ReThinkBig Collaborative Support Action

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Abstract. ReThinkBig is EU-funded Project aiming at bringing together the key European hardware, networking, and system architects with the key producers and consumers of Big Data to identify the industry coordination points that will maximize European competitiveness in the processing and analysis of Big Data over the next 10 years.

1 Context and Goals of ReThinkBig

Every two days the equivalent of all data generated through human history up to 2003 is created. The smart use of this data is a potential for businesses, sciences, society, in many fields and sectors. For this becomes a reality, there are still some challenges to be overcome both technical and non-technical. In fact, a strategic roadmap is needed to help integrate the advancements in hardware and networking and their impact on data analytics. We believe that Big Data will be the source of a revolution that will radically transform our society, ushering in a new era of prosperity.

That will be exactly the Rethink Big focus, survey the landscape of opportunities in Hardware optimizations and networking for Big Data and propose a strategic roadmap from that to align the analytical processes in all the different sectors.

The RETHINK big Project aims to make Europe the leader in this new era by bringing together a cross-section of hardware and software communities together with consumers of Big Data with the singular objective of creating a roadmap to increase the competitiveness of European companies. Starting today, our biggest challenge is to enlist the key stakeholders, to decisively chart our collective future.

Specifically, RETHINK big will deliver a strategic roadmap for how technology advancements in hardware and networking can be exploited for the purpose of data analytics while also taking into consideration advancements in applications, algorithms and systems. Practically speaking, a roadmap will be produced as a result of area specific and cross-functional working groups meetings and congresses.

With this aim, the two-year, 1.9M€ Rethink Big Project launched its activities, taking an integrated approach to Big Data that encompasses the hardware, networking and analytics software. Coordinated by the Barcelona Supercomputing Center, the RethinkBig Project brings together leading organizations in Big Data including Tech-

nische Universitat Berlin (G) Ecole Polytechnique Federale de Lausanne (CH), The University of Manchester (Uk), Universidad Politecnica de Madrid (S), Arm Limited (Uk), Parstream Gmbh (G), Internet Memory Research Sas (F), No Rack Sas (F), Thales (F), Alcatel - Lucent Bell Labs (F).

2 Mutual enrichment ESWC – RethingBig

2.1 Connect ESWC Community and RethinkBig Working Groups.

We will initially identify and evaluate the existing competencies across European Big Data application domains and technology providers in Europe. We will then identify those already established or up-and-coming institutions that possess or are developing the technologies, processes or services and map them to these competencies. This will enable to establish the online community of business experts representing the most critical Big Data application domains and technology providers in Europe include and involve the decision makers that can best judge the strategic interest for their particular industry or domain. Ideally, we will identify experts that can participate via the Working Groups and other experts that may participate via participation in our online community.

2.2 RethinkBig Working Groups

These experts will not only share an interest in defining a credible roadmap, but also hold the decision-making power within their respective institutions to implement that roadmap.

- WG 1: Fundamental Sciences and Engineering Applications;
- WG 2: Business, Finance and Information Marketplaces;
- WG 3: Life Sciences;
- WG 4: Future Internet and Social Networking;
- WG 5: Conventional and unconventional HW Architectures, Process Technology
- WG 6: Distributed Architectures, Devices and Sensors, Memory and Storage Systems;
- WG 7: Networks;
- WG 8: Frameworks, SW Models, Algorithms and Data Structures, and Visualization.

Under the schema of community building, the goal of this project is to bring together representatives of industries in Europe with special emphasis on SMEs, local government, and academia to build a community of expert to deliver the set of solutions that will position Europe in the Big Data Solutions Market.

ESWC gathers the Semantic Web community, which opens a network on the Web of Data/LOD, Social Networks, Web Engineering and Web Science inside this Big Data Support Action.