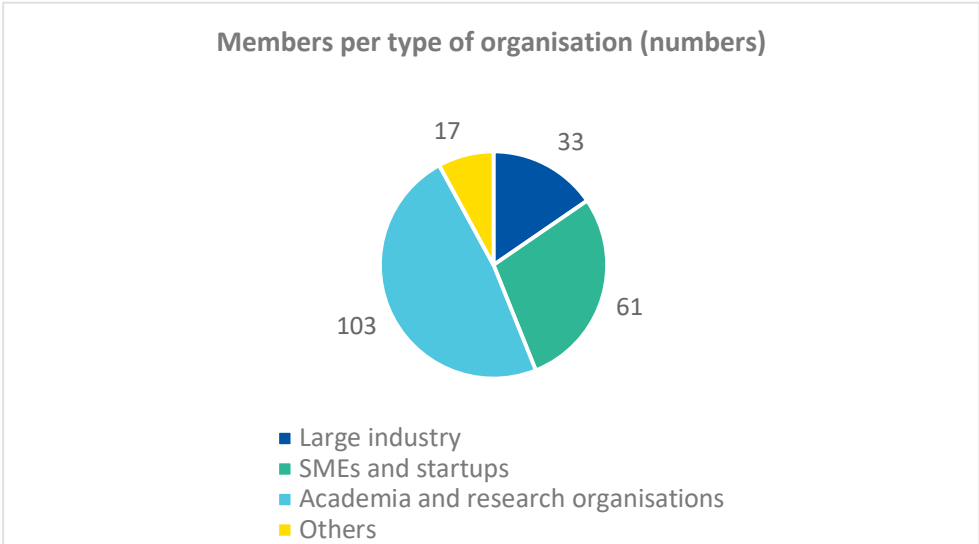


Figure 1 - BDVA Members per type of organisation

As the chart suggests, **private companies compose around a half of BDVA members:** more than one fourth of members are SMEs and the remaining quarter is split between large industry and other organisations. **Academia and research organisations represent the other half of members.**

In terms of areas of research, **BDVA members are active in Data Analytics, Data Management, Data Visualisation, Data Architectures, Data Protection and other areas.**

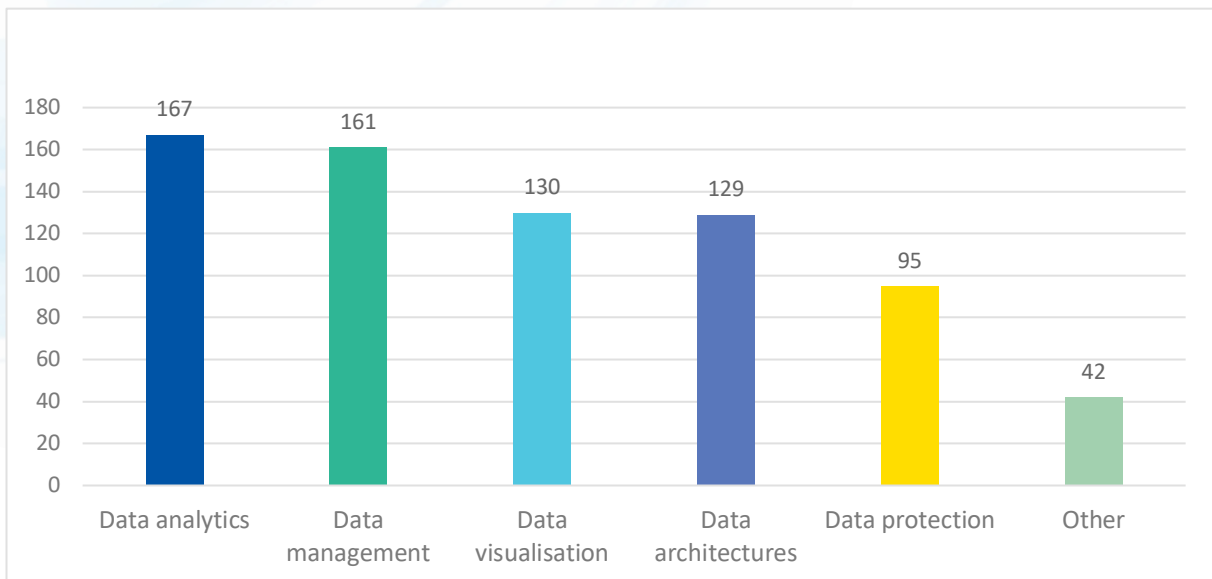


Figure 2 - BDVA Members research specialisations

The majority of the BDVA members combine expertise in several domains covering three or four of the abovementioned areas⁸.

Furthermore, it is interesting to notice that Data analytics comes on the top of the list in terms of areas of expertise of BDVA members and that **almost 75% of BDVA members work both on Big Data and Artificial Intelligence**, according to the association's analysis⁹. This creates a strong and natural bridge towards the new Partnership on AI, Data and Robotics (see Section 4).

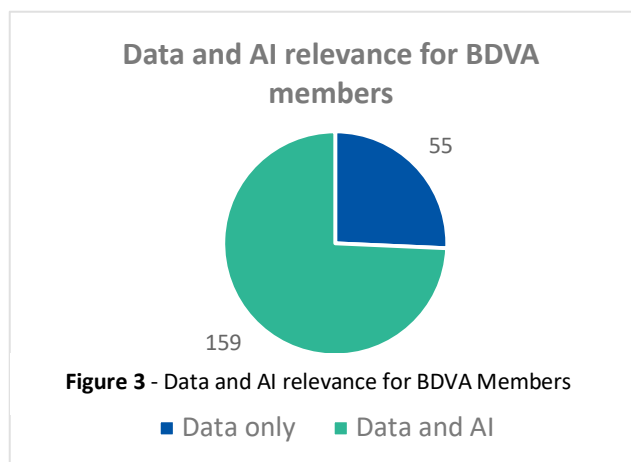


Figure 3 - Data and AI relevance for BDVA Members

■ Data only ■ Data and AI

⁸ Less than ten members (8) are active uniquely in one of the areas shown in the figure above and this concerns Data Analytics and Data Management only.

⁹ Internal analysis, June 2020

2.2 BDVA Governance

BDVA is governed by the General Assembly (GA) and the Board of Directors (BoD) which is nominated by the General Assembly and holds a 2-year mandate. The GA is composed of all BDVA members, but only full members have voting rights¹⁰.

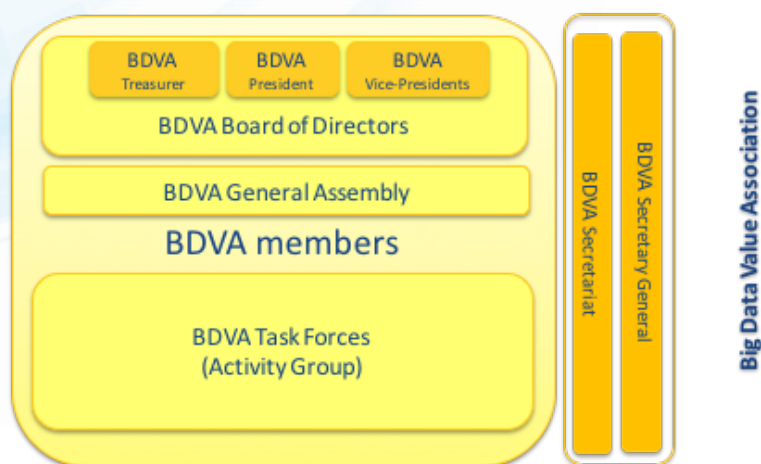


Figure 4 - BDVA governance structure

The Board of Directors (BoD) of BDVA is composed of elected members representatives: it oversees the achievement of the Association objectives and must implement the policies and the decisions adopted by the General Assembly. Elections were held In June and November 2019 to nominate 8 new members of the BoD due to the end of the mandate of the previous members. Today, the BoD counts 29 members from different organisations and its composition ensures a balance between large industry, SMEs, academia and other types of organisations. The full list of members is provided below.

Name	Company	Type of organisation	Role
Antonis Ramfos	ATC	Small-Medium Enterprise	Director
Nuria De Lama	Atos	Large industry	Director
Sy Holsinger	EGI	Other (federation of data centres)	Acting Director
Davide Dalle Carbonare	Engineering	Large Industry	Director
Simon Scerri	Fraunhofer	Academia/Research organisation	Director
Almudena Sánchez	GMV	Large industry	Director
Walter Weigel	Huawei	Large industry	Director
David Bernstein	IBM	Large industry	Director
Stefan Van Baelen	imec	Academia/Research organisation	Director
Marc Schoenauer	INRIA	Academia/Research organisation	Director
Edward Curry	Insight	Academia/Research organisation	Vice-president
Valerio Frascolla	Intel	Large industry	Acting Director
Daniel Saez Domingo	ITI	Other (private technology centre)	Director
Stefanie Lindstaedt	Know - Centre	Academia/Research organisation	Director
Stefan Gessler	NEC	Large industry	Director

10 For a description of the differences in the type of membership please refer to : <https://www.bdva.eu/get-involved>

Name	Company	Type of organisation	Role
Robert Seidl	Nokia	Large industry	Director
Valère Robin	Orange	Large industry	Director
Milan Petkovic	Philips	Large industry	Vice-president
Björn Hovstadius	RISE	Academia/Research organisation	Director
Laure Le Bars	SAP	Large industry	Vice-president
Thomas Hahn	Siemens	Large industry	President
Till Lech	SINTEF	Academia/Research organisation	Director
Harald Schöning	Software AG	Large industry	Director
Anca Liana Costea	Terrasigna	Small Medium Enterprise	Director
Philippe Mouttou	Thales	Large industry	Director
Andrejs Vasiljevs	Tilde	Small Medium Enterprise	Director
Henk Jan Vink	TNO	Academia/Research organisation	Director
Maria de los Santos Pérez Hernandez	UPM	Academia/Research organisation	Director
Caj Södergård	VTT	Academia/Research organisation	Director

Table 1 - Members of BDVA Board of Directors (BoD)

A President and Vice-Presidents are also elected by the members during a General Assembly meeting, upon suggestion of the BoD, and must be already part of the Board of Directors to take these functions. President and Vice-Presidents represent the association towards external stakeholders and are involved in daily life of the organisation. They are supported by a Secretary General, who is the person responsible for the day-to-day management. As of September 1st, 2016, Ana García Robles is BDVA Secretary General. She leads the activities of the permanent Secretariat which, at the time of writing, is composed of two full time employees based in Brussels.

During 2019, the Board of Directors met regularly, both in Brussels and elsewhere or online, (for a total of 10 times), as indicated below:

BoD Meeting number, Date and Location	Main topics discussed and highlights
BoD 31, 22nd of January 2019, Brussels	BDVA strategy for 2019, Financial matters, Membership, Events and Status of the BDV PPP.
BoD 32, 26th of February 2019, Brussels	Perspectives on the new PPP, update on the EuroHPC activities, Collaborations, Projects, Brexit, Membership, Events, update on Task Forces' outcomes and activities.
BoD 33, 12th of April 2019, Brussels	Update on the new PPP, updates on EuroHPC and projects, BoD elections, Membership, Events, i-Spaces, BDV PPP Monitoring Report 2018.
BoD 34, 15th of May 2019, Brussels	Update on the new PPP, updates on EuroHPC and projects, Financial matters, Membership, Events, update on Task Forces' outcomes and activities, updates on the BDV PPP.
BoD 35, 4th of June 2019, Online	Update on the new PPP, update on Collaborations, Membership, Preparation of BDVA General Assembly, Events, BDV PPP Monitoring Report.
BoD 36, 27th of June 2019, Riga	Financial matters, Membership.
BoD 37, 4th of September 2019, Dublin	BDVA strategy, Collaborations, Financial matters, Membership, Preparation of BDVA General Assembly, BDVA participation in proposals, Events, update on the BDV PPP.
BoD 38, 30th of September 2019, Online	Update on the implementation of BDVA strategy, Collaborations, Financial matters, Membership.
BoD 39, 15th of October 2019, Helsinki	BDVA strategic objectives for 2020, Financial matters, Membership, BDVA participation in proposals.

BoD Meeting number, Date and Location	Main topics discussed and highlights
BoD 40, 27th of November 2019, Brussels	Updated on the AI, Data and Robotics PPP, Collaborations, Membership, update on BDVA Task Forces, update on the EuroHPC, Events.
BoD 41, 16th of December 2019, Online	Update on BDVA strategy, Membership, update on Task Forces, Events.

Table 2 - List of BoD meetings 2019 and early 2020

In early 2020, five BoD meetings took place in the first half of the year and notably in January (the 22th), February (the 26th), March (the 31st), April (the 30th) and June (the 5th). The main topics discussed during these meetings were the progresses on the AI, Data and Robotics PPP and on the future HPC Partnership, the inclusion of new members, the organisation of the European Big Data Value Forum in Berlin and the impact of Covid19 on the different association's activities.

The General Assembly was conveyed three times in 2019, once for an extraordinary meeting (in March) which was necessary to adopt strategic decisions and to give BVDA a mandate for collaborating with other associations for the establishment the Strategic Research, Innovation and Deployment Agenda, SRIDA (see section 4). The table below indicates the dates of these meetings and main topics on the agenda.

Date	Main topics on the agenda
Extraordinary General Assembly 17 - 29th of March 2019	<ul style="list-style-type: none"> • BDVA Strategy and objectives for 2019 • AI, Data and Robotics Partnership (Vision paper) • EuroHPC • Brexit • Membership
General Assembly 18 - 27th of June 2019 (Brussels)	<ul style="list-style-type: none"> • BoD elections • BDVA activities status and implementation of the Strategy • AI, Data and Robotics Partnership (SRIDA) • Membership • BDV PPP Monitoring Report 2018 • European Big Data Value Forum in Helsinki • Accounts 2018
General Assembly 19 - 16th of October 2019 (Helsinki)	<ul style="list-style-type: none"> • BoD elections • BDVA activities status and implementation of the Strategy • AI, Data and Robotics Partnership • Membership • Budget 2020

Table 3 - List of GA meetings n 2019

The first General Assembly of 2020 has been organised for the month of July and will aim at discussing the progresses towards the establishment of the AI, Data and Robotics PPP, accounts 2019 and possible changes in the articles and functioning of BDVA.

2.3 BDVA Task forces: Structure, activities and outcomes

The Task Forces are the main centres of activity within BDVA. They are always be involved in the preparation of the Strategic Research Agendas and in other relevant initiatives carried out by the Association, and they are in charge of endorsing key documents and activities before their approval by the Board of Directors. Task Forces may focus on sector-specific or cross disciplinary issues, related to the objectives of the association. The section below describes the activities of BDVA Task Forces and highlights the main updates for the period considered.

2.3.1 Structure and focus

BDVA Task Forces structure and channel the input from Members around the most important topics for the association, thus supporting its mission and vision. In 2019 and during early 2020, nine Task Forces supported the work of BDVA and the PPP (as also shown in the picture below) and notably:

- **TF1 Programme:** contributing to the H2020 Programme content of the BDV PPP and in charge of producing and updating the Strategic Research, Innovation and Deployment Agenda;
- **TF2 Impact:** maintaining the various KPIs defining the expected Impact of BDV PPP;
- **TF3 Community:** focusing on big data community engagement and participation (and particularly on the collaborations, see also Section 8);
- **TF4 Communication:** dealing with the development of communication plan for creating awareness around the BDVA activities and supporting the organisation of the major events (see also Section 6);
- **TF5 Policy and Societal:** focusing on bridging Big Data technology with legal, societal and policy matters;
- **TF6 Technical:** working on identifying and refining the technical challenges of the programme in alignment with the BDV PPP SRIA Technical priorities.
- **TF7 Application:** composed of several domain usage groups which can influence other task forces – e.g. Telecoms, Healthcare, Transport;
- **TF8 Business:** examining the business and economic influences and business areas such as Web Entrepreneurs and SMEs;
- **TF9 Skills and Education:** looking at what skills are needed for the next generation of workers.

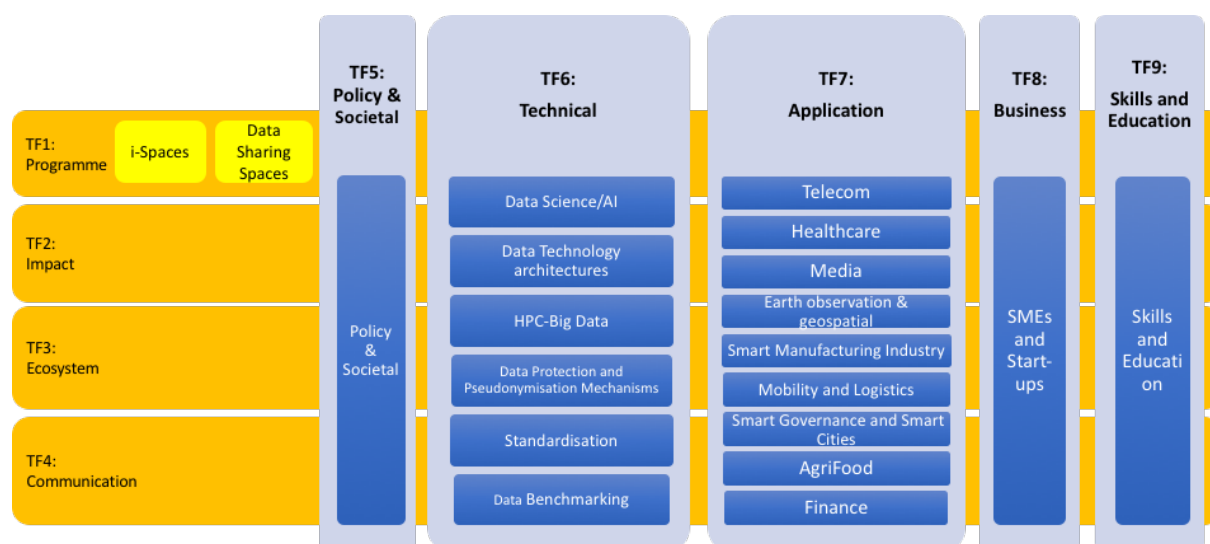


Figure 5 - Structure of BDVA Task Forces

As the picture suggests, each Task Force can be composed of **several sub-groups** focusing on more specific aspects of interest for its members. It is particularly the case for TF1 Programme, TF6 Technical, TF7 Applications and TF8 Business which are composed of 4, 6, 9 and 1 sub-groups respectively. For TF7, the

sub-groups focus on specific sectorial application areas (i.e. transport, healthcare, finance...). TF8 - Business has one sub-group focused on SMEs and Start-ups. The table below lists all the sub-groups for these specific Task Forces, as also shown in Figure 5 - Structure of BDVA Task Forces.

Task Force	Sub-groups
Task Force 1 - Programme	<ul style="list-style-type: none"> • Sub-group 1: Research priorities and SRIA • Sub-group 4: i-Spaces • Sub-group 7: Data Sharing Spaces • Sub-group 8: Work Programme Tracking
Task Force 6 - Technical	<ul style="list-style-type: none"> • Sub-group 1: Data Technologies and Architectures • Sub-group 3: Data Science, AI • Sub-group 4: Data Protection and Pseudonymisation Mechanisms • Sub-group 6: Standardisation • Sub-group 7: Data Benchmarking • Sub-group 8: Big Data and High-Performance Computing
Task Force 7 - Applications	<ul style="list-style-type: none"> • Sub-group 1: Emerging domains • Sub-group 2: Telecom • Sub-group 3: Healthcare • Sub-group 4: Media • Sub-group 5: Earth observation and geospatial • Sub-group 6: Smart Manufacturing Industry • Sub-group 7: Mobility and logistics • Sub-group 8: Smart Governance and Smart Cities • Sub-group 9: Agriculture • Sub-group 10: Finance
Task Force 8 - Business	<ul style="list-style-type: none"> • Sub-group 1: SMEs and start-ups

Table 4 - BDVA Task Forces sub-groups

Each of these Task Forces and sub-groups has a specific mandate, approved by the BoD and including several actions and expected outcomes. The Task Forces and sub-groups are led by key experts also nominated by the BoD (see Annex A for a full list of Task Force leads). An overview of the most recent outcomes is provided in the next section.

2.3.2 Main outcomes

During 2019 and early 2020, BDVA Task Forces have been heavily involved in the publication of papers, organisation of events and in many other activities. Amongst the highlights from this period in terms of outcomes, the following should be underlined:

- **The publication of the Artificial Intelligence PPP vision paper¹¹ and the publication of the two versions of the SRIDA in June and September under TF1 Programme** (see Section 4 on the new partnership for more details).
- **The organisation of the i-Spaces Labelling process 2019 and 2020** (under TF1 Programme, see next section for more details).
- **The publication of the BDV PPP Monitoring Report 2018¹²**, under the TF2 Impact. The report highlights the remarkable progress and advancements of the BDV cPPP and BDVA for the year 2018, insisting on the mobilisation of private investments and on the positive economic and societal impacts of the programme and the projects.

11 <https://www.bdva.eu/sites/default/files/VISION%20AI-PPP%20euRobotics-BDVA-Final.pdf>

12 https://bdva.eu/sites/default/files/MR2018_BDV_cPPP_Main%20Report_and_Annex%201_V1.0.pdf

- **The establishment of Memorandum of Understanding with other important associations and organisations**, such as NESSI, ETSI and CEN-CENELEC, ISO/EIC JTC1 SC2 coordinated by Task Force 3 Community (see Section 2.4 on Collaborations).
- **The organisation of the EBDVF edition in Helsinki and the launch of the activities for the 2020 EBDVF edition**, supported by Task Force 4 Communication (see Section 6.1.1).
- **The delivery of monthly newsletters and new marketing material**, under the guidance of Task Force 4 on Communication (see also Section 6).
- **The work on a publication on Algorithmic Transparency**, under Task Force 5 - Policy and Societal, to be finalised in 2020.
- **The publication of the paper on Data Protection in the Era of Artificial Intelligence - Trends, existing solutions and recommendations for privacy-preserving technologies.** (TF6 Technical)¹³. This paper illustrates the privacy challenges linked to Big Data and AI and describes the technical solutions available to address them today. It concludes that AI Privacy-Preserving Technologies constitute an essential element of the AI Innovation Ecosystem Enablers (Data for AI) as elaborated in the joint BDVA and euRobotics SRIDA.
- **The work on the Strategic Research Agenda of the EuroHPC JU and on the reflection paper on the EuroHPC mission and strategy for the next decade**, under TF6.3 - Big Data and HPC and the delivery of a Big Data and HPC focused session during the EBDVF 2019 in Helsinki.
- **The publication of the paper titled "Towards a European data sharing space - Enabling data exchange and unlocking AI potential"** (Horizontal to all Task Forces)¹⁴. This paper extrapolates current trends to highlight opportunities in Europe for industry, private users (citizens), research and academia and the public sector, over the next decade. It also identifies and analyses foreseen technical and non-technical challenges (business, organizational, legal compliance and skills-related challenges) as well as specific challenges that need to be tackled in a coordinated manner at both national and regional levels. An update of this paper is under preparation.
- **The update of the paper on Big Data Challenges In Smart Manufacturing Industry**¹⁵, which was published in June 2020 and constitutes a review of the first paper published in 2018¹⁶ by the TF7.SG6 on Smart Manufacturing and Industry.
- **The publication of a paper on AI and Healthcare**, to be released in 2020 by the TF7.SG2 on Healthcare.
- **The recognition of BDVA and the BDV PPP as a committed member of the European Digital Skills and Jobs Coalition** (Task Force 9 Skills and Education)¹⁷.

2.3.3 New task forces and updates

On the 16th of December 2019, **the Board of Directors of BDVA approved the creation of a new sub-group under TF7.Applications focused on AI and Big Data in the Financial Sector**. The new sub-group is led by GFT Italy, BDVA full member and coordinator of the INFINITECH project (the BDV PPP flagship project focused on the financial sector)¹⁸, and is co-led by ABI Lab, the Banking Research and Innovation Centre, founded and promoted by the Italian Banking Association (ABI).

During 2019 and early 2020, the Board of Directors also approved the extension of the mandate of TF7.SG 8 initially focused Smart Cities only and now focusing on **Smart Governance and Smart Cities** in order to

13 <http://www.bdva.eu/?q=task-force-6>

14 http://www.bdva.eu/sites/default/files/BDVA%20DataSharingSpace%20PositionPaper_April2019_V1.pdf

15 https://www.bdva.eu/sites/default/files/BDVA_SMI_Whitepaper_2020.pdf

16 <http://www.bdva.eu/node/1002>

17 <http://www.bdva.eu/node/1491>

18 <https://www.infinitech-h2020.eu/>

cover the full potential of Big Data for public sector overall. **Under Task Force 1 - Programme**, the Board of Director also established a new sub-group on **Data Sharing Spaces (TF1.SG7)**, which crystallises some of the activities already ongoing within the Task Force¹⁹. The newly established sub-group rapidly launched a survey on Data Sharing to understand the predominance of data sharing and exchange activities, the value that such practices bring to organisations and the difficulties faced by stakeholders²⁰. The survey will gather insights into what needs to be done to increase participation in data sharing, in view of the ever increasing need of greater access to data and will provide input for the second version of the position paper titled "*Towards a European Data Sharing Space*" (see above).

Finally, the Big Data and HPC sub-group was moved under TF6 Technical, without any impact on its mandate.

2.3.4 Activity Group meetings

BDVA organises regular Activity Group meetings for its members, sometimes also open to external participants and notably BDV cPPP projects participants and coordinators. Activity Group meetings are specifically **a container for all Task Forces and are organised every six weeks**. These events can gather up to 80 people and normally take place in Brussels, at the association's premises, but sometimes they are combined with major events taking place elsewhere (i.e. PPP Summit in Riga, see Section 6.1.2).

The activity group meetings have each time a different agenda which can include plenary sessions and parallel sessions. They allow members to meet and discuss about various topics such as the Strategic Research and Innovation Agenda (SRIA) development and updates, Task Forces activities, research and innovation priorities at the EU level and policy initiatives or even projects and new developments in the field of Big Data and AI. They are also used by BDVA members to pitch about their R&I activities and meet with potential project partners during specific brokering sessions and coffee breaks. As such, they constitute key networking opportunities for the community.

In 2019, BDVA organised six Activity Group meetings during the months of January, February, May, June, October and December. An activity group was also organised in February 2020, immediately before the adoption of travel restrictions linked to COVID19. Due to these restrictions and because these events require the physical presence of participants, no other activity group could be organised in the first half of 2020. Nonetheless, several other online activities were foreseen to keep the community engaged (see section 6.1 on webinars and online activities in particular) and online activity groups are planned for the second half of 2020. In particular, an online Activity Group meeting focusing on the update of the SRIDA has been organised for the 10th of July²¹.

The table below summarises the information concerning each of these events and provides some indications about their contents and attendance.

Activity group number, date and location	Topics on the agenda	Number of participants
AG30 - 23rd of January 2019, Brussels	<ul style="list-style-type: none"> Data Platforms, Data spaces, towards a European Data Space AI coordinated Plan Sessions for i-Spaces, Media, Telco, SMI Plenary including topics such as: TF5-Algorithm transparency, BDVA community Survey, EuroHPC, WP2018-20 Pitching and brokering 	71

19 <https://www.bdva.eu/node/1441>

20 <http://bdva.eu/DataSharingPracticesSurvey>

21 <https://bdva.eu/node/1535>

Activity group number, date and location	Topics on the agenda	Number of participants
AG 31 - 27th of February 2019, Brussels	<ul style="list-style-type: none"> Welcome to new PPP projects: BDVA members – PPP projects collaboration Data Platforms, Data spaces, towards a European Data Space AI-PPP SRIA AI-Data Standards Data Privacy Paper Pitching and brokering. 	57
AG32 - 16th of May 2019, Brussels	<ul style="list-style-type: none"> AI-PPP SRIA H2020 WP2019-20 BDVA Activities 2019 	45
AG33 - 26th-28th of June 2019, Riga	<ul style="list-style-type: none"> Event combined with the PPP Summit in Riga, fully integrated in the Summit's agenda 	N/A
AG34 - 2nd of October 2019, Brussels	<ul style="list-style-type: none"> SRIDA for a European AI, Data and Robotics PPP: First deep dive of cross-sectorial AI Technology Enablers Data and AI Standards and Interoperability Pitching and Brokering H2020 WP2019-20 Technical committee BDV cPPP BDVA activities 2019 TF7.SMI session TF5 (launch of Data Governance activity) 	35
AG35 - 11th and 12th of December 2019, Brussels	<ul style="list-style-type: none"> Data Platforms, Data spaces, towards a European Data Space AI coordinated Plan Sessions for i-Spaces, Media, Telco, SMI Plenary including topics such as: TF5-Algorithm transparency, BDVA community Survey, EuroHPC, WP2018-20 Pitching and brokering 	41
AG36 - 26th-27th of February 2020, Brussels	<ul style="list-style-type: none"> Update in the AI, Data and Robotics Partnership (informative) (Plenary topic) Input to HE WP 2021/22 (TF6 all subgroups, TF7 all subgroups, TF5, TF8, TF1 all subgroups) (workshops and plenary) Data Vision (lead by TF1. including data life cycle and stack) (TF6 all subgroups, TF7 all subgroups, TF5, TF8, TF1 all subgroups) (workshops and plenary) WP 2020 – Calls of interest for members (plenary TF1.SG6) TF7.SMI workshop TF6.SG6 Standards (plenary) TF5 session (finalise recommendations algorithm transparency paper) Pitching, networking and brokering 	49

Table 5 - Activity Group Meetings (2019-early 2020)

Activity group meetings are amongst the most successful events organised by BDVA, with 50 members attending in average and travelling to Brussels, and they receive continuous positive feedback from the community thanks to the breadth of topics covered and their interactivity.

2.4 Collaborations

2.4.1 Strengthened relations with partner associations

Over the years, BDVA has established several partnerships with relevant organisations and initiatives at the European and international level. Particularly, BDVA has well-established relationships with the following

organisations: **EIT Digital**, **euRobotics**, the **European Cyber Security Organisation (ECSO)**, the **Alliance for Internet of Things Innovation (AIOTI)**, **Sustainable Process Industry through Resource and Energy Efficiency (SPIRE)**, the **European Factories of the Future Research Association (EFFRA)**, **European Digital SMEs Alliance** and the **DataSci Awards**.

The exchanges and collaborations with all these associations and initiatives have been very intense in 2019 and 2020 but particularly with EuRobotics, EIT Digital, ECSO, AIOTI, SPIRE, the Digital SME Alliance, EFFRA and DataSci and AI Awards.

- The collaboration with **EuRobotics** developed significantly due to the common work on the Strategic Research, Innovation and Deployment Agenda for the new Big Data, AI and Robotics Partnership. BDVA and EuRobotics signed a Memorandum of Understanding already back in 2018 and from there the collaboration grew closer and closer in view of establishing the new PPP. A more detailed description of this collaboration and its key steps can be found in Section 4.
- BDVA continues to work very closely with **EIT Digital** and especially through the BDVe CSA project, in which EIT Digital is involved as a partner and contributes to several activities on outreach and skills development.
- BDVA and **ECSO** have organised many exchanges in the course of 2019 and early 2020 and participated in each other activities on a very regular basis, both in view of the new AI, Data and Robotics Partnership (see Section 4) and outside this context (i.e. for the development of BDVA paper on Data Protection and Artificial Intelligence, see next section).
- BDVA relation with **AIOTI** also strengthened due to the work on the new partnership and thanks to the joint organisation of sessions and panels during their respective annual events, IoT Forum 2019 (Aarhus, DK) and the EBDVF2019 (Helsinki, FI).
- **EFFRA** and BDVA organised several joint workshops (i.e. the AI for Manufacturing Workshop in July 2019) and met regularly during this reporting period. The two associations also collaborated closely on both versions of the updated paper on Big Data Challenges in Smart Manufacturing²² (see section on publications).
- Finally, BDVA supported the organisation of the **DatSci and AI awards** 2019 edition²³, which is a competition for teams and individuals within the Data Science & Artificial Intelligence Community. BDVA speakers provided keynotes, and two members were part of the jury.

Other collaborations which have been particularly active in 2019 and early 2020 are those with **SPIRE and Digital SME Alliance**, although these are not formalised yet by a written agreement (MoU or similar). BDVA has been invited regularly to events organised by these associations and participates in common projects (e.g.. the EUHubs4Data with Digital SME Alliance).

2.4.2 New collaborations

To exploit additional synergies and increase the impact of BDVA work, new collaborations were established in 2019 and early 2020.



On November 27th 2019, the Big Data Value Association (BDVA) and the Networked European Software and Services Initiative (NESSI) have signed a Memorandum of Collaboration (MoC) in Brussels. This MoC expresses the intention of BDVA and NESSI to strengthen collaboration in the areas of Technology roadmap development. In particular the scope of this collaboration includes:

²² <http://www.bdva.eu/SMIpaper2020>

²³ <https://www.datsci.ai/#/>

- Shaping the European Agenda by joining forces in developing strategic roadmaps, papers, pilots and other joint activities to further research, innovation and value creation using software and software technologies and data, big data and AI technologies in the Digital Economy.
- Work jointly on the identification of research, innovation and deployment challenges and opportunities for software and services in AI systems, including software architectures and software engineering methodologies for AI systems.
- Support in a joint manner, and in collaboration with the European Commission, initiatives to improve advanced digital skills and expand the digitally skilled labour force in those areas of common interest.



Discussions for the development of a Memorandum of Understanding with ETSI started in summer 2019 and resulted in the signature of a MoU during the month of November of the same year. The MoU defines five key areas of mutual Interest and notably:

- exchanging information (including technical, technological and regulatory information) and experience in the field of Big Data, Artificial Intelligence and standardization, that are of mutual interest;
- inviting each other to contribute to existing dedicated groups which have been established on Big Data and/or Artificial Intelligence;
- contributing to relevant activities in the fields of Big Data, AI and standardization, which may include mutual consulting in the requirements phase of development of standards;
- informing each other of relevant events they organise (such as with regard to the publication of policy documents and initiation of public consultation procedures and other public events);
- meeting each other in order to exchange views on strategic level matters, informing on ongoing developments and cooperating on policy or technical matters of common interest to both Parties.

The preparation of a Memorandum of Understanding between CEN-CENELEC and BDVA started in 2019 when the two associations agreed on the objective of strengthening collaboration for the establishment of trustworthy AI within the EU. Through this MoU, BDVA and CEN CENELEC committed to establishing regular forms of collaboration and formalising knowledge sharing and exchange. The aim of the agreement is to contribute to enhancing the industry and meet stakeholders needs to maintain Europe's competitiveness through digitalisation. With the new Big Data, AI and Robotics partnership bringing research and innovation activities closer to deployment and user uptake, joining forces with CEN CENELEC became even more Important for BDVA in order to drive standardisation efforts. The MoU signature took place in early 2020²⁴.



ISO/IEC JTC 1

ISO/IEC JTC 1/SC 42 Artificial intelligence

In April 2019, the 3rd ISO/IEC JTC 1/SC 42 committee plenary meeting voted a resolution requesting BDVA (and a short list of other organisations) to collaborate with the committee by providing input, and more specifically use cases, concerning Artificial Intelligence. The mandate of this newly established ISO committee in fact is to a) serve as the focus and proponent for JTC 1 standardisation program on Artificial Intelligence and b) provide guidance to JTC 1, IEC, and ISO committees developing Artificial Intelligence applications²⁵. To fulfill this mandate, the committee is currently working on a publication which is due in 2020 and which considers possible AI areas requiring further standardisation efforts. The collaboration between the committee and BDVA therefore helps

²⁴ <https://www.bdva.eu/node/1526>

²⁵ <https://www.iso.org/committee/6794475.html>

shaping ISO standardisation activities for the near future and nourishing the reflection concerning the needs and opportunities for standards in the AI domain. As a contributor for the committee's work and for the upcoming publication, BDVA can therefore take an active part in the current and upcoming discussion within ISO. This collaboration, together with the MoUs signed with ETSI and CEN-CENELEC and described above, shows the importance of standardisation for BDVA, in the context of Big Data and AI, and strengthens the relations of the association with key standardisation organisations and stakeholders.

In the course of 2019, BDVA also initiated collaborations with many other organisations and initiatives, mainly in the context of the new Partnership on AI, Data and Robotics. These include AI Research organisations such as **CLAIRE, EurAI and ELLIS AI** (and especially for the development of the SRIDA and Partnership Proposal) and also **5G IA, INATBA, and the 3 Industry Associations of the ECSEL Joint Undertaking (ARTEMIS, AENEAS and EPoSS)**. For more details on all these new relations, see Section 4 on the new Partnership.

2.4.3 i-Spaces

i-Spaces are **Trusted Data Incubators targeted to accelerate take up of data driven innovation in commercial sectors** like Manufacturing 4.0, Logistics, e Commerce, Media, Aerospace, Automobile, Energy, Agriculture and Agroindustry, Pharmacy; as well as in non-profit sectors (e-Government, Environment, Public Health, Smart Cities). Expected Value includes Economical, Societal as well as Environmental dimensions. These platforms host Closed as well as Open Data from Business and Public sources (language resources, geospatial data, healthcare data, economic statistics, transport data, weather data...). Data i-Spaces entities are pre-competitive and nonprofit, though proposing a sustainable business model. **Labelled i-Spaces**, beyond exchange of good practices, form a Europe-wide federation, to foster trans-boundaries data innovation. BDVA has established a process for labelling i-Spaces In the context of Task Force 1 - Programme. The full process is described on BDVA website²⁶.

As customary during the last years, the Big Data Value Association announced during the European Big Data Value Forum 2019, in Helsinki, the name of the European initiatives that have been recognized as new i-Spaces in 2019, which become members of the BDVA i-Spaces group.

During a public ceremony, representatives of the new five i-Spaces received the trophy that accredit them as relevant European Hubs for data driven innovation and experimentation. To be recognized as a BDVA i-Space, initiatives must proof demonstrable value and quality in infrastructures and technologies, provided services, projects and applications, impact to their ecosystems, and a sustainable business strategy.

ahedd.



MI Machine Intelligence Garage



UNIVERSIDAD POLITÉCNICA DE MADRID



²⁶ <http://www.bdva.eu/node/1173>

In 2019, Attica Hub for the Economy of Data and Devices (coordinated by Demokritos Center), Gemini (coordinated by Sintef), Machine Intelligence Garage (coordinated by Digital Catapult), Madrid's i-Space for Sustainability (coordinated by UPM) and LS3 DIH (coordinated by L3S Research Center and TIB) joined and complemented the 10 pre existing BDVA i-Spaces. Then ten i-Spaces which received their certification in the previous year (2018) were ICE, CINECA, Know Center, Smart Data Innovation Lab, BigDataCoE, Teralab, ITI, EGI, CeADAR and Aragon DiH. The figure below shows the

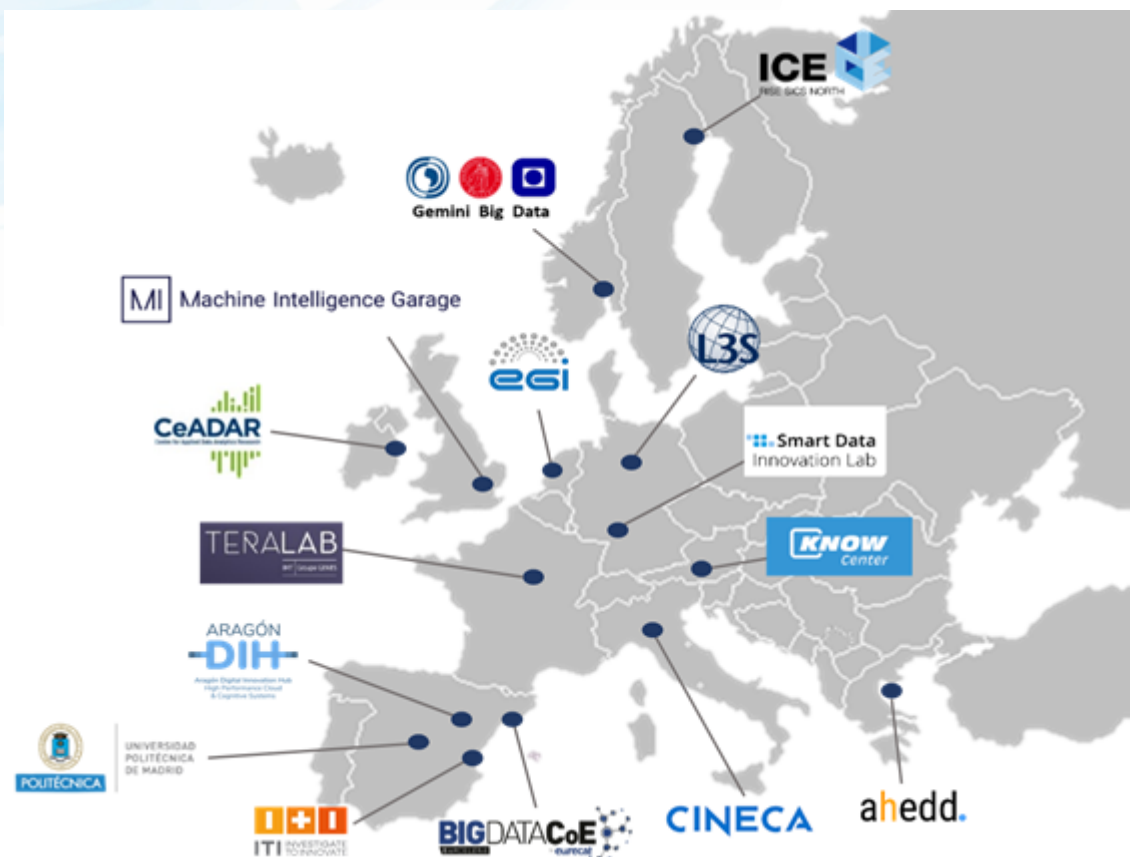


Figure 6 - Location of BDVA i-Spaces in Europe

geographical distribution of BDVA labelled i-Spaces.

In the first months of 2020, BDVA launched the 2020 labelling process which closed in June and will lead to the identification of a new batch of Trusted Data Incubators²⁷ which will come to strengthen the existing list.

It is also important to mention here that, in 2020, BDVA was awarded, together with 20 other partners, the "EUHubs4Data" project, under H2020-DT-ICT-05-2020 on Digitising and transforming European industry and services: digital innovation hubs and platforms. The objective of this project is to establish "a European federation of Big Data Digital Innovation Hubs which, based on the premise "global catalogue, local offer", will ensure access to SMEs and start-ups in their respective regional ecosystems to a global catalogue of data sources and federated data driven services, making accessible the latest developments on Data Analytics and advanced assets on Big Data to companies all across Europe, and establishing as the reference on innovation and experimentation on Big Data". This project will therefore come to strengthen BDVA work and the work of the i-Spaces and concretely builds on their efforts and service provision.

27 <http://www.bdva.eu/node/1173>

2.5 Publications

The many activities carried out by BDVA and the PPP in 2019 and briefly illustrated in this report led to the publication of several papers and contributions. An indicative list and short description of all these documents, including some papers already mentioned in other parts of this document, is provided below.

- **AI PPP Vision Paper BDVA - euRobotics (March 2019)**²⁸: this paper launched the work for the first version of the SRIDA and established the basis for the collaboration of BDVA and euRobotics on the new partnership (see also Section 3 on the new partnership).
- **AI PPP SRIDA. First version (June 2019)**²⁹ and **Second consultation release (September 2019)**³⁰: the two versions of the SRIDA looked at the opportunities and challenges for Artificial Intelligence in Europe and highlighted the elements needed to drive AI adoption in Europe. The second version included more details on the importance of collaboration for the development and uptake of AI (see also Section 3 on the new partnership).
- **BDV cPPP Monitoring Report 2018 Main Report and Annexes (July 2019)**³¹: this document provides an overview of the PPP and BDVA activities for the year 2018 and highlights their economic and social impacts (see also Section 6 on Task Forces).
- **Data Protection in the era of Artificial Intelligence (April 2019)**: this paper looks at the questions of privacy and data protection in the current Big Data landscape and offers some perspectives on the role of AI Privacy-Preserving Technologies³² (see also Section 6 on Task Forces).
- **Towards a European Data Sharing Space - Position Paper (April 2019)**³³: the paper looks at opportunities and challenges for Europe regarding data sharing and includes a list of recommendations for enhancing the data economy (see also Section 6 on Task Forces).
- **BDVA i-Spaces questionnaire labelling 2019 (April 2019)**³⁴: this document was used to collect to collect the information needed by organisations for the labelling process 2019.

In early 2020, BDVA has been working on several additional publications, some of which have already been published while others are due to be published soon, and notably:

- **BDVA response to the European AI whitepaper (May 2020)**³⁵: the document provides BDVA feedback on the European Commission Whitepaper on Artificial Intelligence “A European approach to excellence and trust” which was released in February. It welcomes the efforts of the European Commission and provides some insights on the key elements for building an ecosystem of excellence and an ecosystem of trust.
- **BDVA response to the EC Data Strategy (May 2020)**³⁶: the paper comments the contents of the European Commission’s Data Strategy “A European strategy for data”, published at the beginning of the year, and offers BDVA perspectives on competences, enablers and governance for efficient and innovative data access and use in Europe.

28 <http://www.bdva.eu/sites/default/files/VISION%20AI-PPP%20euRobotics-BDVA-Final.pdf>

29 <http://www.bdva.eu/node/1310>

30 <http://www.bdva.eu/node/1359>

31 <http://www.bdva.eu/node/1360>

32 http://www.bdva.eu/sites/default/files/BDVA%20DataSharingSpace%20PositionPaper_April2019_V1.pdf

33 http://www.bdva.eu/sites/default/files/BDVA%20DataSharingSpace%20PositionPaper_April2019_V1.pdf

34 <http://www.bdva.eu/downloads?page=1>

35 <http://www.bdva.eu/sites/default/files/BDVA%27s%20reponse%20to%20the%20European%20AI%20whitepaper%20-%20May%202020%20-%20ed1.pdf>

36

http://www.bdva.eu/sites/default/files/BDVA%27s%20response%20to%20the%20EC%20Data%20Strategy_May%202020_ed1.pdf

- **The second version of the paper on Big Data Challenges in Smart Manufacturing Industry**, led by TF7 Application - Sub-group Smart Manufacturing and published in June 2020³⁷;
- **An update of the Towards a European Data Sharing Space - Position Paper**, coordinated by TF1 Programme - Sub-group 7 European Data Sharing Spaces and due in the autumn 2020. This paper will also build on the input gathered through the Survey on Data Sharing (see Section 2.3.3 for more details).
- **A paper on AI for Healthcare** coordinated by TF7 Application - Sub-group Healthcare and due to be published in the third quarter 2020;
- **A publication on Algorithmic Transparency**, under Task Force 5 - Policy and Societal, to be finalised in 2020.
- **The third version of the SRIDA for AI, Data and Robotics partnership**, due in September 2020, and drafted in collaboration with euRobotics, CLAIRE, EurAI and ELLIS.

³⁷ <http://www.bdva.eu/SMIpaper2020>

3 THE BIG DATA VALUE PUBLIC PRIVATE PARTNERSHIP IMPLEMENTATION

3.1 The Strategic Research and Innovation Agenda

The vision, overall goals, main technical and non-technical priorities, and a research and innovation roadmap for the European Public Private Partnership (PPP) on Big Data Value are defined in the Big Data Value Strategic Research and Innovation Agenda (BDV SRIA)³⁸. This document has been regularly updated since 2014 to incorporate feedback and reflect the multi annual roadmap of the PPP. The latest version of the SRIA (v4) was released in 2017 and no update took place since. Starting from 2019 the new Strategic Research, Innovation and Deployment Agenda is produced in collaboration with other associations and looking towards the new Public Private Partnership on Big Data, AI and Robotics (see Section 4 of the present report).



3.2 Governance

The picture below shows the governance of the BDV PPP, combined with BDVA governance described in Section 2.2.

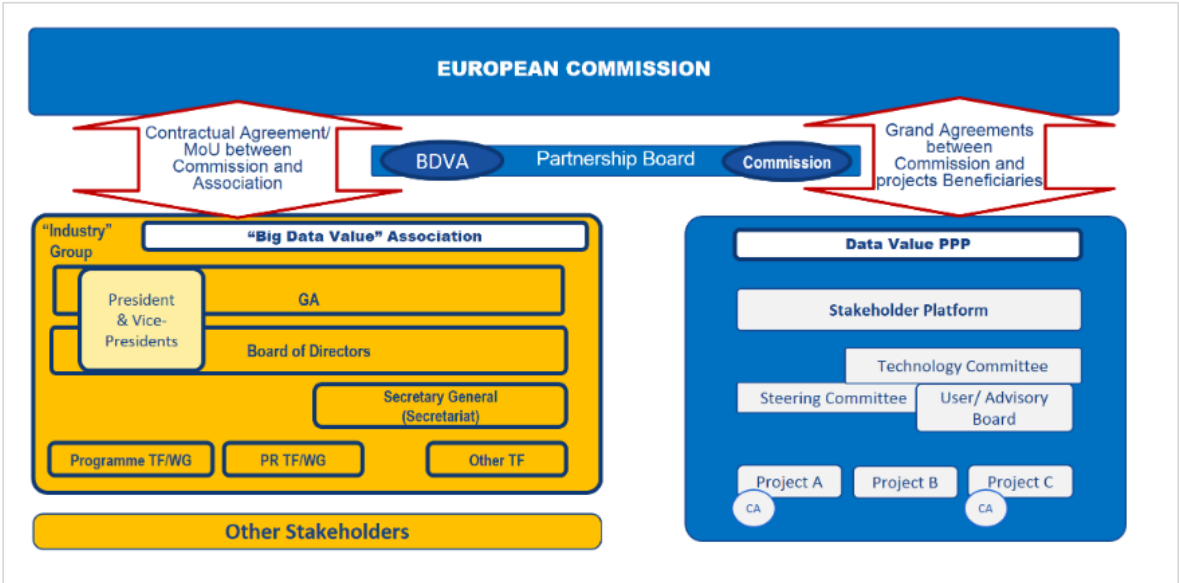


Figure 7 - Governance of the BDV PPP

As the picture suggests, the PPP is governed by a Partnership Board. The Partnership Board (PB) is the monitoring body of the cPPP formed by selected directors of the Board of the BDVA, and representatives of the European Commission. The PB meets approximately 1-2 times per year and complements this with regular bi-weekly exchanges of information. The European Commission is represented by DG Connect Directorate G (Unit G1 in particular).

38 The latest version of the SRIA can be found of BDVA website: http://bdva.eu/sites/default/files/BDVA_SRIA_v4_Ed1.1.pdf

In 2019, the PB met once (the 14th of October, in Helsinki during the EBDVF) to discuss about the status of the PPP calls for 2019, the impact of the partnership thus far and the opportunities for the future. The participants also discussed about the contents of the Monitoring Report for 2018 and early 2019 which was delivered by BDVA during the summer³⁹.

Besides the PB, the BDV PPP is also governed by a Steering Committee and a Technology Committee, coordinated by the BDVe project. In 2019, they both met twice. Two Steering Committee meetings were also organised in the first months of 2020 (June and July). Furthermore, a Communication Committee led by the BDVe project has also been established a few years ago to coordinate communication and outreach activities (see Section 6). This Committee meets on regular basis.

3.3 Implementation of the calls for proposals evaluated in 2019

Disclaimer

Despite the overall scope of this report includes the period going from beginning 2019 to mid-2020, the following section only reports on the calls for proposals evaluated in 2019 and not on those evaluated during the first months of 2020. The latter will be covered in the full Monitoring Report which will be delivered in 2021.

The Work Programme 2018-2020 published on 27th October 2017, called in 2019 for 3 topics dedicated to the Big Data Value cPPP: ICT-11, ICT-12 and ICT-13. In 2019, three calls were evaluated covering the following topics:

- H2020-ICT-2018-3 (ICT-11b): HPC and Big Data enabled Large-scale Testbeds and Applications
- H2020-ICT-2019-2 (ICT-13): Supporting the emergence of data markets and the data economy
- H2020-DT-2019-1 (DT-ICT-11): Big data solutions for energy

The evaluation criteria were standard (no specific criteria applied) and they are described in the Chapter H of the general annexes to the H2020 WP2018-20⁴⁰. The evaluation committees involved:

- 14 experts (of which 7 women) for ICT-11b;
- 27 experts (of which 13 women) for ICT-13;
- 20 experts (of which 10 women) for DC ICT-11.

The average time-to-grant (TTG) for the three calls was of 215,6 days (compared to the maximum TTG of 245 days).

The table below provides quantitative information related to the duration of the evaluation period, the number of Grant Agreements signed, the outcome of the calls in terms of requested budget and funding from the European Commission. **The total EC contribution to the 14 funded projects is 108,8 Million euros.**

39 <http://www.bdva.eu/MonitoringReport2018>

40 HORIZON 2020 WORK PROGRAMME 2018-2020 19. General Annexes, https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga_en.pdf

Call Reference	Publication date	Evaluation period	Nr of topics	Nr of GAs signed	Indicative budget [max funding] (M€)	Outcome of the call ⁴¹ (M€)	Funding	
							EU contribution (rounded figures)	Private/cPPP contribution (rounded figures)
H2020-ICT-2018-3 (ICT-11b)	26/7/2018	21-24/1/2019	1	2	40 M	246,2 M	32,3 M	8,8 M
H2020-ICT-2019-2 (ICT-13)	16/10/2018	3-7/6/2019	1	9	48 M	283,4 M	48,6 M	11,4 M
H2020-DT-2019-1 (DT-ICT-11)	16/10/2018	11-14/6/2019	1	3	30 M	174,5 M	28,0 M	6,1 M

Table 6 - cPPP calls for proposals evaluated in 2019

Each of the tables below further details the number of submitted proposal, eligible proposals and above threshold/selected for funding proposals for each of the abovementioned calls.

Call Reference	Submitted proposal			Evaluation results		Success rate%
	Submitted proposals	Eligible proposals	% of retained	Above threshold	Selected for funding	
H2020-ICT-2018-3 (ICT-11b)	18	18	100%	11	2	11.1%

Table 7 - Evaluation results ICT-11b

Call Reference	Submitted proposal			Evaluation results		Success rate%
	Submitted proposals	Eligible proposals	% of retained	Above threshold	Selected for funding	
H2020-ICT-2019-2 (ICT-13)	54	54	100%	34	9	16.6%

Table 8 - Evaluation results ICT-13

	Submitted proposal	Evaluation results	Success rate%
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⁴¹ Total amount requested in all eligible proposals

Call Reference	Submitted proposals	Eligible proposals	% of retained	Above threshold	Selected for funding	
H2020-DT-2019-1 (DT-ICT-11)	19	19	100%	10	3	15.7%

Table 9 -Evaluation results DT-ICT-11

For the 2019 ICT-11b call, a total of 458 organisations applied, amongst which 108 Small and Medium Enterprises. The table below illustrates the number of participants in the ICT-11b proposals, funded projects per type of organisations and related success rates.

Type participant	Nr of participants in the Proposals	Nr of participants in the funded Projects	Participants success rate	% per participant type
Public Bodies	14	0	0%	0%
Research organisations	81	10	12.3%	14.9%
Higher or secondary education	75	8	10.6%	11.9%
Private for profit (excl. education)	208	35	16.8%	52.2%
Others	80	14	17.5%	20.8%
Total	458	67	16.6%	-
SMEs	108	12	11.1%	17.9%

Table 10 - ICT-11b

For the 2019 ICT-13 call, the total number of participants in the proposals was of 727, including 222 SMEs. The table below indicates the success rate per type of participants for this call.

Type participant	Nr of participants in the Proposals	Nr of participants in the funded Projects	Participants success rate	% per participant type
Public Bodies	17	2	11.7%	1.7%
Research organisations	134	19	14.1%	16.6%
Higher or secondary education	99	18	18.1%	15.7%
Private for profit (excl. education)	371	57	15.3%	50%
Others	103	18	17.4%	15.7%
Total	727	114	15.6%	-
SMEs	222	35	15.7%	30.7%

Table 11 - ICT-13

For the DC-ICT-11 call the number of participants amounted to 371, out of which 93 were SMEs. Their success rate and the distribution of participants in the funded projects is shown in the table below.

Type participant	Nr of participants in the Proposals	Nr of participants in the funded Projects	Participants success rate	% per participant type
Public Bodies	6	2	33.3%	3.5%
Research organisations	63	10	15.8%	17.8%
Higher or secondary education	54	6	11.1%	10.7%
Private for profit (excl. education)	183	27	14.7%	48.2%
Others	63	11	17.4%	19.6%
Total	371	56	15%	-
SMEs	93	11	11.8%	19.6%

Table 12- DT-ICT-11

From the total contribution of the EC to the calls 2019 (**108,8 Million Euros**), 50.5 % goes to private for-profit organisations, 15,3 % to High Education Institutions, 21,0 % to research institutions, 1 % to Public bodies, and 11,9% to others. **22,9 %** of the original EU allocated budget in total goes to SMEs (24,9 Millions €).

The tables below provide a breakdown of the percentage of EU contribution per type of participants and per call.

Type participant	EU contribution	% EU Contribution
Public Bodies	0 €	0%
Research organisations	6 749 597,50 €	20,9%
Higher or secondary education	3 861 965,63 €	11,9%
Private for profit (excl. education)	20 377 094,51 €	63,1%
Others	1 304 375 €	4,0%
Total	32 293 032,64 €	
SMEs	3 861 375 €	11,9%

Table 13 - ICT-11b - funded proposals

Type participant	EU contribution	% EU Contribution
Public Bodies	422 500 €	0,8%
Research organisations	10762810,5 €	22,1%
Higher or secondary education	9.286.812,50 €	19,1%
Private for profit (excl. education)	22567909,9 €	46,4%
Others	5.515.325,00 €	11,3%
Total	48 555 357,9 €	
SMEs	13 618 746,38 €	28,0%

Table 14 - ICT-13 funded proposals

Type participant	EU contribution	% EU Contribution
Public Bodies	711 500 €	2,5%
Research organisations	5 441 812,50 €	19,4%
Higher or secondary education	3 538 780 €	12,6%
Private for profit (excl. education)	12 053 983,50 €	43,1%
Others	6 205 682,50 €	22,2%
Total	27 951 758,50 €	
SMEs	7 436 800,75 €	26,6%

Table 15 - DT-ICT-11 funded proposals

The ratio of BDVA members participating in the calls funded in 2019 was around 20% in the number of organisations and 26% in the funding. Participation of BDVA members was higher in the ICT13 call (around 25%) than in the ICT11b call (14,9%) and in the DT-ICT-11 call (19,6%). The differences in terms of participation in the calls for BDVA members are partially reflected in the funding proportion (31% for the ICT13 call, 23% in the ICT11b call and 23% in the DT-ICI-11 call).

When comparing the results of the 2019 calls with what happened in the previous years it emerged that:

- The level of investments of the European Commission reached a record in 2019 (from 69,9 M€ in 2016, 88,9 M€ in 2017, to 42,5 M€ in 2018 and 108,8 M€ in 2019) with total of public investments by end of 2019 of 310,1 M€.
- SMEs proportion of participants and proportion of funding remained quite stable. SMEs represented 21% of all participants in 2017, 25,3% in 2018 and 22,7% in 2019. They obtained 22,5% of the funding in 2017, 25,3% in 2018 and 22,9% in 2019.⁴²

3.4 Portfolio of BDV PPP funded projects

Currently, there are more than 40 active projects under the BDV PPP, covering a wide range of technologies and of industrial application areas (from Finance to Retail and from Healthcare to Utilities). The table below provides an analysis of the project portfolio per type of mechanisms defined by the SRIA and per call. It shows the type of projects which have been funded over the years and supports the analysis provided in Section 3.5 concerning the achievement of the goals of the PPP.

⁴² These numbers do not include the cascade funding allocated to SMEs through the Data incubators Data-Pitch and EDI.

SRIA Mechanism	WP Topic	Calls 2016	Calls 2017	Calls 2018	Calls 2019
i-Spaces	ICT-14-2016-2017	<p>EW-Shop: Supporting Event and Weatherbased Data Analytics and Marketing along the Shopper Journey</p> <p>AEGIS: Advanced Big Data Value Chain for Public Safety and Personal Security</p> <p>QROWD: Because Big Data Integration is Humanly Possible</p> <p>FashionBrain: Understanding Europe's Fashion Data Universe</p> <p>euBusinessGraph: Enabling the European Business Graph for Innovative Data Products and Services</p> <p>SLIPO: Enabling the European Business Graph for Innovative Data Products and Services</p> <p>BigDataOcean: Exploiting Ocean's of Data for Maritime Applications</p> <p>Data Pitch: Accelerating data to market (INCUBATOR)</p>	<p>BODYPASS: API-ecosystem for crosssectorial exchange of 3D personal data</p> <p>Fandango: FAke News discovery and propagation from big Data ANalysis and artificial intelliGence Operations</p> <p>ICARUS: Aviation-driven Data Value Chain for Diversified Global and Local Operations</p> <p>TheyBuyForYou: Enabling procurement data value chains for economic development, demand management, competitive markets and vendor intelligence</p> <p>Lynx: Building the Legal Knowledge Graph for Smart Compliance Services in Multilingual Europe</p> <p>Cross-CPP: Ecosystem for Services based on integrated Cross-sectorial Data Streams from multiple Cyber Physical Products and Open Data Sources</p> <p>EDI: European Data Incubator (INCUBATOR)</p>	N/A	N/A
Lighthouse projects	ICT-15-2016-2017 ICT-11-a 2018 (Associated projects)	<p>DataBio: Datan-Driven Bioeconomy</p> <p>TT: Transforming Transport</p>	<p>BOOST 4.0: Big Data Value Spaces for COmpetitiveness of European COnnected Smart FacTories 4.0</p> <p>BigMedilytics: Big Data for Medical Analytics</p>	<p>Deep-Health: Deep Learning and HPC to Boost Bio-medical applications for Health</p> <p>LEXIS: Large-scale EXecution for Industry and Society</p> <p>CYBELE: Fostering precision agriculture and livestock farming through secure access to large-scale HPC-enabled ..</p> <p>EVOLVE: HPC and Cloud-enhanced Testbed for Extracting Value from Diverse Data at Large Scale</p>	N/A

SRIA Mechanism	WP Topic	Calls 2016	Calls 2017	Calls 2018	Calls 2019
	H2020-ICT-2018-3 (ICT-11b)	N/A	N/A	N/A	<p>IoTwinS: Distributed Digital Twins for industrial SMEs: a big-data platform</p> <p>Infinitech: Tailored IoT & BigData Sandboxes and Testbeds for Smart, Autonomous and Personalized Services in the European Finance and Insurance Services Ecosystem</p>
	DT-ICT-11-2019	N/A	N/A	N/A	<p>PLATOON: Digital PLATform and analytic TOOLs for eNergy</p> <p>The BD4OPEM: Big Data for OPen innovation Energy Marketplace</p> <p>SYNERGY: Big Energy Data Value Creation within SYNergetic enERGY-as-a-service Applications through trusted multi-party data sharing over an AI big data analytics marketplace</p>
Cooperation and Coordination projects	ICT-17.a	BDVe: Big Data Value ecosystem	N/A	N/A	N/A
	ICT-17.b	e-Sides: Ethical and Societal Implications of Data Sciences	N/A	N/A	N/A
	ICT-17.c	N/A	N/A	Data Market Services: Supporting the European data market providing free support services to data-centric SMEs and start-ups	N/A
Technical projects	ICT-16-2017 ICT-12-2018	N/A	<p>BigDataGrapes: Big Data to Enable Global Disruption of the Grapevine-powered Industries</p> <p>BigDataStack: High-performance data-centric stack for big data applications and operations</p> <p>CLASS: Edge and CLOUD Computation: A Highly Distributed Software Architecture for Big Data Analytics</p>	<p>CloudButton: Serverless Data Analytics Platform</p> <p>ELASTIC: A Software Architecture for ExtremeScale Big-Data Analytics in Fog Computing Ecosystems</p> <p>EXAMODE: EXtreme-scale Analytics via Multimodal Ontology Discovery & Enhancement</p>	N/A

SRIA Mechanism	WP Topic	Calls 2016	Calls 2017	Calls 2018	Calls 2019
			<p>E2Data: European Extreme Performing Big Data Stacks</p> <p>I-BiDaaS: Industrial-Driven Big Data as a SelfService Solution</p> <p>Track and Know: Big Data for Mobility Tracking Knowledge Extraction in Urban Areas</p> <p>TYPHON: Polyglot and Hybrid Persistence Architectures for Big Data Analytics</p>	<p>ExtremeEarth: From Copernicus Big Data to Extreme Earth Analytics</p> <p>INFORE: Interactive Extreme-Scale Analytics and Forecasting</p> <p>SmartDataLake: Sustainable Data Lakes for Extreme-Scale Analytics</p>	
	ICT-18-2016 ICT-13 b - 2018	<p>SODA: Scalable Oblivious Data Analytics</p> <p>MH-MD: My Health - My Data</p> <p>SPECIAL: Scalable Policy-aware linked data architecture for privacy, transparency and compliance</p>	N/A	<p>Safe-SEED: Safe Data Enabled Economic Development</p> <p>MUSKETEER: Machine learning to augment shared knowledge in federated privacy-preserving scenarios</p> <p>MOSAICROWN: Multi-Owner data Sharing for Analytics and Integration respecting Confidentiality and Owner control</p>	
	ICT-17.b	N/A	DataBench: Evidence Based Big Data Benchmarking to Improve Business Performance	N/A	N/A

SRIA Mechanism	WP Topic	Calls 2016	Calls 2017	Calls 2018	Calls 2019
Data platforms	ICT-13-2019	N/A	N/A	N/A	<p>SmashHIT: Smart dispatcher for secure and controlled sharing of distributed personal and industrial data</p> <p>KRAKEN: Brokerage and Market Platform for personal data</p> <p>PIMCITY: building the next generation personal data platforms</p> <p>TRUSTS: Trusted Secure Data Sharing Spaces</p> <p>i3-MARKET: Intelligent, Interoperable, Integrative and deployable open source MARKETplace with trusted and secure software tools for incentivising the industry data economy</p> <p>DataVaults: Persistent Personal Data Vaults Empowering a Secure and Privacy Preserving Data Storage, Analysis, Sharing and Monetisation Platform</p> <p>The FSM: the Food Safety Market: an SME-powered Industrial data platform to boost competitiveness of European Food Certification</p> <p>OpertusMundi: A Single Digital Market for Industrial Geospatial Data Assets</p> <p>DataPorts: A Data Platform for the Cognitive Ports of the Future</p>

It is worth mentioning here that the Mechanism "Data Platform" presented in the table has been included in the latest version of the SRIA (version 4⁴³) because considered useful to achieve the PPP objectives but it is not an official H2020 instrument. As such, it is not explicitly mentioned in the calls.

A full analysis of the outcomes and impacts of these projects will be provided in the next PPP Monitoring Report due in 2021⁴⁴.

3.5 Achievement of the goals of the cPPP

According to the Big Data Value PPP SRIA v4⁴⁵ the programme will develop the European data ecosystem in distinct phases of development, each with a primary theme. The three phases are:

- Phase I: Establish the ecosystem (governance, i-Space, education, enablers) and demonstrate the value of existing technology in high-impact sectors (Lighthouses, technical projects) (Work Programme WP 16–17).
- Phase II: Pioneer disruptive new forms of Big Data Value solutions (Lighthouses, technical projects) in high-impact domains of importance for EU industry, addressing emerging challenges of the data economy (WP 18–19).
- Phase III: Develop long-term ecosystem enablers to maximise sustainability for economic and societal benefit (WP 19–20).

The cPPP goals achieved are analysed based on the defined roadmap. Year 2019 lays between phase II and phase III so the progress of the PPP is assessed considering objectives of both phases.

Phase II: Pioneer disruptive new forms of Big Data Value solutions (Lighthouses, technical projects) in high impact domains of importance for EU industry, addressing emerging challenges of the data economy (WP 18–19). This second phase is meant to build on the foundations established in Phase I and has a primary focus on Research and Innovation (R&I) activities to deliver the next generation of Big Data Value solutions. Although many projects implementing phase II started in 2019 (or early 2020) and it might be too early for making a final judgment, there are some activities from 2019 which already supported the implementation of this phase.

Expected cPPP activities and outcomes for WP2018-19 according to BDV cPPP SRIA / Multi-Annual roadmap	Achievements
Supporting the emergence of the data economy with a particular focus on accelerating the progress of SMEs, start-ups and entrepreneurs, as well as best practices and standardisation (ICT-13-c).	<ul style="list-style-type: none"> • 15 labelled BDVA i-Spaces providing data experimentation and data incubation capabilities for SMEs. • 2 European Data incubators (EDI and DataPitch) with 47 Start-ups incubated during 2018. • The Data Market Services started in 2019 and provides support to SMEs and Standards.
Pioneering disruptive new forms of Big Data Value solutions with the Cloud and HPC or the IoT via large-scale pilot projects in emerging domains of importance for EU industry using advanced platforms, tools and test-beds (ICT11, DT-ICT-11-2019).	<ul style="list-style-type: none"> • 4 ICT-11-a-2018 projects (HPC and Big Data enabled Largescale Test-beds and Applications) funded in 2018 and started in 2019 (associated projects to the PPP). • 2 ICT-11-b projects started in 2019 and cooperation already established. • 2 additional projects selected in 2019 for IoT-Big Data (ICT11-b-2018)⁷

43 https://bdva.eu/sites/default/files/BdVA_SRIA_v4_Ed1.1.pdf

44 See latest version from July 2019 (covering 2018 and beginning of 2019) here: https://bdva.eu/sites/default/files/MR2018_BDV_cPPP_Main%20Report_and_Annex%201_V1.0.pdf

45 And Multi-Annual roadmap version 2017

	<ul style="list-style-type: none"> Emerging domains of importance for EU industry addressed under the above-mentioned calls (energy, finance, healthcare...)
Tackling the next generation of Big Data research and innovation challenges for extreme-scale analytics (ICT-12-a).	<ul style="list-style-type: none"> 6 technical projects selected in 2018 (started in 2018) with focus on extreme-scale analytics. From the running projects in 2018 there is a clear trend to focus on technical contributions in the areas of “Data Analytics” and “Data Processing Architectures”, thus supporting the explanation that a solid base of “Data Management” solutions will enable analytics and processing innovations.
Addressing ecosystem roadblocks and inhibitors to the take up of Big Data Value platforms for data ecosystem viability, including platforms for personal and industrial data (ICT-13).	<ul style="list-style-type: none"> 3 projects selected for funding in 2018 (started in 2019) to advance the state of the art in the scalability and computational efficiency of methods for securing desired levels of privacy of personal data and/or confidentiality of commercial data. Call for proposals for ICT-13-a for setting up and operating platforms for secure and controlled sharing of “closed data” (proprietary and/or personal data) closed in April 2019 and 3 new projects started during the year.
Providing programme support (continuing), facilitating networking and cooperation among ecosystem actors and projects, and promoting community building between BDV, Cloud, HPC and IoT activities (ICT-12-b).	<ul style="list-style-type: none"> BDVA has built strong collaborations with CLAIRE, EurAI, ELLIS AI, ETP4HPC (for HPC), AIOTI (for IoT), EFFRA, euRobotics, SPIRE, ECSO, European Digital SME Alliance, DataSci Awards. BDVA signed MoUs with Networked European Software and Services Initiative (NESSI), CEN-CENELEC, ETSI and 3rd ISO/IEC JTC 1/SC 42 committee BDVA is a private member of the EuroHPC Joint Undertaking. BDVe project supports collaborations.

Phase III: Develop long-term ecosystem enablers to maximise sustainability for economic and societal benefit (WP 19–20). This phase started in late 2019 and will continue until the end of the cPPP. As this phase just started the analysis can only be incomplete. Some ideas of possible achievements are provided below.

Expected cPPP activities and outcomes for WP2018-19 according to BDV cPPP SRIA / Multi-Annual roadmap	Achievements
Sowing the seeds for long-term ecosystems enablers to ensure self-sustainability beyond 2020 (ICT-13)	<ul style="list-style-type: none"> Launch of 9 ICT-13 projects under the mechanisms of Data Platform, as defined by the SRIA. These projects are very relevant from the perspective of the new EU Data Strategy and in order to establish the sectorial EU data spaces which are planned. The projects will also help establishing the link with the future AI, Data and Robotics Partnership. Organisation of an online workshop on the Role of Data Innovation Spaces and Data Driven Innovation Hubs in the European digital transformation. The event addresses the question of sustainability and of the links between the Horizon 2020 initiatives (i.e. i-Spaces) and the Horizon Europe and Digital Europe Programme new mechanisms (i.e. Testing and Experimentation Facilities, European Digital Innovation Hubs).
Creating innovation projects within a federation of i-Spaces (European Digital Innovation Hubs for Big Data) to validate and incubate innovative Big Data Value solutions and business models (DT-ICT-05-2020)	<ul style="list-style-type: none"> Launch of 3 new energy related projects under DT-ICT-11. A full analysis of the projects that bring together i-Spaces and data incubators will be part of the full Monitoring Report on 2020 activities due in 2021.
Ensuring continued support for technology outputs of PPP (Lighthouses, R&I, CSA), including non-technical aspects (training) beyond 2020 (i.e. Open Source Community, Technology Foundation)	<ul style="list-style-type: none"> The BDVe project will deliver shortly an exploitation plan which hands over many important activities to BDVA. The association will continue to support the ecosystem on technical and non-technical aspects beyond 2020.

Expected cPPP activities and outcomes for WP2018-19 according to BDV cPPP SRIA / Multi-Annual roadmap	Achievements
	<ul style="list-style-type: none"> • BDVA is strongly engaged in the discussions concerning the future AI, Data and Robotics Partnership and the strategy for the EuroHPC. The association has also already established many new collaborations for strengthening the impact of the PPP's outputs beyond 2020 (i.e. by partnering with standardisation associations).
<p>Establishing a Foundation for European Innovation Spaces with a charter to continue collaborative innovation activity beyond 2020, in line with the concept of European Digital Innovation Hub for Big Data</p>	<ul style="list-style-type: none"> • Launch of the EUHubs4Data project which will set up a European federation of Big Data Digital Innovation Hubs (DIHs), with the ambition of becoming a reference instrument for data-driven cross-border experimentation and innovation, and support the growth of European SMEs and start-ups in a global Data Economy. • Organisation of an online workshop in June on the Role of Data Innovation Spaces and Data Driven Innovation Hubs in the European digital transformation (see above). • Continued efforts of the Data Incubators projects to deliver results.
<p>Liaising with private funding (including Venture Capital) to accelerate entry into the market and socio-economic impacts, including the provision of ancillary services to develop investment-ready proposals and support scaling for BDV PPP start-ups and SMEs to reach the market</p>	<ul style="list-style-type: none"> • Private investors are a specific and very important target for the new AI, Data and Robotics Partnership. • As part of the BDVe project investors from different countries: France, Germany, Luxembourg, Spain and UK have been identified that have demonstrated interest in investing in startups focusing on the data-driven economy. Those investors have been identified through our participation in main events. BDVe is currently working on linking those investors with BDV PPP startups such as startups from European Data to reach match-making.
<p>Tackling the necessary strategy and planning for the BDV Ecosystem until 2030, including the identification of new stakeholders, emerging usage domains, technology, business and policy road-mapping activity (ICT-13)</p>	<ul style="list-style-type: none"> • Establishment of a vision paper for the new AI, Data and Robotics Partnership in March 2019, together with euRobotics. • Finalisation of a stakeholder mapping exercise to engage relevant communities in the new Partnership, especially from a sectorial perspective.

4 THE EUROPEAN PARTNERSHIP ON AI, DATA AND ROBOTICS

The work on the **European Partnership on AI, Data and Robotics** started back in 2018. At the end of that year, and notably during the ICT Conference in Vienna (5 December), BDVA signed a Memorandum of Understanding (MoU) with the euRobotics association⁴⁶, with the goal of increasing collaboration to boost AI progress in Europe⁴⁷. The MoU foresaw strengthened cooperation and common efforts between the two associations on several priority areas including:

- developing new strategic roadmaps and position papers;
- working towards maximizing benefit of the relevant AI technologies in industrial and service sectors;
- working together in pilots, demonstrators, and projects;
- facilitating standardisation.

A few days later, the European Commission published the **Coordinated Plan on Artificial Intelligence (COM(2018) 795 final)**⁴⁸, which announced **the intention to establish a Public Private Partnership on AI**, in order to increase available financing for AI in Europe and especially for start-ups and SMEs. The document called for private sector partners to commit high levels of investments and referred to the cooperation between BDVA and EuRobotics in this area as a basis to build on for the new partnership.

The launch of the Coordinated Plan and the establishment of MoU resulted in the signature of formal commitment to collaborate on the AI Partnership, signed by BDVA and euRobotics in March 2019 and taking the form of a **Joint Vision Paper**⁴⁹. The vision paper already set out the expected impact from the creation of a connected European AI ecosystem, from the alignment with EU member states and regions, and from the development of trust in AI benefiting both enterprises and citizens. It also outlined the concept of the "AI Value Chain" providing a holistic perspective on AI that encompasses the range of challenges that surround AI driven solutions from business transformation and systems development to legal and ethical issues. The Vision Paper was officially presented to the community during the European Robotics Forum 2019, in Bucharest⁵⁰.

Building on the vision laid down in this paper and on the input coming from the community and collected through workshops (notably two AI Strategic Research and Innovation Agenda Workshops organised in April and May⁵¹), BDVA and euRobotics kicked off the drafting of the **first version of the joint Strategic Research, Innovation and Deployment Agenda (SRIDA)**⁵². This document was published in June and presented during

46 <https://www.eu-robotics.net/>

47 <http://www.bdva.eu/node/1151>

48 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic, and Social Committee and the Committee of the Regions - Coordinated Plan on Artificial Intelligence (COM(2018) 795 final), 7th December, 2018, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:795:FIN>

49 Joint Vision Paper for an Artificial Intelligence Public Private Partnership (AI PPP), March 2019, <http://www.bdva.eu/sites/default/files/VISION%20AI-PPP%20euRobotics-BDVA-Final.pdf>

50 https://www.eu-robotics.net/robotics_forum/info/history/erf-2019-bucharest-romania.html?changelang=3

51 See <https://www.eu-robotics.net/eurobotics/newsroom/press/ai-strategic-research-and-innovation.html?changelang=1> and <https://www.eu-robotics.net/eurobotics/newsroom/press/second-ai-strategic-research-and-innovation-agenda-workshop.html?changelang=1>

52 <http://www.bdva.eu/sites/default/files/AI%20PPP%20SRIDA-Consultation%20Version-June%202019%20-%20Online%20version.pdf>

a public event in Brussels titled "*Joining forces to boost AI adoption in Europe*"⁵³. During the event, the keynote speaker Roberto Viola, (Director-General of the European Commission - DG CONNECT), mentioned that cross-fertilisation across three dimensions is needed to make AI a success in Europe: 1) mainstreaming AI within society, also through further public support, 2) further investing in R&I activities and 3) setting up a good policy framework. The PPP on AI clearly represents a strategic tool for the European Commission to ensure a high level of public and private investments in AI development and deployment.

This first version of the SRIDA looked at the opportunities and challenges for Artificial Intelligence in Europe and highlighted the elements needed to drive AI adoption in Europe and notably an **EU wide underpinning framework for values and policies, AI Innovation ecosystem enablers and cross-sectorial AI technology enablers**. More precisely, the document called for five main line of actions aiming at mobilising the European AI ecosystem, enhancing AI skills and acceptance, developing innovation and market enablers, guiding standards and regulation and promoting research excellence.

The document was put up for consultation: it was used to engage stakeholders in the discussion and as a basis for community building activities. Following the publication of the first SRIDA, BVDA and euRobotics started intense discussion with other existing and potential partnerships concerning horizontal technologies to seek alignment and gather their feedback. The two associations collected as much input as possible to refine the first version of the SRIDA and to produce rapidly a more advanced document.

The second version of the SRIDA, which is the latest at the time of writing, was released in September 2019. This updated version (**SRIDA "Second Consultation Release"**) includes the outcome of the stakeholder engagement efforts carried out during the summer. Key stakeholder associations (such as AIOTI, NESSI, CLAIRE, ELLIS, Humane AI, AENEAS, ECS, 5G IA, EurAI, EuroHPC, Artemis, AI4EU project and others) were directly and heavily involved in its development. This document also includes a new chapter on horizontal collaborations (see below for further details) and incorporates better this notion of collaboration by making the link between EU research communities, EU projects and EU policies.

Horizontal collaboration for the development of the Second Version of the SRIDA

"AI, data and robotics do not, in themselves, constitute complete systems of operation. To leverage the full potential of a completely digitised European Industry, an approach is needed which integrates a range of horizontal technologies"⁵⁴. Several organisations are recognised as crucial for the development of a sound Strategic Research and Innovation Deployment Agenda and these are notably those working on horizontal technologies.

- Cybersecurity - ECSO: Active engagement with Cybersecurity is a critical enabler for AI so that organisations can reliably safeguard critical infrastructure, protect sensitive information and assure business continuity. The deployment of data, robotics and AI applications is not possible without a high level of trust, and an effective Cybersecurity regime underpins the development of that trust.
- Smart networks and services - 5G IA: Smart communications will be required to provide high speed and low latency networks to be delivered by 5G infrastructure, at the same time AI will be a key enabler for cost-effective communication networks.
- Electronics, components, and systems - AENEAS, ARTEMIS-IA, and EPoSS. The combination of Nano-electronics, Embedded Intelligence and Smart Systems Integration together with AI, Data and Robotics is central to continued digitalisation that will help industries to maintain their competitive edge.

53 <https://ec.europa.eu/futurium/en/blog/joining-forces-boost-artificial-intelligence-adoption-europe>

54 Strategic Research, Innovation and Deployment Agenda for an AI PPP A focal point for collaboration on Artificial Intelligence, Data and Robotics Second Consultation Release, September 2019, <http://www.bdva.eu/sites/default/files/AI%20PPP%20SRIDA-Second%20Consultation%20Release-September%202019%20-%20Online%20version.pdf>

- High-performance computing - ETP4HPC: High-Performance Computing (HPC) capabilities are needed by specific AI, data and robotics applications where faster decision-making is crucial and extremely complex data sets are involved, while AI capabilities improve the development and deployment of HPC solutions.
- Internet of Things - AIOTI: The alignment with Internet-of-Things technologies is needed to foster the seamless integration of IoT with data, robotics and AI technology.
- Machine vision - EMVA: Machine Vision with The European Machine Vision Association: Vision components can be seen as a major source to generate data and knowledge about the environment and are a basis for decision making and control in many application areas. Therefore, alignment with the European Machine Vision Association (EMVA) is of mutual benefit.
- Software and systems - NESSI: The creation of a new class of self-learning, self-optimising and self-adapting systems will create the need for novel ways of software and system development. Software engineering will need to be “re-engineering” concerning software design and architecture, data lifecycles, quality assurance, and deployment on dedicated hardware.

The document was officially presented by BDVA and euRobotics to the European Commission on the 16th September, as part of a meeting with Roberto Viola, Director General in the European Commission, DG CNECT, and Lucilla Sioli, Director Directorate A, DG CNECT. It was then introduced to the broader community during the ICT Proposers Days 2019, which took place in Helsinki a few days later⁵⁵. During this event, BDVA and euRobotics hosted a specific booth for the AI PPP. The second release of the SRIDA was further discussed during the EBDVF 2019 edition: a specific session was dedicated to the future partnership with Carl-Christian Buhr (Deputy Head of Cabinet, European Commission) joining panel⁵⁶.

Besides the discussions held during these major events, the last months of 2019 saw the organisation of many meetings with the European Commission, to discuss about the structure for the future partnership, and very close involvement of all relevant communities, to ensure the relevance of its contents. These consultation and stakeholder engagement efforts constituted the basis for the work on the **Partnership Proposal**⁵⁷, which was submitted by 5 associations (BDVA, euRobotics, CLAIRE, ELLIS and EurAI) to the European Commission in December 2019. This document lays down the context, vision, objective and suggested impact of a possible Partnership on Data, AI and Robotics. It also suggests a plan for its implementation (in terms of activities, mechanisms, communication channels and synergies with other programmes) as well as some rules in terms of governance and transparency.

During the first months of 2020, Member States and the European Commission carefully considered the Partnership Proposal and provided feedback for its improvement, which resulted in several updates of the document⁵⁸. The latest version known at the time of writing was released in June 2020. The updates of the document built on Member States and European Commission's input but also on the many discussions between the five key stakeholder associations and on the long list of additional stakeholder engagement events organised by BDVA and its partners, including:

- BDVA Activity Group Meeting taking place on the 26th and 27th of February (see also Section 2.3.4);
- The European Robotics Forum 2020 edition⁵⁹, organised by euRobotics;

55 <http://www.bdva.eu/node/1351>

56 <https://www.european-big-data-value-forum.eu/program-2019/>

57 https://ec.europa.eu/info/sites/info/files/research_and_innovation/funding/documents/ec_rtd_he-partnerships-artificial-intelligence-data-robotics.pdf

58 At the time of writing this report, the latest version is dated 18.06.2020 and is available here: https://ec.europa.eu/info/sites/info/files/research_and_innovation/funding/documents/ec_rtd_he-partnerships-artificial-intelligence-data-robotics.pdf

59 https://www.eu-robotics.net/robotics_forum/

- The Copernicus and AI Workshop of January 2020⁶⁰;
- The "Driving AI in Europe" workshop, organised in Malaga in February 2020 by Atos in collaboration with BDVA, the BDVe project and the and AI4EU project⁶¹.

In parallel to the work on the partnership proposal, in 2020 the five associations started to reflect upon a **third update of the SRIDA**, to be delivered at the end of summer 2020 and constituting the basis for starting the R&I activities of the new PPP in January 2021.

To this purpose, the five associations established a very intense programme of stakeholder engagement events and opportunities to offer the possibility to as many stakeholders as possible to join the discussions. In particular, at the time of writing, the associations are organising two SRIDA Info Days in July⁶² targeting i) user industries and stakeholders in many different sectors; ii) other partnerships and strategic European initiatives (both technology oriented and verticals); iii) Member States; and iv) other relevant stakeholders such as start-ups, national and regional initiatives, trade associations, investors. The purpose of these info days is to explain the SRIDA update process and illustrate all the channels which are available for interested parties for providing feedback.

Wide stakeholders' consultations were also organised within each of the associations promoting the establishment of the PPP, to gather the input of their members. The feedback from internal and external stakeholders will be elaborated by an Editorial Team and will nourish the third update of the SRIDA expected in September 2020. The set-up of the partnership and the signature of the partnership contract are foreseen for November/December 2020.

60 <https://www.copernicus.eu/en/events/events/copernicus-artificial-intelligence>

61 <https://www.bdva.eu/node/1435>

62 <https://bdva.eu/node/1536>

5 THE HIGH-PERFORMANCE COMPUTING PUBLIC PRIVATE PARTNERSHIP - EUROHPC

Since 2018, BDVA is a private Member of the High-Performance Computing PPP - EuroHPC and follows closely its activities, trying to emphasise the importance of AI for HPC and to make the link between the Big Data and HPC communities. The association is represented by two full members in the Research and Innovation Advisory Group (RIAG)⁶³. Thomas Hahn (Siemens) and María Pérez (UPM), and two official observers, Björn Hovstadius (RISE) and Stephanie Lindstaedt (KnowCenter). The EuroHPC RIAG is an advisory Group in charge of drawing up and regularly updating the draft multiannual strategic research and innovation agenda⁶⁴. BDVA representatives to the RIAG (both full and observers) are nominated by BDVA General Assembly.

In 2019, BDVA representatives participated in all six RIAG meetings which took place in March, April, June, August, October and December. BDVA contributed in particular to the drafting of the **joint RIAG and Infrastructure Advisory Group (INFRAG) Long-term strategy paper (to be published in 2020)** and joined the discussions on **the Multiannual Strategic Research and Innovation Agenda for 2021 and 2022**, which are still ongoing at the time of writing, and particularly concerning technologies and applications.

BDVA was also asked to organise a **specific session on HPC, Big Data and AI for the EuroHPC Summit week**⁶⁵ which was supposed to take place at the end of March in Lisbon. Due to the Covid19 restrictions, the event was cancelled but the session prepared by BDVA was transformed into an online activity and organised on the 5th of May. The event was titled "*HPC, Big Data, IoT and AI future industry-driven collaborative strategic topics*"⁶⁶ and aimed at outlining future research and innovation needs in terms of convergence and alignment of the basic technologies and their utilization in industry and especially SMEs. The input from this online event was also used to inform the discussion on the HPC SRIA 2021-2022. Due to the success of the webinar, which gathered more than 80 participants from research, industry and public sector, a follow up event has been organised in July 2020 to continue the discussions⁶⁷.

Under this PPP and in accordance with the 2019 Work Plan, six calls were launched in 2019 concerning extreme scale technologies and applications and Innovating and widening the HPC use and skills base. More information on the 2019 calls can be found on the EuroHPC website⁶⁸.

63 <https://eurohpc-ju.europa.eu/governance.html>

64 <https://eurohpc-ju.europa.eu/governance.html>

65 <https://ec.europa.eu/digital-single-market/en/news/eurohpc-summit-week-2020>

66 <http://www.bdva.eu/node/1501>

67 <https://www.bdva.eu/node/1533>

68 https://eurohpc-ju.europa.eu/closed_calls.html#inline-nav-4

6 COMMUNICATION AND OUTREACH

BDVA and the BDV PPP carry out many communication and outreach activities every year. The section below provides a summary of the most important activities including organisation of large events and webinars and social media and online activities.

6.1 Large events

There are two large events which take place every year and are particularly important for the Big Data community: the European Big Data Value Forum (EBDVF) and the BDV Public Private Partnership Summit.

6.1.1 European Big Data Value Forum - Helsinki

The European Big Data Value Forum is the flagship event of BDVA, organised in collaboration with the European Commission. The 2019 edition taking place in Helsinki was co-chaired by Caj Södergard (VTT) and Laure Le Bars (SAP, representing BDVA). VTT was the main local organizer. It was organised in October 2019 and lasted for three full days (from the 14th to the 16th).



The European Big Data Value Forum 2019 aimed to continue the success of previous editions, where on average every year around 700 industry professionals, business developers, researchers, and policymakers coming from 40 different countries attended the event.

The organising committee of this event included, in addition to BDVA and the BDV project, the European Commission, and VTT, multiple Finnish industrial, Innovation and Research players as well as international companies and other research institutions.



The agenda of the three days featured more than 100 speakers, including high level keynote speakers and more than 480 participants to the event. Furthermore, 24 exhibitors were present at the venue and exposing their Big Data and AI solutions and the event was sponsored by more than 40 organisations. The event received very positive feedback from the community, with an overall rating of 4,2 out of 5 in terms of relevance and interest, based on a survey with the participants. Furthermore, the event website was visited by 15 730 unique users in total and, during the period going from March 2019 to November 2019, the landing page had 61 578 views.



The organisation of the next edition of the European Big Data Value Forum started in January 2020. The event is scheduled for the first week of November and will take



place in Berlin and online⁶⁹. DFKI, Plattform Industrie 4.0, Plattform Lernende Systeme and Berlin Partner will be the local organisers and partners of this edition which will include in the agenda nine main tracks on horizontal and sector specific topics.

6.1.2 BDV PPP Summit 2019 in Riga

BDV PPP SUMMIT

JUNE 26 - 28 2019. RIGA

The PPP Summit is the biggest gathering for the hundreds of organisations involved in the Big Data Public Private Partnership as well as all those who want to be part of the thriving European Big Data Ecosystem.

In 2019, it took place on June 26-28 in the Latvian National Library, the prestigious and modern landmark of Riga, Latvia. It was organised by BDVA and BDVe in collaboration with Tilde, as local organiser. As per the previous edition, the welcome speech for the event was delivered by Commissioner Mariya Gabriel, which testifies for the importance of this event for the Big Data community. The first day of the Summit – BDV PPP Conference – provided a strategic perspective on the current and future European data and AI landscape. Highlights from the European industry and research cooperation were also presented. The two following days were dedicated to thematic workshops – BDV PPP Meetup. Activity Groups, Technical and Steering Committees, as well as to the BDVA General Assembly (see Section 2.2). The event was complemented with the exhibition area, where BDVA, BDVe, TransformingTransport, Special, EDI, EW-Shopp and i-BiDaaS had the opportunity to showcase their achievements and results to the whole community. During this event was the Best Success Story award was launched. This was an exciting opportunity for BDV PPP Projects, to tell their story on stage and to win a free pass to EBDVF2019 (see above). The event had a specific website which received 4,036 views, during April 2019 to July 2019.

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69 <https://www.european-big-data-value-forum.eu/>

6.2 Webinars

On top of the EBDVF and physical events, BDVA also regularly organises webinars, on a breadth of different topics. The list below provides an overview of those organised in 2019 and 2020. During the Covid19 crisis, BDVA also launched a webinar series on the role of data for fighting the pandemic and relayed the information about Covid19 webinars organised by other partner organisations⁷⁰.

Title of the webinar	Date	Participants
Are we using data in the best way to manage the COVID-19 Pandemic?	26.03.2020	114
Virus Outbreak Data Network (VODAN) Introduction and implementations	29.04.2020	39
Part I. HPC, Big Data, IoT and AI future Industry driven collaborative strategic topics - 1st Workshop	05.05.2020	85
Standards and Innovation Data and AI standards generating value for SMEs	19.05.2020	70
Part II. HPC, Big Data, IoT and AI future Industry driven collaborative strategic topics - 1st Workshop	03.07.2020	41

Table 16 - List of BDVA webinars

It is worth highlighting here the webinar on "Standards and Innovation Data and AI standards generating value for SMEs" which was organised by the BDVA TF6.SG6 (Standards) and the BDVA TF8.SG1 (Business-SMEs) and combined an introductory part on ICT Standards and Standardisation with a deep dive for SMEs⁷¹. This webinar was originally planned to be part of the 2020 Big Data Value PPP summit's agenda but the event was cancelled due to Covid19 restrictions.

An impressive number of webinars has also been organised in the context of the PPP activities and in collaboration with projects. In particular, ten webinars were organised under the umbrella of the BDV ecosystem (BDVe) Coordination and Support Action (CSA) project⁷² and covered a variety of topics including for instance the Copernicus Start-Up Programme, the European Strategy on Big Data, Big Data and Smart Manufacturing and Big Data for Public Policy. The full list of 2019 webinars is available on the Big Data Value PPP website⁷³ and the registered sessions can also be found on YouTube⁷⁴. The table below presents a summary of their topics, delivery dates, number of participants and YouTube views.

Title of the webinar	Date	Number of participants	Number of YouTube views
Big Data in the Transport Domain: Transforming Transport	15.01.2019	43	56
TOREADOR - Designing Big Data pipelines	12.02.2019	16	54

⁷⁰ <http://www.bdva.eu/WebinarsCovid19>

⁷¹ http://www.bdva.eu/Standards_Innovation_SMEs_webinar

⁷² <https://www.big-data-value.eu/about-us/>

⁷³ <https://www.big-data-value.eu/past-webinars/>

⁷⁴ <https://www.youtube.com/channel/UC5XVReZ5BY4pcsWJY0nJGvw>

Title of the webinar	Date	Number of participants	Number of YouTube views
Copernicus Startup Programme	06.03.2019	16	39
How much do you know about the European Strategy on Big Data?	09.04.2019	50	27
Big Data for Public Policy The State of Play	14.05.2019	55	31
Big Data Ocean - Rocking the boat with Big Data	04.06.2019	45	35
Big Data in the Smart Manufacturing Industry	18.06.2019	46	103
Deep Learning for everybody: The DEEP-Hybrid-DataCloud approach	29.10.2019	33	22
GDPR Consent, Transparency and Automated Compliance Checking: The SPECIAL Approach	29.11.2019	29	10
Help to get investors ready. Tips for data-centric and data-driven economy startups	03.12.2019	15	10
Big Data Breakthroughs for Global Bio-economy Business	17.12.2019	15	11

Table 17 - List of BDVe webinars 2019

Furthermore, the BDVe project also organised two webcasts, one titled "Big Data Value Innovation Marketplace - "How to" guide" which gained 67 views and one on "Big Data Value Innovation Marketplace - Motivation and benefits for the community" with 30 views.

In total, the number of people who directly attended these webinars was of above 400 persons and the recording of these events, which have been made available publicly, registered several hundred views.

In early 2020, 15 webinars were organised focusing on projects achievements but also more horizontal topics (i.e. tips and good practices for a successful presentation⁷⁵), as also shown in the table below.

Title of the webinar	Date	Number of participants
New Challenges beyond the GDPR. Risks and Tools in an Era of AI?	31.01.2020	42
Using BDV Badges to Recognize Data Science Skills (for Academia, Industry and Students)	23.04.2020	16
BenchLearning: Benchmark your way to excellent business performance	29.04.2020	47
PPP Industrial Data Platforms - B2B and B2C together	06.05.2020	57

75 <https://www.big-data-value.eu/best-success-story-tips-and-good-practices-for-a-successful-presentation/>

Title of the webinar	Date	Number of participants
PPP Industrial Data Platforms - Towards cross-sectorial optimization and traceability	07.05.2020	75
PPP Industrial Data Platforms - Empowering Citizens Leveraging their Data Power	08.05.2020	61
How to exchange and grant access to health data in a secure way	14.05.2020	67
FinTech and InsuranceTech case studies digitally transforming Europe's future with BigData and AI	14.05.2020	128
BDVA i-Spaces: what they are, how to become one, value and collaborations	22.05.2020	36
BigDataStack & I-BiDaas Demo series: Connected Consumer Demo	28.05.2020	
2nd Virtual Bench Learning - DataBench use cases and Toolbox	28.05.2020	48
Simplify - Data Analytics and Machine Learning	11.06.2020	45
Big Data Pilot Demo Days - A BigDataStack seafarer's tale of real-time shipping	18.06.2020	37
Best Success Story: Tips and Good practices for a successful presentation	18.06.2020	32
How to monetize your data in an open data marketplace	23.06.2020	38

Table 18 - List of BDVe webinars 2020

6.3 Other events

In 2019 and early 2020, BDVA contributed to the organisation of other events and to the delivery of specific sessions during events organised by others. The list of other events to which BDVA contributed includes:

- **The Workshop on Artificial Intelligence for Manufacturing**, organised in July 2019 by the European Commission in collaboration with BDVA, euRobotics and EFFRA⁷⁶;
- **The European Conference on Software Architecture**, during which BDVA organised the 2nd International Workshop on Software Architecture Challenges in Big Data⁷⁷;
- **The IoT week of June 2019**, during which BDVA vice President Laure Le Bars (SAP) participated as speaker in the Opening Plenary session called "*Strategic Visions on Future IoT Evolution – Towards a New IoT Paradigm for Business and Society*" and for which BDVA and AIOTI jointly organised a session called "*Towards a European Data Sharing Space: enabling Data Exchange and unlocking AI potential*"⁷⁸.

76 <http://www.bdva.eu/node/1286>

77 <https://ecsa2019.univ-lille.fr/home>

78

<http://www.bdva.eu/node/1313#:~:text=The%20IoT%20Week%20Conference%202019,Research%20and%20Innovation%20IoT%20community.>

- **The European Forum for Electronic Components and Systems (EFECS)**⁷⁹, which took place in Helsinki in November 2019 and hosted a stand from BDVA.
- **The European Robotics Forum 2019 (ERF2019)**, for which BDVA and euRobotics co-organised a panel on Robotics and AI.
- **The "Copernicus and AI" workshop** taking place in Brussels at the end of January 2020. The Secretary General of BDVA presented during this event the upcoming AI, Data and Robotics Partnership⁸⁰.

6.4 Websites and social media activities

There are two separate websites, one for BDVA (www.bdva.eu) and one for the Big Data Value PPP projects (www.big-data-value.eu) managed by the BDVe CSA project, which are regularly updated with news, events, articles and blog posts concerning topics of relevance for the community.

In 2019, the BDVA website was visited more than 90.000 times by over 36.400 individual users (with 36.034 new users compared to the previous year). In the first months of 2020, the website was already visited over 45.000 times and counted 17.577 new users. More than 100 news items were published for the period going to January 2019 to June 2020 and around 50 events were advertised on the platform during the same period. BDVA website now also includes a specific section on the association Covid19 activities which gathers a list of relevant events, data-sharing initiatives to fight the virus and links to the BDV marketplace dedicated to Covid19 solutions.

The BDV PPP website was visited by 15,031 users, with 77.609-page views from unique users for the period July 2018-December 2019. Half of these users visited more than one page which means that the contents engaged visitors and kept the bounce rate reasonably low. Furthermore, the analysis of traffic shows a constant growth of visits to the website, with some peaks corresponding to major events (the PPP Summit and EBDVF). The PPP website includes more than 204 articles to which users access very often directly from social media or newsletters' links.

Joint BDVA and BDV PPP newsletters are sent monthly to BDV PPP projects, BDVA members and other interested parties to inform them about the PPP and association's activities including events, establishment of new collaborations, publication of material etc. The newsletters have more than **2000 subscribers** and constitute one of the main tools for sharing knowledge about the partnership and the community. During 2019, the newsletter has included almost 50 news from the PPP projects, featuring monthly around 8 projects each time.

⁷⁹ <https://efecs.eu/efecs2019.html>

⁸⁰ <https://www.bdva.eu/node/1433>

Social media and especially Twitter, LinkedIn and YouTube are shared between the PPP and BVDA and they

have been used to promote all activities as well as the achievements of projects and members. Concerning **Twitter**, In 2019 BDVA and the BDV PPP consolidated their presence. During the period July 2018-December 2019, the BDVA_PPP profile has gained 57 new followers per month (more than 1000 in the whole period), to reach a total of almost 2.700 followers. The posts published in the profile have gained 895.000 impressions, which means almost 50.000 impressions per month. As per the visits to the website, the impact of the Twitter account has been growing steadily in the last year. The **LinkedIn**

profile of BDVA and BDV PPP has also experienced a slight increase in terms of Impact in 2019. During the same reporting period, the profile has been visited by almost 240 people and has gained 40 new followers per month (700 new followers in 18 months), for a total of more than 1200 followers. Finally, more than 20 videos were published on **YouTube** in 2019 and early 2020. Some videos are quite succesful and the channel has had the highest number of views (3500) for the welcome from commissionaire Mariya Gabriel to the BDV Summit in Riga, the promo video for EBDVF18 and EBDVF19, and the after-movie and interviews video of EBDVF19.

Slideshare is another platform shared between the PPP and BDVA. This repository has more than 100 presentations as it hosts all presentations coming from the BDVe webinars.



Big Data Value @BDVA_PPP · 3 giu

Projects @InforeProject @SmartDataLake @ExtremeEarth_EU join forces in this #bdvpppseries #webinar (June 11, 10:00 CEST) aimed to simplify #DataAnalytics and #MachineLearning:

◆ More information: big-data-value.eu/simplify-data-...

👉 Registration: register.gotowebinar.com/register/94841...



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8



ANNEX A – LIST OF TASK FORCES AND SUB-GROUPS LEADERS

This Annex contains the full list of BDVA Task Force and sub-group leaders in June 2020.

Task Force	Sub-group	Name of the leader(s) and organisations
Task Force 1 - Programme	/	Edward Curry (Insight Centre)
	TF1.SG1 Research Priorities and SRIA.	Sonja Zillner (Siemens)
	TF1.SG4: i-Spaces	Daniel Alonso (ITI)
	TF1.SG6: Workprogramme tracking	Cristina Sandoval (UPM)
	TF1.SG7: European Data Sharing Spaces	Simon Scerri (Fraunhofer), Irene López de Vallejo (Bluespecs) and Tuomo Tuikka (VTT) (Co-leads)
Task Force 2 - KPI Monitoring	N.A.	Gabriella Cattaneo (IDC) / Ana Garcia (BDVA) (acting co-lead)
TF3 – Community	/	Nuria de Lama (ATOS) / Chris Knighting TU/e (co-lead)
	TF3-SG1: Membership	Open
	TF3-SG2: Liaisons	Laure Le Bars (SAP)(acting)
TF4 – Communication	N.A.	Daniel Sáez (ITI)
TF5 – Policy and Societal	N.A.	Freek Bomhof (TNO) / Nathalie Bertels (Imec - KUL)
TF6 - Technical	/	Arne Berre (SINTEF)
	TF6-SG1-2: Data Technology Architectures	Andrea Panizza (Everis)
	TF6-SG3-5: Data Science/AI	Dimitris Zisis (MarineTraffic)
	TF6 Big Data-HPC	María Pérez (UPM)
	TF6-SG4: Data Protection and Pseudonymisation Mechanisms	Zoltan Mann (Paluno)
	TF6-SG6: Standardisation	Lead: Ray Walshe (DCU), Co-Lead: Stefan Gessler (NEC), Co-Lead: Ahmet Soylu (SINTEF)
	TF6-SG7: Data Benchmarking	Arne Berre (SINTEF) / Axel Ngonga (Paderborn University)
TF7 - Applications	TF7-SG2: Telecom	Robert Seidl (Nokia)

Task Force	Sub-group	Name of the leader(s) and organisations
	TF7-SG3: Healthcare	Tiblets Demewez (Philips)
	TF7-SG4: Media	Luk Overmeire, (VRT) (acting)
	TF7-SG5: Earth Observation & Geospatial	Florin Serban (Terrasigna)/ Codrina Maria Ilie (Terrasigna)
	TF7-SG6: Smart Manufacturing Industry	Davide Dalle Carbonare (Engineering) / Sergio Gusmeroli (co-lead) (Polimi)
	TF7-SG7: Mobility and logistics	Vivian Kiousi (Intrasoft)
	TF7-SG8: Smart Governance and Smart Cities	Roberto Di Bernardo (acting) (Engineering)/ Vega Rodríguez (ITA Innova) (co-lead)
	TF7-SG9: Agriculture	Nuria de Lama (ATOS)
	TF7-SG10: Finance	Maurizio Ferraris, GFT Italy (lead) Marco Rotoloni ABI Lab (co-lead)
TF8 -Business	/	Stefano Modafferi (IT Innovation) (lead)
	TF8-SG1: SME/WE	Tatjana Gornostaja (Tilde) (lead) / Artur Romão (DECSIS) (co-lead)
TF9 - Skills & Education	N.A.	Ernestina Menasalvas (UPM)

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