## D3.8: Startups and SME Ecosystem characterization

<table>
<thead>
<tr>
<th>Workpackage</th>
<th>WP3 – ECOSYSTEM. Community building and engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editor(s):</td>
<td>Tatjana Gornostaja, Susanne Kuehrer, Tonny Velin</td>
</tr>
<tr>
<td>Responsible Partner:</td>
<td>TILDE</td>
</tr>
<tr>
<td>Contributors</td>
<td>ATOS, TNO, EIT, BDVA/ANSWARE</td>
</tr>
<tr>
<td>Internal Reviewer</td>
<td>SIEMENS, SAP</td>
</tr>
<tr>
<td>Status-Version:</td>
<td>FINAL</td>
</tr>
<tr>
<td>Due to</td>
<td>M18</td>
</tr>
<tr>
<td>Submission Date:</td>
<td>05/07/2018</td>
</tr>
<tr>
<td>EC Distribution:</td>
<td>Public</td>
</tr>
<tr>
<td>Abstract:</td>
<td>The present document reports on the work within the BDVe project Work Package 3 “ECOSYSTEM. Community building and engagement” on the characterization of the Big Data players’ ecosystem of startups and SMEs.</td>
</tr>
</tbody>
</table>
## Contents

1. INTRODUCTION ................................................................................. 7  
2. STARTUPS AND SME ECOSYSTEM ....................................................... 8  
3. BDV INVESTORS GROUP.................................................................. 11  
4. ENGAGEMENT OF STARTUPS AND SMES ........................................... 13  
5. CONCLUSIONS ................................................................................. 16  
6. DESCRIPTION OF THE BIG DATA ENTREPRENEURSHIP SESSION AT EUROPEAN BIG DATA VALUE FORUM (EBDVF) 2017............................... 17  
7. BOOKLET „SMES IN THE EUROPEAN DATA-ECONOMY: A REPRESENTATIVE SAMPLE FROM THE BDVA COMMUNITY ......................... 19
List of Figures

FIGURE 1. SME BOOKLET COVER ................................................................. 9
FIGURE 2. ROLE OF SMEs IN DATA VALUE CHAIN (BOOKLET EXTRACT) ........... 10
FIGURE 3. EXAMPLE OF THE SME PROFILE IN THE BOOKLET........................... 11
FIGURE 4. BDV IG STRATEGY ......................................................................... 12
FIGURE 5. EBDVF SESSION TOPIC (PROGRAMME EXTRACT) ............................... 14
List of Tables

Table 1. Definitions, Acronyms and Abbreviations................................................. 5
## Definitions, Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDV</td>
<td>Big Data Value</td>
</tr>
<tr>
<td>BDVA</td>
<td>Big Data Value Association</td>
</tr>
<tr>
<td>BDVe</td>
<td>Big Data Value ecosystem</td>
</tr>
<tr>
<td>BDV IG</td>
<td>Big Data Value Investor Group</td>
</tr>
<tr>
<td>BDV PPP</td>
<td>Big Data Value Public-Private Partnership</td>
</tr>
<tr>
<td>EDI</td>
<td>European Data Incubator</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium-sized Enterprises</td>
</tr>
<tr>
<td>SRIA</td>
<td>Strategic Research and Innovation Agenda</td>
</tr>
<tr>
<td>ODINE</td>
<td>Open Data Incubator Europe</td>
</tr>
</tbody>
</table>

Table 1. Definitions, Acronyms and Abbreviations
Executive Summary

The present document (D3.8) reports on the work within the BDVe project Work Package 3 “ECOSYSTEM. Community building and engagement” Task 3.2 “Data-driven entrepreneurship and SME engagement” on the characterization of the Big Data players’ ecosystem. It proposes an update of two documents delivered a year ago: Deliverable 3.6 “Enriched Map of Big Data players in Europe: SMEs and startups” and D3.7 “Value proposition and engagement plan for entrepreneurs and SMEs”.

D3.8 provides a periodic update on the composition of the Big Data Value Public-Private Partnership (BDV PPP) ecosystem, focusing on SMEs and including startups, its dynamics with the definition of value proposition and engagement plans in D3.6 and D3.7. The map of “Big Data players in Europe: SMEs and startups” has been enriched. The list of activities engaging these companies has been updated, including past, ongoing and planned activities.
1. Introduction

The present document reports on the work within the BDVe project Work Package 3 “ECOSYSTEM: Community building and engagement” on the characterization of the Big Data players’ ecosystem of SMEs and startups. It proposes an update of two documents:

- Deliverable 3.6 (M06), which reported on the work on the enrichment of the Big Data players map of SMEs and startups on top of the Data Landscape portal\(^1\). The Data Landscape portal is part of the European Data Market study for the Directorate-General for Communications Networks, Content and Technology and is managed by International Data Corporation (IDC) and Open Evidence\(^2\). During the first period (January-June 2017), the work was focused on the negotiation about the collaboration between the two projects – Data Landscape portal and BDVe project. As a result, it was agreed that Data Landscape portal managers update the database with the data provided by the BDVe project – the list of “new”\(^3\) players in Big Data in Europe: SMEs and startups – and thus enrich the map of Big Data players in Europe, including this promising and lively component of our ecosystem.

- Deliverable 3.7 (M06), which defined the value proposition and engagement plans for entrepreneurs and SMEs. The three target groups of stakeholders were defined: intermediaries (incubators and accelerators)\(^4\), SMEs and startups (named “SMEs” hereinafter) and different categories of investors, such as venture capitalists, business angels and other private investors (named “investors” hereinafter). During the first period (January-June 2017), the work was focused on the following three actions:
  - state-of-art analysis: how other PPPs engage with the defined target groups, we analysed the following PPPs;
  - value proposition definition: what benefits the target groups can get, i.e. the incentives for them to contribute to the BDV PPP independently of whether they are a contractual party or not; channel identification;
  - engagement plans: what are actions and responsibilities to address the target groups inside and outside the BDV PPP, locally and regionally, in collaboration with sectorial communities.

The work with intermediaries is being done in collaboration with Work Package 2 “IMPACT. Framing the European Data Economy to maximize impact” and reported in D2.8 “Status report on BDVe network and market place activities”.

---

1. [www.datalandscape.eu](http://www.datalandscape.eu)
2. [www.open-evidence.com](http://www.open-evidence.com)
3. “New” means the organisation has not been mapped on Data Landscape yet.
4. Intermediaries were identified as a group that could facilitate the interaction – acting as mediators – between the Big Data Value Public-Private partnership (BDV PPP) and innovative startups and entrepreneurs in general to help to engage them into the activities of the BDV PPP.
2. Startups and SME ecosystem

The first round of the enrichment task was reported in D3.6 “Enriched Map of Big Data players in Europe: SMEs and startups”. We used the data about the companies participating in the ODINE incubator and enriched the Data Landscape portal with the list of 50 companies. The Data Landscape portal is part of the European Data Market study for the Directorate-General for Communications Networks, Content and Technology and is managed by Open Evidence, The Lisbon Council and IDC. In 2017, it was agreed with the Data Landscape portal managers, the BDV project would provide its feedback to improve the portal and the monitor service, if any. By then, there were two recommendations:

- Tags: add a tag “SME” or “startup” to make it possible to filter: this was promptly implemented.
- Search: “whole words only” search is available, i.e. it is not possible to search with an incomplete word, e.g. “tilde” does not return “tilde”, which is in the data: this is not yet implemented.

For the second round of the enrichment task, we reused the data about 17 companies participating in Data Pitch and European Data Incubator (EDI) – the two incubator projects within the BDV PPP, which have received funding from the European Union’s Horizon 2020 Research and Innovation programme. The EDI incubator has published the first call for participation (deadline on June 28, 2018) and the list of successful companies will be made public by the end of August 2018, according to the communication with the project coordinator, and will be reused for the enrichment task.

In addition, more than 30 BDV PPP projects, which have received funding from the European Union’s Horizon 2020 Research and Innovation programme, were added to the list. We used the data about the companies participating in these projects to enrich the Data Landscape portal.

Furthermore, we collected the data about companies participating in BDVA, more that 60 of which are SMEs. We published the booklet “SMEs in the European Data Economy: a representative sample from the BDVA community” in November 2017.

5 https://opendataincubator.eu
6 http://datalandscape.eu and http://datalandscape.eu/companies
7 http://datalandscape.eu/about
8 https://datapitch.eu/cohort1startups
9 https://edincubator.eu
10 http://www.big-data-value.eu/our_projects (not all of the project published at the moment)
11 https://core.bdv.eu/bdva-member-profile?organization_name_op=%3D&organization_name=&big_data_related_activities_x_20=&country_op=in&organisation_type_26%5B0%5D=SME&organisation_type_26%5B1%5D=Start-ups%20Web-entrepreneurs&page=1
D3.8: Startups and SME Ecosystem characterization

for the EBDVF event (see Figure 1). The booklet showcases the expertise and competences of a group of selected SMEs actively contributing to the development of the European Big Data and data-driven innovation ecosystem\(^1\).

![SME booklet cover](image)

Figura 1. SME booklet cover

The booklet offers the reader a good overview of the emerging European data-driven economy through a sample of real businesses and success stories. The SMEs being part of the Big Data Value Association are fast growing businesses offering their products and services to their partners and customers to develop Big Data driven innovation. The profiles, expertise and competences of the Association’s SMEs range from data management, including data analytics, integration and visualisation, to data standardisation and architectures, as well as data services, consultancies and users. The showcased SMEs operate in aerospace, agriculture, defence, energy health, manufacturing, transport and other domains at the European level and globally and are key players in the European data-driven economy (see Figure 2).

\(^1\) At the time of publishing this booklet over 30% of the BDVA members are SMEs.
D3.8: Startups and SME Ecosystem characterization

<table>
<thead>
<tr>
<th>Company</th>
<th>Data center</th>
<th>Data acquisition</th>
<th>Data aggregated</th>
<th>Data storage</th>
<th>Data analyzed</th>
<th>Data visualized</th>
<th>Data shared</th>
<th>Data exchange</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-Spaces</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Role of SMEs in Data Value Chain (booklet extract)

This booklet addresses both public and private organisations and businesses in Europe and worldwide pursuing partnerships with European SMEs active in the new data economy for exchange of knowhow, tools, technology and services, or for the development of new partnerships. The main purpose of the publication is promotional. All the SMEs showcased in this publication are members of BDVA. Each of the companies provides information about their role and offering in the data-driven economy, alignment with the European Big Data Value Strategic Research and Innovation Agenda (SRIA) and their overall role in the Big Data value chain (see Figure 3).

Thus, for the first round of the enrichment task, we used the data about the companies participating in ODINE and for the second round – the data from the Data Pitch incubator, BDVA website, BDV PPP website and SME booklet, identifying more SMEs and startups, which are active in the Big Data community. For the third round of the enrichment task, we will consider the companies registered on the F6S platform14 (in collaboration with Task 2.3), as well as the companies, participating in i-Spaces15.

---

14 https://www.f6s.com/startups
15 http://www.big-data-value.eu/i-spaces
D3.8: Startups and SME Ecosystem characterization

3. BDV Investors Group

The BDV Investors Group (IG) was introduced in D3.7 as a group of different categories of investors, such as venture capitalists, business angels, and other private investors (named “investors” hereinafter) interested in investment opportunities in Big Data, linked data or data-intensive SMEs and startups. The purpose of the group is to foster cross-border co-investments in data-related SMEs and startups, as well as to enhance the engagement of the European SMEs and startups in the BDV PPP ecosystem.

The group is open to any kind of private investors (venture capitalists, business angels and in general private investors), whose investment strategy includes Big Data SMEs and startups. In order to keep the group very focused on its main goal, only private investors can be members of the group. Investors that join the BDV IG will be classified according to their investment ranges to adjust the investment opportunities submitted to them to their investment strategies.

The adopted strategy consisted in searching for data-related startups through different sources to identify good investment opportunities to be fed into the group. These startups are analysed to confirm their relation to the BDVA reference model and supported (mentorship) to reach investment ready status. Once this status is reached by any of these startups it is updated in the group deal flow. Figure 4 represents the described procedure in a schematic way.
During the period of January 2017 – June 2018, the following activities related to the BDV IG have been performed:

- Look for SMEs involved in the data driven economy
  - We approached the Open Data Institute (ODI) and Data Pitch incubator and presented the BDV IG to them. In March 2018, we organised a webinar to present the BDVA IG to Data Pitch. The webinar generated high interest among the startups participating in Data Pitch. Some of them are already looking for funding and having another instrument, such as BDV IG, is very much welcome. In April-June 2018, we followed up with the webinar and individual calls with some startups: FROSHA and NEXQUESTION. The company profile templates from those startups are being filled in to be included in the market place. We approached EDI, however, the list of their companies will be made public later.
  - We approached the SMEs funded by the SME Instrument programme Phase 2: HUMEXE from TECNIMUSA, however, they had already got funding from the project and were not looking for a new round of investments at that moment.
  - From our communication with incubators, we found out that some companies are interested in early seed stage funding (300 k€). This helps us to further communicate with private investors and to meet the needs of specific startups.

- Look for investors interested to invest in SMEs involved in the data driven economy
  - In October 2007, we attended the South Summit – the Leading Innovation Global Platform focused on business opportunities and disruptive trends, that gathers the entrepreneurial ecosystem. During that event, we established contacts with investors from several European countries and presented them the BDV IG within BDVe. Some investors have showed interest and we keep communication with them.
D3.8: Startups and SME Ecosystem characterization

- In addition to our contacts from the South Summit event, we also contacted other investors interested to participate in the BDV IG – willing to invest in SMEs and startups involved in the Big data and data driven economy. Investors are interested to know about the SMEs and startups within our ecosystem. At the moment, have a group of 5 interested investors (mainly venture capitalists and business angels) from France, Germany, Luxembourg and Spain and 10 more have been contacted.

- Participation in events
  - In June 2018, we contacted the organisers of the South Summit 2018\(^\text{16}\) – the event with the global audience of 12,500+ attendees, 650+ investors and 4300+ CEO/Executives from 100+ countries, and presented to them the BDVe project, BDV IG and modelX (developed in WP2). We agreed the organisers of the event would send a detailed participation package proposal to BDVe, including the number of tickets, participation to sessions, booth etc. Moreover, the event organisers mentioned that 100 startups would participate in the competition and we could engage the most successful ones in our BDVe IG.

To conclude, we have prepared the ground base for the setup of the BDV IG and its functioning with the group of 10 investors, who express their interest, and SMEs and startups, who participate in Data Pitch. We are preparing the profiles of SMEs and startups to include them in the market place and to invite the BDV IG investors to go through the list of SMEs and startups and identify those that might be of interest for them. During the following months by the end of this year, the overall mechanism of the BDV IG will be in place for investors, SMEs and startups to exchange communication and make deals. In the next 24 months, the companies from EDI’s first call and Data Pitch’s next call will be approached to join the deal flow of the BDV IG. We will make effort in trying these companies to make deals with investors.

4. Engagement of startups and SMEs

The following main activities were performed in collaboration with BDVA and resulted in tangible outcomes:

- Review of the BDVA Strategic Research and Innovation Agenda in view of further SME engagement and contribution to PPP Key Progress Indicator Monitoring Report.

- Validation of the defined value proposition in D3.7 for Big Data intermediaries (incubators) in collaboration with Task 2.3, as well as SMEs and investors interested in Big Data. The outcome will be reported in D2.8 to avoid duplication.

\(^{16}\) [https://www.southsummit.co/es](https://www.southsummit.co/es)
D3.8: Startups and SME Ecosystem characterization

- Organisation of Big Data Entrepreneurship session at European Big Data Value Forum (EBDVF) 2017, engaging intermediaries (incubators Data Pitch and European Data Incubator), SMEs in Big Data and representatives from private and public sides of investments in Big Data (European Business Angels Network and European Commission). The programme of the session is included in Annex I of this document (the programme extract is in Figure 5).

- Publishing of the booklet „SMEs in the European Data-Economy: a representative sample from the BDVA community“ (in collaboration with the BDVA Task Force 3 “Community”). The booklet is available since November 2017 and its first distribution was done during EBDVF 2017 in Versailles. The whole booklet is included in Annex II of this document.

- Definition of BDV Investors Group and engagement of investors interested in Big Data (see the description of ongoing and planned activities above).

- Dissemination of results (BDV PPP website, presentations at relevant events and BDVA Board of Directors and Activity Group meetings).

**Figure 5. EBDVF session topic (programme extract)**

The following main activities have been planned for 2018 and further on:

- Update the value proposition for Big Data intermediaries (incubators), SMEs and investors interested in Big Data where needed.

- Consider the organisation of the Big Data Entrepreneurship session at the EBDVF 2018 event, engaging intermediaries (incubators Data Pitch and European Data Incubator), SMEs in BDV PPP and investors interested in Big Data. At the moment, we are in contact with Allan Hanbury (Professor of Data Intelligence, Institute of Information Systems Engineering, Vienna University of Technology), who is the chair of EBDVF 2018 programme committee and organises the session for startups and SMEs.

- Update the booklet “SMEs in the European Data-Economy: a representative sample from the BDVA community” in collaboration with the BDVA Task Force 3 “Community”.
D3.8: Startups and SME Ecosystem characterization

- Operate BDV Investors Group and further engagement of investors interested in Big Data. The following activities are planned:
  - foster the relationships between private investors and startups and SMEs via the market place; the concept of the market place is developed in Task 2.3 and is reported in D2.8;
  - look for more private investors, willing to invest in startups involved in the data driven economy;
  - participate in the South Summit 2018\(^{17}\) as a key event where for BDVe to get maximum benefits to introduce the BDV IG and ModelIX;
  - consider the participation in the Web Summit\(^{18}\) – with the global audience of more than 70,000 attendees, 650 investors and 4,300 executives, contact the event’s organisers and propose to them the presentation of BDVe results and Big Data assets. We contacted Michael Harnett, the Web Summit exhibition manager, and Richard Condon, the manager of activities engaging investors, and had a telco with Richard Condon, who connected us with other people involved in the organisation of the event about the possibility to organise the BDVe session, covering activities in Task 2.3 (ModelIX) and Task 3.2 (Investors Group);
  - maintain the cooperation with Data Pitch (the second call for participation of Data Pitch opens on July 2, 2018 where more than 30 startups will be selected for funding and possible further investment after successful graduation from the incubator);
  - cooperate with EDI (100 startups will be selected for funding and possible further investment after successful graduation from the incubator);
  - continue approaching the SMEs funded by the SME Instrument programme Phase 2 and detect those that need further investment;
  - consider possibilities to cooperate with other sources of SMEs and startups, for example, i-Spaces and the F6S platform.

- Definition of the BDV market place as a unique entry point for SMEs and startups to the world of intermediaries (incubators) and investors interested in Big Data (see D2.8) to make contacts and establish business deals. By the moment, the following activities have been performed: we have reviewed the template for startups and SMEs to promote themselves via the market place (offering) but also to look for investment. The template is ready and is about to be implemented in the market place. The market place is an entry point for startups and SMEs, who are looking for further private investments. Investors will be able to look for startups of potential interest, approach startups, ask them for further information and, hopefully, make a deal beneficial for both parties.

\(^{17}\) [https://www.southsummit.co/es](https://www.southsummit.co/es)

\(^{18}\) [https://websummit.com](https://websummit.com)
D3.8: Startups and SME Ecosystem characterization

- Dissemination of results (PPP website, presentations at relevant events and BDVA Partnership Board, Board of Directors and Activity Group meetings).

5. Conclusions

To conclude, the work related to the ecosystem of SMEs, including startups, is progressing smoothly in accordance with the definitions and plans set in D3.6 and D3.7. The list of companies participating in BDV PPP was prepared and provided to the Data Landscape portal for upload. The portal is a living resource and the list of Big Data players: startups and SMEs will be updated on a continuous basis within the BDVe project in collaboration with the BDVA Task Force 8 “Business” Subgroup 1 “SMEs Big Data Entrepreneurship: startups and SMEs”. The next update is expected in December 2018.

The value proposition and engagement plans for SMEs and startups were revised and amended to further improve their relevance. The work with the intermediaries is performed in collaboration with the Task 2.3 “Innovation Booster” reported in the Deliverable 2.8 “Status Report on BDVe network and market place activities”. The work with the private investors is performed according to the updated plan.
6. Description of the Big Data Entrepreneurship session at European Big Data Value Forum (EBDVF) 2017
Big Data Entrepreneurship

CONCEPT: The session will be an interactive panel discussion bringing together different stakeholders and point of views on how to advance the take up of Big Data entrepreneurship and facilitate “small” players’ business growth in Big Data in Europe. The only session during the event with a special focus on “small” players: startups and SMEs in Big Data entrepreneurship.

TOPIC: The session will discuss stakeholders’ roles and needs, optimal way to connect "small" players and investors, active involvement of corporates data providers, support services for “small” players, engagement of other stakeholders, and other relevant questions.

OUTCOME: The session will result in the identification of "missing" points in and the strategy of next operational steps to successful entrepreneurship environment and investment landscape in Big Data in Europe, encouragement for things already going well and positive elements to be strengthened.

MODERATOR:
Christine Balch  
TNO Industry, EU Program Manager

PANELLISTS:
Intermediaries (incubators) providing support to "small" players in Big Data:

Elena Simperl  
Data Pitch, Coordinator
Miguel García González  
European Data Incubator, Partner
Irene Lopez de Vallejo  
Machine Learning Garage, Director for Collaborative Research - Digital Catapult

“Small” players: startups and SMEs pitching their successful use cases in Big Data

Anys Boukli  
Digital Partners, Founder and CEO
Fabrice Tocco  
Dawex, Co-founder
Dimitros Petalios  
Draxis, Project Manager
Konstantinos Chatzikokolakis  
MarineTraffic, Senior Researcher
Anca Liana Costea  
Terrasigna, Policies, Strategies and International Cooperation Manager
Andrejs Vasiljevs  
Tilde, Co-founder and CEO

Private and public investments in Big Data entrepreneurship

Audra Shallal  
European Business Angels Network, Board Member
Kimmo Rossi  
European Commission, Head of Research and Innovation Sector

Corporates engaging with “small” players in Big Data

Sebastien Gibier  
SAP France, Head of Startups
Monica Franceschini  
Engineering, Solution Architecture Manager

ORGANISERS:
BDVA SME group & BDVe SME task:
Tatjana Gornostaja (Tilde), Susanne Kuehrer (EIT Digital), Bas Kotterink (TNO),
Tonny Velin, Antonio Alfaro, Victoria Moreno (Answare)
7. Booklet „SMEs in the European Data-Economy: a representative sample from the BDVA community
SMEs in the European Data-Economy

A representative sample from the BDVA community

November 2017
This booklet showcases the expertise and competences of a group of selected small and medium-sized enterprises (SMEs) actively contributing to the development of the European big data and data-driven innovation ecosystem. The booklet offers the reader a good overview of the emerging European data-driven economy through a sample of real businesses and success stories.

Small and medium-sized enterprises (SMEs) are the backbone of Europe’s economy. According to the European Commission’s statistics, SMEs represent 99% of all businesses in the European Union. In the past five years, they have created around 85% of new jobs and provided two-thirds of the total private sector employment in Europe. The European Commission considers SMEs and entrepreneurship as key to ensuring economic growth, innovation, job creation and social integration in the European Union.

To unlock the potential of a European data economy is one of the objectives of the European Union, and Big Data has become a key asset for the advancement of economy and society, leading the transfer of innovations into new businesses and jobs. The involvement of SMEs is of utmost importance for the success of the Big Data Value ecosystem, supporting their business and opening new opportunity for their growth. The Big Data Value Association (BDVA) boosts European Big Data Value research, development and innovation and fosters the perception of Big Data Value in Europe. BDVA is an industry-driven international non-for-profit organisation with over 180 members all over Europe and a well-balanced composition of large, small and medium-sized industries, as well as research and user organisations.

The mission of BDVA is to develop the Innovation Ecosystem that will enable the data-driven digital transformation in Europe, delivering maximum economic and societal benefit, as well as achieving and sustaining Europe’s leadership on Big Data Value creation and Artificial Intelligence. BDVA is also the private counterpart to the EU Commission to implement the Big Data Value Public-Private Partnership program (BDV PPP). BDVA and the Big Data Value PPP pursue a common shared vision of positioning Europe as the world-leader in the creation of Big Data Value. One of the Big Data Value PPP general objectives is to facilitate the acceleration of business ecosystems and appropriate business models with a particular focus on SMEs, enforced by Europe-wide benchmarking of usage, efficiency and benefits. One of the strengths of the European Big Data market and business is that there are many SMEs that are dynamic and flexible and can react quickly to market changes.

The SMEs part of the Big Data Value Association are fast growing businesses offering their products and services to their partners and customers to develop Big Data driven innovation. The profiles, expertise and competences of the Association’s SMEs range from data management, including data analytics, integration and visualisation, to data standardisation and architectures, as well as data services, consultancies and users. The showcased SMEs operate in aerospace, agriculture, defence, energy health, manufacturing, transport and other domains at the European level and globally and are key players in the European data-driven economy.

This booklet addresses both public and private organisations and businesses in Europe and worldwide pursuing partnerships with European SMEs active in the new data economy for exchange of know-how, tools, technology and services, or for the development of new partnerships. The main purpose of the publication is promotional.

All the SMEs showcased in this publication are members of the Big Data Value Association (BDVA). Each of the companies provides information about their role and offering in the data-driven economy, alignment with the European Big Data Value Strategic Research and Innovation Agenda and their overall role in the Big Data value chain.

We invite the reader to explore this emerging economic asset for Europe, provided in a brief and compacted way to facilitate quick access and matchmaking to the know-how and expertise needed.

We thank all BDVA members who contributed to this promotional booklet by providing information and showcasing their success stories.

The Editors

November 2017
### Role of the SMEs in the Data Value Chain

<table>
<thead>
<tr>
<th>Role</th>
<th>Data owner</th>
<th>Data acquisition</th>
<th>Data aggregator</th>
<th>Data storage</th>
<th>Data analysis</th>
<th>Data services</th>
<th>Data user</th>
<th>Data exchange</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answere</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DataCentric</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DataRiver</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datris</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dawex</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diavita</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Partners</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassroots</td>
<td></td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InData</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Catalyst</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JOT Internet Media</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lynkeus</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine Traffic</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martel</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mosaic Factor</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mozaica</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuropublic</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Nuromedia</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semantic Web Company</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spacelabel</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teknopar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrasigna</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tilde</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treellogic</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trilateral</td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ubiwhere</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valdani Vicari Associati</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>webLyzard</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wings</td>
<td>•</td>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Answere is a Spanish ICT-based SME whose portfolio includes the provision of ICT consultancy services and development of turn-key and R&D projects in a large spectrum of industrial sectors.

Role and offer in the data-driven economy
Answere is a technology provider and develop innovative solutions and services for the management, the analytics and the visualization of data. Answere has over 15 years of expertise in the data field in real-time environments such as Aerospace, Defense and Emergency Management. The company is currently involved in developing innovative solutions in data management, analytics and visualization for Big Data in the Transport sector.

Success story
Answere is currently involved in the Transforming Transport (TT) project (transformingtransport.eu) that aims at demonstrating, in a realistic, measurable, and replicable way the transformations that Big Data will bring to the mobility and logistics market. To this end, TT validates the technical and economic viability of Big Data to reshape transport processes and services to significantly increase operational efficiency, deliver improved customer experience, and foster new business models. TT will address seven pilot domains of major importance for the mobility and logistics sector in Europe: (1) Smart Highways, (2) Sustainable Vehicle Fleets, (3) Proactive Rail Infrastructures, (4) Ports as Intelligent Logistics Hubs, (5) Efficient Air Transport, (6) Multi-modal Urban Mobility, (7) Dynamic Supply Chains. Answere is in charge of the pilot on Sustainable Vehicle Fleets (Connected Vehicles) where the main objectives are to perform predictive maintenance on cars, reduction of CO2 and improvement of traffic management.
ATC

Brief company description
ATC offers digital transformation solutions in the areas of Data/Content Management and Analysis, Enterprise Management, HCM, Training, and Mobiles. The company maintains an active presence in the EU, the Balkans, Central Europe, Middle East and North Africa for over 30 years.

Role and offer in the data-driven economy
ATC implements and delivers data-driven products and services which utilize proven data management approaches, including APIs, Web Crawlers, Data Warehouses, Data Lakes and Semantic technologies to collect, curate and make available open and closed data, including content gathered from the social media. Furthermore, ATC’s data-driven products and services incorporate innovative data analytics methods and algorithms, including AI and machine learning, helping organisations to achieve enhanced levels of user experience, optimize their business processes and implement innovative business models.

Success story
Truthnest is a toolset that incorporates ATC’s many years of experience in the media field by providing the appropriate indicators to confirm the validity of news as they are published or reproduced in social media. For the production of these indicators, news analytics techniques have been utilized using technologies such as artificial intelligence, semantic analysis and network dynamics for the development of automated fact checking methods that bypass human resourcefulness in disguising false claims from true ones.

In the same spirit, ATC has worked with Deutsche Welle, a media institution, to develop Truly Media platform. Truly Media is an online collaboration environment where journalists from around the globe can use advanced digital tools for verifying news, images and videos as they are shared directly by users of social media (USG). It builds on work carried out in EC co-funded research projects and is currently supported by Google’s DNI Fund (Digital News Initiative).

Collaboration
Offering products and services for data-driven transformation in the Media market and beyond. Looking for collaborations on secure sharing of personal data and proprietary/commercial/industrial data, on AI and machine-learning for advanced automaticity of its data-driven products and services.
DataCentric

**Brief company description**

DataCentric is a data company that builds data-driven technology solutions. DataCentric expertise stems from its experience of creating and delivering databases for marketing and sales and managing its customers’ data. Passion for data has led DataCentric to build the DataCentric Data Lake, a complex information system based on Big Data techniques, connected to the Internet and major public and private Data Sets on consumers, businesses and territories. This is the way it develops products and vertical APIs to be able to trigger and make the best decisions in real time. Legal compliance and respect for privacy are part and parcel of DataCentric essential values.

**Role and offer in the data-driven economy**

As data owners, and experts in data sources and data processing, DataCentric optimizes the business processes and the efforts and investments in sales and marketing activities and strategies of its clients.

**Success story**

**The Vodafone’s case.** Vodafone proposed DataCentric a challenge when they were about to expand their fiber optic network in the Spanish market, and needed to figure out the best areas for this expansion and the main variables involved in purchasing propensity. DataCentric analysed Vodafone’s and competitor’s current deployment to discriminate drivers of high penetration zones extracted from areas with low penetration of customers. Based on these drivers DataCentric established a probability/scoring propensity to have high/low customer penetration in those zones where it was not currently present. Thanks to this project Vodafone reduced costs in 10% and increased sale contracts in 22% in relation to the previous year.

**Collaboration**

Data, Data Privacy and Compliance.
Information Catalyst

**COMPANY NAME**  
Information Catalyst

**HEADQUARTERS**  
Crewe (UK)

**EMPLOYEES**  
20

**COMPANY WEBSITE**  
informationcatalyst.com

**FOUNDATION YEAR**  
2011

**CONTACT INFORMATION**  
info@informationcatalyst.com

**Brief company description**

Information Catalyst delivers ICT Services, Data, and Software Consultancy, Resources, and innovative software to help your business with (Big) Data, Analytics, business interoperability, Industry 4.0, Internet of Things, Cloud, and development.

**Role and offer in the data-driven economy**

Information Catalyst (ICE) is focused on the software, data, and service economy acting as a technology provider. ICE executes small to large-scale software developments involving multiple international partners – e.g. the virtual factory Operating system (vf-os.eu) – and also standards development. ICE has been a key actor in European initiatives such as the Big Data Value Association where, as inaugural Secretary General, it helped to grow BDVA to 130 stakeholders in its first year of operation, and also in the NESSI Software and Services initiative.

**Collaboration**

ICE offers its services to customers and partners interested in the fields the company operates in. A fast growing SME with solutions and regarding software, data, and services to assist partners and end users.

**Success story**

ICE likes to punch above weight in terms of being an SME Innovator. Innovation, conducted through R&D, is the heart of any forward-looking ICT organisation. It is why ICE has been at the forefront of initiatives in Europe such as BDVA and NESSI. Participation in European, Regional and National innovation initiatives has many advantages to ICE, its personnel, and thus its customers, from being at the edge of technology, influencing technical direction, through to using tangible results in its activities. ICE has been active with a specific strategy designed to contribute its vision and extract insight into client and its solutions.

In SME terms, during a 2016 UK Regional Government event, where ICE was invited to attend, it was stated how well the regions’ industry was doing in acquiring 10M€ Grants from Europe/H2020. ICE acquired in the same period nearly 3M€ of activity on behalf of itself and its partners/customers.
Lynkeus

**Brief company description**

Lynkeus is an independent consultancy with a track-record of large-scale EU-funded projects. Its expertise focuses on eHealth solutions, data analytics, privacy and security issues, and blockchain and smart contracts development.

**Role and offer in the data-driven economy**

Lynkeus focuses on innovative solutions for managing and sharing healthcare data for clinical and research purposes, exploring ways to enhance the value of data by combining advanced analytics, knowledge discovery and disease & treatment simulation systems with privacy and security, also having recourse to blockchain and smart contracts. Lynkeus is also primarily involved in regulatory analysis, with special regard to the General Data Protection Regulation and its implementation in healthcare.

**Success story**

Lynkeus contributed to the successful completion of two recent EU-funded projects in the eHealth Sector, namely MD-Paedigree and CARDIOPROOF. The two projects implemented an advanced federated infrastructure for clinical data, equipped with state-of-the-art data management and analytics solutions. Additionally, a first evaluation of the impact of model-based Decision Support Systems on the clinical decision-making process was provided within CARDIOPROOF, thus paving the way to increased usage of datasets in the clinical environment for improved diagnostic and therapeutic outcomes. Lynkeus is currently coordinating MYHEALTHMYDATA, which is the first EU-funded project applying blockchain and smart contracts to health data, while also exploring the strongest privacy and security solutions. Within WHOLODANCE, Lynkeus is exploring new ways of exploiting digital assets in the area of body movements: the project is implementing a digital library of motion captured dance movements, combined with a blending engine and similarity search functionalities for teaching and choreography purposes.

**Collaboration**

Lynkeus looks for research and business opportunities in blockchain-based and smart contracts applications, as well as in personalized medicine, data management and relevant IPR and security, privacy, and regulatory issues.
MarineTraffic

Company Description
MarineTraffic is the leading maritime information service used by shipping professionals to support their decisions and by maritime enthusiasts to track any ship in the world.

Role and Offer in the Data-driven Economy
All MarineTraffic solutions are powered by vessel positional data collected through the company’s data collection network; the most extensive such network in the world collecting more than 500M data points daily. Global real-time and historical ship positions combined with various data sources and analysis techniques result in a highly comprehensive source of actionable maritime intelligence.

Collaboration
MarineTraffic offers data-based services centered around the visibility of the global maritime fleet. We aim to increase efficiency through transparency, and contribute to reducing the industry’s carbon footprint.

Success Story
Founded in 2007, the company has always been dedicated to making maritime information universally accessible. Before the 2004 compulsory requirement that all ships over 300 gross tonnage should carry Automatic Identification Systems, only ship operators and vessel traffic managers could have a view on where their ships were and where they were heading. Today more than 6 Million people access MarineTraffic to see the world’s ships and make use of this information for their own purposes. But there’s more to MarineTraffic than just tracking the vessels. The company is constantly innovating and adding new features based on feedback from its commercial users that enable them to both understand vessels’ operations and monitor conditions that might affect their passage.
Terrasigna

**Brief company description**
Terrasigna’s main expertise is in analysis, processing and interpretation of different type of Earth Observation data; data mining; desktop/web/tablet and smart phones applications development for geospatial data.

**Role and offer in the data-driven economy**
Terrasigna developed its own big data technologies in: Satellite Images Time Series, Content Based Image Retrieval, Visual Data Mining. The services developed by the company using big data technologies address the following domains: agriculture, forestry, water quality, etc. In data value chain, Terrasigna acts as data user, technology provider, service and applications provider. Examples of products and services: Geospatial agility, Suitability Coverage Engine (partnership with GISAT Czech Republic) and Service for forested areas monitoring at national level.

**Success story**
Terrasigna’s expertise in EO big data is used, since the beginning of 2017 in Data-driven Bioeconomy (DataBio) project, funded by the European Commission. The project addresses three economic domains: agriculture, forestry and fishery and aims to prove the benefits of using big data technologies in the raw material production in the respective three domains. Along with making its technologies available for the other pilots to be developed in the project for agriculture, forestry and fishery, the company uses Satellite Images Time Series to offer support to the European Common Agriculture Policy, by providing to the national Agency for Subsidies and Intervention in Agriculture a pilot service that allows the agency to monitor in a more efficient way the compliance of the declared crops with the reality in the field.

**Collaboration**
Terrasigna’s offer: technologies for better understanding the changes and processes in the environment; powerful data techniques and tools that allow collecting, analysing, processing, and visualising vast amounts of data.
Tilde is a leading European language technology company with a mission to empower language diversity in the digital age. Tilde brings the latest Artificial Intelligence research into innovative products for machine translation, terminology management, natural language processing, and human computer interaction.

**Role and offer in the data-driven economy**

Language technologies by Tilde unleash the value of multilingual unstructured data. Tilde develops domain specific machine translation, natural language processing tools, and technologies for multilingual linked data to enable content analytics across the language boundaries.

Tilde coordinates European Commission activities on language data collection from EU Member States and supports European Commission in the creation of a multilingual technology infrastructure.

As an active member of language technology associations (META-NET, LT-Innovate, ELRA) and BDVA, Tilde fosters synergy and cooperation between these communities.

**Collaboration**

Tilde offers its unique competences in language technology, artificial intelligence, deep machine learning, and virtual embodiment. Tilde is looking for partnerships to implement its competences in products and services world-wide.

**Success story**

Tilde developed the EU Council Presidency Translator – a multilingual communication tool that uses novel technologies to instantly translate language data. The tool uses Artificial Intelligence to instantly translate texts, documents, and websites between Estonian and English. Specially designed for delegates, journalists, and translators at Estonia’s 2017 EU Council Presidency, the tool features the world’s first AI-powered Neural Machine Translation system for Estonian. The EU Council Presidency Translator complements Estonia’s e-government platform and is part of the European Commission’s Connecting Europe Facility eTranslation infrastructure, which enables digital services to become fully multilingual.

The EU Council Presidency Translator was launched in 2015 at the Latvian Presidency, providing access to local language content and media information for the six-month event. Started in June of 2017, the tool is deployed for the Estonian Presidency, followed by the Bulgarian and Austrian presidencies in 2018.
Apis

**COMPANY NAME**
Apis Europe AD

**HEADQUARTERS**
Sofia (Bulgaria)

**EMPLOYEES**
65

**COMPANY WEBSITE**
apis.bg | eurocases.eu

**FOUNDATION YEAR**
2006

**CONTACT INFORMATION**
office@apis.bg

**Brief company description**
Apis Europe AD is a private company specialised in analysis, design, development, implementation and maintenance of legal information systems and large databases in the field of company data.

**Role and offer in the data-driven economy**
The company strategy is focused on development of cross-border legal and company data services with European added value:
- EuroCases is a web service providing access to national case law of EU Member States linked to EU law;
- Tax & Financial Standards is an information system on the application of the EU law in the field of taxes and finances;
- Link Detector is a free software tool that checks for legal citations and establishes links to EU law.

**Collaboration**
Apis Europe AD is looking for partnership in creating products and/or participation in projects based on integration and linking of multilingual cross-border datasets in the field of EU law and company data.

---

DataRiver

**COMPANY NAME**
DataRiver Srl

**HEADQUARTERS**
Modena (Italy)

**EMPLOYEES**
13

**COMPANY WEBSITE**
datariver.it

**FOUNDATION YEAR**
2009

**CONTACT INFORMATION**
info@datariver.it

**Brief company description**
DataRiver is an Innovative SME, founded as a Spin-Off of the University of Modena, providing solutions and consulting services in the fields of Data Integration, Semantic Web and Business Intelligence.

**Role and offer in the data-driven economy**
The company develops innovative software solutions and offers specialized consulting services for Clinical Data Management, Big Data Integration and Analytics. The mission of DataRiver is to allow customers to better understand data through an integrated and unified view of the data sources inside and outside the company. The value resulting from the integrated data enables companies/institutions to improve decision-making, production and estimation processes, optimizing costs and time effort.

**Collaboration**
DataRiver develops solutions and offers consulting services for Big Data Management, Integration and Analysis. Industrial research project partnerships in the field of Data Integration, Semantic Web and Business Intelligence.
Datris stands for DAta TRansformation InSight. Developing innovative data-driven applications for not-for-profit organisations and communities internationally.

Role and offer in the data-driven economy
Datris delivers contract data analytics and ICT project management for large corporates (aero/defence, education, marketing) as a profitable business unit alongside the development of its own data-driven applications: (i) CLUBETTER, the ultimate easy-to-use and affordable membership management web application for not-for-profit organisations and local communities, (ii) D-SCRAPER web & social media data scraper with in-built semantic search, NLP and advanced analytics, with v1 also designed to support not-for-profit organisations seeking to expand their participation and reach.

Collaboration
Datris is seeking to collaborate EU wide both in the development and roll out of CLUBETTER as a multi-lingual community support platform and building advanced scraping/analytics technologies for D-SCRAPER.

Dawex enables organizations to meet and conduct data transactions directly. Acting as a trusted third-party, any kind of data are traded on the marketplace: customer and product-related data, financial data, IoT data, licensed as one-off deals or subscriptions, through datasets or APIs. Providers can highlight the value of their data while retaining complete control over it. Data acquirers to find the most relevant data sources, schedule recurring data exchanges over time, and receive notifications regarding new opportunities.

Collaboration
By facilitating cross-border and cross-sectors data flow and making data exchange accessible and secure for all economic stakeholders, Dawex contributes to building the Data Economy.
Diavita

**Brief company description**

Diavita designs healthcare & medical app providing mobile app development services for private healthcare, medical device & pharma clients.

**Role and offer in the data-driven economy**

Diavita provides value-creation mechanisms of data analytics, which includes using data analytics to gain insights (knowledge creation), automate decision-making (decision automation), data analytics (through machine learning algorithms) to empower autonomous systems that are able to learn from data of previous situations and to autonomously make decisions based on the analysis of these data.

**Collaboration**

Diavita is interested in collaboration in the following domains: Cloud Computing, 5G, Big Data and High Performance Computing.

Digital Partners

**Brief company description**

Digital Partners specializes in Digital Transformation Consulting and Digital Platforms Solutions for multiple industries. Digital Partners solutions cover different sectors, unlocking the value of corporate data by using a personalized Data Driven approach. Its services include Analytics through Business Digital Dashboards by transforming data into knowledge to create value for clients.

**Role and offer in the data-driven economy**

This innovative platform uses the power of Data Driven Business Modelling through an incremental and iterative machine learning engine based on the DDBM “Data Driven Business Model” Framework. The engine proposes Business Valuable Patterns connected to different Valuable Business and Technical APIs, learning from their dataset of and actions with their Behaviours. Digital Partners mixes cognitive computing & machine learning, for decoupling the data business usages and make them valuable for market purposes as needed.

**Collaboration**

Digital Partners offers different Digital Big Data Platforms & Services supported by different realized scenarios. Digital Partners is looking for added value partners to commonly respond to its clients’ needs as well as partnership on common European opportunities.
Grassroots Arts, is a media arts research company, whose specific assets are:
Visions, know-how, networking and experience, grown for 16 years in academic and industry driven research and development projects.

Role and offer in the data-driven economy
Grassroots is offering creative concepts, user engagement and user centric design methodologies for big data user test scenarios, test pilots and experiments, and project management for research and innovation projects. Its main focus is not on ICT, but on creativity and user engagement activities for the experiments and test pilots. The assets are vision, know-how, talent and community networks for designing large scale experiments.

InData Labs core services include data architecture advisory, big data engineering, data science, and machine learning development. Its projects have helped the customers to find new ways of leveraging data, add mission-critical features to its products, and automate time-consuming tasks. InData Labs Big Data Services include: Data warehouse modernization, Data lake implementation, Real time stream processing. InData Labs Artificial Intelligence development skills include: Machine learning, Natural language processing, Computer vision, Predictive analytics.

Collaboration
Grassroots Arts offers project management as well as the design of big data pilots and user evaluation.

Collaboration
InData Labs is full-stack data scientists, engineers, and app developers. It partners with companies of all sizes helping them build AI-powered products and solutions.
### JOT Internet Media

**Brief company description**

JOT Internet Media España SL is a specialist digital marketing agency that generates large amounts of qualified search traffic to premium partners. This means the company helps its clients increase their web traffic, monetize it and generate extra revenue.

**Role and offer in the data-driven economy**

JOT exploits the data to implement a novel analytic approach enabling the optimization of the digital marketing budget and improvement of the performance and conversion rates of campaigns. This is based on the custom automation of tasks and reporting which enables the exploitation of account managers’ skills for strategic decisions instead of merely routine tasks. Within the data value chain, JOT plays the data owner role. Apart from using the data for the core business of the company, JOT developed additional technical work to enrich the data sets, generate user profiling and offer them to third parties, such as e-commerce.

**Collaboration**

JOT is open to collaborating as a big data provider and end user. The main goals are the implementation and evaluation of machine/deep learning and complex engine processes applied in real cases related to digital marketing.

### Martel Innovate

**Brief company description**

Martel is a dynamic, Swiss-based ICT consultancy with more than 20 years’ experience managing innovation projects worldwide. Martel supports the lifecycle of innovation projects through its three business units.

**Role and offer in the data-driven economy**

Martel Innovate specializes in ICT, with a focus on public innovation funding, media and branding, and innovative technology. Martel Lab, the R&D&I department, offers scalable and customized services for IoT and data intensive services based on FIWARE technologies, cable of supporting more than 10,000 transition per second per node. E.g., the QuantumLeap service supports the realtime processing for georeferenced time series. It also offers solutions for creating dynamic and intuitive dashboards on top of stored data.

**Collaboration**

Martel Innovate offers its R&D skills on Timeseries data management, combined with deep experience in the marketing of R&D results. Martel Innovate is looking forward to opportunities to validate its technologies in new data-driven application scenarios.
Mosaic Factor

Mosaic Factor is an SME specialized in data driven innovation in Mobility of people and goods, with a strong focus on data sharing and all related issues and opportunities.

Role and offer in the data-driven economy

Mosaic Factor is specialized in the development and customization of predictive algorithms and data analytics for Mobility and Logistics. Data Privacy and Data Sharing mechanism are core competencies of Mosaic Factor team.

Collaboration

Mosaic Factor offers data analysis in the fields of Mobility and Logistics. If you are handling data related to one of these fields and you have doubts about Data Privacy, Data Ownership and Data Sharing mechanisms, Mosaic Factor will be happy to assist you with its experience.

Mozaika

Mozaika, the Humanizing Technologies Lab, is an SME and a Research Center providing research in the field of data science, unstructured data processing, natural interfaces, knowledge management and human insight.

Role and offer in the data-driven economy

At Mozaika they are trying to leverage data science with natural interfaces to provide solutions tailored to human behavior, attitudes and comprehension, also known as cognitive systems. The company specialized in building information infrastructure service a variety of applications in data as a service mode. The company also offers R&D services and project development.

Collaboration

Mozaika offers project development, business analysis, design and development of information infrastructures in different verticals, R&D services in knowledge management and AI. They look for strategic partners, business development and marketing experts, new markets, investors.
Neuropublic

**Brief company description**
Neuropublic is an ICT SME, specialized in integrated IS and high-demand applications, focusing especially on agriculture. Neuropublic services are being successfully used for >10 years, by >800,000 end-users.

**Role and offer in the data-driven economy**
Neuropublic is working on the integration, management and analysis of large volumes of heterogeneous types of data in order to provide services related to Smart Farming, CAP implementation and spatial analytics, to >725,000 agricultural professionals. These data include environmental and soil measurements coming from its national wide network of IoT telemetric stations of its own design called GAIATrons, weather forecast data, UAVs and Sentinel data, proximity sensing data, business data and more.

**Collaboration**
Neuropublic offers expertise on using Big Data in agriculture, focusing especially on CAP implementation and Smart Farming, and significant use cases with access to all stakeholders across the agri-food value chain.

Nuromedia

**Brief company description**
Nuromedia is an independent multimedia and software engineering company founded in 2006 by Jens Piesk and Dr. Holger Sprengel, entrepreneurs in technology sector, with profound expertise of national and international R&D projects. Nuromedia develops, produces and markets quality products, services and trend-setting software solutions.

**Role and offer in the data-driven economy**
Nuromedia works in Big Data Analysis, Data Visualization and use of data for Media Application. The amount of data generated by media applications and games developed by the company’s sister company Nurogames is immense. Nuromedia works in using data from various sources and applications to analyze and produce smarter applications for eHealth and eLearning as well as Serious games and Applied games.

**Collaboration**
Nuromedia offers collaboration for National and International R&D projects. The company work heavily in dissemination and exploitation apart from software development and data analysis in the projects.
Semantic Web Company

**Brief company description**
Semantic Web Company (SWC) is globally acknowledged as a leading and most innovative Linked Data technology provider. SWC is the company behind PoolParty Semantic Suite - the preferred semantic solution of Fortune 500 companies.

**Role and offer in the data-driven economy**
SWC focus is on metadata & data management and integration, search based applications, and analytic solutions making use of semantic information and data management principles and techniques. A team of Linked Data experts provides consulting and integration services for semantic data, information and knowledge (management) solutions. SWC’s research department guarantees innovation that matters in national and international Research and Innovation projects. Its core product PoolParty Semantic Suite (poolparty.biz) used as semantic middleware enables customers to establish context sensitive data & information management solutions.

**Collaboration**
Collaborations in Research and Innovation projects (bilateral, H2020 etc) as well as technology projects as e.g. integration of software into industry solutions and/or technology cooperation (e.g. ML, NLP, semantics etc).

<table>
<thead>
<tr>
<th>EXPERTISE IN VERTICAL SECTORS</th>
<th>BDV PRIORITY AREAS</th>
<th>ROLE IN THE DATA VALUE CHAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Publishing]</td>
<td>[Data management]</td>
<td>[Data integrator]</td>
</tr>
<tr>
<td>[Pharma]</td>
<td>[Data analytics]</td>
<td></td>
</tr>
<tr>
<td>[Health]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Construction]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[International development]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spacelabel

**Brief company description**
Spacelabel is a company operating in the Space and Earth monitoring applications sectors: design and development of IT systems for the space industry, geospatial information systems and services, mission definition and analysis of Earth observation minisatellites.

**Role and offer in the data-driven economy**
Provision of EO Data Discovery and Acquisition Components (e.g. FedEO gateway) enabling harmonized access to many EO missions worldwide. Spacebel co-authored several EO-related OGC standards and CEOS Best Practices and has the expertise with EO metadata, linked data, data discovery, identity management ordering and access from (OGC, CEOS, HMA, ISO, W3C and OASIS). Components for data analytics (based on Sentinel data) and standards-based method for deployment of processors on a cloud environment (Exploitation Platform thread of OGC TestBed 13).

**Collaboration**
Spacebel is willing to collaborate with business-oriented service providers to implement sustainable EO-based services for value chains in Agriculture, Natural Resource Management, Risk Management, and other environmental domains.

<table>
<thead>
<tr>
<th>EXPERTISE IN VERTICAL SECTORS</th>
<th>BDV PRIORITY AREAS</th>
<th>ROLE IN THE DATA VALUE CHAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Forestry]</td>
<td>[Data management]</td>
<td>[Data aggregator]</td>
</tr>
<tr>
<td>[Agriculture]</td>
<td>[Data processing architectures]</td>
<td>[Data analysis]</td>
</tr>
<tr>
<td>[Risk management]</td>
<td>[Data standards]</td>
<td>[Data services]</td>
</tr>
</tbody>
</table>

**Company Details**

<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>HEADQUARTERS</th>
<th>EMPLOYEES</th>
<th>COMPANY WEBSITE</th>
<th>FOUNDATION YEAR</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantic Web Company</td>
<td>Vienna (Austria)</td>
<td>40+</td>
<td>semantic-web.com</td>
<td>2005</td>
<td><a href="mailto:office@semantic-web.com">office@semantic-web.com</a></td>
</tr>
<tr>
<td>Spacelabel</td>
<td>Liège (Belgium)</td>
<td>100</td>
<td>spacebel.be</td>
<td>1988</td>
<td><a href="mailto:info@spacebel.be">info@spacebel.be</a></td>
</tr>
</tbody>
</table>
## Teknopar

<table>
<thead>
<tr>
<th><strong>COMPANY NAME</strong></th>
<th>Teknopar Industrial Automation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEADQUARTERS</strong></td>
<td>Ankara (Turkey)</td>
</tr>
<tr>
<td><strong>EMPLOYEES</strong></td>
<td>30</td>
</tr>
<tr>
<td><strong>COMPANY WEBSITE</strong></td>
<td>teknopar.com.tr</td>
</tr>
<tr>
<td><strong>FOUNDATION YEAR</strong></td>
<td>1996</td>
</tr>
<tr>
<td><strong>CONTACT INFORMATION</strong></td>
<td><a href="mailto:punal@teknopar.com.tr">punal@teknopar.com.tr</a></td>
</tr>
</tbody>
</table>

### Brief company description
Teknopar is an R&D performing SME and it is one of the leading providers of automation systems and solutions in Turkey for industrial facilities, energy, mobility and defence sectors.

### Role and offer in the data-driven economy
Teknopar is a professionally managed high-end automation solution company with its state-of-the-art implementation, integration, development and customization services. Its major focus is on industrial and energy automation with abilities on hardware and embedded software design and delivery. Teknopar has ICT solutions focusing on Big Data, M2M and Industry 4.0.

### Collaboration
Teknopar is looking for collaboration on ICT research and innovation projects. Big data analytics solutions and IoT applications for manufacturing, energy and other verticals are the main topics the company is interested in.

## Treelogic

<table>
<thead>
<tr>
<th><strong>COMPANY NAME</strong></th>
<th>Treelogic S.L.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEADQUARTERS</strong></td>
<td>Llanera (Spain)</td>
</tr>
<tr>
<td><strong>EMPLOYEES</strong></td>
<td>150</td>
</tr>
<tr>
<td><strong>COMPANY WEBSITE</strong></td>
<td>treelogic.com</td>
</tr>
<tr>
<td><strong>FOUNDATION YEAR</strong></td>
<td>1996</td>
</tr>
<tr>
<td><strong>CONTACT INFORMATION</strong></td>
<td><a href="mailto:info@treelogic.com">info@treelogic.com</a></td>
</tr>
</tbody>
</table>

### Brief company description
Treelogic helps optimizing processes and business operations using advanced ICT solutions focused on AI & Big Data integrating emerging technologies as part of the Smart Data ecosystem.

### Role and offer in the data-driven economy
With 20+ years of experience and present in 10+ countries, Treelogic builds open AI & Big Data solutions. Treelogic processes unstructured and structured data, real-time and historical, to unlock its value and deliver it to be used anywhere in the business. Treelogic covers the whole lifecycle and develop end-to-end technology-agnostic solutions with a secure-by-design approach. The company is committed to quality and customer satisfaction, and collaborate with its clients in the definition of use cases for the adoption of emerging data-driven technologies.

### Collaboration
Treelogic helps optimizing processes and business operations using advanced ICT solutions focused on AI & Big Data integrating technologies as part of the Smart Data ecosystem.
Trilateral Research offers data management (including GDPR assessment) and data analytics services to public and private sector clients, including EC projects. The company is interested in new and interesting test-cases for its services.

**Collaboration**

Trilateral Research offers data management (including GDPR assessment) and data analytics services to public and private sector clients, including EC projects. The company is interested in new and interesting test-cases for its services.

**Brief company description**

Trilateral Research is a leading multidisciplinary consulting and technology development company. Its team collaborates across social sciences and technology, to bring insights from each to capture the benefits of data driven innovation.

**Role and offer in the data-driven economy**

Trilateral Research creates knowledge and tools that empower clients to transform research into innovation and innovation into impact. Its foundation is in social science, with a focus on the privacy, social, ethical or data protection impacts of data-driven technologies. The company has built upon this to add cutting-edge competencies for a rich, diverse set of consulting services within innovation management and technology development. Trilateral Research collaborates across sociology, criminology, computer science, engineering, economics and law to deliver multi-disciplinary services to myriad clients.

**EXPERTISE IN VERTICAL SECTORS**

- Crisis & security
- Smart cities
- Environmental sustainability

**BDV PRIORITY AREAS**

- Data management
- Data analytics
- Data services
- Data user

**ROLE IN THE DATA VALUE CHAIN**

- Data analysis
- Data services

**Ubiwhere**

Ubiwhere's offerings are based on its cutting-edge products and services, the company gathers data from IoT networks from various domains and process it to extract knowledge with the main goal of assessing city needs as a whole. Through data analysis, visualisation and cross-domain/domain-specific applications, Ubiwhere offers municipalities and city service providers the knowledge and tools to enhance the quality and efficiency of their services with the ultimate goal of improving citizens’ quality of life.

**Collaboration**

With more than 10 years of expertise and know-how in the area of Smart Cities, Ubiwhere seeks to foster synergies with partners and municipalities to build the next generation cities.

**Brief company description**

Software and R&D company for the Smart cities, Telecommunications and Internet of the Future sectors.

**Role and offer in the data-driven economy**

Ubiwhere’s offerings are based on its cutting-edge products and services, the company gathers data from IoT networks from various domains and process it to extract knowledge with the main goal of assessing city needs as a whole. Through data analysis, visualisation and cross-domain/domain-specific applications, Ubiwhere offers municipalities and city service providers the knowledge and tools to enhance the quality and efficiency of their services with the ultimate goal of improving citizens’ quality of life.
Valdani Vicari Associati

**Company Name:** Valdani Vicari & Associati (VVA)

**Headquarters:** Milan (Italy) / Brussels (Belgium)

**Employees:** 80

**Company Website:** vva.it

**Foundation Year:** 1992

**Contact Information:** europeanpublicpolicy@vva.it

**Brief Company Description:**
VVA is an independent consultancy providing public policy research and advisory services to European Institutions, as well as helping private clients in digital transformation and online marketing.

**Role and Offer in the Data-Driven Economy:**
VVA is both developing uses for Big Data for its advisory activities, and acting as an interlocutor between Big Data providers and users. It assesses and advises European Union policies and programmes around Earth observation and GNSS, the sharing economy, digital platforms, algorithms, data privacy. Its subsidiary Mates4digital (M4D) is a digital company specialising in online marketing using its own proprietary platform Rankit (rankit.it). Its artificial intelligence team works on machine learning solutions helping companies engage with their customers (ndg.ai).

**Expertise in Vertical Sectors:**
- Earth observation and GNSS
- Energy
- Sharing economy
- Health
- Online marketing

**BDV Priority Areas:**
- Data user
- External advisor

**Role in the Data Value Chain:**
- Society
- Data skills

**Collaboration:**
VVA strives to build a European collaboration network focused on policy and societal aspects of Big Data. M4D is looking for partners to expand its online marketing activities in Europe.

webLyzard

**Company Name:** webLyzard technology

**Headquarters:** Vienna (Austria)

**Employees:** 8

**Company Website:** weblyzard.com

**Foundation Year:** 2008

**Contact Information:** info@weblyzard.com

**Brief Company Description:**
webLyzard provides Web intelligence, semantic search and visual analytics services to policy makers such as the United Nations and US Department of Commerce, and to business-to-consumer brands in various sectors.

**Role and Offer in the Data-Driven Economy:**
webLyzard’s award-winning big data platform builds on more than 15 years of focused R&D into text mining, natural language processing, linked data, human-computer interaction, and information visualization. To support decision makers, the highly scalable platform detects emerging stories, visualizes semantic associations and provides one of the industry’s most advanced communication success metrics. webLyzard has a strong record in acquiring and managing large-scale research projects, including both national projects and European initiatives (FP7, Horizon 2020).

**Expertise in Vertical Sectors:**
- Government, health
- Energy
- Environment
- Tourism
- Automotive
- Telecommunications

**BDV Priority Areas:**
- Data analytics
- Data visualization
- Society

**Role in the Data Value Chain:**
- Data aggregator
- Data analysis
- Web intelligence

**Collaboration:**
webLyzard is looking for technology partners to advance the state of the art in Horizon 2020 projects, and for strategy channel partners to market its services to an international audience.
WINGS focuses on the development of software through advanced wireless, cloud/IoT, big data and security technologies leveraging know-how of its staff who has been active in research projects for more than twenty years.

Role and offer in the data-driven economy

WINGS members have a long experience and expertise in machine learning, data mining and data analysis with algorithms and tools capable of addressing Big Data challenges. WINGS competence in the area refers to the exploitation of machine learning techniques (mainly unsupervised ones that offer re-usability of their tools in more than one use case/application) for building knowledge on the past experience of the considered (eco-)system, visualizing the produced knowledge and predicting the future behaviour of the (eco-)system. These predictions can eventually guide proactive actions for avoiding undesired future situations (e.g., in the telecommunication or e-health area) or for suggesting actions that will receive better acceptance from the potential future customers (e.g., in targeted campaigns or customer related issues in the telecommunication area).

Collaboration

WINGS is looking for partners that are willing to offer data or expertise in the above mentioned verticals for commonly developing new products, services or businesses.
Powered by:

BIG DATA VALUE
eCOSYSTEM PROJECT

bdva.eu