

# The Paris-Saclay University Project

September 18, 2012



Campus Paris Saclay

FONDATION DE COOPERATION SCIENTIFIQUE

# The Paris-Saclay Campus, a historical landmark.

## Higher education and research establishments

- Université Paris-Sud (1955)
- HEC (1964)
- Ecole Supélec (1975), Ecole Polytechnique (1976)

## National research bodies with important potential

- CEA (1952)
  - CNRS
  - INRIA
  - ONERA
  - INRA
- 
- Geographically distributed across a large area (10 km)

# The Paris-Saclay Campus today...

## About 15% of research in France in six fields

- 2 to 4% of publications world wide
- 8,000 publications/year

## International recognition in fundamental research

- 2 Nobel prizes in physics
- 6 Fields medals (mathematics)
- 38 ERC grants (67% of starting grants in France)

**Large-scale equipments** (SOLEIL Synchrotron, neutron source, lasers, High Performance computing, IRM for neuroscience, etc.)



## ... but a fragmented academic landscape...



**10  
Grandes Ecoles**

**2 Universities**



**6 local  
Establishments  
of NROs**

Faculty	10,473	1,572	3,363	5,538
Students	47,598	16,548	31,050	
Undergrad.	19,184	3,000	16,184	
<b>Graduates</b>	<b>28,514</b>	<b>13,548</b>	<b>14,866</b>	
Inc. Doctorates	5,711	2,919	2,792	




## ....the starting ground of the Paris-Saclay University.

# The Paris-Saclay Campus and the 4 major governmental initiatives: a new momentum

## 2009

- **Competitiveness clusters**  
1,5 B€  Systematic, Moveo, Advancity  
Link with 1000 Companies
- **Opération Campus**  
3B€ for 12 campus  850 M€ for Saclay Campus

## 2011

- **Investissements d'Avenir**  
11B€ for higher education  
7.9B€ for research   1B€ for Paris-Saclay Buildings  
950M€ for Paris-Saclay University
- **Projet du Grand Paris**  
35 B€ in total  A new metro by 2020

# Large investment program in constructions

## 8 Graduate Schools moving to Saclay between 2012 and 2017

- Engineering: ENSTA Paris Tech (System Engineering) (2012)
- Economics: ENSAE ParisTech (Economics) (2013)
- Food/Agriculture: AgroParisTech (2015)
- Engineering: Ecole Centrale Paris (2015)
- Information and Communication Technologies: Telecom ParisTech and Telecom SudParis (2016)
- Science and Technology: ENS Cachan (2017)

## Building projects at Saclay through 2020:

1.3 million square meters to be built.

A 2.2 billion euro investment project.

## Large companies R&D centers already on campus or on the way

Microsoft Research  
Danone R & D  
Thales R&T  
On the way  
Horiba  
EDF R & D



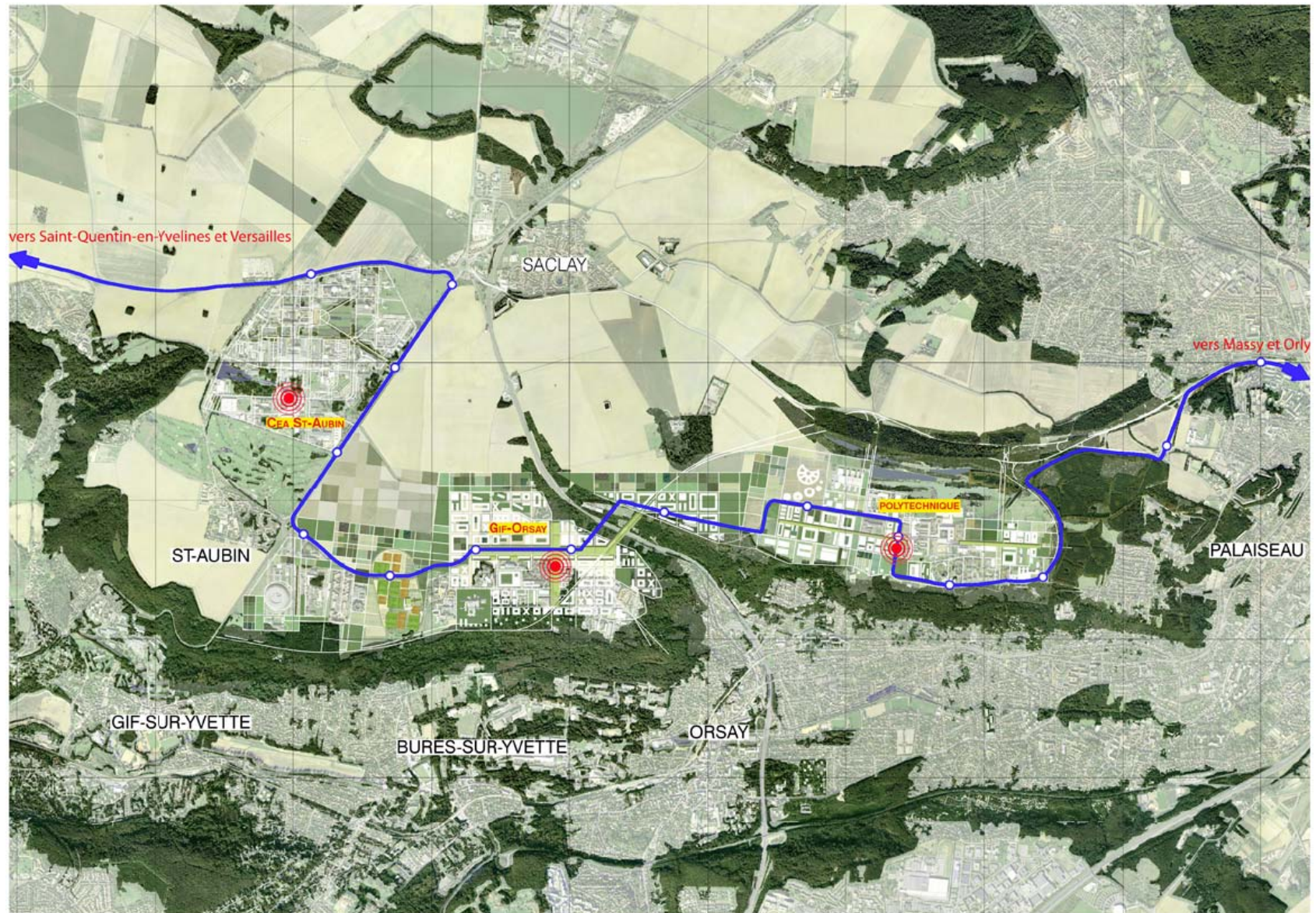


# The campus 2012

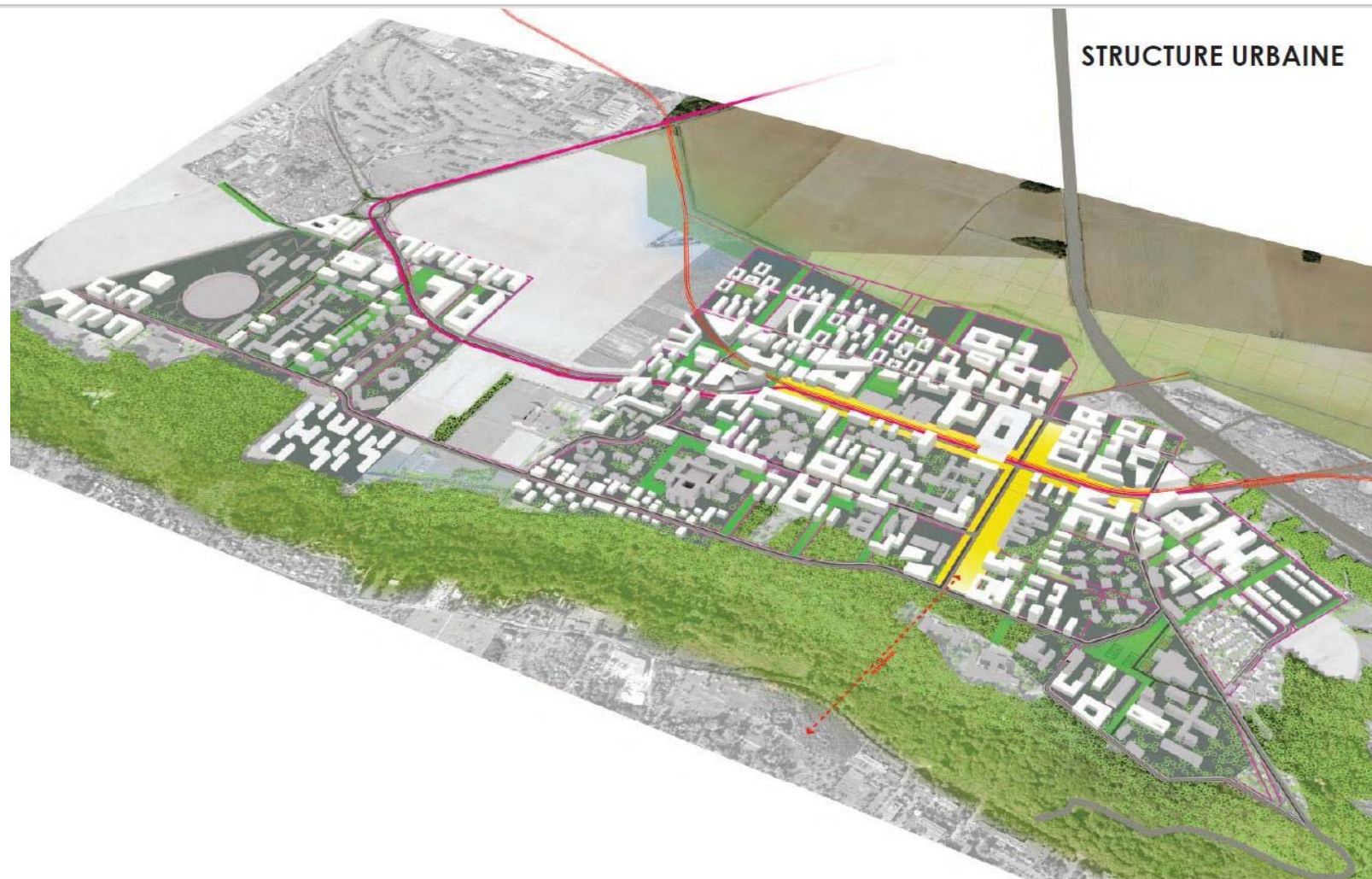




# The campus 2020





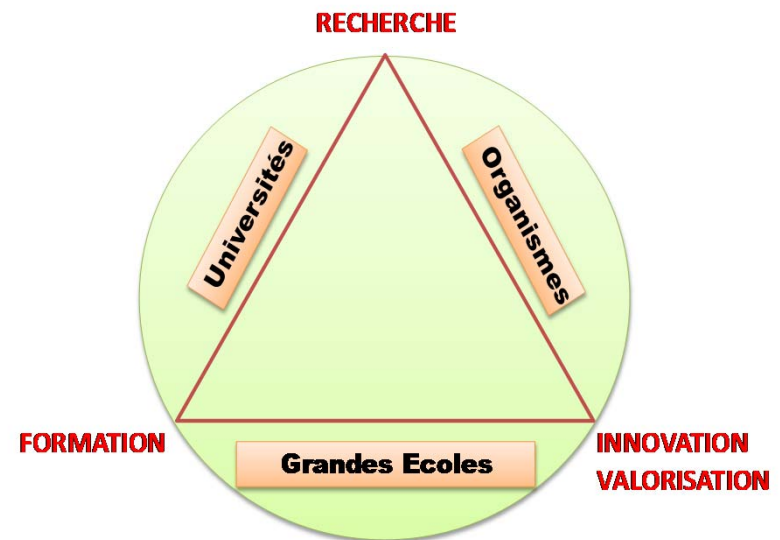


## EDF R & D center



# The Paris-Saclay University Project (2014)

- 48 000 Students,(27000 graduate), 12000 faculty members (+80% from today)
- Taking the **best of** Higher Education and Research in France.
- A new organisation between the members to foster cooperation and mutualization with an strong international momentum.
- In the top 10 of the Shanghai ranking





## Six elements to build the identity of the Paris-Saclay University

**One scientific signature**

**One Doctorate label**

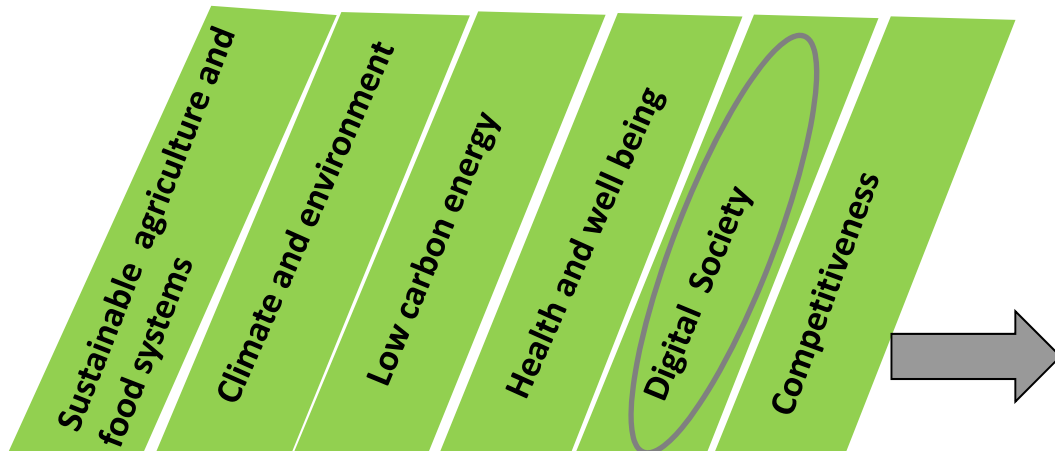
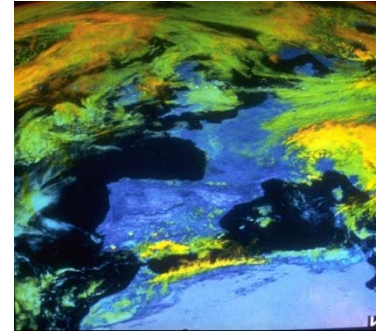
**One unified student card**

**One single entry point for international applications**

**One business gateway for enterprises**

**And the unique opportunity of a new Campus**

# Research organized by crossing Scientific fields with societal challenges



## Challenges for society, innovation

- Transdisciplinary research, emergence
- Requires transverses projects

Agricultural and food science

Biology – Health

Chemistry

Economy, financed and management

Environment Science

Engineering Sciences

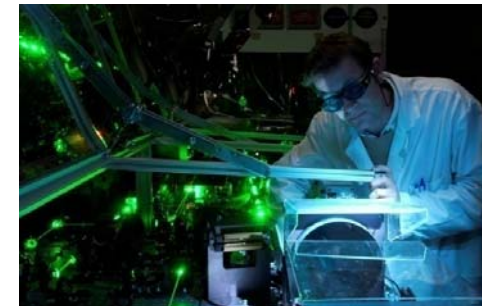
Information Science & technology

Mathematics

Nanoscience/nanotechnology

Physics

Social Sciences and Humanities



## Disciplines

- Specific dynamics and methods
- Increasing knowledge
- Education

# Research

**12 000 researchers/professors in 2020 of high scientific standard and opened to the business world**

## The stakes

- Maintain excellence in physics , mathematics, engineering, computer science
- Develop excellence in biology starting from the best teams  
→ neuroscience, molecular biology, interface with physics, pharmacy
- Enhanced links between disciplines, transdisciplinary programmes
- Develop links with industry

## A three points strategy

1. Develop scientific networking at the campus scale
2. Pooling laboratories, platforms, equipments
3. Project: Shared strategy to build-up research in emerging domains





# Education

**22 000 master students and 5 000 PHD students :**  
**a large pool of students a resource for companies (hiring and cooperative research)**

## The stakes

- Attract best students and professors
- Increase partnerships with industry
- Attract young students to science

## A four points strategy

1. Rationalize education cursus, shared strategy
2. Mix various types of students, create links (specific cursus, tutoring, graduate schools..)
3. Increase international recognition  
→ partnerships, assistance for foreign students, international cursus
4. Enlarge, enrich links with industry



# Innovation

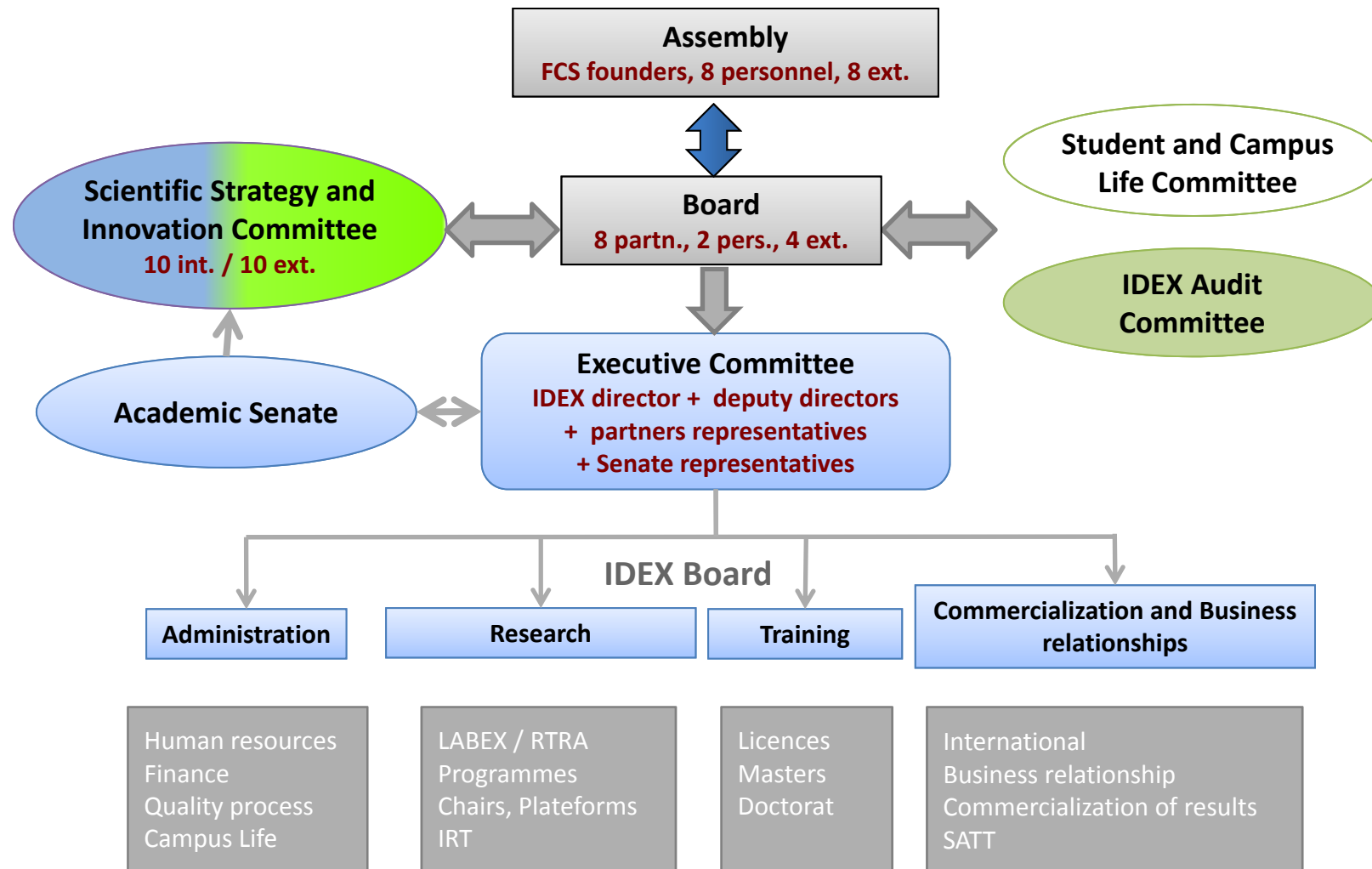
## A significant investment to foster collaboration between academia and industry



Shared facilities at Campus scale for better use of research potential

- **Major projects:**
  - Institutes for technological research (Systems, low carbon energy)
  - Society for acceleration of technological transfers (more than x10 present activities)
- **Enhance collaborative projects between students, firms and laboratories...**
  - Carnot Institute
  - Initiate a profound change of mindset towards entrepreneurship in the student population,
- **Attract innovating companies (R&D, students, access to laboratories..)**
  - Biotechnology, IST, energy, health services, transportation, agronomy/food industry nanotechnology , etc

# An operational organization already in place : FCS

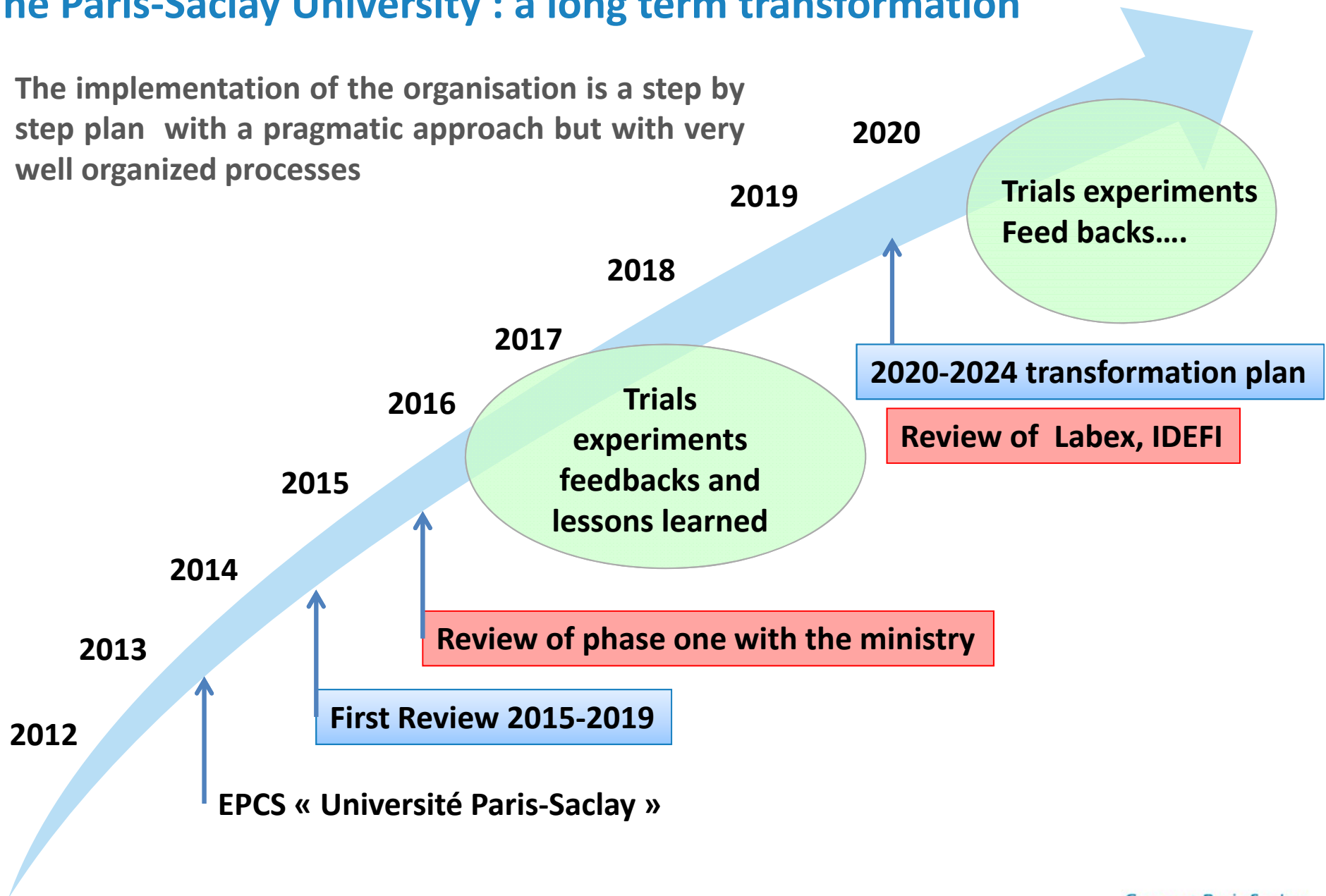


... geared for the new challenge



# The Paris-Saclay University : a long term transformation

The implementation of the organisation is a step by step plan with a pragmatic approach but with very well organized processes



# The Paris-Saclay University: an International Project

- An international project based on
- Attracting new talents.
- Cooperating with major universities and research centers in Europe.
- and with major universities abroad, with emphasis on the BRICS.
- A wealth of contacts and cooperations of the Paris-Saclay University Members with russian institutions.
- But a common policy of the University towards Russia still to be determined in the coming year.

# Paris-Saclay University

