

## **RETHINK big: Roadmap for European Technologies in Hardware Networking for Big Data**

### **Description**

The objective of the RETHINK big project was to bring together the key European system architects and consumers of Big Data systems, to describe a coherent vision that will highlight the various business and technical challenges within the EU, and to achieve success by addressing the need of EU for processing and analysis of Big Data over the next 10 years. More specifically, this project created the framework for the specialists to deliver a roadmap across both hardware and networking, while also taking into consideration advancements in applications, algorithms and systems, as well as the energy efficiency and security.

Our goal was not only to produce a roadmap but, more importantly, to establish a competent community of experts in the field of Big Data, that will document the common challenges faced by European companies and research institution. The roadmap was produced through conferences and work groups, involving important Big Data actors, both scientific and industrial developers and users. They investigated where Europe stands in the international Big Data technologies, what Europe's strengths are as well as weaknesses, identify priority actions, and suggested further steps that need to be taken to strengthen the position of Europe in the analysis and processing of Big Data. The experts, facing a common problem and driven by common objectives, produced the directions that future hardware and networking devices should take in order to be able to handle Big Data efficiently. In addition, the experts have envisioned the programming frameworks that enable software developers to easily use such specialised hardware.

The RETHINK big project was also responsible for disseminating the roadmap across relevant constituencies and establishing cross-disciplinary communities with a shared understanding of concrete problems worth investigating in future programmes. Coordination with international actors working on the same goals was also addressed.

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**Source URL (retrieved on 23 Sep 2023 - 04:26):** <https://www.bsc.es/es/research-and-development/projects/rethink-big-roadmap-european-technologies-hardware-networking-big>