

DE LA RECHERCHE À L'INDUSTRIE



Didier JUVIN

Chef de Projet Simulation Numérique
et Calcul Intensif

Direction des applications militaires

www.cea.fr

A global strategy since 1996



- Independent access to the technology
- World class Infrastructure
- Important spin-off to industry and society

Technology

Exascale[∞]
computing research
CEA/INTEL/UVSQ

LA NOUVELLE FRANCE INDUSTRIELLE

10¹⁸
Bull
exascale
program

Infrastructures

TGCC

GENCI

Applications

Energy Health Biology Engines Security Space

Ter@tec

a strategy confirmed by the highest national authorities

Mai 2014 : "Supercomputer" plan of "La Nouvelle France Industrielle" was launched



Supercalculateurs Installation du comité de pilotage des 34 plans industriels

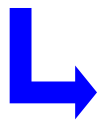
Action fields

- **Mastering technologies**
 - New generation of supercomputers
 - New architectures
 - New generation of software
- **Initiatives by sector**
 - Health
 - Agriculture
 - Urban city system
 - Materials
 - Manufacturing Industry
 - Multimedia
- **Diffusion to industry**
- **Formation**



Gérard Roucairol
President of Ter@tec
Is the leader of the plan

- CEA is in charge of the organisation of the exaflop R&D program for 2021 to maintain HPC French industry in the Top 5 leader worldwide



R&D Convention
ATOS/Bull-CEA/DAM



Mai 2015 : The plan is consolidated in the convergence HPC-Big data

...Inside a European HPC value chain

A platform to support the EU strategy : ETP4HPC

A cPPP established between the Commission and ETP4HPC



Led by European HPC Technology providers with an objective to build a competitive HPC value chain in Europe.

Strategic Research Agenda outlines the research priorities of European HPC on its way to achieve Exascale capabilities

www.etp4hpc.eu

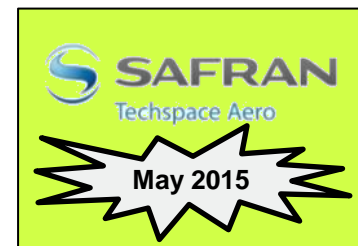
- **First projects has been selected :**
 - ➔ FETHPC (Exascale technologies) : 19 projects, total budget 93 M€
 - ➔ CoE (Centers of Excellence) : 8 CoE, total budget 40 M€
 - ➔ PRACE (infrastructure) support actions, total budget 15 M€



- **CEA & its partners has obtained the top budget for the call**
- **On-going process to consolidate a European competitive HPC value chain**

2 hot spots this year :

- 2 new partners joined the CCRT in 2015:



- CEA/DAM renews its confidence in BULL for TERA 1000 delivery

(details to be announced very soon...)

CEA actor number 1 for HPC in Europe



Defense : Tera 100 : 1.3 PFlops



Industry : Airain : 0.45 PFlops



Research : Curie : 2 PFlops

Thank you