Horizon 2020 Program (2014-2020)

Big data PPP
Research addressing main technology challenges of the data economy

Industrial-Driven Big Data as a Self-Service Solution

D7.7: Third report on Dissemination strategy and activities †

Abstract: This deliverable presents the work performed in WP7 – Task 7.2 "Communication strategy triggering awareness and new business opportunities" which includes the reporting and monitoring of the respective dissemination and communication activities during the third year of the project (M25-M36). As the objective of WP7 is to supervise the integrity and consistency of all dissemination efforts for creating awareness on the I-BiDaaS achievements, the main purpose of the current deliverable is to report the dissemination, collaboration, and communication activities followed during the 3rd year of the project, as well as the results from these activities based on which project's dissemination plan was updated respectively. This report is the final out of three reports submitted on a yearly basis.

Contractual Date of Delivery	31/12/2020
Actual Date of Delivery	29/12/2020
Deliverable Security Class	Public
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† *The research leading to these results has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 780787.*

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Revisions

Version	Date	By	Overview
7.7.7	28/12/2020	SpirosFotis	Final Version Revised
7.7.6	26/12/2020	Spiros Fotis	Second Version Revised
7.7.5	21/12/2020	Spiros Fotis	Second Version
7.7.4	17/12/2020	Vlatka Katusic Cuentas	ENPC Internal Review
7.7.3	17/12/2020	Ramon Martín de Pozuelo	CAIXA Internal Review
7.7.2	05/12/2020	Leonidas Kallipolitis	First draft
7.7.1	26/11/2020	All Partners	Initial Input
7.7.0	10/10/2020	Spiros Fotis	ToC

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List of Abbreviations

BDT Basic Data Transfer
BDV Big Data Value
D Deliverable
DoW Document of Work
EC European Commission
EAB External Advisory Board
ICT Information Computer Technology
KPI Key Performance Indicator
M Month
NLP Natural Language Processing
PoC Proof of Concept
PPP Public-Private-Partnership
SME Small Medium Enterprise
TC Technical Committee
WP Work Package

Executive Summary

Having reassessed the results derived from the dissemination efforts of the two first years of the project; the I-BiDaaS consortium revised its dissemination strategy accordingly. As a result, significant progress has been made during the final year of the dissemination activities. The collaboration and involvement of all partners in association with increased liaison activities was the key to achieving the objectives in the project's last year.

Dissemination material created during the first and second year of the project was updated while new content was developed as part of the dissemination activities during the final year.

I-BiDaaS web presence has been enhanced with posts on all social networking channels of the project and new material uploaded on the website on a constant basis.

In addition, the publication of articles in both scientific journals and conference proceedings alongside the participation in conferences, workshops, and other events of similar nature, greatly enhanced the project's reach to a broader audience, both technical and business.

Collaboration with other projects and active participation in collaborative initiatives has been established, adding more value to the project's dissemination efforts.

Following the recommendations provided during the first review, we redefined our approach regarding collaboration with other projects. We intensified our interaction with BDV PPP making the most of the toolkit it offers, and we communicated all lessons learned from the experience of data sharing and data availability by using the I-BiDaaS platform, provided by our data pilots.

Due to the importance of the issue addressed by I-BIDaaS, all the aforementioned dissemination & communication activities were widely and positively accepted.

1 Introduction

1.1 About this deliverable

Deliverable 7.7 serves as a report for the dissemination, collaboration, and communication activities for I-BiDaaS during the final year of the project under WP7. Furthermore, it provides an update on the project dissemination strategy presented at M24 (D7.5, December 2019).

In addition, this deliverable aims to evaluate the outcome of the planned dissemination and communication strategy, based on the measured KPIs. Conclusions are drawn from the overall dissemination and communication activities throughout the development of the project.

1.2 I-BiDaaS dissemination strategy at a glance

Figure 1 below outlines the phases of the Dissemination strategy implemented during the life cycle of the project. At the starting point, monitoring of literature resources and events in Big Data batch and streaming analytics, data fabrication and visualization, software engineering, and resources management frameworks, both in academia and industry, took place. During the Inception Phase, targeted groups were further researched and analysed to develop correlations between stakeholders, tools, and appropriate communication channels.

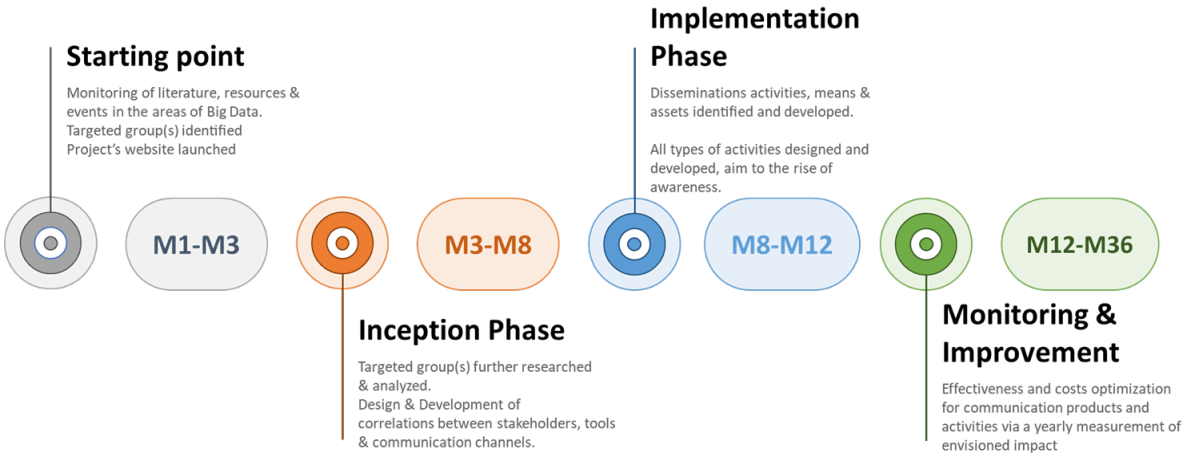

Figure 1. Dissemination & Communication Strategy Phases

During the final 2 phases of the dissemination strategy for the I-BiDaaS project, the dissemination team established an internal mechanism of specific tools and techniques for the systematic, targeted, and complete dissemination of the project achievements and progress. This internal mechanism provided us with constant and continuous work routines on a daily basis for more efficient implementation, monitoring, and improvement of the dissemination activities planned. Monthly virtual meetings on dissemination were established during all this period to coordinate activities and plan related activities.

1.3 Document structure

The present document is structured as follows:

Section 2 provides an overview of the I-BiDaaS original dissemination strategy and contrasts it with the strategy developed considering the project's evolution. In Section 3, the dissemination material created during the final year of the project is presented. Section 4 enlists all

dissemination activities performed by the consortium. Section 5 outlines the I-BiDaaS achievements in terms of the project's web presence with respect to the official web site and the social media channels in place for dissemination purposes. Section 6 brings to attention the I-BiDaaS activities under the BDV PPP umbrella. Section 7 overviews the collaboration activities during the final year of the project. In Section 8, KPIs and goals are revised, and the dissemination strategy initially planned is analysed with regards to the actual strategy followed. Finally, an overall evaluation of the dissemination & communication effort is presented.

2 Monitoring project's evolution

The monitoring and improvement phase enabled understanding of the effectiveness of I-BiDaaS communication and dissemination strategies. Following the three basic dimensions for monitoring, i.e., areas of interest, assets to disseminate, and target groups, outreach activities became more intensive in the last year of the project. Their orientation turned from awareness to market creation and the opening of new business opportunities.

Areas of interest

As the project progressed, the dissemination team targeted its efforts at the identified areas of interest during the last year, which in principle remained unchanged. The I-BiDaaS solution still aims to empower IT and non-IT Big Data experts to efficiently utilize and interact with Big Data technologies, enhance current knowledge, optimize existing analytics processes and create new business opportunities. Facilitating access to Big Data functionalities to a broader number of roles in an organization, eliminating the necessity to have deep knowledge of IT concepts and implementing utilities bring closer Big Data analytics to business people.

Assets to disseminate

In the 1st year of the project, assets to disseminate were more of a conceptual nature, highlighting the various components of the I-BiDaaS architecture. After the MVP release (M12), the dissemination team focused on communicating more tangible assets. During the last year of the project, feedback from the first evaluation results and continuous improvements on the 1st prototype (released in M18) led to the fully integrated final prototype in M34 All use cases were fully implemented, and data processing pipelines within I-BiDaaS were established. Therefore, dissemination activities focused on sharing the results and raising awareness on the methods and technologies used. We also focused on evaluating other technologies and tools already available in the market to have a clear idea of what I-BiDaas is offering, similarities and differences, all this in order to increase interest and pave the way to exploitation activities and market opportunities.

Target groups for dissemination

Bringing the project results to the attention of non-scientific audiences, scientific peers, potential business partners, and policymakers is a continuous activity to foster collaboration and innovation since the 1st year of the project. Thus, dissemination activities targeted technology experts and stakeholders from public, private, and academic sectors familiar with technical issues. In contrast, communication activities addressed wider groups, e.g., manufacturers, telecom providers, banks (key-stakeholders), policymakers, and investors.

After the 1st review of the project, the dissemination team included lessons learned from the use cases and success stories from data providers. In collaboration with other projects, online activities included workshops, hackathons, and webinars that enhanced dissemination activities with a more efficient engagement of all targeted groups.

Identifying target groups was a continuous task performed in the different events in which the project participated. Thus, additional tools such as the use of chatbots in physical events and questionnaires during online activities allowed to receive feedback from potential early adopters of the platform. The activation of different industrial clusters from the partners was also part of the strategy to reach potential end-users to test the platform and collect feedback for the project's long-term sustainability.

3 Creation, elaboration, and provision of dissemination material

3.1 Design of project promotional material

Dissemination of last year's results through different channels included the design and use of promotional material that, based on the project's visual identity, would enhance I-BiDaaS recognizability in target areas of interest and increase project outreach. To this end, much effort was spent on creating posters for events where consortium partners presented the project results and the compilation of videos from online sessions and demonstrations.

We hereby present the banners created for last year's organized events (Figure 2, Figure 3, Figure 4) and participation in other relevant events (Figure 5). Details about these events follow in paragraph 4.3 of the next chapter.

I-BiDaaS – organised events:

Figure 2. Posters for virtual workshop "I-BiDaaS Application to the Financial Sector"

Figure 3. Posters for online hackathon "I-BiDaaS - Telefonica Research Online Hackathon"

Figure 4. Posters for webinars "Big Data Pilot Demo Days"

Participation to relevant events:

Figure 5. Posters for I-BiDaaS participation in various events

Figure 6. Caixa Runner Up in BDV Best Success Story (BSS) contest

Videos created from the above events were also published to offer an audiovisual experience and help the target audience better understand the project results. We list below the produced videos, publication dates, and relevant links:

1. Big Data Pilot Demo Days: I-BiDaaS Application to the Financial Sector Webinar, May 28, 2020, https://www.youtube.com/watch?v=omhDsRkjI94
2. Big Data Pilot Demo Days - I-BiDaaS Application to the Telecommunications Sector, July 3, 2020, https://www.youtube.com/watch?v=pqCoYx_by0U&t=3216s
3. BigDataPilotDemoDays - I BiDaaS Application to the Manufacturing Sector Webinar, Jul 31, 2020, https://www.youtube.com/watch?v=nKBqE7PS2CY
4. EBDFV 2020 "Parallel session on European Big Data Research for Industry" Sponsored by I-BiDaaS, Nov 16, 2020, https://www.youtube.com/watch?v=CWyAx6736G8
5. I-BiDaaS Final Event, December 21, 2020, https://youtu.be/xmIUGSxfnLQ

Moreover, an updated project presentation and the applications of I-BiDaaS have been compiled to a 7min video: https://www.youtube.com/watch?v=kQsr7RqF3Gc.

All videos can be found under the project's YouTube channel: https://www.youtube.com/channel/UCCBVaMmNbS1NPzXTvPQukAA/videos

4 Dissemination activities during the final year of the project

4.1 Overview

The following figure (figure 7) outlines the recorded dissemination activities carried out for I-BiDaaS during the 36 months of its development.

- Publications: I-BiDaaS achieved 5 papers and 1 poster publications in conference proceedings and two other publications (book chapters) during the final year of the project out of 28 in total.
- Events: I-BiDaaS was present in 17 events during the final year of the project.
- Other dissemination activities: All the dissemination activities are tracked in the reporting document updated monthly by all the consortium partners.

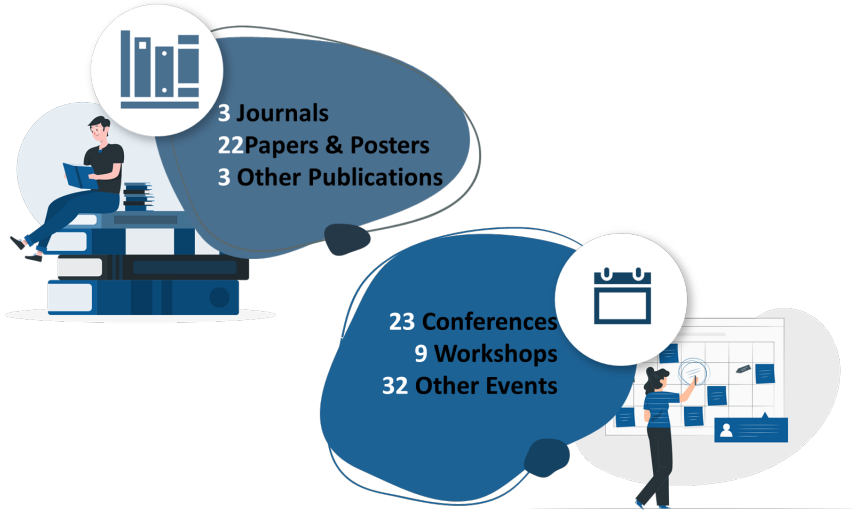

Figure 7. Dissemination activities at a glance

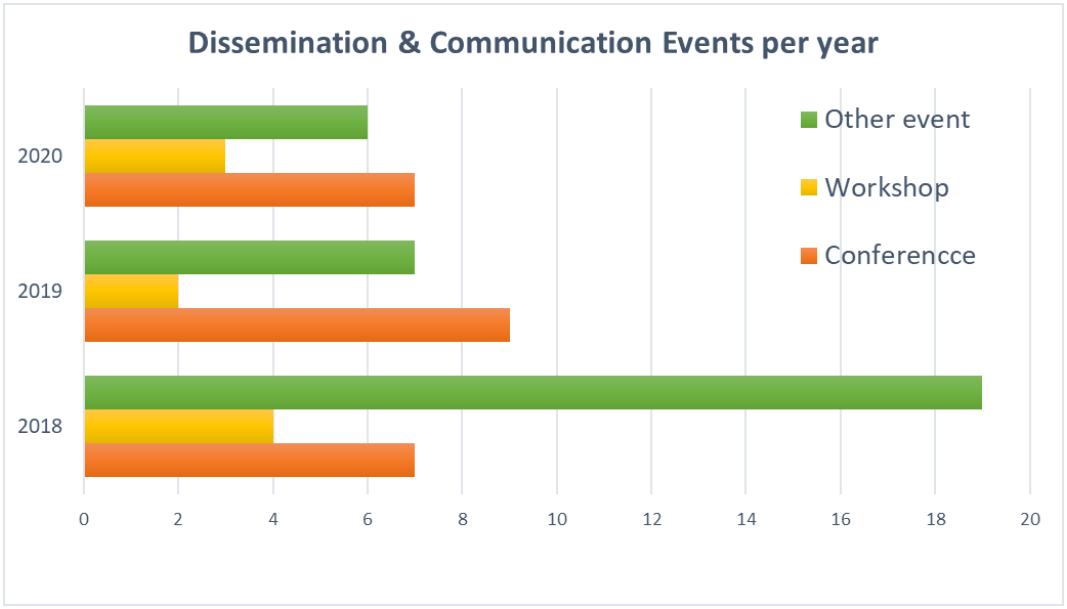

Figure 8. Dissemination & Communication Events per year

Research outcomes have also been published in open-access repositories (https://zenodo.org/communities/i-bidaas), following the project partners' commitment to promote Open Access to scientific publications and research data. Statistics for this effort are taken from OpenAIRE and depicted in the following figure:

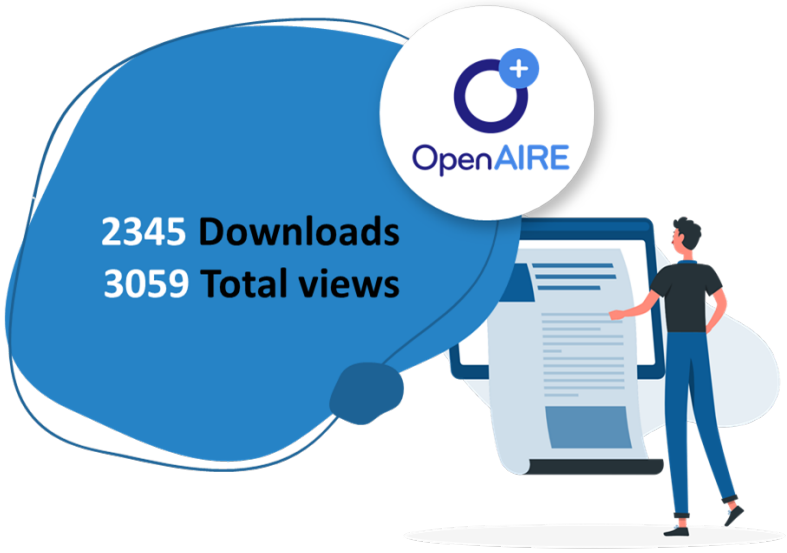

Figure 9. Open Access Publications

4.2 Publications

4.2.1 Conference proceedings

Table 1: List of Conference Proceedings published during the final year of I-BiDaaS

Conference / Workshop	Title	Authors
10th International Conference on Information Society and Technology, Serbia, 2020	Parallel Differentially Private K-Means Implementation Using COMPSs Framework	Sukpisit, S., Skrbic, S., Jakovetic, D.
10th ACM Conference on Data and Application Security and Privacy (CODASPY '20), August 3–4, 2020, Virtual Conference	TrustAV: Practical and Privacy-Preserving Malware Analysis in the Cloud	Deyannis, D., Papadogiannaki, E., Kalivianakis, G., Vasiliadis, G., and Ioannidis, S.
IEEE Conference on Network Softwarization (IEEE Netsoft 2020), June 29 – July 3, 2020, Virtual Conference	Pythia: Scheduling of Concurrent Network Packet Processing Applications on Heterogeneous Devices	Giakoumakis, G., Papadogiannaki, E., Vasiliadis, G., and Ioannidis, S.
IEEE International Workshop on Computer-Aided Modeling and Design of Communication Links and Networks (CAMAD 2020), September 14 – 16, 2020, Virtual Conference	Head(er)Hunter: Fast Intrusion Detection using Packet Metadata Signatures.	Papadogiannaki, E., Vasiliadis, G., and Ioannidis, S.
The 31st International Conference on Database and Expert Systems Applications - DEXA 2020, September 14-17, 2020	Challenges in Resource Provisioning for the Execution of Data Wrangling Workflows on the Cloud: A Case Study	Almasaud, A. K. A., Bharadwaj, A., Sampaio, S., & Sakellariou, R.
2020 IEEE International Conference on Big Data, December 10 - 13, 2020, Virtual Conference	Towards a Multi-Perspective Methodology for Big Data Requirements	Kavakli, E., Sakellariou, R., Eleftheriou, I. and Mascolo, J.E.

4.2.2 Other publications

Table 2: List of other publications

Title	Published In	Authors
Big Data Analytics in the Manufacturing Sector: Guidelines and Lessons Learned through the CRF Case	Technologies and Applications for Big Data Value (Book chapter, to appear)	A. Alexopoulos, Y. Becerra, O. Boehm, G. Bravos, V. Chatzigiannakis, C. Cugnasco, G. Demetriou, I. Eleftheriou, S. Fotis, G. Genchi, S. Ioannidis, D. Jakovetic, L. Kallipolitis, V. Katusic, E. Kavakli, D.Kopanaki, C. Leventis, M. Martínez, J. Mascolo, N. Milosevic, E. Pere Pages Montanera, G. Ristow, H. Ruiz-Ocampo, R. Sakellariou, R. Sirvent, S. Skrbic, I. Spais, G. D. Spennacchio, D. Stamenkovic, G. Vasiliadis, M. Vinov
Big Data Analytics in the Banking Sector: Guidelines and Lessons Learned from the CaixaBank Case	Technologies and Applications for Big Data Value (Book chapter, to appear)	A. Alexopoulos, Y. Becerra, O. Boehm, G. Bravos, V. Chatzigiannakis, C. Cugnasco, G. Demetriou, I. Eleftheriou, L. Fodor, S. Fotis, S. Ioannidis, D. Jakovetic, L. Kallipolitis, V. Katusic, E. Kavakli, D. Kopanaki, C. Leventis, M. M. Marcos, R. M. de Pozuelo, M. Martínez, N. Milosevic, E. P. Pages Montanera, G. Ristow, H. Ruiz-Ocampo, R. Sakellariou, R. Sirvent, S. Skrbic, I. Spais, G. Vasiliadis and M. Vinov

4.3 Events

4.3.1 Events Attended

Table 3: List of events attended by I-BiDaaS members during the final year of the project

Event Title	Place	Date
Advanced course 4 of the H2020 ITN BIGMATH project	Novi Sad, Serbia	30-31/1/2020
5th Barcelona Activa Pre-Incubation program	Barcelona, Spain	18/2/2020
Circular Economy Symposium 2020	Harvard University, Boston, USA	6/3/2020
10th International Conference on Information Society and Technology (ICIST 2020)	Kopaonik, Serbia	8-11/3/2020
EuroSys'20	Online	27-30/4/2020
Big Data Value PPP Virtual Summit 2020 (BDV PPP Summit 2020) Webinars	Online	May to July 2020
"How to rely on a data community to create value?" Webinar organised by Big Data & AI World and AEKIDEN Data Evolution	Online	27/5/20
I-BiDaaS - "I-BiDaaS Application to the Financial Sector" Workshop	Online	22/6/2020
IEEE Conference on Network Softwarization (IEEE Netsoft 2020)	Online	29/6/2020 – 3/7/2020

10th ACM Conference on Data and Application Security and Privacy (CODASPY '20)	Online	3-4/8/2020
IEEE International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD 2020)	Online	14-16/9/2020
The 31st International Conference on Database and Expert Systems Applications (DEXA 2020)	Online	14-17/9/2020
Kosovo Sustainable Development Week (KSDW)	Online	29/9/20
I-BiDaaS - TID Hackathon	Online	23-25/10/2020
European Big Data Value Forum (EBDVF 2020)	Online	3-5/11/2020
European Consortium for Mathematics in Industry (ECMI) Webinar "Math for Industry 4.0 - Models, Methods and Big Data"	Online	2-3/12/2020
2020 IEEE International Conference on Big Data	Online	10-13/12/2020

4.3.2 "I-BiDaaS Application to the Financial Sector" Workshop

During the Experimentation phase of the I-BiDaaS project, the virtual workshop "I-BiDaaS Application to the Financial Sector" was successfully organized on June 22, 2020, under the coordination of Dr. Ramon Martín de Pozuelo, Project Manager at Security Innovation and Transformation team of CaixaBank. The workshop's participants were mostly professionals in the Big Data, data science, and related domains employed at CaixaBank or collaborating with the banking entity. There were more than thirty (30) virtual attendants representing three (3) different departments of CaixaBank, as well as six (6) other entities that work in the financial sector. The workshop aimed to showcase the potential usage of the I-BiDaaS Solution, its tools and technologies in real-world scenarios, and use cases from the banking sector.

Dr. Dusan Jakovetic, I-BiDaaS Scientific & Technical Manager, started with an overview presentation of the I-BiDaaS project, including the motivation behind I-BiDaaS, the project's vision, and its applicability to different sectors. Dr. Ramon Martin de Pozuelo presented the financial/banking sector requirements applicable to I-BiDaaS and explained the current challenges in the banking sector relating to Big Data analytics and the need for more agile but secure and data privacy-preserving infrastructure relying on the cloud. Dr. Dusan Jakovetic followed with a more in-depth description of the I-BiDaaS architecture and its core technologies, emphasizing how it successfully addresses the banking sector requirements. After that, Dr. Ramon Martin de Pozuelo continued the presentation, specifying the three different use cases in which CaixaBank worked on the project with the rest of the I-BiDaaS partners.

During the presentation of all use cases defined for the financial sector, it was indicated to the attendees how I-BiDaaS could be an agile self-service solution for:

a) big data analytics to easily adapt for developing algorithms with synthetic/tokenized data and

b) tool performance testing or proof-of-concepts' validation on the cloud.

This way, they could benefit from bypassing CaixaBank's strict internal security and privacy validation procedures while still proceeding with secure data analytics without sensitive data leakage concerns.

Finally, the workshop included a hands-on session led by Dr. Vassilis Chatzigiannakis, Technical Director of ITML. During this session, the participants could access the I-BiDaaS online platform and perform experiments in the self-service mode.

The workshop participants were impressed by the work performed by the I-BiDaaS Consortium. They stressed their interest in the final solution to be considered a new tool in the big data analytics portfolio inside CaixaBank. Moreover, CaixaBank's personnel responsible for the Big Data analytics tools were interested in the cost of the solution and the type of license the final solution will be commercialised, to compare it with the existing tools the bank is using. The external data scientists and attendees from consulting companies focused their attention on the self-service capabilities of the I-BiDaaS Solution and the cost of the data pre-processing required for secure data extraction to be able to work with the I-BiDaaS platform.

4.3.3 TID Hackathon

TID organised an online Hackathon event between the dates October 23rd to October 25th, 2020, on the "Quality of Service in Call Centers", a high-value use case for any company that wants to maintain a close customer relationship customers. In this Hackathon challenge, motivated by the I-BiDaaS EU project, we proposed the analysis of Call Center transcripts and the corresponding voice acoustic features to predict customer satisfaction index (CSI). Such services may support the Call Center in screening phone calls automatically and identifying efficiently problematic cases. Hence, the main task was to provide an automatic solution for analysing the calls and predicting customer satisfaction.

The Hackathon was designed to challenge curious and analytical minds, data experts, designers, and developers with (but not limited to) competences in:

- Analysing big and complex data with scalable methods (e.g., Deep Learning, statistical analysis)
- NLP and speech processing technologies

Considering the conditions and limitations to launch the event, the attention it received exceeded our expectations. Students, PhDs, researchers, and employees from startups and SMEs from all over Europe teamed up to address the challenge of developing algorithms that take the output from speech-to-text technologies (e.g., prosodic and linguistic features) and convert them into relevant information for the Call Center Operations.

Thirteen people participate, consisting of 8 teams. The participating teams were the following:

- Team 1 - Qbeast Analytics (2 persons)
- Team 2 – Algomo (3 persons)
- Team 3 (1 person)
- Team 4 - Forest Labs (1 person)
- Team 5 - Bharat Eco Solutions and Technologies (1 person)
- Team 6 - ZZ Data Labs (2 persons)
- Team 7 – ElArbustoDeLaDecision (2 persons)
- Team 8 - OEG-UPM (1 person)

To assist the teams and improve communication and collaboration; we assigned a mentor to each of them. The mentors, who were recruited from the I-BiDaaS consortium technical partners, were the first "line of defense" for addressing questions and resolving technical issues:

- Ioannis Arapakis (TID)
- Jordi Luque (TID)
- Gerald Ristow (SAG)
- Leonidas Kallipolitis (AEGIS)
- Andreas Alexopoulos (AEGIS)
- Raül Sirvent (BSC)
- Omer Boehm (IBM)
- Lidija Fodor (UNSPMF)

In summary, this Hackathon addressed the challenge of developing speech technologies that transform audio calls into relevant information for the Call Center. By working synergistically on this use case, we delivered technologies that can improve the number of audio calls processed per time unit and significantly reduce the manual effort allocated for this task.

Last but not least, the winning team was awarded a free entrance to the Wayra pitch day!

Figure 10. Wayra pitch day poster

4.3.4 I-BiDaaS Final Event

After three years of research and innovation, the I-BiDaaS project partners organized a livestream event on December 21st, 2020 to share the main results. Aiming to ensure further adoption and to boost exploitation of the project's results and its sustainability, I-BiDaaS experts were focused on showcasing the third and final version of the I-BiDaaS solution and its applicability in 8 real-word, industry-led experiments in the domains of banking, manufacturing, and telecommunication during this event.

In more details, an overview of the I-BiDaaS project was presented by the Project Coordinator Prof. Sotiris Ioannids followed by the I-BiDaaS architecture presentation with its core technologies and a series of step by step demos of the I-BiDaaS solution and its application to the targeted sectors while focusing on the requirements of the pilot studies. Moreover, the I-BiDaaS Innovation Ecosystem and the business and commercial offering was also outlined during this online event.

The I-BiDaaS Consortium was honored to have Nuria de Lama (ATOS, BDVA, I-BiDaaS EAB member) as the keynote speaker of the event. Nuria de Lama delivered a keynote titled “A 5-years journey through the European Big Data Landscape”.

For the record, it would be a miss, not to mention that 117 people from all over the world registered for the final event.

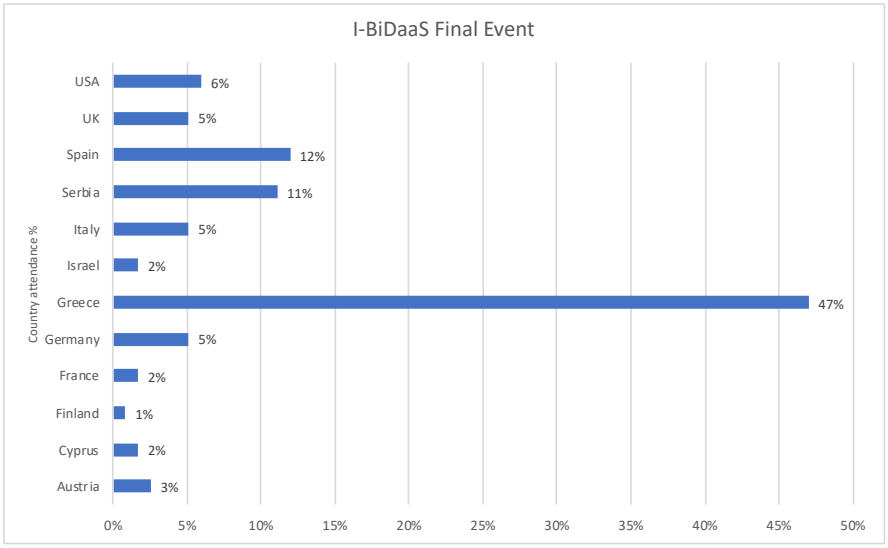

Figure 11. I-BiDaaS Final Event - Geographical Spread

5 Web presence & Communication of I-BiDaaS

5.1 I-BiDaas website

The I-BiDaaS project website remains a person-centric online portal providing easy-accessible information to the general public. It includes various information regarding the project concept, innovation capability, impact, domains, consortium, results (including all publications, dissemination materials, presentations, deliverables), and news. The major updates performed on the website during the 2nd year of the project provided a significant boost to its purpose of service. Therefore, the website's appearance and functionalities during the final year of the project followed the same approach. Moreover, the website is continuously enriched with new information (various completed and upcoming events) and valuable materials (articles, blog news, completed deliverables, videos, presentations, etc.). Particular focus has been given to creating blog posts (7 posts created during the last year) and news items (14 news items created during the last year) that promote project results and consortium members' participation in relevant industry events.

Table 4: I-BiDaaS Website Statistics

Website Statistics (26/12/2020)	
Unique Visitors	4023
Downloads	2806
Pageviews	21020

5.2 Social Media

During the last year of the project, social media channels were heavily used to share information on project results and organization/participation in relevant events. Twitter has remained the leading channel in terms of reach, followed by the project's LinkedIn profile and the introduced (in the 2nd year) YouTube channel, which accommodated all the videos created by the consortium.

5.2.1 Twitter profile

The following table presents the I-BiDaaS Twitter account's acquired statistics as measured by the Twitter analytics dashboard. Concerning the previous two years, an increase of almost 47% of the total audience reached was achieved during the last year of the project.

Table 5: Twitter Analytics

Twitter Analytics (26/12/2020)	
Tweets	997
Followers	294
Audience Reached	424119

5.2.2 LinkedIn account

The statistics of the LinkedIn profile are presented in the following table. An impressive 76% increase in total post views was achieved in the final year (compared to the previous two years).

Table 6: LinkedIn Profile Analytics

LinkedIn Analytics (26/12/2020)	
Connections	181
Posts	115
Total Posts Views	17399

5.2.3 YouTube channel

The YouTube channel was introduced in the second year of the project to host the I-BiDaaS tools' demonstration videos. During the last year, videos from webinars and Big Data relevant events have been uploaded to showcase the project results and lessons learned. Analytics of the published videos are presented in the table below.

Table 7: YouTube Channel Analytics

YouTube Analytics (26/12/2020)	
Subscribers	17
Videos Uploaded	16
Total Views	710

5.2.4 Other Web platforms

Apart from the creation and management of social media account on mainstream platforms, the I-BiDaaS dissemination team utilized a series of less widely known but equally effective platforms on the web for the dissemination and communication of the project achievements and publications.

Other Web Platforms utilized by I-BiDaaS (26/12/2020)	
Zenodo	https://zenodo.org/communities/i-bidaas?page=1&size=20
OpenAire	https://explore.openaire.eu/search/project?projectId=corda__h2020::652e6b81a75292294cdd34ff5a806573
GitHub	https://github.com/ibidaas/knowledge_repository

6 BDV PPP activities

I-BiDaaS project is included in the range of projects under the auspices of the BDV PPP. Since the 1st year of I-BiDaaS, constant collaboration with the BDV PPP has been part of the dissemination strategy plan.

The final year of the I-BiDaaS project can be described as a thriving period for the I-BiDaaS dissemination activities within the BDV PPP spectrum.

6.1 Big Data Pilot Demo Days

During the virtual BDV PPP Summit 2020 from May 21 to July 16, 2020, BigDataStack, I-BiDaaS, Track & Know, and Policy Cloud joined forces in a series of 9 online demonstrations of innovative Big Data Technologies unlocking the potential of applications in domains spanning from telecommunications, transport, finance, retail, manufacturing 4.0 and health to citizen mobility and policy-making against radicalisation.

The new data-driven industrial revolution highlights the need for big data technologies to unlock the potential in various application domains. To this end, BDV PPP projects I-BiDaaS, BigDataStack, Track & Know, and Policy Cloud deliver innovative technologies to address the emerging needs of data operations and applications. To enable data operations and data-intensive applications to fully exploit the sustainability and take full advantage of the developed technologies, the BDV PPP projects brought onboard use cases that exhibit their applicability in a wide variety of sectors. This webinars showcased the implementation of the Big Data technologies in the pilot studies and their relevance to an ever-wider scope contributing to Europe's digital future.

The recordings of all webinars are available via the projects' websites, YouTube channels, and the BDVA webpage dedicated to the webinars. Regarding I-BiDaaS, three webinars were organized from

a. I-BiDaaS Application to the Financial Sector, May 21st, 2020[1]
b. I-BiDaaS Application to the Telecommunication Sector, June 25th, 2020[2]
c. I-BiDaaS Application to the Manufacturing Sector, July 9th, 2020[3]

Overall, the Big Data Pilot Demo Days series managed to attract 452 unique people from 43 countries. In Figure 12, the oberall geographical spread of the nine webinars is depicted.

[1] http://www.ibidaas.eu/events/Big-Data-Pilot-Demo-Days:-I-BiDaaS-Application-to-the-Financial-Sector/
[2] http://www.ibidaas.eu/events/I-BiDaaS-Application-to-the-Telecommunication-Sector-Webinar/
[3] http://www.ibidaas.eu/events/I-BiDaaS-Application-to-the-Manufacturing-Sector-Webinar/

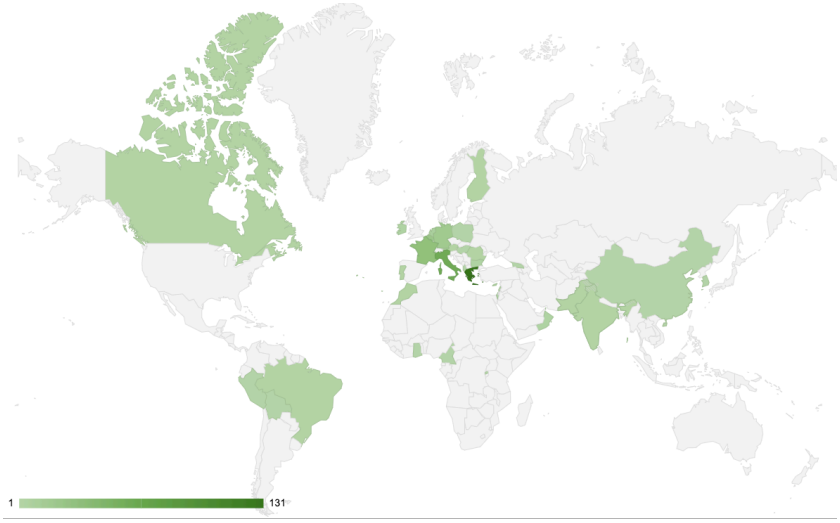

Figure 12. Geographical spread of the Big Data Pilot Demo Days series of webinars

I-BiDaaS webinars attracted 134 unique people coming from 14 different countries, as depicted in Figure 13. It is worth mentioning that all three webinars received great visibility after being available on our YouTube channel with a total number of 330 views up to now.

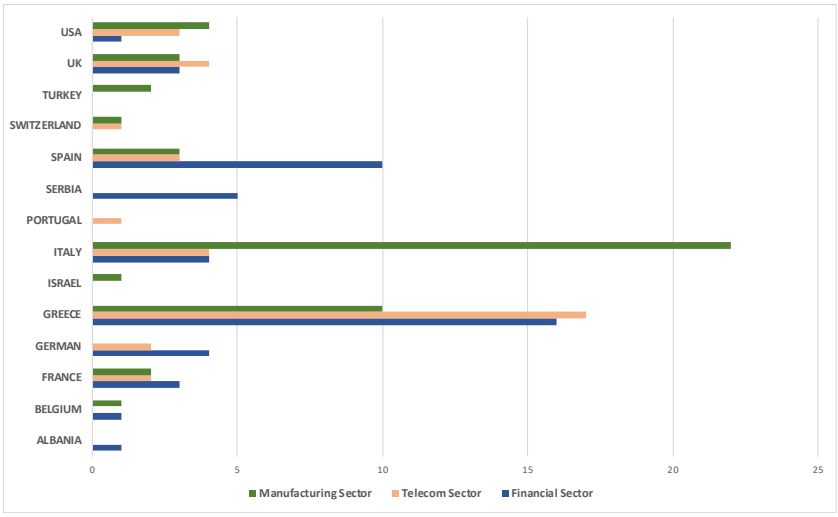

Figure 13. Geographical distribution of the I-BiDaaS Webinars

In the following subsections, a detailed description and the feedback received for each webinar are provided.

6.1.1 Webinar by CAIXA

The kick-off webinar of the Big Data Pilot Demo Days series under BDV PPP, called *I-BiDaaS Application to the Financial Sector*, was held on May 21st, 2020. This big data pilot webinar's main goal was to present the I-BiDaaS self-service solution and its application to the banking sector in a step-by-step fashion.

Dr. Dušan Jakovetić, I-BiDaaS Scientific & Technical Manager, started the webinar with an overview presentation of the I-BiDaaS project, including the motivation behind I-BiDaaS, the project's vision, and its applicability to different sectors. Dr. Ramon Martin de Pozuelo, Project Manager at the Security Innovation & Transformation team of CaixaBank, followed up and set

the CaixaBank pilot study requirements focusing on why CaixaBank needs I-BiDaaS, how I-BiDaaS helped them grow, increase their revenues, lower the cost, etc. Later on, Dr. Jakovetić made a more in-depth presentation of the I-BiDaaS architecture with its core technologies highlighting how I-BiDaaS successfully managed to address CaixaBank's use-case requirements. During the final session, Dr. Martin de Pozuelo presented the I-BiDaaS CaixaBank-roadmap illustrating how CaixaBank completely changed its approach from non-sharing real data to looking for the best way possible to share real data and perform big data analytics outside its facilities. An extensive step-by-step demonstration of the I-BiDaaS solution of the following use cases took place.

Some interesting questions and feedback were collected during the webinar, especially regarding the false impression of the attendants that the use cases were executed separately and not directly within the I-BiDaaS platform. That helped to improve the way the use cases are integrated and the way they are shown and described, going more into depth on the details and functionalities of the platform and all the process to set up a new use case project.

Moreover, other questions with regards to the application of the I-BiDaaS solution to other areas of the bank were also raised. CaixaBank explained that their focus on I-BiDaaS was to evaluate the tool mainly for assessing it in speeding up the process of elaborating new Proof-of-Concept developments in Big Data analytics fields and especially on the fraud prevention and cybersecurity topics. Still, it will be considered for other purposes in the long-term, after a more in-depth evaluation by the Big Data tools management team of the entity.

The webinar attracted 48 unique attendees.

6.1.2 Webinar by TID

The second I-BiDaaS webinar of the Big Data Pilot Demo Days series under BDV PPP, I-BiDaaS Application to the Telecommunication Sector, was held on June 25th, 2020. This big data pilot webinar's main goal was to demonstrate in a step-by-step fashion the I-BiDaaS self-service solution and its application to the telecommunication sector.

Dr. Dušan Jakovetić, I-BiDaaS Scientific & Technical Manager, started the webinar with an overview presentation of the I-BiDaaS project, including the motivation behind I-BiDaaS, the project's vision, and its applicability to different sectors. Dr. Ioannis Arapakis, Researcher at Telefonica Research, Barcelona, Spain, followed up and set the Telefonica pilot study requirements focusing on why Telefonica needs I-BiDaaS. Later on, Dr. Jakovetić made a more in-depth presentation of the I-BiDaaS architecture with its core technologies highlighting how I-BiDaaS successfully managed to address Telefonica's use-case requirements. During the final session, Dr. Arapakis proceeded with an extensive step by step demonstration of the I-BiDaaS solution of the following use cases: (i) Quality of Service in Call Centers, (ii) Optimization of Placement of Telecommunication Equipment, and (iii) Accurate Location Prediction with High Traffic and Visibility.

During the Q&A session, the presenter addressed several questions raised by the audience. For the Call Center use case, the focus of interest was on the ML models developed for processing and learning from mainly language-agnostic data. Another inquiry was about the process of placing new antennas' locations and if it is similar to the demonstration of the I-BiDaaS use case. Finally, Dr. Arapakis had the opportunity to share the lessons learned regarding data sharing and data availability in the corporate ecosystem and how I-BiDaaS contributed to breaking the data silos.

The webinar attracted 37 unique attendees.

6.1.3 Webinar by CRF

The third I-BiDaaS webinar of the Big Data Pilot Demo Days series under BDV PPP, I-BiDaaS Application to the Manufacturing Sector, was held on July 9th, 2020. This big data pilot webinar's main goal was to demonstrate in a step-by-step fashion the I-BiDaaS self-service solution and its application to the manufacturing sector.

The webinar was structured in six parts: an introduction with questions to find out more about participants, four presentations, and a final session for Q&A. The webinar started with an overview of the I-BiDaaS project's motivation, vision, and applicability to different sectors. Mr. Giuseppe Danilo Spennacchio, a Systems Specialist at CRF, explained the specific manufacturing industry domain requirements, focusing on why CRF needs I-BiDaaS. Subsequently, it was described how I-BiDaaS successfully managed to address the defined requirements by explaining the architecture with its core technologies developed within the I-BiDaaS project. Finally, a detailed step by step demonstration of the I-BiDaaS solution for two use cases in a real manufacturing environment was presented.

The webinar attracted 49 unique attendees.

6.2 EBDVF 2020

The European Big Data Value Forum (EBDVF) is the flagship event of the European Big Data and Data-Driven AI Research and Innovation community organized by the Big Data Value Association (BDVA) and the European Commission (DG CNECT). The 2020 edition of the EBDVF took place between the 3rd and the 5th of November 2020.

I-BiDaaS was sponsoring EBDVF2020 and managed to have a strong presence by co-organising a session and actively participating in 3 (three) more sessions, having the main goal of sharing the I-BiDaaS results and the lessons learned.

1. *Parallel session on European Big Data Research for Industry. Three projects. Seven sectors. Nine applications. 41 software components. Now what? (I-BiDaaS sponsored event)*

On Tuesday, November 3rd, 2020, within the framework of the European Big Data Value Forum, Big Data research projects I-BiDaaS (Industrial-Driven Big Data as a Self-Service Solution), BigDataStack (High-performance data-centric stack for Big Data applications and operations)[4] , and Track & Know (Big Data for Mobility Tracking Knowledge Extraction in Urban Areas)[5] hosted a joint session. I-BiDaaS sponsored the session with the support of Track&Know and BigDataStack.

This session took the form of a led group discussion on Big Data research's impact and future (exchange of questions, experiences, ideas triggered by a set of key questions). What to expect? The projects brought together findings in terms of barriers to adoption of Big Data research in different sectors, current and future impact of their research.

The three invited speakers elaborated on the concrete business questions that have been answered in the project pilots. The debate was initiated by a set of questions to get the interaction going and to encourage participants to share their questions, experiences, and views on Big Data research and the adoption of project outcomes and toolsets in the different sectors. The questions were*: i) How are we contributing to the European Big Data Ecosystem? ii) What*

[4] https://bigdatastack.eu
[5] https://trackandknowproject.eu

is the role/impact of new technologies in the industries? What barriers did you encounter with the industries in your project? How can we apply Big Data in businesses? iii) Now What?

The expert panel was composed of three (3) invited speakers, one from each project:

- I-BiDaaS: Alon Rozen - Professor of Innovation, Dean Ecole des Ponts Business School, I-BiDaaS Expoitation manager,
- Track & Know: Toni Staykova - Co-Founder and Vice President, UKeMED,
- BigDataStack: Richard McCreadie - Lecturer in Information Retrieval and Data Systems, University of Glasgow.

The session was moderated by:

- I-BiDaaS: Despina Kopanaki - Project Manager, FORTH-ICS, I-BiDaaS
- Track & Know: Jenny Rainbird - Senior Research Project Manager, Inlecom Systems,
- BigDataStack: Marieke Willems - Project Manager, Trust-IT Services,

In total, 117 attendees from more than 14 countries attended the session, which significantly increased the project's visibility. The distribution per country is depicted in Figure 14.

Figure 14. Distribution per country of the attendees - Parallel session on European Big Data Research for Industry (I-BiDaaS sponsored event)

The session's recording is available on all the projects' YouTube channels and on the BDVA YouTube channel.

The result of this group discussion is an insightful report with key findings with recommendations on how to facilitate the uptake of results and to make Big Data research more sustainable and future proof. The full report is available in the following link: https://doi.org/10.5281/zenodo.4326876.

2. *Evaluation schemes for Big data and AI Performance of high Business impact (DataBench)*

I-BiDaaS and DataBench projects have established a productive collaboration. As a result, the DataBench project invited I-BiDaaS to participate in the "Evaluation schemes for Big data and AI Performance of high Business impact" session organised by DataBench, which took place

on November 4th, 2020. Leonida Kallipolitis from AEGIS had the opportunity to present the I-BiDaaS perspective on Big Data and AI architectural pipelines and benchmarks. The presentation included the I-BIDaaS Architecture and the related Business and Technical performance impact.

3. *Big Data Value Best Success Stories 2020*

BDVe project and BDVA have organized this year the second edition of the Best Success Story (BSS) contest. The contest was initially organised for the BDV PPP Summit 2020, which was cancelled due to the COVID-19 pandemic. However, the BSS contest was not cancelled. Motivated by the valuable feedback received during the 1st project review, CAIXA decided to participate in the contest to promote and give visibility to the results produced and submitted CaixaBank's Succes Story titled "Towards open and agile Big Data Analytics in Financial Sector"[6]. The story's main focus included lessons learned on data sharing and data availability and how CAIXA completely changed its approach from a non-sharing real data to looking for the best way possible to share real data and perform big data analytics outside its facilities.

Twenty-one stories were submitted. Although CAIXA's BSS was not the final winner, it was selected as a runner up[7]. This allowed Dr. Ramon de Pozuelo to present CAIXA's story during the EBDVF 2020 on a dedicated slot for the Best Success Story Award on November 5th, 2020.

4. *Parallel session on Data-Driven AI for Financial Services (Infinitech)*

Dr. Ramon Martin de Pozuelo from CAIXA was one of the session invited speakers of the Parallel session on Data-Driven AI for Financial Services organised by the EU H2020 Infinitech project on November 5th, 2020. During the session, the I-BiDaaS approach as an innovative solution for real-life scenarios from the Banking Sector was presented. Dr. de Pozuelo aimed to provide insights on "*How to exploit your big data and overcome the challenges and constraints of a highly regulated sector?"*. The I-BiDaaS architecture, CAIXA's use cases and the results obtained in the project were presented.

6.3 BDVA Innovation Marketplace

BDVe Innovation Marketplace is an excellent dissemination and exploitation opportunity for I-BiDaaS. It is a great way to promote all the innovation results developed within the course of the project to a broader audience and help carry out matchmaking for potential future users of the I-BiDaaS platform and its components. The I-BiDaaS Consortium identified 5 (five) Innovations that were submitted and published after the review process in the Innovation Marketplace. The full list of the I-BiDaaS Innovations and their current TRL includes:

1. Multidimensional Storage with Efficient Sampling (MuSES)[8], TRL 7
2. AEGIS Advanced Visualization Toolkit (AVT)[9], TRL 6
3. Parallelization of Constraint Satisfaction Problems (CSP) solver[10], TRL 6
4. ADMM Machine Learning Algorithms[11], TRL 5

[6] https://www.big-data-value.eu/wp-content/uploads/2020/06/16.-I-BiDaaS_CaixaBank_Sucess_story.pdf
[7] https://www.big-data-value.eu/best-success-story-award-2020/
[8] https://marketplace.big-data-value.eu/content/multidimensional-storage-efficient-sampling-muses
[9] https://marketplace.big-data-value.eu/content/aegis-advanced-visualization-toolkit-avt
[10] https://marketplace.big-data-value.eu/content/parallelization-constraint-satisfaction-problems-csp-solver
[11] https://marketplace.big-data-value.eu/content/admm-machine-learning-algorithms

5. Specification of an end-to-end Big Data as-a-self-service platform

6.4 Contribution in BDVA Newsletters

Another point of collaboration between I-BiDaaS and BDVA includes the contribution of content on I-BiDaaS for the BDVA newsletters[12]. This type of cooperation has been established since the 2nd year of the project and resulted in the following contributions presented in table 8 below to circulated newsletters.

Table 8: I-BiDaaS contributed post in BDV newsletters

Title	Link	Link on BDVA
I-BiDaaS Minimum Viable Product (MVP)	http://ibidaas.eu/blog/I-BiDaaS-MVP/	https://www.big-data-value.eu/i-bidaas-minimum-viable-product-mvp/
Data curation, ingestion, and processing layer	http://ibidaas.eu/blog/Data%20curation,%20ingestion%20and%0processing%20layer/	https://www.big-data-value.eu/i-bidaas-data-curation-ingestion-and-processing-layer/
Batch processing innovative technologies for rapidly increasing historical data	http://ibidaas.eu/blog/Batch-processing-innovative-technologies-for%20rapidly-increasing-historical-data/	https://www.big-data-value.eu/i-bidaas-batch-processing-innovative-technologies-for-rapidly-increasing-historical-data/
I-BiDaaS – CRF Hackathon	http://ibidaas.eu/blog/I-BiDaaS–CRF-Hackathon/	https://www.big-data-value.eu/i-bidaas-crf-hackathon/
Analyzing Real-time Data via Complex Event Processing	http://ibidaas.eu/blog/Analyzing-Real-time-Data-via-Complex-Event-Processing/	https://www.big-data-value.eu/i-bidaas-analyzing-real-time-data-via-complex-event-processing/
I-BiDaaS 1st Integrated Prototype	http://ibidaas.eu/blog/I-BiDaaS-1st-Integrated-Prototype/	https://www.big-data-value.eu/i-bidaas-1st-integrated-prototype/
I-BiDaaS Real – life industrial and operational experiments	http://ibidaas.eu/blog/I-BiDaaS-Real–life-industrial-and-operational-experiments/	https://www.big-data-value.eu/i-bidaas-real-life-industrial-and-operational-experiments/
I-BiDaaS exploitation, sustainability, and business continuity	http://ibidaas.eu/blog/I-BiDaaS-exploitation-sustainability-and-business-continuity/	https://www.big-data-value.eu/i-bidaas-exploitation-sustainability-and-business-continuity/
Reaping the benefits of Big Data developments: Big Data Pilot Demo Days	http://ibidaas.eu/blog/Reaping-the-benefits-of-Big-Data-developments:-Big-	https://www.big-data-value.eu/reaping-the-benefits-of-bigdata-developments-big-data-pilot-demo-days/

[12] https://www.bdva.eu/node/839

	Data-Pilot-Demo-Days/	
Towards open and agile Big Data analytics in the Financial Sector	http://ibidaas.eu/blog/Towards-open-and-agile-Big-Data-analytics-in-Financial-Sector/	https://www.big-data-value.eu/wp-content/uploads/2020/06/16.-I-BiDaaS_CaixaBank_Sucess_story.pdf
"I-BiDaaS Application to the Financial Sector" Workshop	http://ibidaas.eu/blog/"I-BiDaaS-Application-to-the-Financial-Sector"-Workshop/	https://www.big-data-value.eu/i-bidaas-application-to-the-financial-sector-workshop/
I-BiDaaS - Telefonica Research Online Hackathon	http://ibidaas.eu/blog/Telefonica-Research-Online-Hackathon/	https://www.big-data-value.eu/i-bidaas-telefonica-research-online-hackathon/
Data Sharing and Data Availability: Lessons Learned	http://ibidaas.eu/blog/Data-sharing-availability/	https://www.big-data-value.eu/i-bidaas-lessons-learned-on-data-sharing-and-data-availability/

Several other events have also been included in the BDVA Newsletters:

- I-BiDaaS: Qbeast won the 5th Barcelona Activa Pre-Incubation - https://www.big-data-value.eu/i-bidaas-qbeast-won-the-5th-barcelona-activa-pre-incubation/
- I-BiDaaS presented at the Data Science Conference 5.0 https://www.big-data-value.eu/i-bidaas-presented-at-the-data-science-conference-5-0/
- I-BiDaaS at the IEEE International Conference on Big Data (IEEE BigData 2019) https://www.big-data-value.eu/i-bidaas-at-the-ieee-international-conference-on-big-data-ieee-bigdata-2019/

7 Collaboration activities

7.1 Collaboration strategy in a glance

Collaboration is a fundamental concept in terms of approaching and driving innovation. In this context, I-BiDaaS focuses on cooperating with and contributing to other related European projects. This will thus ensure the wide diffusion and active promotion of ideas and project results to the target audience. As the basic idea behind the collaboration is that projects working in the same areas can have synergies to exploit, complement each other both in research and business, join forces to reach their target audience, and get the necessary critical mass to have a real impact, and so on.

To this end, I-BiDaaS consortium members came in contact with relevant projects and have been engaged in numerous concrete collaboration activities, including participation in joint events, exchanging of knowledge, sharing outcomes, and combining results in Big Data-driven innovation.

7.2 Collaboration with other projects

7.2.1 I-BiDaaS & INFINITECH

Table 9: I-BiDaaS & INFINITECH

Characteristics	Description
INFINITECH overview	INFINITECH is a joint effort of global leaders in ICT and finance to lower the barriers for BigData/IoT/AI-driven innovation, boost regulatory compliance, and stimulate additional investments. INFINITECH will provide: • Novel BigData/IoT technologies for seamless management and querying of all types of data interoperable data analytics, blockchain-based data sharing, real-time analytics, as well as libraries of advanced AI algorithms. • Regulatory tools incorporating various data governance capabilities and facilitating compliance to regulations (e.g., PSD2, 4AMLD, MIFiD II). • Nine novel and configurable testbeds & sandboxes, each one is offering Open APIs and other resources for validating autonomous and personalized solutions, including a unique collection of data assets for finance/insurance.
I-BiDaaS in comparison to INFINITECH	Both I-BiDaaS and INFINITECH projects argue that it is still a fact that many financial or insurance institutions still face difficulties using big data technologies due to complicated regulations and the lack of testbed resources. The primary goal of CaixaBank when starting its involvement in I-BiDaaS was to find an efficient way to perform big data analytics outside its premises and become much more flexible in adopting proof-of-concept (PoC) technological solutions. CaixaBank recently joined the INFINITECH Consortium and plans to continue the fraud detection use cases from a different perspective, based on all the knowledge and experience gained within I-BiDaaS.
Concrete collaboration activities	1. INFINITECH invited CaixaBank to present during the EBDV2020 session “Data-Driven AI for Financial Services”, the I-BiDaaS approach as an innovative solution for real-life scenarios from the Banking Sector.

7.2.2 I-BiDaaS & DataBench

Table 10: I-BiDaaS & DataBench

Characteristics	Description
DataBench overview	The DataBench project addresses a significant gap in the current benchmarking community's activities by providing certifiable benchmarks and evaluation schemes of BDT performance of high business impact and industrial significance. DataBench Toolbox will provide a unique environment to search, select, and deploy big data benchmarking tools, giving the possibility to generate unified technical metrics and derive business KPIs., including current and future benchmarks.
I-BiDaaS in comparison to DataBench	DataBench project aims to create certifiable benchmarks and evaluation schemes around Big Data Technologies, both from a business point of view and from a technical point of view. For I-BiDaaS, it is of interest to consider benchmarking tools and results offered by DataBench, both from technical and business perspectives.
Concrete collaboration activities	1. On July 7, 2020, I-BiDaaS participated in a webinar organized by the DataBench project entitled "Virtual BenchLearning – Assessing the Performance and Impact of Big Data, Analytics, and AI". The webinar described a framework and tools to assess Big Data and AI technologies' performance and impact by providing real insights from DataBench. I-BiDaaS participated in the webinar by presenting the current I-BiDaaS benchmarking approach, landscape, and needs, both from the technological and business perspectives. 2. On November 4, 2020, I-BiDaaS participated at the DataBench Final Event in the framework of EBDVF. We delivered a presentation including an overview of I-BiDaaS and how the I-BiDaaS experimentation maps to the generic Big Data pipelines described in DataBench. In addition, I-BiDaaS and DataBench had several online meetings that facilitated collaboration. 3. Furthermore, the I-BiDaaS data providers participated in the survey carried out by DataBench on Big Data use and impacts and responded to a questionnaire released by DataBench to check the validity of their benchmarks. 4. An important dimension of collaboration is that DataBench provided I-BiDaaS several recommendations on concrete benchmarks applicable to the I-BiDaaS main targeted sectors—manufacturing, telecommunication, and banking. Finally, I-BiDaaS provided feedback on a ReachOut tool that DataBench established and feedback on their tool that facilitates search over Big Data benchmarks for a targeted application.

7.2.3 I-BiDaaS & BigDataStack & Track & Know

Table 11: I-BiDaaS & BigDataStack & Track & Know

Characteristics	Description
BigDataStack overview	BigDataStack is a unique high-powered stack of solutions focusing on providing fully efficient and optimized processes across the complete set of technologies required by data operations and data-intensive applications. To enable data operations and data-intensive applications to fully exploit the sustainability of BigDataStack and take full advantage of the developed technologies, the consortium has brought on board three use cases: smart insurance, the connected consumer, and real-time ship management.
Track & Know overview	Track & Know research develops and exploits a new software framework that aims to increase Big Data's efficiency. This is being applied in the transport, mobility, motor insurance, and health sectors.
I-BiDaaS in comparison to BigDataStack and Track & Know	The new data-driven industrial revolution highlights the need for big data technologies to unlock the potential in various application domains. All three BDV PPP projects deliver innovative technologies to address the emerging needs of data operations and applications. To fully exploit the sustainability of the developed technologies, the projects onboarded pilots that exhibit their applicability in a wide variety of sectors. In their third and final year, the projects are ready to demonstrate the developed and implemented technologies to

	interested end-users from the industry and technology providers for further adoption. BDV PPP projects joined forces to • showcase innovative technologies in various domains, fostering further adoption, contributing to Europe's digital future. • bring together their findings in terms of barriers to adoption of Big Data research in different sectors and in terms of current and future impact of their research.
Concrete collaboration activities	1. *Big Data Pilot Demo Days series of webinars:* During the virtual BDV PPP Summit 2020 from May 21 to July 16, 2020, BigDataStack, I-BiDaaS, Track & Know, and Policy Cloud joined forces in a series of 9 online demonstrations of innovative Big Data Technologies in 7 different sectors. (see Section 6.1 for more information) 2. *Parallel session on European Big Data Research for Industry. 3 projects. 7 sectors. 9 applications. 41 software components. Now what?" (I-BiDaaS Sponsored session):* On Tuesday November 3rd, 2020, within the framework of the EBDVF2020, I-BiDaaS, BigDataStack and Track & Know hosted a joint session. The objective of this session was to discuss the findings of the three projects, present the barriers to adoption discovered in different sectors, and the future impact and sustainability of Big Data research. It was a led group discussion on the impact and future of Big Data research. (see Section 6.2 for more information)

8 Dissemination strategy revision

8.1 KPIs evaluation and revision.

The I-BiDaaS project has reached its end date, and all objectives set in the project's WP7 have been so far achieved or exceeded. This is reflected by the key achievements reported through this report and the level of completion of the KPIs outlined in table 12 of this deliverable. Table 13 enlists the justification for each achieved KPI related to the dissemination strategy. These were measured up to the final month (M36) for showcase purposes during the 2nd and final review of the project.

Table 12: Dissemination KPIs & actual achievements

DC-KPI	Success Indicator	Actual Achievement
KPI-DC-1	At least 500 downloads for public deliverables, prototypes, promotional material.	**2806** Direct Downloads
KPI-DC-2	At least 10 publications	**3** Journal papers, **18** Conf. & Workshop papers, **4** Posters
KPI-DC-3	At least 3 conferences or workshop participations per year.	**2018**: **7** Conf. & **4** Workshops **2019**: **9** Conf. & **2** Workshops **2020**: **8** Conf. & **3** Workshops
KPI-DC-4	At least 33% of conference and journal papers have an impact factor or ERA classification.	**50%**
KPI-DC-5	At least 33% gold open-access journal articles.	**33,3%**
KPI-DC-6	At least 2 active participations to a standardization body	**2**
KPI-DC-7	At least 2 standards that are used and improved within I-BiDaaS.	Detailed lists with standards for the use cases and the components have been identified.
KPI-DC-8	At least 3 workshops or special events.	**9**
KPI-DC-9	At least 3 collaborations with projects in H2020	**5**
KPI-DC-10	At least 4 participations to collaborative initiatives.	**6**

Table 13: KPIs Achivements Justifications

DC-KPI	Success Indicator
KPI-DC-1	The project boost the dissemination efforts within the duration of the project achieving 2806 downloads of its material
KPI-DC-2	I-BiDaaS is delivering a solid publications list, including 3 Journal papers, 18 Conference/Workshop papers, and 4 Conference/Workshop Posters. The detailed list for 2018 publications is reported in D7.3, for 2019 in D7.5, and for 2020 in this deliverable D7.7. I-BiDaaS publications can be found on the project's website[13] and also in Zenodo[14] and OpenAIRE[15].
KPI-DC-3	During the reporting period, I-BiDaaS partners attended 24 Conferences & 9 Workshops • **2018**: 7 Conferences & 4 Workshops • **2019**: 9 Conferences & 2 Workshops • **2020**: 8 Conferences & 3 Workshops The detailed list of conferences & workshops attended by I-BiDaaS partners can be found in D7.3 for 2018, D7.5 for 2019, and in this deliverable, D7.7, for 2020. I-BiDaaS Consortium invested in events targeted at industry and academia to showcase I-BiDaaS vision, impact, and results, and to create an active community for the project that will significantly enhance its entrance to the market
KPI-DC-4	We have achieved 50% of the publications to have an impact factor or ERA classification.
KPI-DC-5	3 (three) journal articles have been accepted and published.

[13] http://www.ibidaas.eu
[14] https://zenodo.org
[15] https://explore.openaire.eu/search/project?projectId=corda__h2020::652e6b81a75292294cdd34ff5a806573

	1. **Gold** Open Access - Sahu, A.K., Jakovetic, D., Bajovic, D. and Kar, S., 2018. Communication efficient, distributed weighted non-linear least-squares estimation. *EURASIP Journal on Advances in Signal Processing*, 2018(1), p.66. 2. **Green** Open Access - Jakovetić, D., Krejić, N. and Jerinkić, N.K., 2019. Exact spectral-like gradient method for distributed optimization. *Computational Optimization and Applications* 74, 703-728. 3. **Green** Open Access - Jerinkić, N.K., Jakovetić, D., Krejić, N. and Bajović, D., 2020. Distributed second-order methods with increasing number of working nodes. *IEEE Transactions on Automatic Control*, vol. 65, no. 2, pp. 846-853. Thus, the I-BiDaaS consortium has achieved 33,3% gold open access to journals.
KPI-DC-6	1. Participation in **BDVA** which is driving big data standardization and interoperability priorities and is connected with Big Data Standards related to Big Data PPP projects The I-BiDaaS solution can be contextualised within the BDV reference model defined in the BDV Strategic Research and Innovation Agenda (BDV SRIA) and contributes to the model. Specifically, the work is relevant to the following BDV reference model horizontal concerns: • Data visualisation and user interaction: We develop several advanced and interactive visualisation solutions applicable in the banking sector. • Data analytics: We develop data analytics solutions for the three industrial use cases in the banking sector. While the solutions may not correspond to state-of-the art advances in algorithm development, they contribute to revealing novel insights into how Big Data analytics can improve banking operations. • Data processing architectures: We develop an architecture that is well-suited for banking applications where both batch analytics (e.g., analysing historical data) and streaming analytics (e.g., online processing of new transactions) are required. A novelty of the architecture is the incorporation of realistic synthetic data fabrication and the definition of scenarios of usefulness and quality assurance of the corresponding synthetic data. • Data protection: We describe how data tokenisation and realistic synthetic data fabrication can be used in baking applications to allow for more agile development of Big Data analytics solutions. • Data management: We present innovative ways for data management utilising efficient multidimensional indexing Regarding the BDV reference model vertical concerns, the work is relevant to the following: • Big Data Types and Semantics: The work is mostly concerned with structured data, meta-data, and graph data. The work contributes to the generation of realistic synthetic data from the corresponding domain-defined meta-data. • Cybersecurity: The presented solutions that include data tokenisation correspond to novel best practice examples for securely sharing sensitive banking data outside bank premises. Therefore, in relation to BDV SRIA, we contribute to the following technical priorities: Data protection; Data Processing Architectures; Data Analytics; and Data Visualisation and User Interaction. 2. Participation and active collaboration with **DataBench**, who is designing performance benchmarking processes for Big Data. DataBench is expected to set the standards and benchmarks for the emerging Big Data ecosystem. In Section 7.2.2 of this deliverables, all the collaboration activities between the two projects are described. An important dimension is the I-BiDaaS contributions to the DataBench project's ReachOut campaign – the campaign on Generation of architectural Pipelines-Blueprints (reachout-project.eu). Specifically, we reported on the Mapping of I-BiDaaS architecture to the DataBench pipeline, and the Mapping of I-BiDaaS "Advanced Analysis of bank transfer payment in financial terminal" case to the DataBench generic blueprint.
KPI-DC-7	I-BiDaaS, among many additional standards, references NIST and BDVA big data reference models. Among the standards and Bodies of Knowledge referenced are: BABOK, CMMI, IEEE standards, ISO 9001, ISO/IEC standards, PMBOK, SWEBOK, ITIL In Deliverable D6.5[16], several tables providing a detailed representation of the standards used in the various use cases and components of I-BiDaaS are included. In more detail, D6.5 includes: • List of Standards used in I-BiDaaS Technologies • List of Standards used in the use-case experiments

[16] https://www.ibidaas.eu/deliverables/

	• List of Standards per layer related to I-BiDaaS • Analysis of standard processes and methodologies per use-case • Organization standard related activities
KPI-DC-8	Nine (9) special events have been organized in the context of I-BiDaaS: 1. **I-BiDaaS Info Day - Workshop on Big Data Analytics[17]:** January 22, 2019, Faculty of Sciences of University of Novi Sad, Serbia 2. **CRF's hackathon at Campus Melfi[18]:** June 18-19, 2019, Campus Melfi, Italy. 3. **Satellite Promotional Event at BDV PPP Summit in Riga[19]:** June 26-28, 2019, Riga, Latvia 4. **European Big Data Value Forum 2019[20]:** October 14-16, 2019, Helsinki, Finland 5. **CAIXA Virtual Workshop[21]:** June 22, 2020 6. **BDV PPP Virtual Summit 2020[22] -** Big Data Pilot Demo Days series of webinars (Collaboration between I-BiDaaS and BigDataStack) May 21 – July 16, 2020 a. **I-BiDaaS Application to the Financial Sector, May 21, 2020[23]** b. **I-BiDaaS Application to the Telecommunication Sector, June 25, 2020[24]** c. **I-BiDaaS Application to the Manufacturing Sector, July 9, 2020[25]** 7. **Telefonica Research Online Hackathon[26]:** October 23-25, 2020. 8. **European Big Data Value Forum 2020[27]:** November 3, 2020 (Collaboration between I-BiDaaS, BigDataStack, and Track&Know) 9. **I-BiDaaS Final Event[28]:** December 21, 2020.
KPI-DC-9	Five (5) collaborations with H2020 projects have been initiated: 1. **TOREADOR** - TrustwOrthy model-awaRE Analytics Data platform (GA #688787)[29] 2. **DataBench** - Evidence-Based Big Data Benchmarking to Improve Business Performance (GA #780966)[30] 3. **BigDataStack** – Holistic Stack for BigData Applications and Operations (GA # 779747)[31] 4. **Track&Know** – Big Data for Mobility Tracking Knowledge Extraction in Urban Areas (GA # 780754)[32] 5. **INFINITECH** – Tailored IoT & BigData Sandboxes and Testbeds for Smart, Autonomous and Personalized Services in the European Finance and Insurance Services Ecosystem (GA # 856632.)[33]
KPI-DC-10	I-BiDaaS is actively participating in most (if not all) BDVA and ENISA[34] activities, I-BiDaaS Coordinator Dr. Sotiris Ioannidis is a PSG member of ENISA. I-BiDaaS is also supporting EU's purpose to become a global leader in accelerating digital transformation and contributing to Europe's determination in transitioning to circular industries, Dr. Giorgos Demetriou is a contributor of Veltha[35], member of the Screen Policy Lab[36], and member of the Circular Economy Expert Group[37] from the European Commission. Finally, UNSPMF is a member of the European Consortium for Mathematics in Industry (ECMI). Several activities related with ECMI included I-BiDaaS participation, e.g., the BIGMATH project advanced course 4.

[17] https://ibidaas.eu/blog/I-BiDaaS-Info-Day-Workshop
[18] https://www.ibidaas.eu/blog/I-BiDaaS–CRF-Hackathon/
[19] https://ibidaas.eu/events/I-BiDaaS-at-the-BDV-PPP-Summit-2019/
[20] https://ibidaas.eu/events/I-BiDaaS-at-the-European-Big-Data-Value-Forum/
[21] https://ibidaas.eu/blog/"I-BiDaaS-Application-to-the-Financial-Sector"-Workshop/
[22] https://www.ibidaas.eu/blog/Reaping-the-benefits-of-Big-Data-developments:-Big-Data-Pilot-Demo-Days/
[23] http://www.ibidaas.eu/events/Big-Data-Pilot-Demo-Days%3A-I-BiDaaS-Application-to-the-Financial-Sector
[24] http://www.ibidaas.eu/events/I-BiDaaS-Application-to-the-Telecommunication-Sector-Webinar
[25] http://www.ibidaas.eu/events/I-BiDaaS-Application-to-the-Manufacturing-Sector-Webinar
[26] https://www.ibidaas.eu/blog/Telefonica-Research-Online-Hackathon/
[27] https://www.ibidaas.eu/blog/European-Big-Data-Research-for-Industry–Report-online-now/
[28] https://youtu.be/xmIUGSxfnLQ
[29] http://www.toreador-project.eu/
[30] https://www.databench.eu
[31] https://bigdatastack.eu
[32] https://trackandknowproject.eu
[33] https://www.infinitech-h2020.eu/
[34] https://www.enisa.europa.eu/
[35] https://www.veltha.eu/
[36] https://screen-policy-lab.mn.co/
[37] https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3517

8.2 Conclusion

This deliverable aimed to outline the achievements with respect to the Dissemination and Communication activities planned and organized during the final year of the I-BiDaaS project. As it has been demonstrated throughout this document, all objectives set in the dissemination and communication plan created for the project[38] have been far achieved.

This is reflected by the key achievements reported through this report and the level completion of the KPIs outlined in table 12 of this deliverable.

During the third year of the project, a powerful presence on the web and social media and KPIs were achieved with ease. Moreover, a series of strong collaborations with other projects and initiatives have been developed, such as DataBench, Track&Know, and BigDataStack.

The outbreak of COVID-19 led to a setback for creating more events with physical presence since physical meetings were prohibited. However, the I-BiDaaS project turned to a new virtual format by adopting virtual event platforms (webinars, etc.) as a viable alternative to in-person events. Additionally, during this final year of I-BiDaaS, all the M18 review comments were fully addressed.

Even though we reached the end of the I-BiDaaS project, dissemination, and communication plan is an ongoing activity that does not end with the end of the project development. In this context, the website and all social media accounts will be maintained beyond the end of the I-BiDaaS project to ensure continuous information and public awareness about the impact of the I-BiDaaS solution.

[38] https://www.ibidaas.eu/sites/default/files/docs/ibidaas-d7.3.pdf