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D9.8.4 Collaboration Plan

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0.1	16/12/2016	Tomás Pariente (ATOS)	ToC, initial set of responsibilities and content
1.0	31/01/2017	Tomás Pariente (ATOS)	Feedback included

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Executive Summary

This document presents the final version of the collaboration plan and its respective progress report, which outlines the plan's implementation achievements.

The collaboration plan and report results has been updated yearly in the series of deliverables D9.8.x, based on the initial plan drafted in D9.8.1. The goal of the present deliverable is therefore to update the collaboration work achieved within the final period of the project and report the outcomes.

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Abbreviations and acronyms

DoW	Description of Work
WP	Workpackage
tbd	To be defined
SOA	Service Oriented Architecture
PPP	Public Private Partnership
SN	Social Network

1. Introduction

1.1. Purpose of the document

This document is the final Collaboration Plan and Report of the LeanBigData project. It contains the update of the plan defined on previous deliverable D9.8.3 Collaboration Plan, and will allow to update the project activities, stakeholders and concertation events to further strengthen the support to LeanBigData in order to maximise its results.

Also, this document contains the report of the reached activities, mentioned on previous deliverable.

This document is the therefore the final of the series of collaboration reports, related to M36. Therefore it is not reporting on the setting and planning anymore, but on the final outcomes of the of collaboration activities that have taken place during the project time. The document points out possible future actions to be of interest after project time.

1.2. Intended audience

As a public document the target readers are the project partners, general public, especially participants in sister initiatives and related research, and the EC Officers.

1.3. Structure of the document

This Collaboration Plan is structured as follows:

- Section 1 introduces the objectives and scope of the document.
- Section 2 provides an overview of the collaboration plan and the different projects, initiatives and stakeholders to be taking into account.
- Section 3 lists the potential projects, initiatives and events identified up to now, as well as the procedures to identify new ones in the future.
- Section 4 reports the activities undertaken.
- Section 5 concludes the document with a summary of the objectives and outcomes in terms of collaboration.

2. Collaboration Plan outline

2.1. Collaboration strategy

LeanBigData has been keen from its inception to participate in a bigger picture to enhance the overall value and coherence of our RTD work, and the relevance to European and worldwide developments. In this respect, this series of documents provided from the first year of the project the strategy of LeanBigData towards achieving an effective collaboration with other EU projects and with other relevant activities.

The EC funded Coordination and Support Actions under FP7 and currently in H2020, addressing e.g. best practices and standards work, technology transfer and cross-disciplinary training, research roadmaps and technology foresight, in areas especially relevant for the Objective. LeanBigData partners has been in contact and participated in focused concertation actions, themed seminars, initiatives of interest (e.g. the PPP on Big Data) or special interest groups (e.g. the European Data Forum¹).

In order to achieve a good collaboration strategy, this document set a few guidelines and the thoughts of the project partners on the specific projects and initiatives we wanted to engage with.

2.2. Collaboration with other projects

The research and development done in LeanBigData was not isolated from the outside world. Our project needed reinforcement on its links with other EU-funded projects. The collaborations started with the CumuloNimbo, CoherentPaaS and BIG projects as early as in the first semester of the project. This was an important milestone that the project needed to further explore and integrate with other existing and emergent research activities. A strategy for liaising with them was been during the first year looking for potential synergies.

From then on, LeanBigData partners engaged other projects, following the same strategy. We monitored the outcomes of the new calls, especially the ones funded under the umbrella of the Big Data Value PPP. Once identified, the strategy followed was based in the steps defined on the initial Collaboration Plan:

- Step 1: List projects, including their profile and a contact person from that project and assign a contact person from LeanBigData.
- Step 2: Initiate the contact in case a LeanBigData partner is involved or knows partners of the other project, and/or prepare an introductory email describing briefly what we want to do.
- Step 3: Prepare a detailed email describing what LeanBigData will offer to them, what we are asking from them
- Step 4: If needed, prepare an agreement to share information and best practices
- Step 5: Organisation of activities and tracking of the communication (to be reported in future versions of this document)

This strategy, segmented in actions, was executed by the following partners:

¹ <http://www.data-forum.eu/>

Step of the strategy	Action	Partner	Deadline
Step 1	Provide updated list of projects to be contacted.	ALL – Coordinated by ATOS	M12, M24, M30
Step 1	Review the list and contact partners of LeanBigData consortium that are participating in other target projects	ALL PARTNERS	M12, M24, M30
Step 2	Ask to the PO for a list of Project Managers with contact emails.	UPM (as coordinator)	M14
Step 2	Get more emails by looking the contact addresses in the project websites.	ATOS	M14-M16, M28-M30
Step 2	Provide a mailing list facility, introduce the email addresses and launch the message.	UPM	M14-M16
Step 2	Take advantage of existing contacts between project partners to ease the process of contact. Prepare a very short email easy to read (2 paragraphs) for the very first contact. (what LeanBigData is, who we are, LeanBigData and its role in your exploitation and dissemination, Best practices...)	ATOS, UPM, ICCS (as responsible of dissemination)	M14-M16
Step 2	Act as a contact point for the first reply to projects.	ATOS, UPM	Started in M8
Step 2	Excel file to track contacts updated and success rate.	ATOS	Started in M8
Step 2	Track what is introducing on the website each project contacted, (Report to the same excel file than previous action)	ATOS, UPM	Started in M8
Step 3	Prepare a longer email for a second contact (only projects that have not replied the first time)	ATOS, UPM, ICCS (as responsible of dissemination)	Done in M6 – update in Y2
Step 4	If needed, prepare agreements with projects – (non-disclosure agreements or similar)	UPM	Not needed
Step 5	Register and track activities in a working document	All, ATOS coordinate	From M9 to the end of the project
Step 5	Review the track list and prepare synergy activities, contact projects to organize activities and detect needs for future activities	All	From M9 to the end of the project

Table 2.1: Collaboration strategy

2.3. Collaboration with existing and future initiatives

LeanBigData sought actively the collaboration or engagement with related initiatives besides EU funded projects in the scope of FP7 or H2020. Project partners were instructed to identify potential initiatives and programmes of interest and with relation with LeanBigData tools and best practices, not limited to public funding but to private funding as well.

As already mentioned, the PPP on Big Data that the EC launched in 2015 is of outmost interest for LeanBigData. We have followed the ICT Work Programme¹, especially topics from ICT-14 to ICT-17, and engage the BDVA² community. Some partners of LeanBigData are also members of the BDVA, such as ATOS and UPM. ATOS holds a Vice-presidency and a Secretary of the BDVA, making this link easier for the project.

2.4. Presence in collaboration events

LeanBigData partners will contribute to and participate in focused concertation actions, seminars, or special interest groups in order to enhance and enlarge the value of our RTD. In this regards the project will send representatives to concertation events when required by the EC and identify potential events of interest. The European Data Forum is a clear example where LeanBigData should be represented.

¹ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/information-and-communication-technologies>

² <http://www.bdva.eu/>

3. Identification of related projects

3.1. Existing projects

Table 3.1 presents the updated list of candidate projects for collaboration with LeanBigData.

Project	Description and Why is important URL	Project Contact	LeanBigData Contact	Notes
Pheme	http://www.pheme.eu/ Detection of rumors in Social Networks	ATOS - Tomás Pariente	Tomás Pariente	
BIG	http://www.big-project.eu/	ATOS – Tomás Pariente	Tomás Pariente	Contacted. We are following the reports to search for the applicability for LeanBigData
Cumulo Nimbo	http://cumulonimbo.eu	UPM – Marta Patiño	Ricardo Jimenez	
CoherentPaaS	http://coherentpaas.eu	UPM – Marta Patiño	Ricardo Jimenez	
Cloud4BigData		UPM – Marta Patiño	Ricardo Jimenez	
BigDataPaaS		UPM – Marta Patiño	Ricardo Jimenez	
TREADOR	http://www.treador-project.eu/	ATOS - Tomas Pariente	Tomas Pariente	Contacted on May 2016
CrowdHealth		ATOS - Tomas Pariente	Tomas Pariente	

Nanostreams	http://www.nanostreams.eu	FP7 project on building efficient servers using accelerators and thin CPUs	FORTH – Angelos Bilas	Angelos Bilas	
Vineyard	http://vineyard-h2020.eu/en/	H2020 project on using accelerators in datacenters	FORTH – Angelos Bilas LeanXcale – Ricardo Jimenez Peris	FORTH – Angelos Bilas LeanXcale – Ricardo Jimenez Peris	
Euroserver	http://www.euroserver-project.eu	FP7 project on building lower power servers	FORTH – Manolis Katevenis	Angelos Bilas	
Michelangelo	https://www.michelangelo-project.eu/	A H2020 project aimed at making virtual infrastructures ready to run big data, high performance computing, and I/O intensive applications in production.	INTEL - Annie Ibrahim Rana	INTEL - Alexander J. Leckey	These were developed using a power analysis approach based on feedback from Intel and additional requirements from LeanBigData

Table 3.1: Table of candidate existing projects for collaboration

3.2. Future projects

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020), aimed at securing Europe's global competitiveness.

By coupling research and innovation, Horizon 2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

Within H2020, especial attention will be paid to projects funded under the objectives 14, 15, 16 and 17 of the work programme. Those objectives were funded by the Data Value Chain Unit of DG-Connect –recently renamed to Data Policy and Innovation-, the same unit behind LeanBigData. We have been monitoring the projects funded under these objectives and check which ones are more suitable to engage with. Examples of this are TOREADOR –funded under ICT-16 and started in 2016.

3.3. Identification of existing initiatives

This section tries to identify existing initiatives where LeanBigData could potentially collaborate or follow closely.

Of especial interest is also the Big Data PPP launched by the EC. The PPP starts in 2015 and will run until 2020. The first projects are expected in 2016. LeanBigData partners will follow closely the development of the PPP and engage in the PPP activities (some of the partners such as UPM and ATOS are relevant stakeholders in the PPP launch).

Table 3.2 presents the updated list of initiatives that LeanBigData should follow or collaborate.

Initiative	Description	Why is important	Initiative main Contact	LeanBigData Contact	Notes
PPP on Big Data	PPP on Big Data technologies. Call launched due in April 2016	Potential usage of LeanBigData technology in the scope of the PPP	Nuria de Lama (ATOS)	Tomás Pariente (ATOS)	Potential funding opportunity for LeanBigData partners
BigDataValue	http://www.bigdatavalue.eu/	Input to the future PPP	Nuria de Lama (ATOS)	Tomás Pariente (ATOS)	
EIT ICT Labs Future Cloud	Action line from EIT ICT Labs that includes Big Data as one of the main innovation lines	Bridging the RTD results with the market			

Table 3.2: Table of candidate existing initiatives for collaboration

3.4. Identification of collaboration events

This section lists some of the main events where LeanBigData could maximise the engagement with stakeholders, such as concertation meetings fostered by the EC or major events on the topics related to LeanBigData research. Note that this list goes back to the beginning of the project, but also beyond the project life-span, meaning that in the future partners would present results of the project in a voluntary basis. Therefore the list is not exhaustive, and comprises only the main events where some partners would be interested to disseminate the projects results for further collaboration.

Table 3.3 presents the updated list of events that LeanBigData should follow or collaborate.

Event	Description	Why is important	When and Where	LeanBigData Contact	Notes
European Data Forum	http://www.dataforum.eu/ Main event on Big Data from the Unit of the EC funding LeanBig Data	Essential to ensure the awareness on LeanBigData technologies and to meet other stakeholders	Not decided yet	Ricardo Jimenez (LeanXcale)	LeanBigData had booth and presentations during the event in past editions
ICT Conference	Event organized by the EU every 2-3 years	Major event on ICT. Exhibit the results from LeanBigData to stakeholders	Not decided yet	Marta Patiño (UPM)	LeanBigData was present in sessions / stand in the past ICT 2015 in Lisbon.

Data Value Chain InfoDays	InfoDays organized by the EC for H2020 calls	Contact with other stakeholders. Spreading the word and new funding opportunities	18 Jan 2017, Luxembourg	Several partners	Potential new funding opportunities to continue working on the same set of technologies
Strata Hadoop conferences	strataconf.com Conferences around Hadoop ecosystem organized by o'really and cloudera	Contact stakeholders of Hadoop and potential users	19-21 Nov 2014, Barcelona 17-20 Feb. 2015 San Jose CA 28-29 Mar. , 2016 San Jose CA 22-25 May 2017 London	Ricardo Jimenez (LeanXcale)	
Hadoop Summit	hadoopsummit.org/	Create awareness about project results among Hadoop Community. Contact stakeholders of Hadoop and potential users	15-16 April, 2015 Brussels 13-14 April, 2016 Dublin 28-30 June 2016 San Jose CA 5-6 April, 2017 Munich	Ricardo Jimenez (LeanXcale)	
Big Data Spain	www.bigdataspain.org	Create awareness about project results among Spanish companies interested in Big Data	17-18 Nov 2014, Madrid 17-18 Nov 2016, Madrid 2017 – To be announced	Ricardo Jimenez (LeanXcale)	

<p>Cloud Expo conferences (track big data/analytics)</p>	<p>www.cloudcomputingexpo.com</p>	<p>Create awareness about project results among cloud big data community</p>	<p>11-12 March 2015 Cloud Expo Europe, London 9-11 June 2015 Cloud Expo NY, New York, NY 3-5 Nov 2015 Cloud Expo Sta Clara, CA 7-9 June 2016, New York 15-16 Mar 2017, London</p>	<p>Ricardo Jimenez (LeanXcale)</p>	
<p>NoSQL matters conferences</p>	<p>https://www.nosql-matters.org</p>	<p>Create awareness about project results among NoSQL community</p>	<p>27 March 2015 Paris June 2015 Dublin 19 Sep 2015 Berlin 18-19 Nov 2015 Berlin 20-21 Nov 2015 Barcelona 15 Sep 2016 Berlin 2017 not decided yet</p>	<p>Ricardo Jimenez (LeanXcale)</p>	

Table 3.3: Table of events

4. Collaboration Progress Report

4.1. Collaboration Activities accomplished

This section aims to report the collaboration activities carried out until now, related to projects, initiatives and events listed in the previous sections and also new ones.

4.1.1 Collaboration with other projects

Table 4.1 presents the list of projects contacted for collaboration with LeanBigData.

Project	Description and URL	Date of contact	of Project Contact	LeanBigData Contact	Results
BIG	http://big-project.eu/ Big Data Public-Private forum	EDF 2014	ATOS	Tomás Pariente	Contacted. Big ended, but we are following the reports to search for the applicability for LeanBigData
PHEME	http://www.pHEME.eu/ Detection of rumors in Social Networks	Several contacts	ATOS	Tomás Pariente	The data PHEME acquisition framework and the LeanBigData SN case study share partially the software.
CoherentPaaS	http://coherentpaas.eu	Several contacts	UPM – Marta Patiño	Ricardo Jimenez	Full integration of core components is being performed between both projects
Cumulo Nimbo	http://cumulonimbo.eu	LeanBigData leverages the core results of CumuloNimbo on ultra-scalable transactional processing	UPM – Marta Patiño	Ricardo Jimenez	LeanBigData has taken the core results from CumuloNimbo and improving their efficiency in scaling, making them “lean”
Cloud4BigData		Regional research programme that co-funds the research of UPM-LSD in the area of BigData and Cloud	UPM – Marta Patiño	Ricardo Jimenez	Cloud4BigData research program includes LeanBigData as associated project.

BigDataPaaS		National research project that extends LeanBigData results for its use in cloud environments	Marta Patiño UPM	Ricardo Jimenez	BigDataPaaS
Capture	Social Network monitoring tool, e.g. Twitter.	May 2015	ATOS	Tomás Pariente	Possible BenchMark for the project results.
Vineyard	Hardware acceleration technologies	March. 2015	Ricardo Jimenez - LeanXcale	Marta Patiño	Integration of hardware acceleration techniques into LeanBigData
Nanostreams	http://www.nanostreams.eu	FP7 project on building efficient servers using accelerators and thin CPUs	FORTH - Angelos Bilas	Angelos Bilas	Use of light-weight network protocols for reducing SPU overhead

Table 4.1: Table of projects contacted for collaboration

4.1.2 Collaboration with events

Table 4.2 presents the list of events where LeanBigData collaborated or followed.

Initiative	Description	Why is important	When and Where	LeanBig Data Contact	Results
European Data Forum	http://2014.data-forum.eu/ http://2015.data-forum.eu/ https://2016.data-forum.eu/ Main event from the Data Value Chain unit on Big Data	Essential to ensure the awareness on LeanBigData technologies and to meet other stakeholders	16-17 ^t Nov. 2015 Luxembourg 29-30 June Eindhoven	Marta Patiño (UPM) Several partners present	LeanBigData had a stand at EDF 2016 and 2016 and disseminated the projects results among attendants

ICT Conference	Event organized by the EU every 2-3 years	Exhibit the results from LeanBigData to stakeholders Participate in the sessions	20-22 Oct. 2015 Lisbon	Ricardo Jimenez (LeanXcale)	Ricardo Jimenez participated in the session Innovation Ecosystems for European Big Data Economy as speaker presenting LeanXcale as an example of European startup in the Big Data field. LeanBigData submitted a stand proposal for the exhibition at ICT Conference 2015 and was not accepted. However, CoherentPaaS got accepted its stand proposal and also showed LeanBigData results at the CoherentPaaS stand as a collaboration between the two projects
BDVA Summit http://www.bdva.eu/?q=summit	Event organized periodically by the BDV Association	Participate in the summit	17-19 June 2015, Madrid 29 Nov-2 Dic 2016, Valencia	Marta Patiño UPM Tomás Pariente ATOS	UPM and Atos participated actively in both summits and discussed about collaboration

Table 4.2: Events where LeanBigData collaborated or followed

4.2. Commercial collaboration between partners

Table 4.3 presents the list of commercial collaboration between partners.

Partnes	Description	Contacts	Results
LeanXcale, UPM and Atos	ATOS providing sales support to LeanXcale	Tomás Pariente (ATOS) and Ricardo Jiménez (LeanXcale)	Agreements signed between LeanXcale and ATOS. First business opportunities explored in the financial domain.
LeanXcale and Atos	ATOS and LeanXcale to provide a version of Capture (ATOS Social Network monitoring solution) with LeanXcale at the back-end	Tomás Pariente (ATOS) and Ricardo Jiménez (LeanXcale)	Initial discussions to provide a joint solution in the cloud of Capture using LeanXcale. To be shown to potential customers.
INESC and LeanXcale	Part of the team at INESC has moved to LeanXcale	Ricardo Jimenez (LeanXcale)	Contribution to LeanXcale

UPM and LeanXcale	Part of the team at UPM has moved to LeanXcale. UPM signed a technology transfer contract with LeanXcale providing exclusive rights to exploit the patents on scalable transactional processing and on scalable stream processing. Prof. Ricardo Jimenez quit his position in the university to become CEO of LeanXcale.	Ricardo Jimenez (LeanXcale)	Contribution to LeanXcale
CA & FORTH	CA has datacentre monitoring tools that could benefit from the novel visualization developed during this project.	Victor Muntés (CA) and George Margetis (FORTH)	Started conversations with interested CA business units to fund an agreement with FORTH for further visualization technology development. However, the product that might have been potentially interested in this technology moved to maintenance mode, because of a corporate strategic decision. Because of this, our potential joint collaboration was frozen.

Table 4.3: Table of commercial collaboration between partners.

5. Conclusion

This document presents the final collaboration plan and report of LeanBigData. It aims to update the previous Collaboration Plan and Reports, reporting the collaborations done during this final year of the project, detailing if these collaborations are related with projects, initiatives or events. The document also reports on the commercial collaborations conducted among partners.

Being the last collaboration report of the D9.4.x series, this document outlines potential event of interest for LeanBigData, as well as a brief overview of the main commercial agreements and interests that may lead to future collaboration among partners.