

# PROJECT PERIODIC REPORT

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**Period covered:** from September 2012 to September 2013

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## Publishable Summary

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<sup>1</sup> Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

<sup>2</sup> The home page of the website should contain the generic European flag and the FP7 logo which are available in electronic format at the Europa website (logo of the European flag: [http://europa.eu/abc/symbols/emblem/index\\_en.htm](http://europa.eu/abc/symbols/emblem/index_en.htm) logo of the 7th FP: [http://ec.europa.eu/research/fp7/index\\_en.cfm?pg=logos](http://ec.europa.eu/research/fp7/index_en.cfm?pg=logos)). The area of activity of the project should also be mentioned.



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## Abbreviations and acronyms

AB	Advisory Board
BD	Big Data Technologies
BIG project	BIG - Big Data Public Private Forum project
DoW	Description of Work
GA	General Assembly
PB	Project Management Board
PC	Project Coordinator
PM	Person Month
PMa	Project Manager
PMB	Project Management Board
QA	Quality Assurance
R1	Reporting Period 1 (means the first of the four monthly reports)
SD	Strategic Director
SF	Sectors Forum
SFL	Sector Forum Leader
tbd	To be defined
TWG or TG	Technical Working Groups
WGL	Technical Working Group Leader
WP	Work package
WPL	Workpackage Leader



## 1. Publishable summary

### 1.1. Project context and objectives

Building an Industrial community around Big Data in Europe will be the priority of this project. BIG will work towards the definition and implementation of a strategy that includes research and innovation but also technology adoption. We think that having this community established and the adequate resources to work at all levels (technical, business, political, etc.) needed to overcome existing challenges is the basis for a long term European plan in this field.

The following list provides a more specific formulation of BIG objectives:

1. **BIG will set up an industrially-led initiative around Big Data to contribute to EU competitiveness and position it in Horizon 2020.** Industrial leadership will guide actions towards real business benefits, but will be complemented by the views of Academia and Research organizations, which will also take part in this endeavour. Even though preparatory work will be done along the project duration, it will be a long term approach to represent the views and interests of Big Data stakeholders because of its relevance in the current and future context.
2. BIG will elaborate an **integrated roadmap that takes into consideration technical, business and policy aspects**, focusing not only on pure technical issues, but also establishing priorities based on expected impact. This consortium is prepared to bring about the necessary expertise, channels and contacts to ensure contributions from a wider community composed of experts of relevant technical domains as well as experts in sectors or application domains where the application of these technologies is expected to produce a high impact.
3. BIG will ensure that technical research areas selected by the project cover the needs expressed by the industry in different application domains. For that to happen we need a sharp understanding of how big data can be applied to these concrete environments/sectors, and this needs to be transmitted to domain experts. Thus, this objective makes reference to ensure that there will be a **clear path for the adoption of the technology in each of the selected sectors**.
4. BIG will promote adoption of earlier waves of big data technology. Instead of adopting only a futuristic approach, **BIG will use as starting point those technologies that are already in place and will foster experimentation with them**. The idea is to reach a clear understanding of the level of maturity of the different solutions as well as the feasibility of their implementation.
5. BIG will **define and promote actions dealing with policy and regulation**, including aspects such as **data security, intellectual property, privacy, liability and data access**. Therefore BIG will contribute to the whole ecosystem related to Big Data implementation.
6. BIG will carry out **dissemination actions** targeting different stakeholders and players in the value chain. BIG will address all the relevant communities thanks to an ambitious strategy that will include presence in mass media, presence in the most relevant conferences, organization of our own workshops and events and maximization of the use of web channels.

All this will not be possible without providing the right collaboration infrastructures. Collaboration among projects, but also many discussions with buy-in from high level decision makers in the EU data industry. Bearing this in mind **BIG will set up and maintain a support infrastructure that will enable collaboration, information sharing and customization of actions toward different targeted audiences, either at dissemination level or any other aspect that may be needed**.



The following statement is an attempt to summarize these objectives into a single major goal for the project:

BIG will work at technical, business and policy levels, shaping the future through the positioning of Big Data specifically in H2020 and bringing the necessary stakeholders into a self-sustainable industrially-led initiative that will go beyond the project duration and will greatly contribute to enhance the EU competitiveness taking full advantage of Big Data.

Whereas preparation for the future will be essential, BIG will not disregard what is already available and therefore will differentiate from previous and present initiatives in that it will look for an impact through the promotion and adoption of current technologies already within the timeframe of the project.

## 1.2. Main results achieved so far

This first period (13 months) was characterised by the overall organization of the project and the first version of the main deliverables, Technical whitepapers, Sector's requisites and Sector's Roadmaps. As well as the preparation work for setting up the future Big Data Public-Private Forum.

The major results achieved so far with respect to the objectives of the active Work Package are described in the following paragraphs:

### **WP1: Project management:**

#### Objectives:

WP1 ensures the achievement of the project results through technical and administrative coordination as well as provide timely and efficient organizational and financial coordination with respect to contractual commitments. During this period the main work has been devoted to set up the foundation for an effective management of the project from the administrative and financial perspective, and the quality assurance. Therefore the objectives for the first period have been:

- to carry out contractual, administrative and financial coordination and controlling
- to cooperate and communicate between the Commission and the project
- to provide overall RTD organisation, coordination, and control
- to represent the project towards external parties
- to ensure that preparation and provision of deliverables meet time and quality targets
- to organise the kick-off meeting and guide the inception phase of the project
- to organise Consortium Meetings
- to provide quality assurance to the project by establishing a Quality assurance and self-assessment plan

#### Results:

As main result WP1 has delivered an a Quality assurance and self-assessment plan where all the internal quality procedures and communication tools have been reported to the project partners. We had two consortium meetings and several technical and sectorial meetings and conference calls. All deliverables have been delivered to the EC according to the internal quality procedures.

**WP2: Strategy & Operations:**Objectives:

In the current period (first 13 months), the objectives of WP2 encompass the planning and structuring the working groups and tasks, and the assembly of our research activities into the first drafts of the technical white papers, sector requisites and sector roadmaps.

Results:

WP2 has formed two sets of working groups that look at the state of the art and future developments in big data from the technology and the business perspective, respectively. The technical working groups cover the whole value chain of big data: From data acquisition to data analysis to data curation to data storage to data usage. These five working groups have jointly published a first draft of white papers that result from desktop research and in-depth interviews with leading experts. The sector forums cover a total of 10 business sectors including Health, the Public Sector, Finance & Insurance, Telecommunications, Media and Entertainment, Manufacturing, Retail, Energy, and Transport. They have jointly worked out the sector requirements for big data and as a collaborative result, the BIG project has published a first draft of sector roadmaps for big data in a common format.

On the one hand, the final result of the work in WP2 will be finalized versions of the technical white papers, sector requisites and sector roadmaps. While these documents will have a specific impact where they serve as detailed background information in many occasions, on the other hand, the final result of WP2 will be a consolidated roadmap for big data in Europe that is expected to serve as a reference document for the strategic planning of big data activities, including Horizon 2020.

**WP3: Dissemination and Stakeholder Engagement:**Objectives:

The dissemination activities of the BIG project are crucial for the BIG consortium to achieve the prime objective of setting up a European industrial forum that brings together vendor and user industry of large data applications and promote big data technology adoption as well as further research.

Results:

In the first phase of the project's third work package, the three consortium partners Institut für Angewandte Informatik e.V. (INFAI), Open Knowledge Foundation Deutschland e.V. (OKFDE) and the University of Innsbruck (UIBK) have worked on the implementation of a dissemination strategy for BIG to promote and support the dissemination of the results of the project and the best practices towards large-scale technology adoption. Dissemination within the BIG project covers a wide spectrum of activities, including but not restricted to: community extension and management, setting up and maintenance of the collaboration infrastructure, web 2.0 tools and events, targeting both the participation of BIG in major conferences that are well known in the field, as well as the organization of our own events. That included the establishment of a dissemination methodology and an identification of a dissemination strategy along which dissemination activities and stakeholder engagement has been performed in year one of the project. Regular monthly dissemination telephone conferences were established to discuss and monitor dissemination and stakeholder engagement activities and secure successful promotion of project outcomes. A project website and Web 2.0 dissemination tools like Facebook, Twitter, Slideshare were set up and were used actively. Recently, a BIG LinkedIn group was founded to ignite and further the discussion on topics related to big data in the LinkedIn community.





## WP4: Big Data Public-Private Forum:

### Objectives:

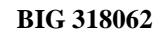
The BIG project has two major goals: 1) building a roadmap around Big Data that includes a valuable analysis of both the technology aspects and the requisites coming from different sectors and 2) setting up a long term initiative that helps Europe in positioning its industries in the Big Data domain. WP4 relates to the second goal, setting up the so called Big Data Public Private Forum.

**Partners in the BIG consortium are convinced of the need to urgently react to the current situation in the Big Data landscape if Europe wants to play a leading position in the future of a data-driven society. The EC and policy makers, led by our Commissionaire Neelie Kroes, have also expressed their concerns on existing barriers and challenges and the need for actions at policy and regulatory level. But that process is slow, and not enough. BIG proposes an innovation ecosystem that will bring European industry to the forefront of innovation by capitalizing on Big Data technologies and by involving users in such a process so that future research & innovation activities at EU level are industry-driven and based on market needs and demands. We expect our proposal of setting up a Big Data Public Private Forum to be a major step in the EU competitiveness in what concerns Big Data Value.**

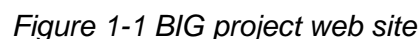
### Results:

In the first period, BIG has produced the following contents to work towards such goal:

- A preliminary **market research** with an overview of major players in the Big Data domain. The huge business potential of Big Data is highlighted together with many examples of use cases that have already deployed Big Data solutions with explicit and quantified benefits. This section confirms the business motivation of the BIG consortium and extended group of stakeholders to build a long term initiative on BD. On the one hand such an analysis shows the leading position of US players in this landscape, which calls for an action from the European side; on the other hand, it makes visible the enormous opportunities derived from the Industrial Internet and the Analytics 3.0 phenomena.
- A summarized vision of **major problems and challenges** Europe has to face to make possible a data-driven society. All of them have a clear European dimension that could not be addressed by a single organization; they fall under different categories that will require multidisciplinary teams in terms skills and competences. Policy makers will be a crucial piece in this part, of utmost importance to reach economies of scale by industrial actors.
- Formulation of the **BIG vision for 2020, mission, as well as strategic and specific objectives of the Big Data Public Private Forum (BD PPF).**
- **Identification of major areas of future work in terms of IPR and standardization.** Three main aspects on intellectual property rights should be addressed specifically from the point of view of Big Data. They all revolve around the data rather than the processing technologies: 1) Data Ownership: raw data and derived data; 2) Data Privacy: national and international aspects and 3) Data Responsibility: mapping liability for results from Big Data applications to processing and data sources. From the standardization perspective, the list includes hard- and software technology, data interoperability and finally, benchmarking in multiple fields



The project web page can be found at [www.big-project.eu](http://www.big-project.eu).



The BIG Consortium consist of **11 partners** drawn across the European Union which covers the spectrum from industrial partners, academic research, research institutes and non-profit

organizations related to the research, development and application of Intelligent Information Management in the domain of Open Data and Big Data.

- Atos Origin SA (Project coordinator – Spain)
- The Press Association Ltd (United Kingdom)
- Siemens AG (Germany)
- AGT Group (R&D) GMBH (Germany)
- Universitaet Innsbruck (Austria)
- National University of Ireland, Galway (Ireland)
- Institut Fur Angewandte Informatik EV (Germany)
- Deutsches Forschungszentrum fuer Kuenstliche Intelligenz GMBH (Germany)
- EXALEAD (France)
- Open Knowledge Foundation Deutschland (Germany)
- STI International Consulting und Research GMBH (Austria)

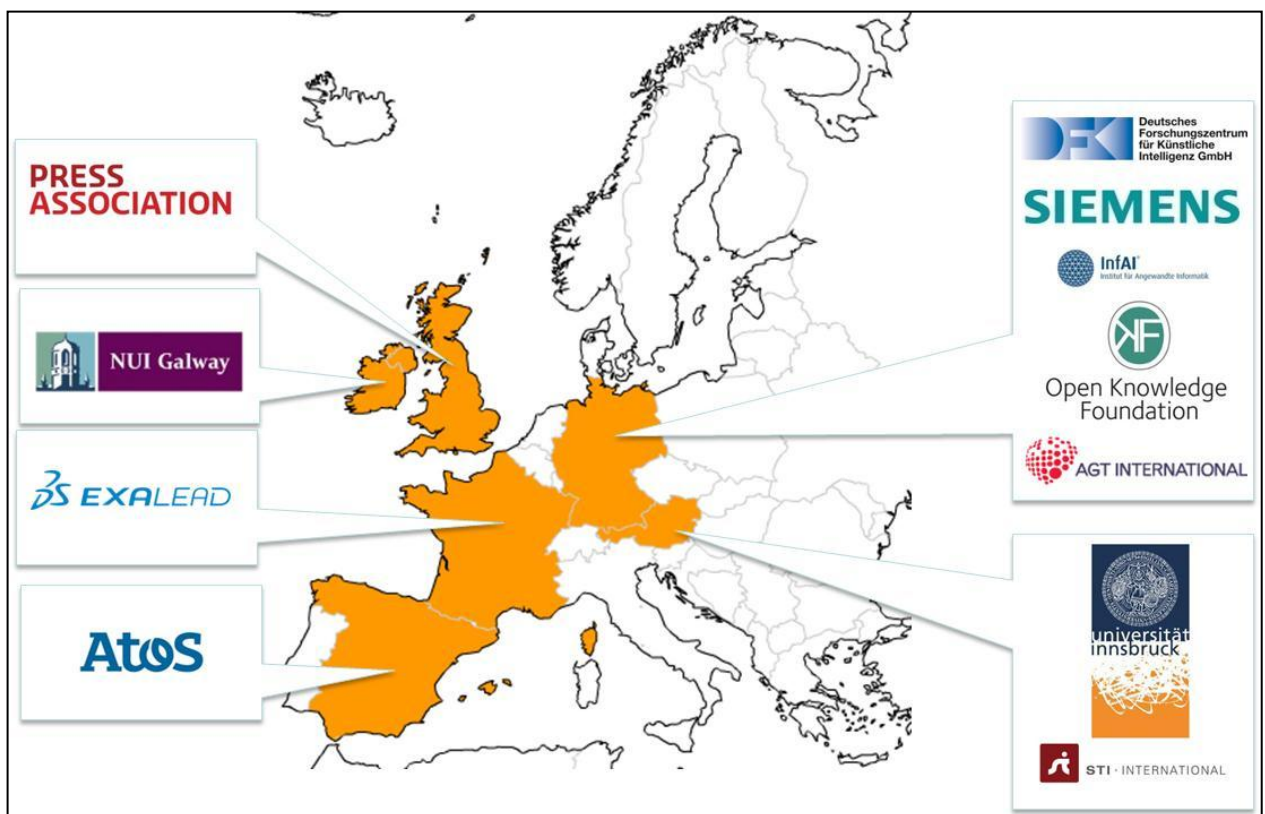


Figure 1-2 BIG project consortium members map