CEA

From research to industry

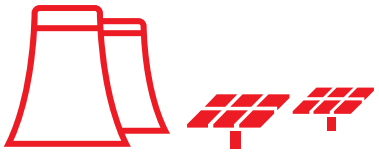
Infor EAM Research Organizations User Group Meeting at CERN - 21/03/2018

French Alternative Energies and Atomic Energy Commission

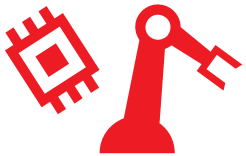
www.cea.fr

LEADER OF STRATEGIC MISSIONS FOR THE FUTURE

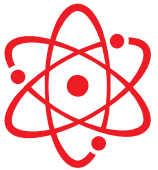
Defence and **security** of the country



Nuclear and renewable **energy**

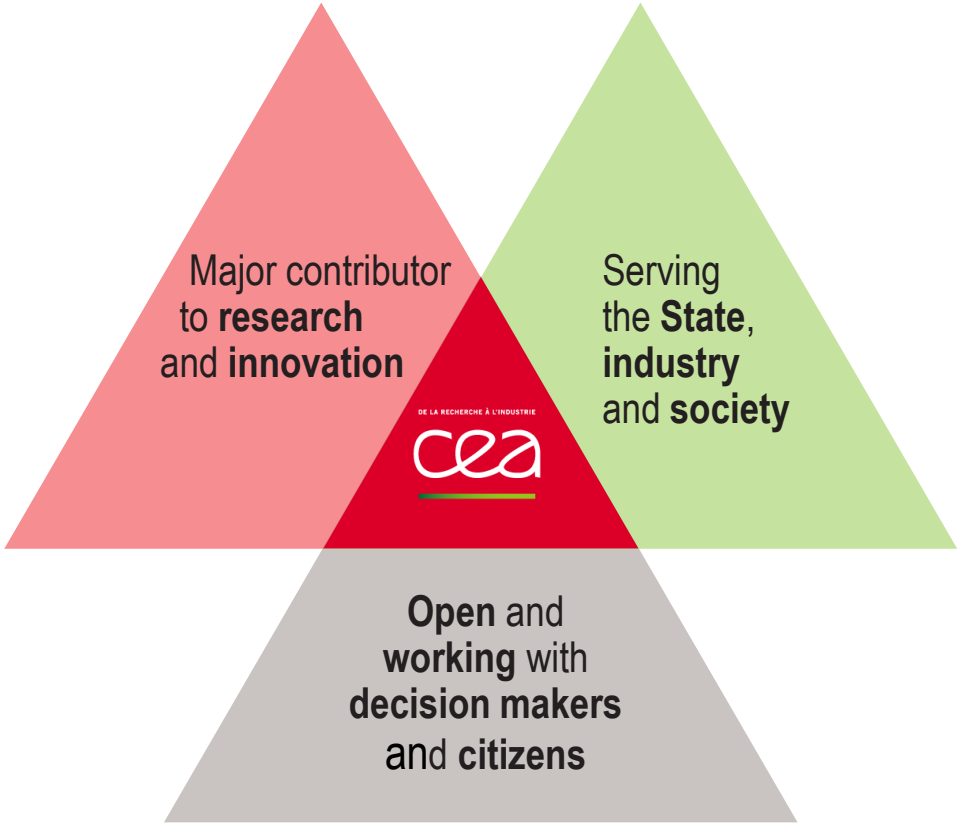


Technology research for industry



Fundamental research

A UNIQUE PUBLIC RESEARCH ORGANISATION



16,000
employees

1,400
doctoral students and post-docs

LOCATED THROUGHOUT FRANCE

10
CENTRES

Cadarache *(nuclear fission, fusion, propulsion, new energy technologies)*, Cesta *(nuclear warhead architecture and guarantee, MegaJoule Laser)*, DAM Île-de-France *(physics of nuclear weapons, numeric simulation, battle against nuclear proliferation and terrorism, engineering, Very Large Computing Centre, tsunami warning centre)*, Fontenay-aux-Roses *(life and health sciences)*, Gramat *(weapon system vulnerability and armament effectiveness)*, Grenoble *(new technologies for energy, health, information and communication, nanosciences, cryogenics, biosciences and biotechnologies)*, Le Ripault *(non-nuclear materials for deterrence, fuel cell, hydrogen storage)*, Marcoule *(nuclear fuel cycle and waste)*, Saclay *(nuclear technology, climate and environment, material sciences, health, technological research)*, Valduc *(nuclear materials for deterrence, Epure radiographic facility)*

5
REGIONAL PLATFORMS FOR TECHNOLOGY TRANSFER

Nantes, Bordeaux, Toulouse, Metz, Lille

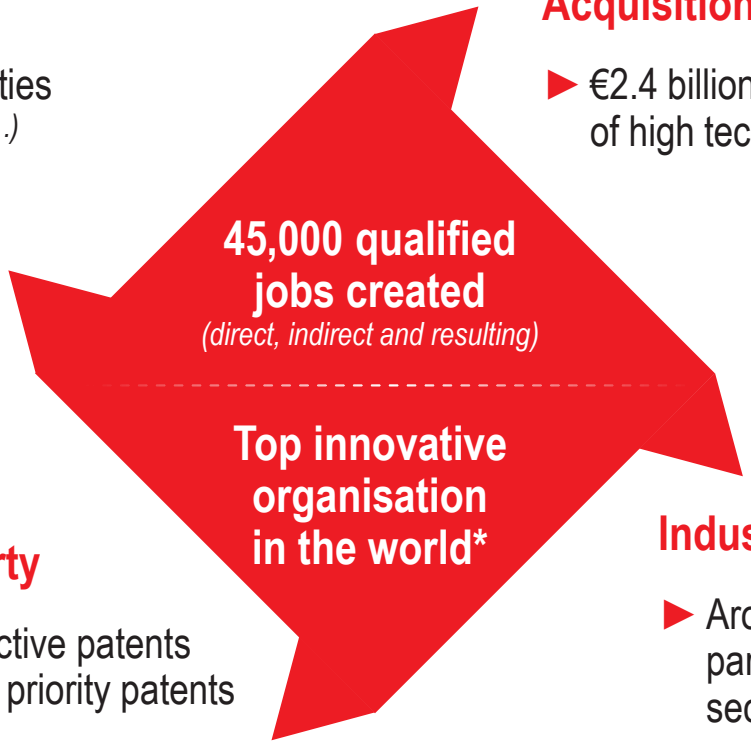
CEA AND THE CREATION OF ECONOMIC VALUE

Business creation

- Incubator of industrial activities
  (STMicroelectronics, Areva, Soitec,…)
- Startup creation
  (187 since 1972)
- Catalyst for investments in technology
  (through its subsidiary, CEA Investissement)

Acquisition

- €2.4 billion in acquisitions of high technology



Intellectual property

- 5,844 families of active patents
  Filing of some 750 priority patents each year

Industrial partnerships

- Around 500 industrial partnerships in all sectors of activity

*(cf. Thomson Reuters 2016)

A GROWING COMMITMENT IN EUROPE

730 projects in the Seventh Framework Programme

204 projects already accepted in Horizon 2020 *(**success rate: 21%**)**

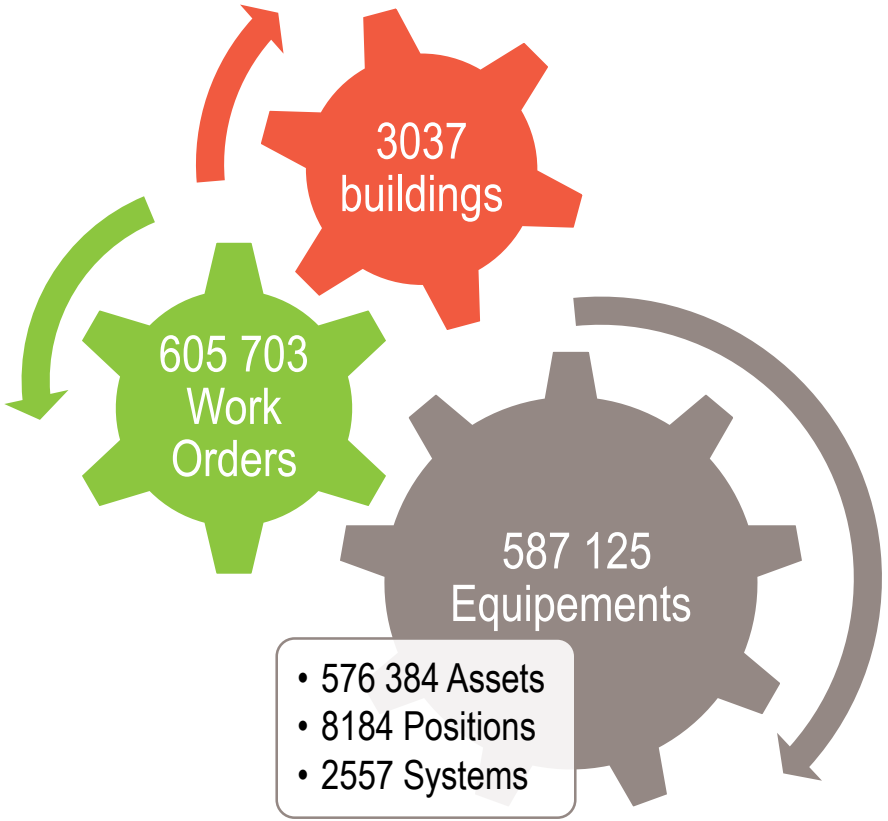
180 in millions of euros*

In addition to numerous partnerships and other joint projects

In all sectors of its activity, CEA participates in European research

INFOR EAM AT CEA

INFOR EAM AT CEA IN NUMBERS



OURS PLATFORMS

Today

9 Platforms for 10 centers

End of 2018

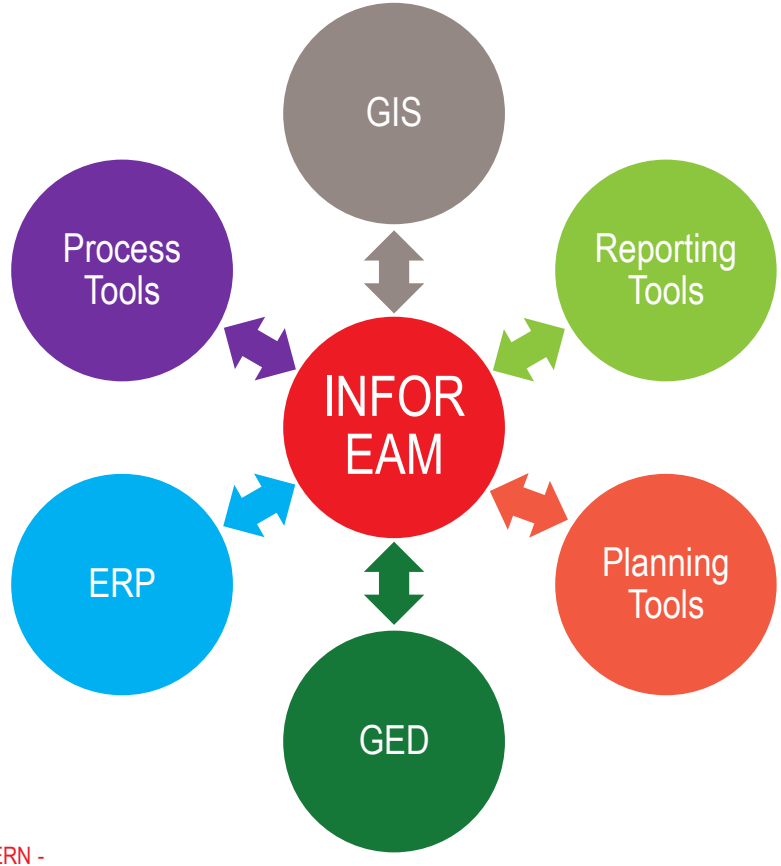
1 Platform for 5 centers related to the Defence and security of the country activities

4 Platforms for 5 civils centers

Infor EAM Version — From 8.4 to 11.3

Database — SQL Server and Oracle

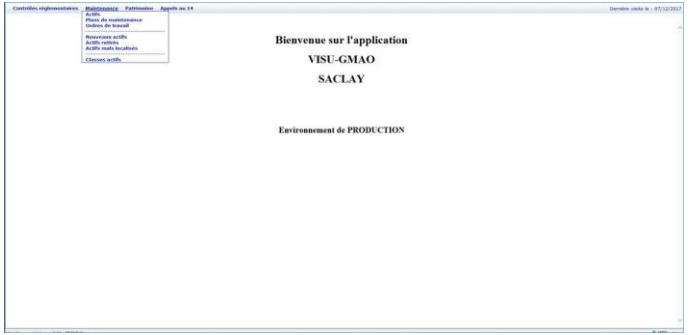
INTEGRATING TOOLS AND PROCESSES

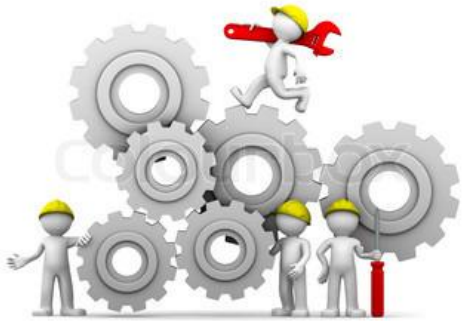


DIFFERENT NEEDS DIFFERENT TOOLS

Infor EAM
Full / Expert Web Interface

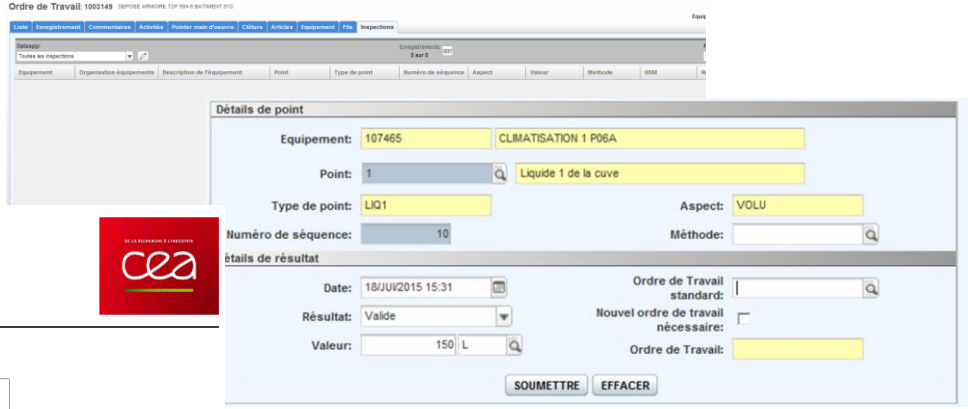
Infor EAM
Simplify / Read only Interface





- Very wide range of user profiles :
  - Maintenance managers
  - Engineers
  - Maintenance technicians (internal + contractors)
  - End users

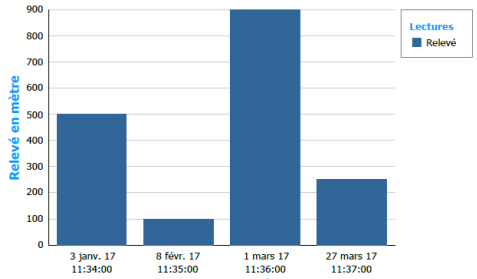
INFOR EAM IN ACTIONS



Infor EAM **Relevés d'inspection**

Graphique Histogramme

Relevés pour l'équipement : CUVE R1 (LSE) 500 m3



Date de relevé	Relevé	Unité de mesure	OT de travail
3 janv. 17 11:34:00	500	mètre	1475555
8 févr. 17 11:35:00	100	mètre	1475556
1 mars 17 11:36:00	900	mètre	1475557
27 mars 17 11:37:00	250	mètre	1475558

INFOR EAM IN ACTIONS

A tool to ask and manage big project and studies

DE LA RECHERCHE À L'INDUSTRIE

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Thank you for your attention

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Appendices

THEY EXIST THANKS TO CEA

French nuclear deterrent

First gene therapy for Parkinson's disease and beta-thalassemia
(hereditary blood disease)

French nuclear power plant fleet

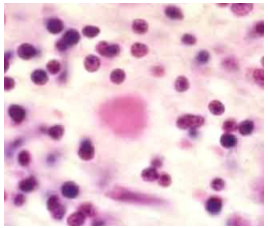
Reprocessing of spent fuel (*world first)*

Vitrification of nuclear waste
(disposal management)

Flat screen technology

Airbag deployment system

Ultrasound inspection of automotive, aerospace and nuclear parts



First French CT scanner

Mad cow disease: European screening test

First rapid Ebola screening test

Superconducting magnets and Atlas and CMS experiments at CERN (discovery of Higgs Boson)

Pollution cleanup technology using supercritical fluids *(green chemistry)*

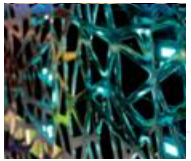
A CONTRIBUTION TO THE DEVELOPMENT OF KEY SECTORS

Nuclear sector: electricity production and fuel cycle

Manufacturing - Digital engineering

Cleanup and dismantling

High-performance computing



Solar energy

Micro-and nanoelectronics

Transportation: electricity storage, hydrogen, fuel cell

Design of very large research instruments