

Project Acronym: **LeanBigData**
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 Project Number: **619606**
 Instrument: **STREP**
 Call Identifier: **ICT-2013-11**

D9.2.3 Dissemination Plan and Report

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Author(s):	Sotiris Stamokostas	ICCS CA SyncLab PT UPM LeanXcale FORTH Intel INESC Atos
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1.0	30/01/2016	Sotiris Stamokostas (ICCS/NTUA)	Final Version
1.1	6/3/2016	Marta Patiño (UPM)	Revised version

Executive Summary

LeanBigData targets at building an ultra-scalable and ultra-efficient integrated big data platform addressing important open issues in big data analytics. The goal of work package 9 is to promote and empower the dissemination, transfer, collaboration, exploitation, assessment, and broad uptake of the LeanBigData project results to the target audience and stakeholders.

This deliverable reports on the progress of the communication and dissemination activities from all project partners during the second year. The dissemination progress is monitored by qualifying and quantifying the activities and ensuring that these efforts are sufficient to keep the project in line with the goals defined within the Description of Work.

This document is structured as follows: Section 2 reports the promotional material that the project used during this reporting period in order to promote its results, according to the plan defined in the [2]; Section 3 and 4 present some concrete dissemination and communication actions for the period from M13 to M24 and the results are compared to those of the first reporting period; finally, Section 5 concludes the document.

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Abbreviations and acronyms

DoW	Description of Work
WP	Work package
Tbd	To be defined
SOA	Service Oriented Architecture
EC	European Commission

1. Introduction

The aim of Task 9.2 (“Dissemination Activities”) is to disseminate the results from LeanBigData through a diverse set of channels (conference and journal publications, presentations and demonstrations, press releases, web site, etc.). The dissemination plan and the corresponding channels have already been defined during the first phase of the project and are clearly reported in the corresponding deliverables.

This document reports on the dissemination and collaboration activities for the second dissemination period (M13 – M24). The measurement and evaluation of these efforts is being performed using the criteria defined in the previous similar report [2].

This is the second version of the Communication and Dissemination Report. There will be one more update in project month 36.

The document is structured as follows:

- Section 2 reports on the Dissemination channels such as the project web site and the flyers, poster and video used for the dissemination of LeanBigData results.
- In Section 3 the dissemination activities are reported such as the conference papers, the workshops and the white paper.
- Section 4 reports the communication activities that took place during the year 2 of the project.

2. Dissemination channels

This section offers a general description of the promotional material to be used for the dissemination of the LeanBigData results and reports the progress that has been made according to last year dissemination plan.

2.1. Web site

The project website (<http://leanbigdata.eu/>) acts as one of the major communication vehicles for global dissemination to all specified target groups (i.e. general public, research communities, industry / business, government-related organizations).

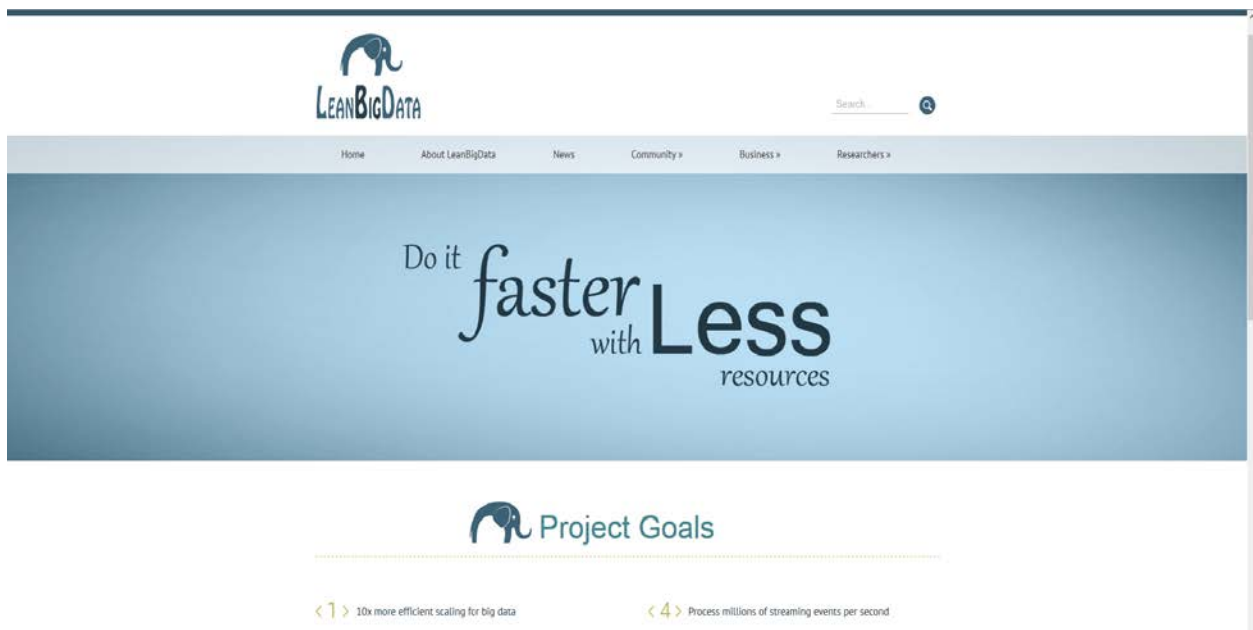
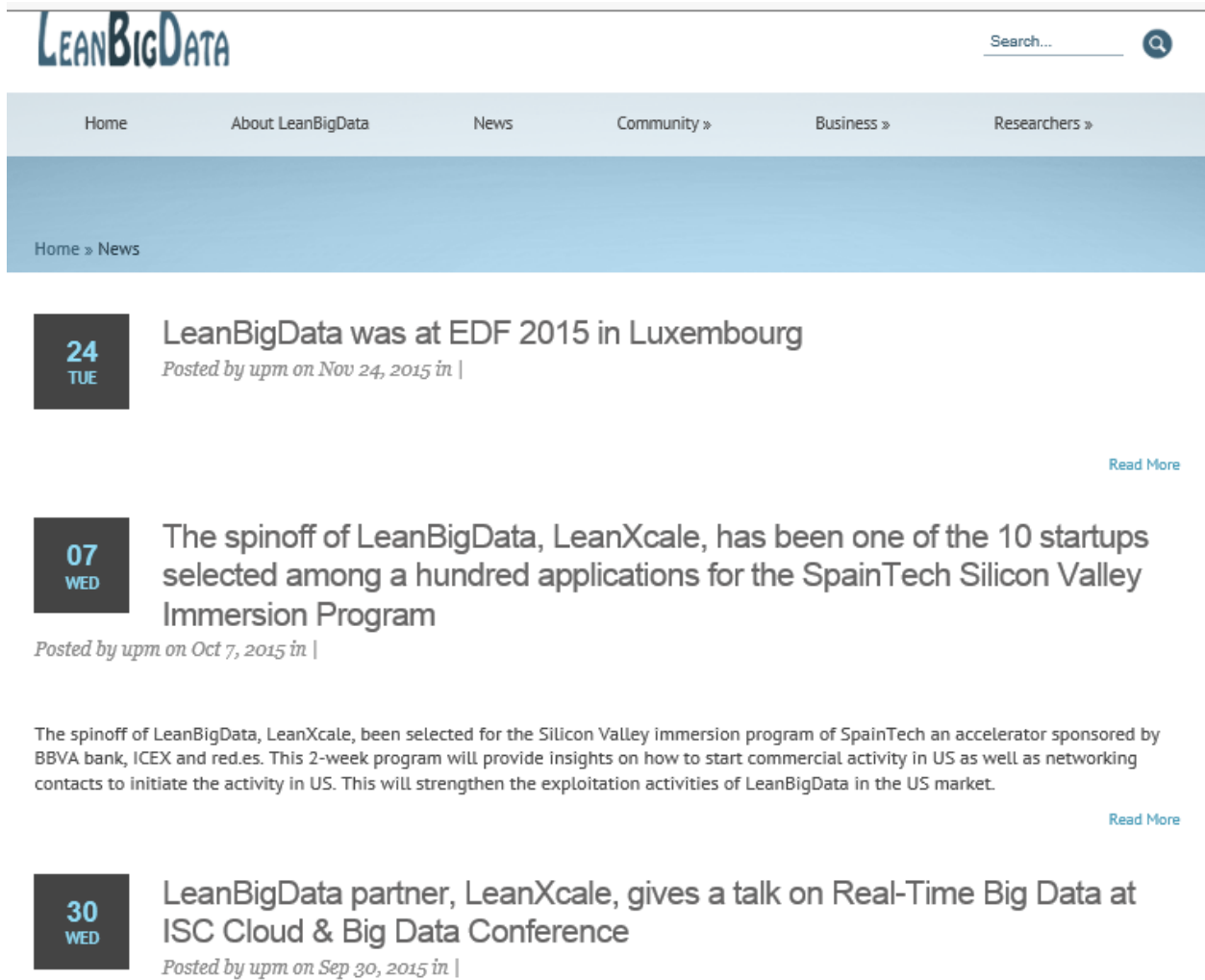


Figure 1: Project website

The content of the website has been kept updated during the second year with news items related to the activity of the project.



The screenshot shows the LeanBigData website's news section. At the top, there is a navigation bar with links for Home, About LeanBigData, News, Community, Business, and Researchers. A search bar is located on the right. Below the navigation bar, a breadcrumb trail reads "Home » News". The main content area features three news items, each with a date and day in a dark box, a title, a byline, and a "Read More" link.

24 TUE LeanBigData was at EDF 2015 in Luxembourg
Posted by upm on Nov 24, 2015 in | [Read More](#)

07 WED The spinoff of LeanBigData, LeanXcale, has been one of the 10 startups selected among a hundred applications for the SpainTech Silicon Valley Immersion Program
Posted by upm on Oct 7, 2015 in | [Read More](#)

The spinoff of LeanBigData, LeanXcale, been selected for the Silicon Valley immersion program of SpainTech an accelerator sponsored by BBVA bank, ICEX and red.es. This 2-week program will provide insights on how to start commercial activity in US as well as networking contacts to initiate the activity in US. This will strengthen the exploitation activities of LeanBigData in the US market.

30 WED LeanBigData partner, LeanXcale, gives a talk on Real-Time Big Data at ISC Cloud & Big Data Conference
Posted by upm on Sep 30, 2015 in | [Read More](#)

Figure 2: News section of the website

2.1.1 Statistics from Google Analytics

We use Google analytics¹ in order to collect statistics regarding the visits in our website. We analyse these statistics in order to retrieve quantitative and qualitative information so as to have better insights regarding the user experience while navigating in our website, and to see if LeanBigData really attracts visitors so that they can later return and check for updated news and information about later achievements. Unfortunately, this functionality was not present in the previous year, so we cannot compare the results from the current reporting period with the previous ones. The results are shown below.

¹ <http://www.google.com/analytics/>

Audience Overview

Feb 1, 2014 - Jan 10, 2016

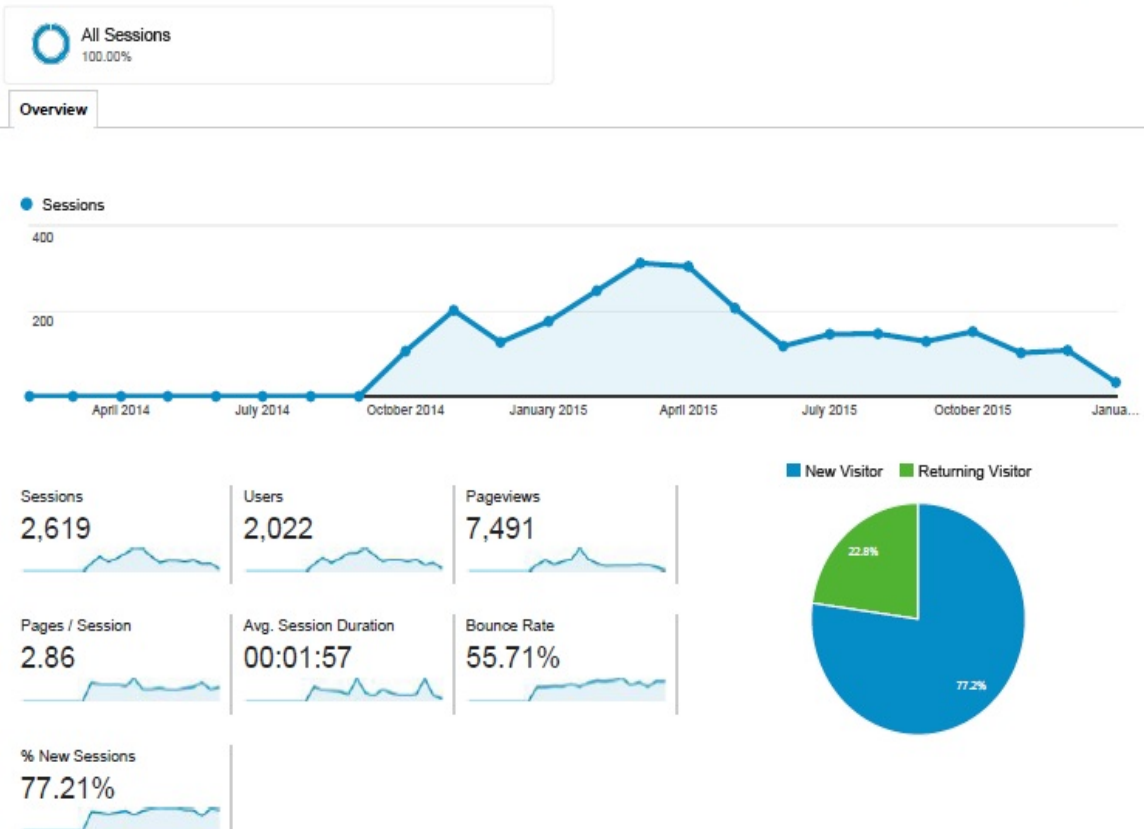


Figure 3: New visitors on the project web site during year 2

The consortium enriched the project web site with updated content and used it as the main communication vehicle to disseminate the project vision and major outcomes. This was noted in the Google analytics, with an initial constant increase of new visitors of the LeanBigData web site to get information regarding the project and be informed about its latest news. As shown in the Figure 3 above the 77 % of the web site visitors are new visitors.

The following figures give more information regarding the demography in terms of country of origin of the project web site visitors. In the Figure below is showed that the most visitors are from Spain, Italy and Portugal accordingly. There are also visitors in the top-10 from Brazil and USA not only EU.

Country	Sessions	% Sessions
1. Spain	482	18.40%
2. Italy	247	9.43%
3. Portugal	230	8.78%
4. Brazil	227	8.67%
5. Greece	193	7.37%
6. United States	165	6.30%
7. United Kingdom	117	4.47%
8. Germany	116	4.43%
9. France	98	3.67%
10. Belgium	88	3.36%

Figure 4: Top 10 countries for visitors

Country	Acquisition			Behavior			Conversions		
	Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	2,619 % of Total: 100.00% (2,619)	77.21% Avg for View: 77.21% (0.00%)	2,022 % of Total: 100.00% (2,022)	55.71% Avg for View: 55.71% (0.00%)	2.86 Avg for View: 2.86 (0.00%)	00:01:57 Avg for View: 00:01:57 (0.00%)	0.00% Avg for View: 0.00% (0.00%)	0 % of Total: 0.00% (0)	\$0.00 % of Total: 0.00% (\$0.00)
1. Spain	482 (18.40%)	58.30%	281 (13.90%)	44.19%	3.79	00:03:27	0.00%	0 (0.00%)	\$0.00 (0.00%)
2. Italy	247 (9.43%)	74.09%	183 (9.05%)	46.15%	3.25	00:01:47	0.00%	0 (0.00%)	\$0.00 (0.00%)
3. Portugal	230 (8.78%)	70.00%	161 (7.96%)	48.70%	3.18	00:02:13	0.00%	0 (0.00%)	\$0.00 (0.00%)
4. Brazil	227 (8.67%)	98.68%	224 (11.08%)	94.71%	1.08	00:00:15	0.00%	0 (0.00%)	\$0.00 (0.00%)
5. Greece	193 (7.37%)	65.80%	127 (6.28%)	43.01%	3.71	00:02:21	0.00%	0 (0.00%)	\$0.00 (0.00%)
6. United States	165 (6.30%)	91.52%	151 (7.47%)	63.03%	2.13	00:00:54	0.00%	0 (0.00%)	\$0.00 (0.00%)
7. United Kingdom	117 (4.47%)	84.62%	99 (4.90%)	52.14%	2.84	00:01:32	0.00%	0 (0.00%)	\$0.00 (0.00%)
8. Germany	116 (4.43%)	78.45%	91 (4.50%)	45.69%	3.20	00:02:28	0.00%	0 (0.00%)	\$0.00 (0.00%)
9. France	96 (3.67%)	91.67%	88 (4.35%)	56.25%	2.52	00:01:18	0.00%	0 (0.00%)	\$0.00 (0.00%)
10. Belgium	88 (3.36%)	59.09%	52 (2.57%)	39.77%	3.41	00:03:15	0.00%	0 (0.00%)	\$0.00 (0.00%)
11. India	63 (2.41%)	100.00%	63 (3.12%)	57.14%	2.21	00:01:40	0.00%	0 (0.00%)	\$0.00 (0.00%)
12. (not set)	48 (1.83%)	70.83%	34 (1.66%)	22.92%	3.88	00:03:03	0.00%	0 (0.00%)	\$0.00 (0.00%)
13. Poland	36 (1.37%)	72.22%	26 (1.29%)	63.89%	2.53	00:02:03	0.00%	0 (0.00%)	\$0.00 (0.00%)

Figure 5 : Visitors' country of origin (part-1)

From these figures, it can be concluded that the project triggers the interest across the globe, and it is not restricted inside the borders of the EU. This is due to the extreme communication activities of the consortium during the second period. Apart from the regular EU events and meetings, the consortium participated in a variety of exhibition, talks and meetings across the globe in order to disseminate its vision. It is indicative that visitors coming only from Brazil (8.67 %) and USA (6.30 %) consists 15 % of the total traffic. This is explained due to the increased effort spent mainly by the newly established spin-off that is a new partner of the project, LeanXcale, which participated in several meetings during this year in order to attain global awareness of the project outcomes so as to attract potential customers and gain a better position in the global market.

14.	Netherlands	28 (1.07%)	92.86%	26 (1.29%)	64.29%	1.68	00:00:23	0.00%	0 (0.00%)	\$0.00 (0.00%)
15.	Canada	22 (0.84%)	81.82%	18 (0.80%)	59.09%	2.77	00:00:30	0.00%	0 (0.00%)	\$0.00 (0.00%)
16.	Ireland	21 (0.80%)	85.71%	18 (0.80%)	42.86%	3.29	00:01:24	0.00%	0 (0.00%)	\$0.00 (0.00%)
17.	Serbia	19 (0.73%)	63.16%	12 (0.50%)	36.84%	4.26	00:05:16	0.00%	0 (0.00%)	\$0.00 (0.00%)
18.	Turkey	17 (0.65%)	76.47%	13 (0.64%)	52.94%	2.29	00:01:36	0.00%	0 (0.00%)	\$0.00 (0.00%)
19.	Australia	16 (0.61%)	93.75%	15 (0.74%)	75.00%	2.50	00:00:27	0.00%	0 (0.00%)	\$0.00 (0.00%)
20.	Malaysia	16 (0.61%)	93.75%	15 (0.74%)	75.00%	2.06	00:01:26	0.00%	0 (0.00%)	\$0.00 (0.00%)
21.	Sweden	16 (0.61%)	81.25%	13 (0.64%)	68.75%	2.06	00:00:18	0.00%	0 (0.00%)	\$0.00 (0.00%)
22.	Philippines	15 (0.57%)	100.00%	15 (0.74%)	100.00%	1.00	00:00:00	0.00%	0 (0.00%)	\$0.00 (0.00%)
23.	Thailand	15 (0.57%)	53.33%	8 (0.40%)	86.67%	1.13	00:00:21	0.00%	0 (0.00%)	\$0.00 (0.00%)
24.	Switzerland	14 (0.53%)	71.43%	10 (0.40%)	57.14%	3.21	00:01:17	0.00%	0 (0.00%)	\$0.00 (0.00%)
25.	Austria	13 (0.50%)	84.62%	11 (0.54%)	46.15%	3.69	00:00:52	0.00%	0 (0.00%)	\$0.00 (0.00%)
26.	Colombia	12 (0.46%)	83.33%	10 (0.40%)	83.33%	1.58	00:00:27	0.00%	0 (0.00%)	\$0.00 (0.00%)
27.	Finland	12 (0.46%)	100.00%	12 (0.50%)	66.67%	2.42	00:00:34	0.00%	0 (0.00%)	\$0.00 (0.00%)
28.	Indonesia	12 (0.46%)	83.33%	10 (0.40%)	91.67%	1.08	00:00:03	0.00%	0 (0.00%)	\$0.00 (0.00%)
29.	Luxembourg	12 (0.46%)	66.67%	8 (0.40%)	33.33%	3.92	00:03:35	0.00%	0 (0.00%)	\$0.00 (0.00%)
30.	China	11 (0.42%)	90.91%	10 (0.40%)	72.73%	2.18	00:01:42	0.00%	0 (0.00%)	\$0.00 (0.00%)
31.	Israel	11 (0.42%)	81.82%	9 (0.45%)	72.73%	2.18	00:00:43	0.00%	0 (0.00%)	\$0.00 (0.00%)
32.	Mexico	11 (0.42%)	100.00%	11 (0.54%)	100.00%	1.00	00:00:00	0.00%	0 (0.00%)	\$0.00 (0.00%)
33.	Romania	11 (0.42%)	100.00%	11 (0.54%)	54.55%	4.09	00:02:27	0.00%	0 (0.00%)	\$0.00 (0.00%)

Figure 6: Visitors' country of origin (part-2)

34.	Singapore	11 (0.42%)	81.82%	9 (0.45%)	72.73%	1.64	00:01:14	0.00%	0 (0.00%)	\$0.00 (0.00%)
35.	United Arab Emirates	10 (0.38%)	80.00%	8 (0.40%)	60.00%	2.60	00:01:49	0.00%	0 (0.00%)	\$0.00 (0.00%)
36.	Slovakia	9 (0.34%)	77.78%	7 (0.35%)	55.56%	2.44	00:00:26	0.00%	0 (0.00%)	\$0.00 (0.00%)
37.	Argentina	8 (0.31%)	100.00%	8 (0.40%)	75.00%	1.75	00:03:56	0.00%	0 (0.00%)	\$0.00 (0.00%)
38.	Japan	7 (0.27%)	100.00%	7 (0.35%)	85.71%	1.14	00:00:08	0.00%	0 (0.00%)	\$0.00 (0.00%)
39.	Norway	7 (0.27%)	100.00%	7 (0.35%)	42.86%	3.57	00:03:00	0.00%	0 (0.00%)	\$0.00 (0.00%)
40.	Russia	7 (0.27%)	100.00%	7 (0.35%)	71.43%	1.57	00:00:45	0.00%	0 (0.00%)	\$0.00 (0.00%)
41.	Ukraine	7 (0.27%)	57.14%	4 (0.20%)	57.14%	2.71	00:00:43	0.00%	0 (0.00%)	\$0.00 (0.00%)
42.	Hong Kong	6 (0.23%)	100.00%	6 (0.30%)	100.00%	1.00	00:00:00	0.00%	0 (0.00%)	\$0.00 (0.00%)
43.	Hungary	6 (0.23%)	100.00%	6 (0.30%)	50.00%	4.67	00:01:28	0.00%	0 (0.00%)	\$0.00 (0.00%)
44.	Iran	6 (0.23%)	100.00%	6 (0.30%)	66.67%	3.00	00:03:09	0.00%	0 (0.00%)	\$0.00 (0.00%)
45.	South Korea	6 (0.23%)	100.00%	6 (0.30%)	66.67%	1.33	00:00:10	0.00%	0 (0.00%)	\$0.00 (0.00%)
46.	Lithuania	6 (0.23%)	66.67%	4 (0.20%)	33.33%	4.00	00:03:34	0.00%	0 (0.00%)	\$0.00 (0.00%)
47.	Taiwan	6 (0.23%)	100.00%	6 (0.30%)	83.33%	1.17	00:04:10	0.00%	0 (0.00%)	\$0.00 (0.00%)
48.	Denmark	5 (0.19%)	100.00%	5 (0.25%)	80.00%	2.40	00:00:54	0.00%	0 (0.00%)	\$0.00 (0.00%)
49.	Vietnam	5 (0.19%)	100.00%	5 (0.25%)	60.00%	1.80	00:00:30	0.00%	0 (0.00%)	\$0.00 (0.00%)
50.	Chile	4 (0.15%)	100.00%	4 (0.20%)	100.00%	1.00	00:00:00	0.00%	0 (0.00%)	\$0.00 (0.00%)

Figure 7: Visitors' country of origin (part-3)

As shown in the figure above there are visitors from 50 different countries. 72% of the total visitors are from Europe and almost 30 % of the visitors come from North America, Asia and Central and South America equally divided.

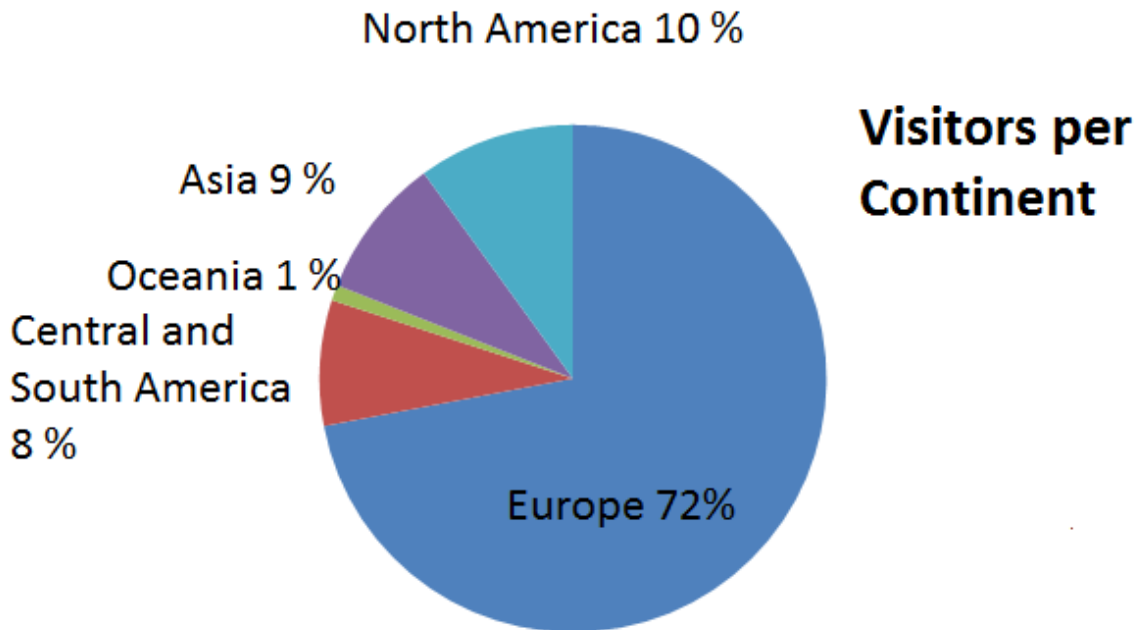


Figure 8: Visitors per Continent

Location

Feb 1, 2014 - Jan 10, 2016

All Sessions
100.00%

Map Overlay

Summary

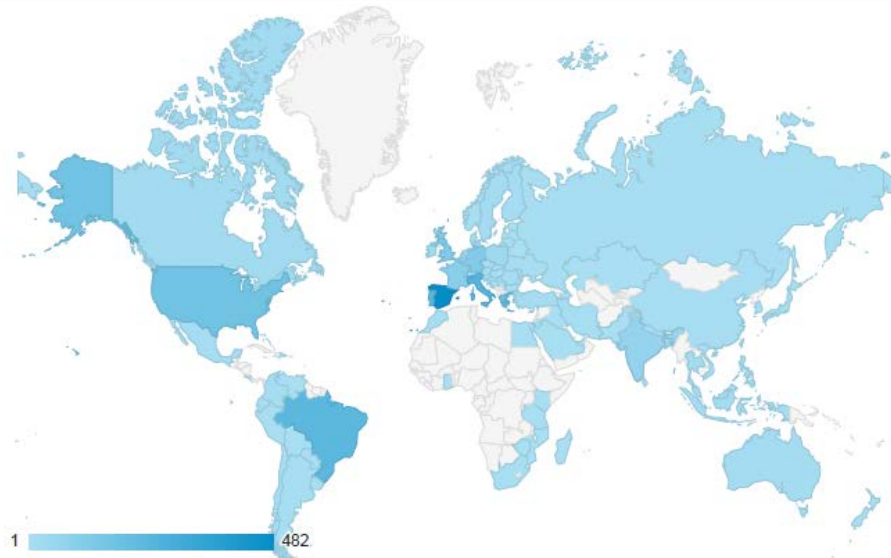


Figure 9: Visitors Map

2.2. Presence in Social Media

Regarding the presence of the project in the social media, LeanBigData has accounts in Twitter and LinkedIn.

In Twitter, the project is present here: <https://twitter.com/leanbigdata>.

In LinkedIn, the project is present here:
<https://www.linkedin.com/grp/home?gid=6656862>.

2.3. Promotional material

The promotional material was created during year 1 of the project including:

- Flyer
- Poster
- Video



Figure 10: LeanBigData Logo

The logo shows an elephant, one common way to represent big data nowadays, but it depicts very slim to depict that is a lean big data infrastructure, what is the core innovation to be delivered in the project.

2.3.1 Flyer

The second of the three flyers has been produced and provided. The first flyer produced by LeanBigData was mainly focused on providing the vision and the goals of the project. The second flyer produced by the project additionally provides the early results of the project and focuses on creating expectation based on those results. The second flyer is available at the project website. It will be used as well as factsheet for the project; it is under the community /promotional material tab.

2.3.2 Poster

A poster, unchanged as reported during the first year of the project, has been designed distilling the main message of the project in cooperation with professional graphical designers. The goal has been to create a highly attractive poster that can attract the attention of visitors in large events where the main difficulty is to attract the attention of public due to the excess of offer from many booths in exhibition floors.



Figure 11: LeanBigData Poster

The poster depicts two elephants. The one on the right depicts the current Big Data technology. As it can be seen on the elephant’s belly, it is eager on resources, as current big data technology. Also the scale notices this showing that is on the high resource consumption side. The elephant is hairy to denote that this traditional big data technology is being rendered obsolete. The left elephant shows a slim elephant representing LeanBigData depicting that the technology being delivered by LeanBigData is “Lean”. It is also in culturist pose to denote the power of the platform. The scale reinforces the message that the platform will be low in resource usage with respect current technology.

2.3.3 Promotional Video

A promotional video was created in the first year for three purposes:

- to provide a visual support for delivering a pitch about the project to broad audiences from non-technical people to experts on the topic
- to be used as background video in exhibition booths
- to be distributed through the project web site and YouTube.

3. Dissemination Activities

This section describes all the dissemination activities that took place during the second period of the project (M13-M24). The dissemination activities that took place during the previous reporting period are also referred so as to highlight the progress that the consortium has made during the last months.

This is the second version of the Dissemination Report. There will be one more update in month 36.

3.1. Publications & Patents

Table 1 summarizes the publication activities of the LeanBigData partners during the second reporting period. The table contains only published papers related to the project. No publications were made during the first reporting period in order to present comparative data. The following sections describe each of these activities separately.

Publications	#(M13-M24)
Conference , workshop and journal publications	3
Patents	1
Total	4

Table 1: Publications & Patents Summary during the second year

3.1.1 Conference and Workshop Papers

The following papers have been published as a result of LeanBigData activities:

Publication Title	Conference	Author(s) Name(s)	Publication Date	Beneficiaries
Direct Debit Transactions: a comprehensive analysis of emerging attack patterns	SecureSysComm 2015: Workshop on Security and Privacy in Systems and Communication Networks	Luigi Romano, Luigi Coppolino, Salvatore D'Antonio, Gaetano Papale, Luigi Sgaglione e Ferdinando Campanile	2015	SyncLab
Self-Learning Cloud Controllers: Fuzzy Q-Learning for Knowledge Evolution	IEEE International Conference on Cloud and Autonomic Computing	P Jamshidi, AM Sharifloo, C Pahl, A Metzger, G Estrada	Sep' 2015	Intel
CumuloNimbo: A Cloud Scalable Multi-tier SQL Database	IEEE Computer Society	Ricardo Jimenez-Peris, Marta Patiño-Martinez, Bettina Kemme, Ivan Brondino, José Pereira, Ricardo Vilaça, Francisco Cruz, Rui Oliveira y Yousuf Ahmad	Mar' 2015	LeanXcale, UPM, INESC

Table 2: List of Conference and Workshop Papers

SyncLab paper is focused on the Banking use case (Electronic Alignment of Direct Debit transactions) and provides a comprehensive analysis of the emerging attack patterns against the Direct Debit payment service. It was presented in the Workshop-SecureSysComm 2015 which is a Workshop on Security and Privacy in Systems and Communication Networks and took place on 4-6 November 2015 in Krakov –Poland. The Workshop seeks submissions from academia and industry presenting novel research on theoretical and practical aspects of data protection, privacy, security, and cryptography. Papers describing new methods or technologies, advanced prototypes, systems, tools and techniques and general survey papers indicating future directions are also encouraged. Its proceedings will be published by IEEE CPS. (<http://wpage.unina.it/ficco/SecureSysComm2015/home.html>).

Intel paper “Self-Learning Cloud Controllers: Fuzzy Q-Learning for Knowledge Evolution” shows the potential application of data sensors and CEP for the autoscaling of cloud resources. The algorithm can be either applied to the backend to autoscale the LeanXcale database on-demand or any other deployment using advanced data sensors. The concept is undergoing extensive validation tests.

The join article among LeanXcale, UPM and INESC presents the architecture of the LeanXcale database. It as published in a IEEE journal.

Details of all publications partially funded by the LeanBigData project has been uploaded to the Bibliographic social networks <http://www.citeulike.org>, <http://mendeley.comand> and <http://www.bibsonomy.org> and tagged clearly mentioning the project.

3.1.2 Patents

The following patent has been submitted as a result of LeanBigData activities:

Publication Title	Patents	Author(s) Name(s)	Publication Date	Beneficiaries
Tiered Heterogeneous Fast Layer Shared Storage Substrate Apparatuses, Methods, And Systems	US Patent Application	Angelos Bilas, Markos Fountoulakis, Spyros Papageorgiou, and Tryfon FarmakakiS	Submitted in Nov 2015	Forth

Table 3: List of Patents

3.2. White papers

Since the project has as main goal to exploit commercially most of its outcomes, most deliverables are not public to avoid the competition gaining insights on what is done before the consortium partners are prepared for doing a commercialization effort. Additionally, deliverables are quite deep technical documents with little interest for a broad audience. For this reason, a compromise has been sought that has been that every year a public white paper will be written summarizing the main outcomes of the project so far. This white paper will be written with care so it is understandable to a wide audience and can attract the attention of stakeholders and potential users/clients of the platform.

For year 2 the white paper is available as deliverable 9.12 “Insight to LeanBigData”.

3.3. Workshop Organization

For the first public workshop, in agreement with the Project Officer, LeanBigData has joined forces with the CoherentPaaS project and organized a workshop that will be held in conjunction with the CLOSER2016 event:

<http://closer.scitevents.org/DataDiversityConvergence.aspx> (Rome, Italy, 25-26 April 2016). The title of the workshop is: “Towards Convergence of Big Data, SQL, NoSQL, NewSQL, Data streaming/CEP, OLTP and OLAP”

(<http://closer.scitevents.org/Workshops.aspx#DataDiversityConvergence>).

Two other workshop proposals have been submitted and accepted. On one hand, one was submitted to VLDB 2016, the top conference on databases. The workshop has been merged with the BOSS workshop by the workshop co-chairs for space reasons. The workshop will become a session within the BOSS workshop with invited talks. Additionally, another workshop has been accepted that will serve as the second public workshop and will be part of the 11th Int. Federated Conference on Distributed Computing Techniques (DiscoTEC) to be held during 6-9th 2016 at Crete (<http://2016.discotec.org/>).

3.4. Training Activities

Table 4 gives an overview of on-going and finished teaching activities.

Type of Activities	On-Going	Finished
Lectures	7	-
Phd Dissertation	7	-
Diploma Thesis	2	1
Master Thesis	3	2
Total	19	3

Table 4: Training Activities

UPM

UPM has participated in the creation of a new major in the European ICT Digital master programme on “Data Science” together with other top European universities such as TU Berlin, KTH Sweden, INRIA Sophia-Antipolis, TU Eindhoven. This is a 2-year European master (120 ECTS) with double-degree and has a minor on “Entrepreneurship”. The master aims at training entrepreneurs in hot ICT areas where innovation activities can lead to the creation of new ICT industry. UPM is both an entry and exit node (teaches both the first and second years) and LeanXcale, the start-up being created by UPM and INESC, will receive internships from the master students. In this master the course “Big Data Ecosystems” is taught by UPM.

UPM is also involved in two masters related to the project topic and UPM, the team involved in the project, participates in both. The first one is a 1-year research-oriented master “Master on Software and Systems”. Two courses are taught related to the project, “Foundations of Distributed

Systems” and “New Trends in Distributed Systems”. The second master is a 2-year professional oriented master with a major in “Distributed Systems”.

UPM has also 4 on-going PhD thesis and 2 master thesis were defended on contributions of the project.

FORTH

FORTH researchers, associated with CoherentPaaS contribute to the following training and teaching activities in the Department of Computer Science at the University of Crete:

- Systems programming, 2nd year undergraduate compulsory course
- Embedded systems, 4th year undergraduate elective course
- Parallel Computer Architecture, graduate course
- 1 PhD thesis, related to storage issues
- 1 Master thesis, related to key value store optimizations

ICCS

ICCS contributes to the extension of the ‘Web Programming’ lecture of the under-graduate course of the school of Electrical and Computer Engineering (ECE) of the National and Technical University of Athens (NTUA), and to the extension of the ‘Fault Tolerance’ lecture of the post-graduate course of the aforementioned school. There are two on-going PhDs related to the topics of LeanBigData.

4. Communication Activities

The following table summarizes the communication activities that took place in the second dissemination phase.

Activity	# (M1 – M12)	# (M13 – M24)
Press Releases	1	-
Invited Talks at public events	10	6
Invited Talks at companies	15	12
Project Presentations	-	3
Meetings and EC Events	-	1
Panel Speaker	-	3
Booths at Exhibitions	-	7
Commercial talks/meetings	-	31
Investor/Accelerator Pitches/Meetings	-	24
Direct Communication at Attended Events	8	-
Other Communication Activities	2	23
Total	36	110

Table 5: Summary of Y2 Communication Activities

4.1. Invited Talks at public events

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	Aula Empresa – UPC	Barcelona, Spain	Jan' 2016	CA
2	CloudDP workshop at EuroSys Conference	Lyon, France	Apr' 2015	LeanXcale
3	ISC Cloud & Big Data Conference Invited talk	Frankfurt, Germany	Sep' 2015	LeanXcale
4	City Univ. Talk	London, UK	Dec' 2015	LeanXcale
5	Univ. Of Sydney talk	Sydney, Australia	Mar' 2015	UPM
6	Mezz'ora al tg (Italian TV-talk)	Naples, Italy	Mar' 2015	SyncLab

Table 6: List of Invited Talks at public events

SyncLab presented LeanBigData on the Italian TV at "Mezz'ora al tg" which is a daily topical Italian talk-show with in-depth on new technologies. Luigi Romano was interviewed on EC funding projects and LeanBigData. The interview is shown on air nationwide on March 4, 2015. The video is available at: <https://www.youtube.com/watch?v=DjCl5IOAJ7Y>. The mention to LeanBigData appears around minute 15 of the video.

This action has created awareness in the Italian market and helps SyncLab in the exploitation

CA was invited to talk to Universitat Politècnica de Catalunya (UPC) about CA technology on Anomaly Detection and Root Cause Analysis technology CA has developed in the project, and also presented the whole project its targets and its outcomes. In this event there were 10 invited talks and the interest and the relevance of the event was evaluated by the students with score 4.5/5. The CA presentation was evaluated by the students as the most interesting one of all the others.

4.2. Invited Talks at companies

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	Workshop in Prague	Prague, Czech Republic	Sep' 2015	CA
2	in Town Hall Iberia	Barcelona, Spain Madrid, Spain Lisbon, Portugal	Nov' 2015	CA
3	HortonWorks tech talk	Santa Clara, California	Feb' 2015	UPM
4	Hbase Meetup Bay Area group meeting	Santa Clara, California	Feb' 2015	UPM
5	BonitaSoft talk	San Francisco, California	Feb' 2015	UPM
6	Cloudera tech talk	Palo Alto, California	Feb' 2015	UPM
7	Ericsson talk	San Jose, California	Feb' 2015	UPM
8	MongoDB talk	Sydney, Australia	Mar' 2015	UPM
9	Cloudscape Startup Session	Brussels, Belgium	Mar' 2015	UPM
10	Twitter Tech Talk	San Francisco, California	Sep' 2015	LeanXcale
11	Salesforce Tech Talk	San Francisco, California	Sep' 2015	LeanXcale
12	Technology Meeting in Fujitsu Munich	Munich, Germany	Jul' 2015	Forth

Table 7: List of Invited Talks at companies

CA on November and on September 2015 presented the project to the Company Town Hall Iberia into three cities (Barcelona, Madrid and Lisbon) for 8 different activities and to a workshop in Prague. During these events also presented technology they had developed in the project about Anomaly Detection and Root Cause Analysis which lead to three active collaborations with its Business Units to reuse it.

Forth on July 2015 presented the project to the Fujitsu Munich and also had a discussion about problems and trends in scalable storage for datacenters and analytics.

4.3. Project Presentations

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	EDF 2015	Luxembourg	Nov' 2015	ICCS/NTUA, ATOS
2	Ipromotion meeting	Athens, Greece	Jan' 2015	ICCS/NTUA
3	NTUA's "Night for the young researchers 2015" meeting	Athens, Greece	Sep' 2015	ICCS/NTUA

Table 8: List of Project Presentations



Figure 12: LeanBigData in EDF 2015

ICCS/NTUA presented LeanBigData at NTUA's "Night for the young researchers 2015" which was held in September 2015 in Athens. The photo below shows the LeanBigData booth.



Figure 13: LeanBigData in NTUA's "Night for the young researchers 2015"

4.4. Meetings and EC Events

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	EU Entrepreneurship unit	Concall Brussels, Belgium - Madrid, Spain	May 2015	LeanXcale

Table 9: List of Meetings and EC Events

A concall was held with the EU entrepreneurship unit. They provide an accelerator but they are still at an early stage and just provide basic training about entrepreneurship. There is a unit on San Francisco, but they have a very wrong system of selecting startups based on time from incorporation, 3 years minimum. It does not matter what is the stage of the startup and the potentiality of the opportunity in the American market.

4.5. Panel Speaker

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	BDVA PPP conference	Madrid, Spain	Jun' 2015	UPM
2	Talk at Ecosystems for European Big Data Economy session at ICT Conference	Lisbon, Portugal	Oct' 2015	LeanXcale
3	HbaseCon	San Francisco, California	May 2015	LeanXcale

Table 10: List of Panel Speaker

4.6. Booths at Exhibitions

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	Interop Tokyo	Tokyo, Japan	Jun' 2015	LeanXcale/INESC
2	Interop London	London, UK	Jun' 2015	LeanXcale/INESC
3	RISE Conference	Hong Kong, China	Jul' 2015	LeanXcale/INESC
4	Web Summit	Dublin, Ireland	Nov' 2015	LeanXcale/INESC
5	EDF	Luxembourg	Nov' 2015	UPM/INESC
6	Unbound Digital	UK	Nov' 2015	LeanXcale
7	Techcrunch Disrupt EU	London, UK	Dec' 2015	LeanXcale/INESC

Table 11: List of Booths at Exhibitions

4.7. Commercial talks/meetings

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	Commercial Roadshow	Athens, Greece	Dec' 2014	UPM
2	Partnership meeting, SoftTelecom	Madrid, Spain	Feb' 2015	UPM
3	Partnership meeting, MongoDB	Sydney, Australia	Apr' 2015	UPM
4	Partnership concall meeting, BonitaSoft	Grenoble, France and Madrid, Spain	Apr' 2015	UPM
5	Partnership meeting, SoftTelecom	Madrid, Spain	Apr' 2015	UPM
6	Partnership meeting, Coowry	Madrid, Spain	Apr' 2015	UPM
7	Partnership meeting, Pragsis	Madrid, Spain	Apr' 2015	LeanXcale

8	Partnership meeting, QualityObjects	Madrid, Spain	Apr' 2015	LeanXcale
9	Commercial talk, BBVA Bank	Madrid, Spain	Apr' 2015	LeanXcale
10	Partnership meeting, Zed Consulting	Madrid, Spain	Apr' 2015	LeanXcale
11	Commercial talk, BBVA Bank	Madrid, Spain	May 2015	LeanXcale
12	Commercial talk, BBVA Bank	Madrid, Spain	May 2015	LeanXcale
13	Partnership meeting, Atos	Madrid, Spain	May 2015	LeanXcale
14	Commercial meeting, Santander	Madrid, Spain	May 2015	LeanXcale
15	Partnership meeting, Indra	Madrid, Spain	May 2015	LeanXcale
16	Commercial meeting, Telefonica	Madrid, Spain	Jun' 2015	LeanXcale
17	Talk presented via concall, Twitter	Seattle, USA - Madrid, Spain (concall)	Jun' 2015	LeanXcale
18	Partnership meeting, SyncLab	Naples, Italy	Jun' 2015	LeanXcale
19	Partnership meeting, Sopra	Madrid, Spain	Jul' 2015	LeanXcale
20	Commercial meeting, Santander Bank	Madrid, Spain	Jul' 2015	LeanXcale
21	Partnership meeting, Pragsis	Madrid, Spain	Jul' 2015	LeanXcale
22	Partnership meeting, Ericsson	Madrid, Spain	Jul' 2015	LeanXcale
23	Partnership meeting, Sopra	Madrid, Spain	Jul' 2015	LeanXcale
24	Commercial meeting, Santander Bank	Madrid, Spain	Sep' 2015	LeanXcale
25	Partnership meeting, BonitaSoft	San Francisco, California	Sep' 2015	LeanXcale
26	Partnership meeting, MapR	Madrid, Spain	Dec'2015	LeanXcale
27	Partnership meeting, Hopla Software	Madrid, Spain	Dec'2015	LeanXcale
28	Partnership meeting, Everis-NTT Data	Madrid, Spain	Dec'2015	LeanXcale
29	Partnership meeting, Sanmina	Madrid, Spain	Jan'2015	LeanXcale

30	A&J Calero Engineering	Madrid, Spain	Jan'2015	LeanXcale
31	Partnership meeting, J21 partners	Madrid, Spain	Jan'2015	LeanXcale

Table 12: List of Commercial talks/ meetings

4.8. Investor/Accelerator Pitches/Meetings

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	Investor F2F meeting, Ericsson VC	San Jose, California	May 2015	LeanXcale
2	Accelerator F2F meeting, SpainTech	San Francisco, California	May 2015	LeanXcale
3	Investor F2F meeting, Bullnet	Madrid, Spain	Jul' 2015	LeanXcale
4	Investor F2F meeting, Goldman Sachs	Hong Kong, China	Jul' 2015	LeanXcale
5	Accelerator meeting (via Concall), SpainTech	San Francisco, California - Madrid, Spain (concall)	Aug' 2015	LeanXcale
6	Investor F2F meeting (via concall), Goldman Sachs	Hong Kong, New York, Madrid (concall)	Sep' 2015	LeanXcale
7	Accelerator meeting, SpainTech	San Francisco, California	Sep' 2015	LeanXcale
8	German Chamber of Commerce meeting	Madrid, Spain	Oct' 2015	LeanXcale
9	Bullnet meeting	Madrid, Spain	Oct' 2015	LeanXcale
10	Point Nine Capital meeting	Concall, Brussels	Oct' 2015	LeanXcale
11	Hoxton Ventures meeting	Concall, Brussels	Oct' 2015	LeanXcale
12	Microsoft Ventures	Dublin, Ireland	Nov' 2015	LeanXcale
13	Index Ventures	Dublin, Ireland	Nov' 2015	LeanXcale
14	SpainTech program	San Francisco, US	Nov' 2015	LeanXcale
15	EIT Digital meeting	San Francisco, US	Nov' 2015	LeanXcale
16	Startup Bootcamp FinTech	London, UK	Dec' 2015	LeanXcale
17	Adara partners meeting	Madrid, Spain	Dec' 2015	LeanXcale
18	INTEL Capital meeting	London, UK	Dec' 2015	LeanXcale
19	Santander bank Future Banking director	Madrid, Spain	Dec' 2015	LeanXcale
20	Oracle Exadata Ex-Director meeting	Madrid, Spain	Dec' 2015	LeanXcale
21	Telefonica Big Data director meeting	Madrid, Spain	Dec' 2015	LeanXcale
22	DCG Workshop	Dublin, Ireland	Oct' 2015	Intel
23	Polytech ventures	Concall	Jan' 2015	LeanXcale/Polytech
24	PoC for a confidential company	Belfast, UK	Apr' 2015	Intel

Table 13: List of Investor/Accelerator Pitches/Meetings

Internally at INTEL, the LeanBigData project and the startup company LeanXcale were presented to the Intel project accelerator team (USA) and attracted a lot of interest about the project and the company's activities.

Also Intel at Belfast, UK in April 2015 carried out a Proof-of-Concept for a confidential company based in Belfast. Advanced analytic capabilities were combined with CEP concepts to monitor

power consumption and react accordingly. PoC involved anomaly detection algorithms and data sensors. Proof-of-Concept validated and now moving forward into a phase II of development.

4.9. Other communication activities

No	Event Name	Event Location (City, Country)	Date	Beneficiary
1	Trade Show Attendance, Strata Hadoop	San Jose, California	Feb' 2015	UPM
2	Scientific conference attendance, EuroSys Conference	Lyon, France	Apr' 2015	LeanXcale
3	Cooperation meeting, Imperial College	London, UK	Jun' 2015	LeanXcale
4	Cooperation meeting URJC	Madrid, Spain	Jul' 2015	LeanXcale
5	Cooperation meeting URJC	Madrid, Spain	Aug' 2015	LeanXcale
6	Attendance ISC Cloud & Big Data Conference	Frankfurt, Germany	Sep' 2015	LeanXcale
7	South Summit	Madrid, Spain	Oct' 2015	LeanXcale
8	Innovate Finance Meetup	London, UK	Dec' 2015	LeanXcale
9	Fintech Connect Live	London, UK	Dec' 2015	LeanXcale
10	Technology presentation of a Business Unit at CA	Barcelona, Spain Santa Clara, USA	May 2015	CA
11	Technology presentation of a Business Unit at CA	Barcelona, Spain	Apr' 2015	CA
12	Technology presentation of a Business Unit at CA	Barcelona, Spain	Oct' 2015	CA
13	Technology presentation of a Business Unit at CA	Barcelona, Spain Santa Clara, USA	Dec' 2015	CA
14	Technology presentation of a Business Unit at CA	Santa Clara, USA	Mar' 2015	CA
15	Forth Visited by Entrepreneurs	Heraklion, Greece	Jul' 2015	Forth
16	Forth Visited by Entrepreneurs	Heraklion, Greece	Jan' 2016	Forth
17	FAST'2016 PC meeting	Toronto, Canada	Dec' 2015	Forth
18	Technical presentation to the Ads teams	Lisbon, Portugal	Jul' 2015	PT
19	Technical presentation to the big-data department	Aveiro, Portugal	Nov' 2015	PT
20	LBD presentation to the product department	Aveiro, Portugal	Dec' 2015	PT
21	ATOS financial stuff & LeanXcale	Barcelona, Spain	Jul' 2015	ATOS
22	Telemetry for Orchestration – Research insights	Leixlip, Ireland	Oct' 2015	Intel
23	Orchestration Research insights by H1'15	Leixlip, Ireland	July 2015	Intel
24	Multiple Research demonstrations by the Orchestration Research – Telemetry section	Leixlip, Ireland	Jan', May, Jun', Sep', Dec' 2015	Intel

Table 14: List of Other communication activities

FORTH had a discussion on technology trends in storage systems in Toronto, a discussion on applications and exploitation of shared storage technology in Heraklion and a discussion on applications and exploitation of shared storage technology also in Heraklion.

CA had presented her technology developed for the project about Visualization, Anomaly Detection and Root Cause Analysis for technology transfer to the products development at the business units 5 times during 2015.

PT had followed the evolution of LeanBigData project, with particular emphasis on the LBD platform, by internally promoting and presenting this technology. Three different presentations took place during 2015 with different audiences: one target at the advertisement team, to address the use-case and its impact on the current ads server; the second at the big-data team to share and discuss the inner technological building blocks of LBD platform; and the last one, more recently, to the business team, in order to address the potential economic impact of LBD in the company.

Intel Labs and Intel Data Center Group's SDI Telemetry team in Intel's campus in Leixlip, Ireland on October 2015 organized the workshop for R&D harvesting "Telemetry for Orchestration – Research insights", which had 10 attendances. The purpose of the workshop was to demonstrate research insights from Intel Labs, particularly smart telemetry. It was demonstrated the anomaly detection as part of approach to reduce data transmission for telemetry needs. A candidate topic were identified for future inclusion in the Snap open source telemetry toolkit, which was announced publically by Intel on 2 Dec 2015. Intel conducted multiple research demonstrations to Intel Executives from Intel Labs and Data Center Group in Leixlip, Ireland 5 times in 2015 by the Orchestration Research – Telemetry section.

Intel's H1 report out on CSLs orchestration research insights progress to multiple business groups (Data Center Group, Software & Services Group, IoT Group, Platform Engineering) on Leixlip, Ireland on July 2015. It was a virtual meeting with 20 attendances and its purpose was to analyze the Adaptive telemetry using anomaly detection which showed 10x reduction in telemetry transmission rates by focusing on outlier values instead of sending all data points, as part of H1 Apex Lake demonstrations.

5. Summary

This deliverable reports on and evaluates the communication and dissemination activities of the LeanBigData project during the second dissemination phase (M13 – M24). The main goal from a dissemination point of view was to ensure LeanBigData visibility, which draws the attention of target groups to the project and supports the application of the project's outcomes and results. Our dissemination was based on the initial strategic planning, as reported in the previous versions of this document. The consortium has made an increased effort in order to strengthen the dissemination results by publishing scientific papers to major conferences, while, it increased its communication activities. This made LeanBigData known in a wider community and it is concluded that the project's dissemination strategy was successful during this reporting period. We plan to increase the communication and dissemination effort during the last dissemination period, as the delivered software will be fully functional and the use cases can benefit from using it. As a matter of fact, special effort will be spent for the dissemination of the final version of prototypical implementations of LeanBigData components and its scenarios.

One updated version of the communication and dissemination report will be provided by next version of this deliverable D9.2.4 (M36). This will include reporting on progress and results regarding communication and dissemination goals for the dissemination of the third phase.

6. References

- [1].FP7 Grant Agreement - Annex II General Conditions Grant Agreement No. 611068
- [2].LeanBigData Consortium: D9.2.2 Dissemination plan and Report, January, 2015
- [3].EDF: European Data Forum 2015, Luxembourg, 16-17 November 2015,
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