



irfu



**EPICS**  
**IRFU**

April 20–24, 2026

**université**  
**PARIS-SACLAY**

## **Spring EPICS collaboration meeting 2026**

Welcome and introduction

Pierre MANIL,  
Head of CEA/Irfu's Systems engineering department

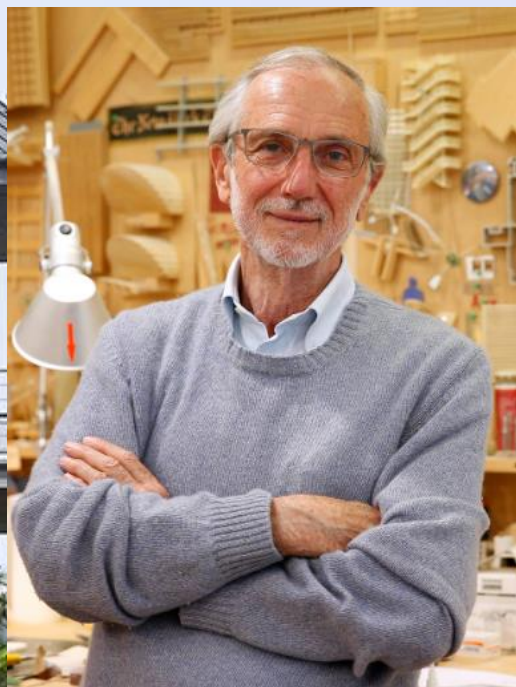
20/04/26



**“ Welcome  
and warm thanks for joining  
this EPICS collaboration meeting!**

**Welcome at the heart of**

**université  
PARIS-SACLAY**



**RENZO  
PIANO**



**We are here  
ENS Paris-Saclay**

Orsay

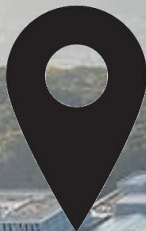


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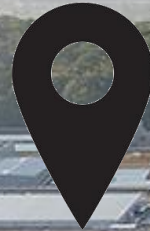
Gif-sur-Yvette



Hotel



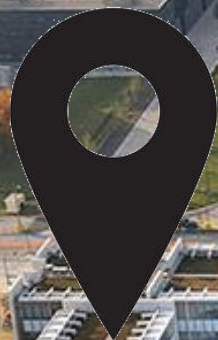
CentraleSupélec



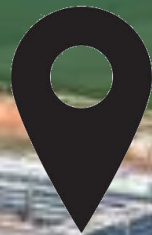
University headquarters



**We are here**  
**ENS Paris-Saclay**



**ALAIN  
ASPECT**



**We are here**



# Our scientific committee



**PAUL  
LOTRUS**



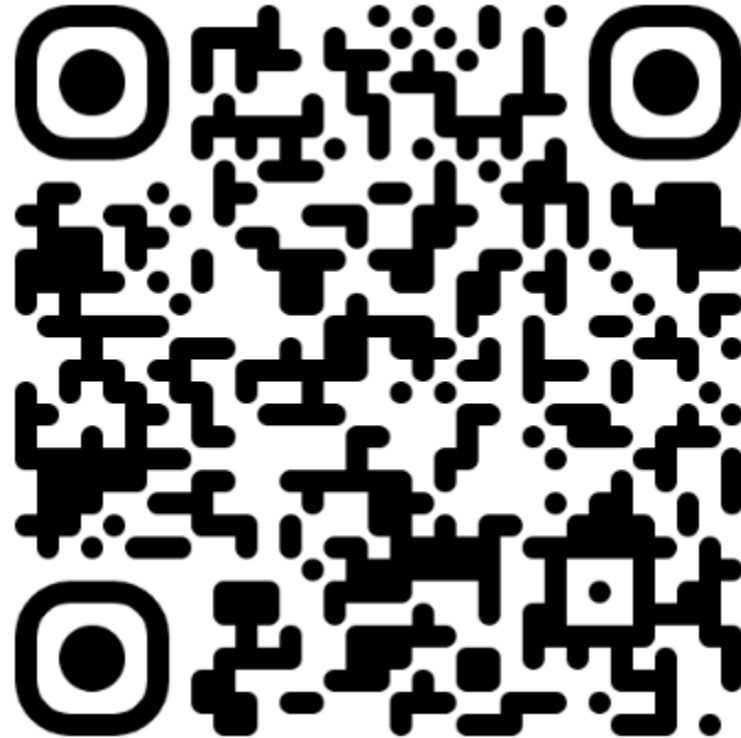
**FRANÇOISE  
GOUGNAUD**



**ALEXIS  
GAGET**

- Organization comity and practical information to be introduced in next talk

# Indico page of the meeting



<https://indico.in2p3.fr/event/37441/>



# Our sponsors



irfu

université  
PARIS-SACLAY

Gold Level

BECKHOFF

Beckhoff



Osprey

Silver Level



EMG2



Observatory Science



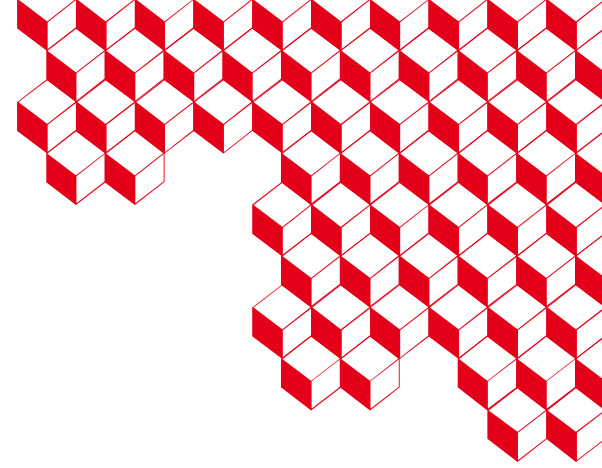
Bronze Level



D-TACQ



IOXOS

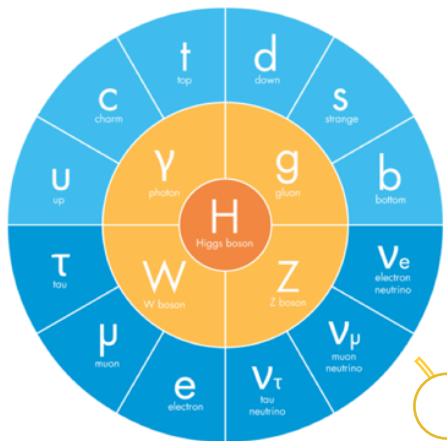
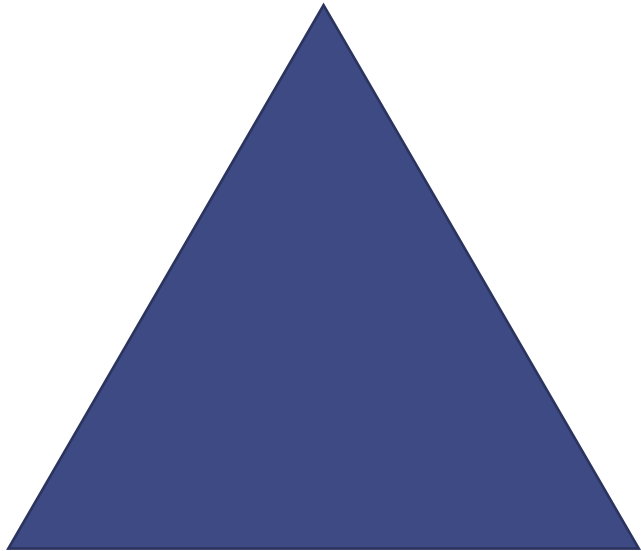


# “ Exploring the fundamental laws of the Universe



- Energy content of the Universe
- Evolution of the structures, galaxies, stars
- Stars and planetar systems
- Exploration of transient Universe

### Structuration of the Universe

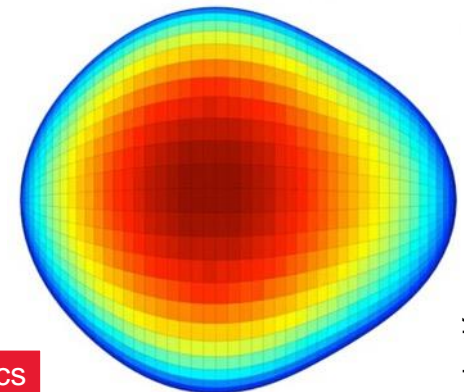


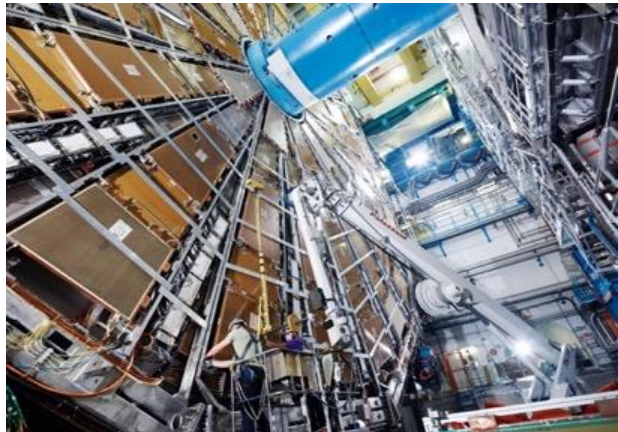
### Elementary components of matter

- Coherence of the standard model
- Structural tests of the standard model

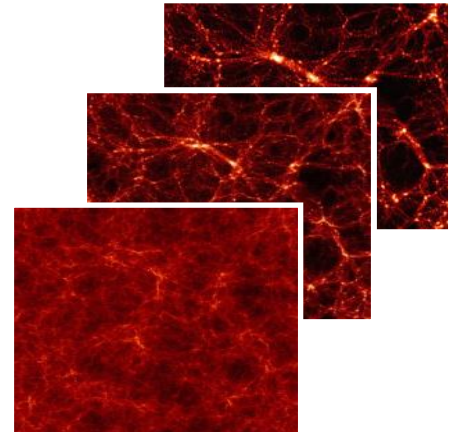
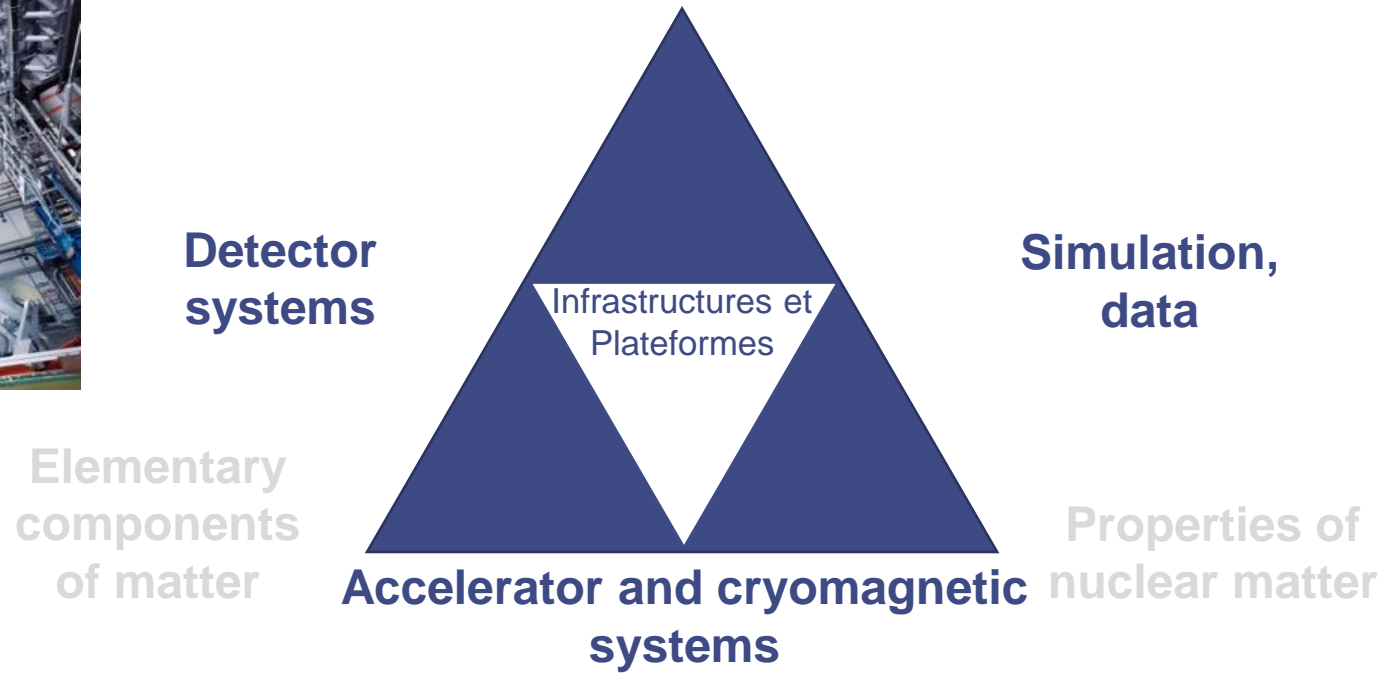
### Properties of nuclear matter

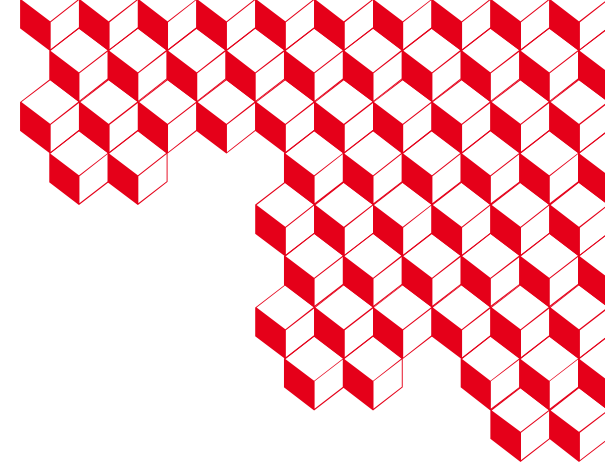
- Nuclear structure and dynamics
- Quark and gluons dynamics





Structuration of the Universe



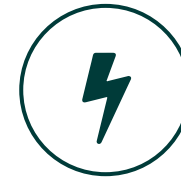
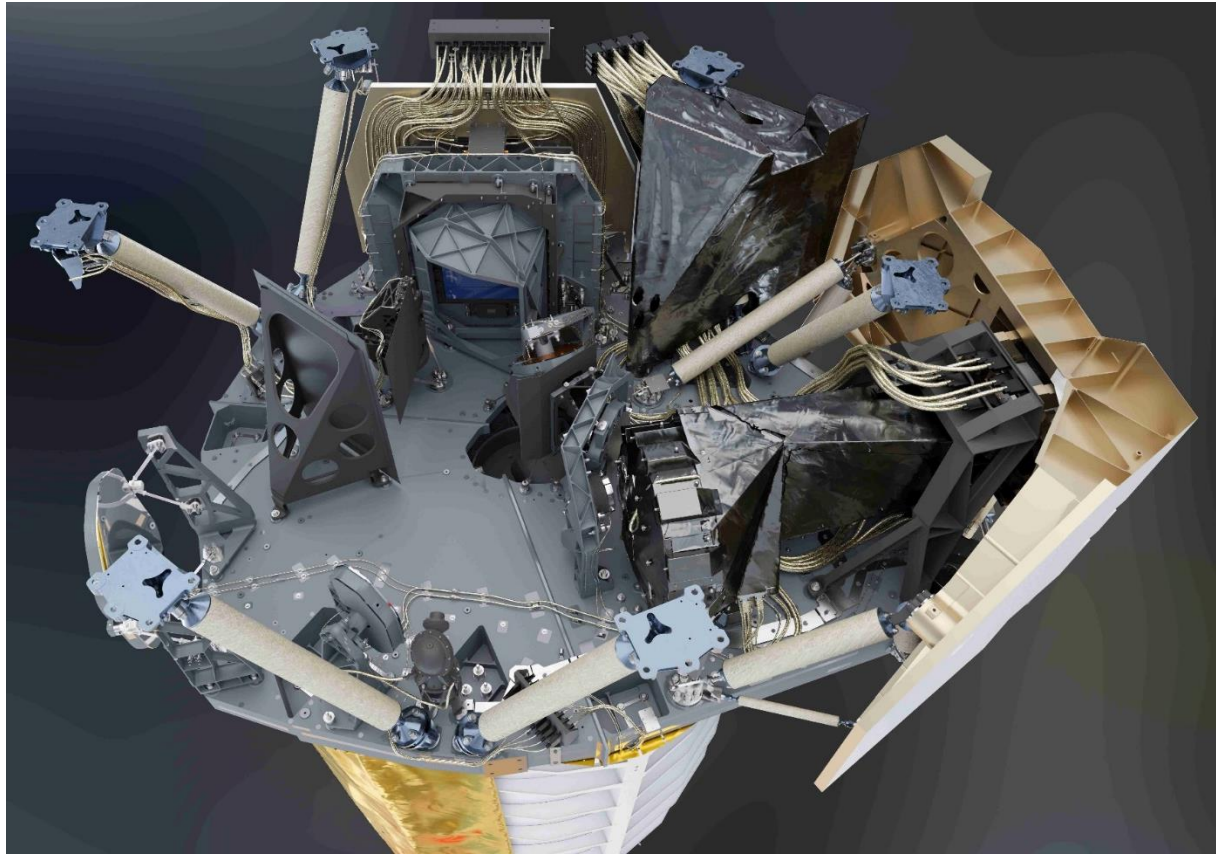


## “ Designing and commissioning instruments for physics

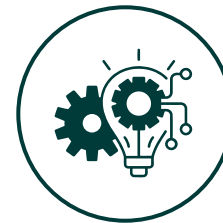
# Systems engineering at Irfu



**MECHANICAL & THERMAL  
ENGINEERING**

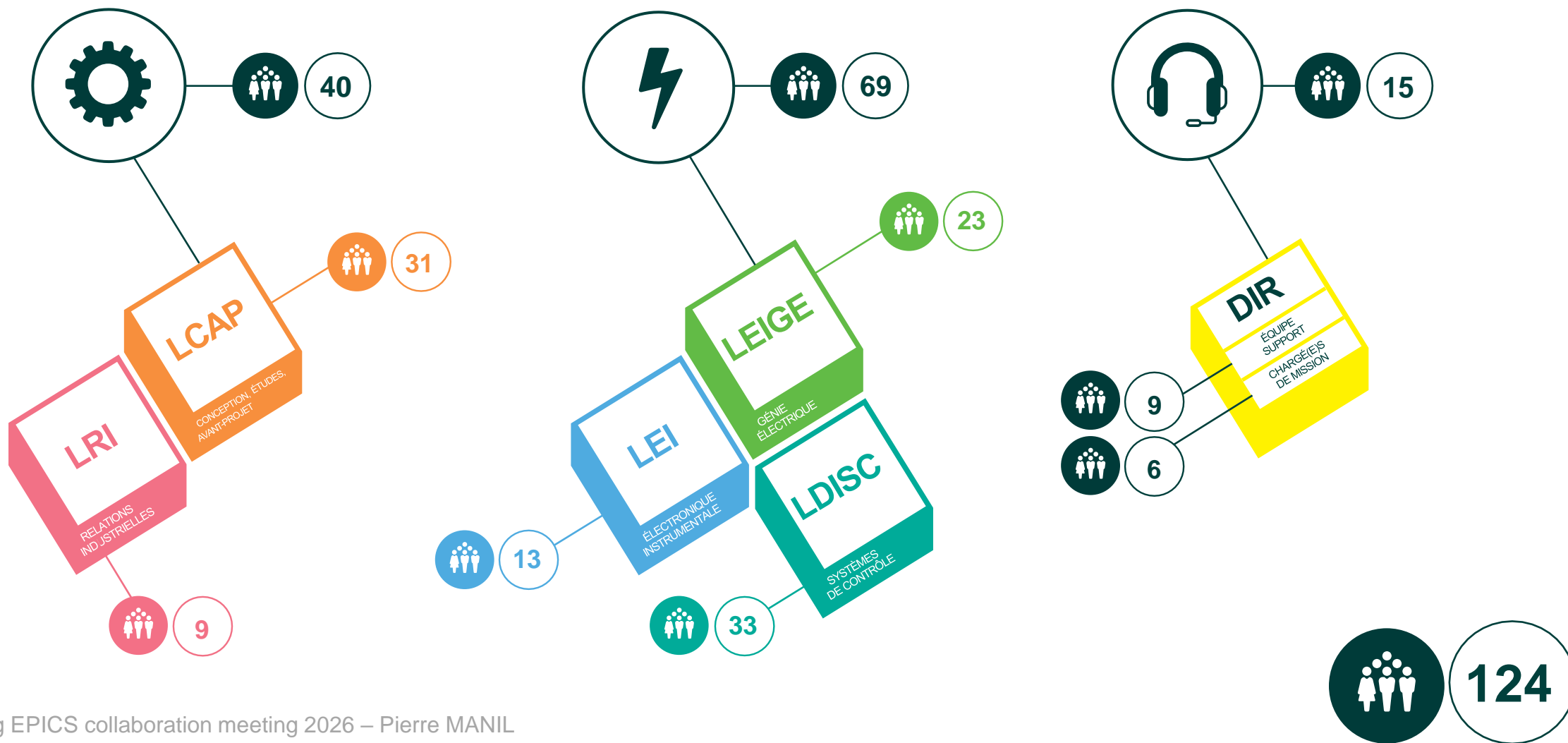


**INSTRUMENTATION,  
CONTROL**

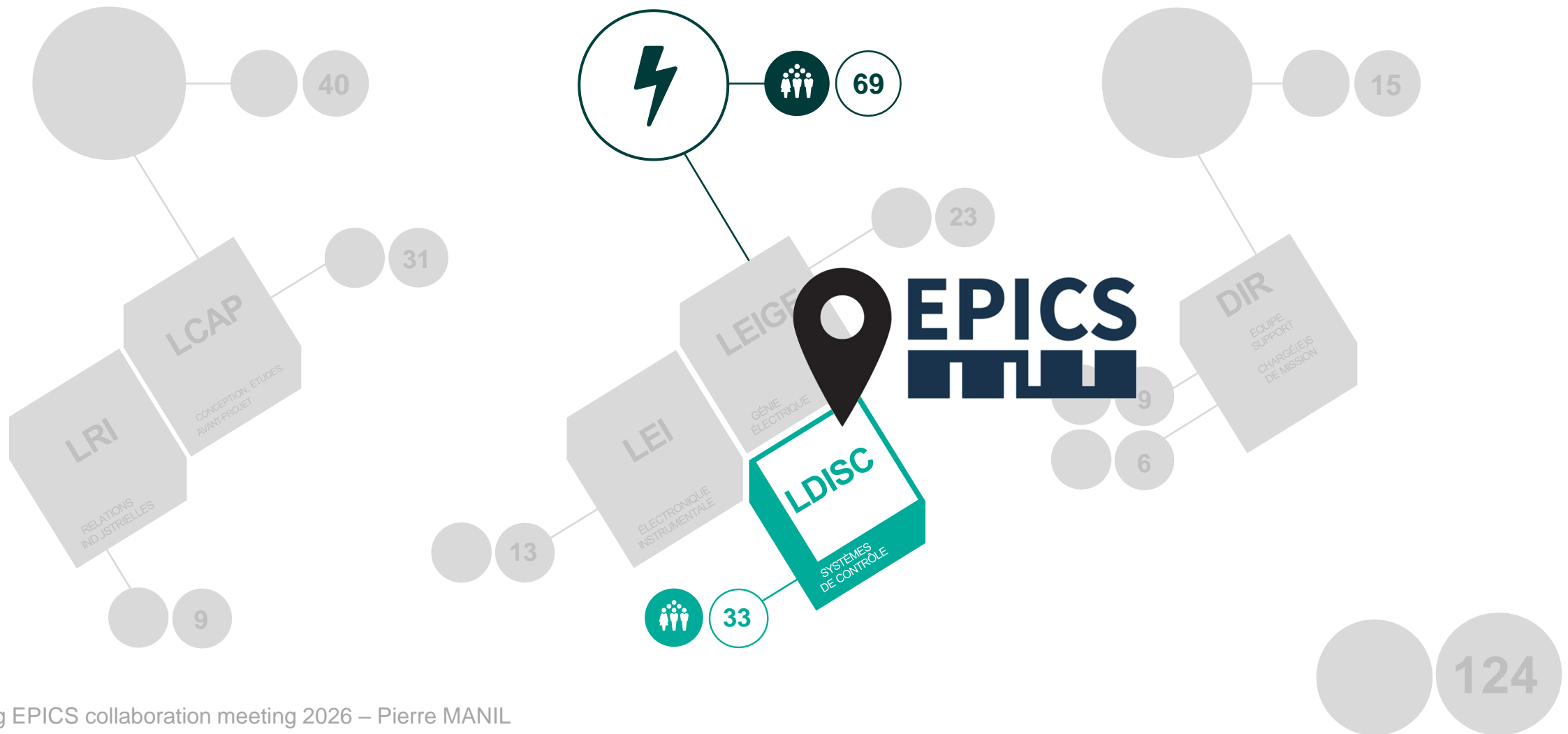


**SYSTEMS  
ENGINEERING**

# Irfu's systems engineering teams



# Irfu's control experts



# Irfu's control experts

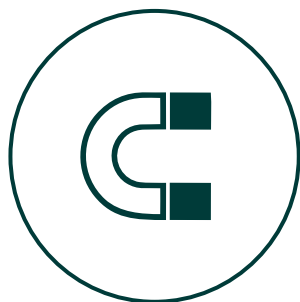


- a strong experience on EPICS
- a culture of service and transmission
- an integrated roadmap including EPICS and home-made SCADA for specific (lightweights) projects

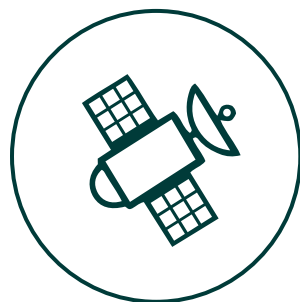
# Following the whole project lifecycle



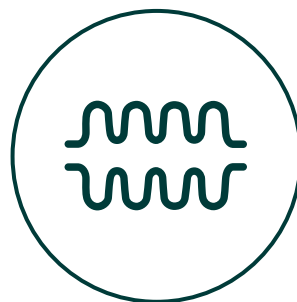
# Our domains of application



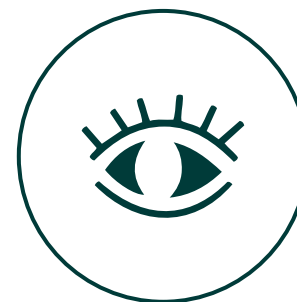
**CRYOMAGNETIC  
SYSTEMS**



**SPACE DETECTOR  
SYSTEMS,  
TELESCOPES**



**ACCELERATOR  
SYSTEMS**

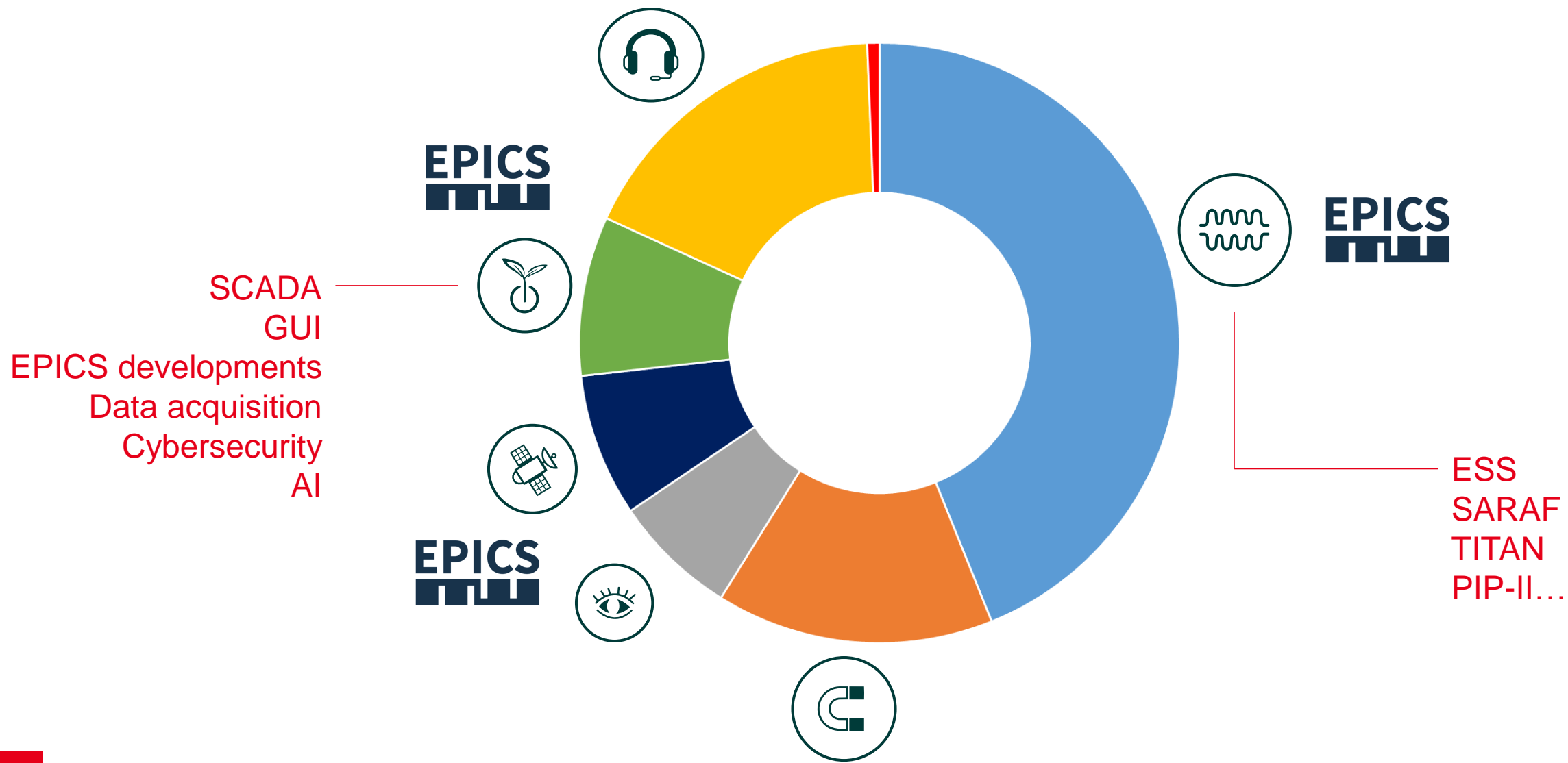


**DETECTOR  
SYSTEMS**

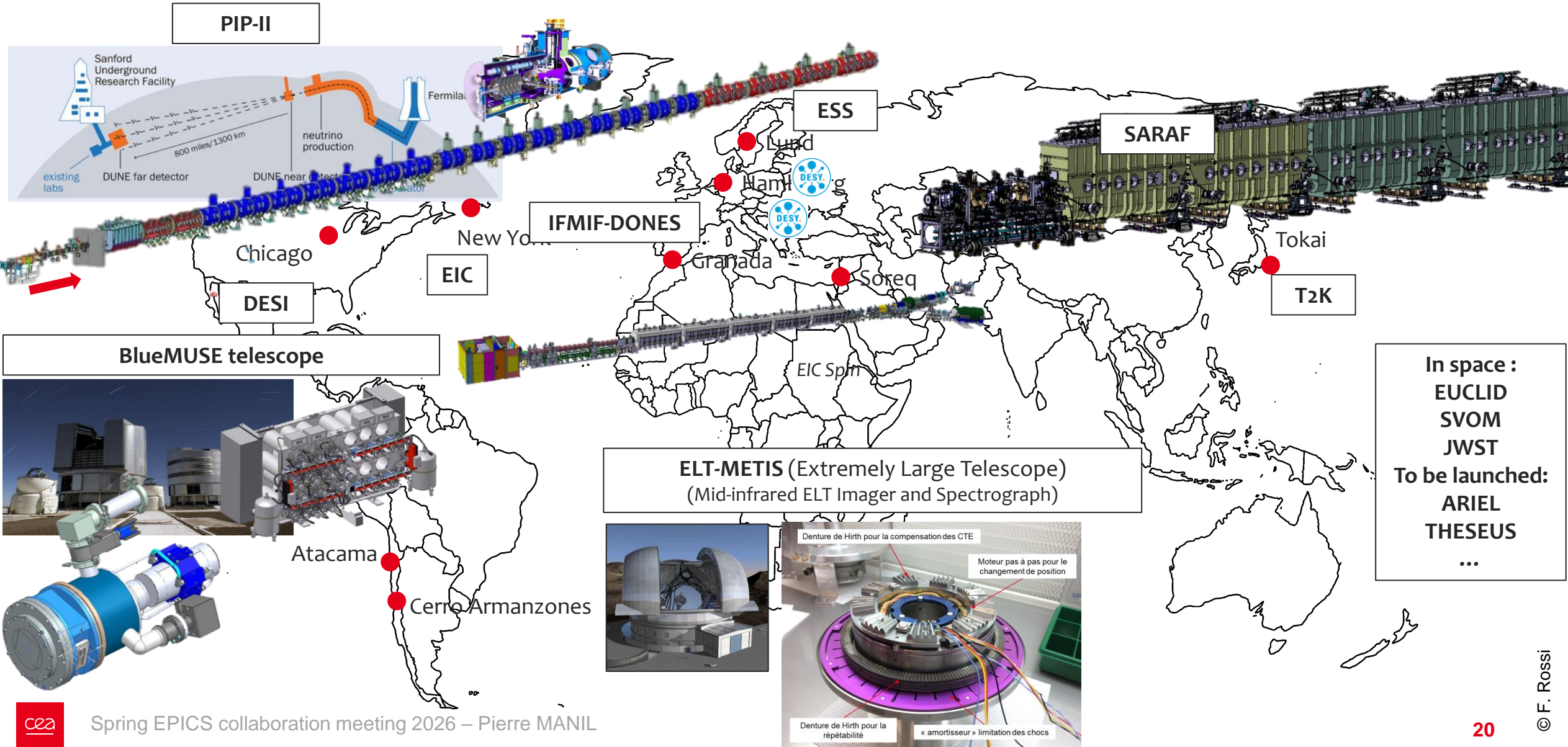


**INTERNAL  
R&D**

# Our involvement per domain



# Contributions worldwide...



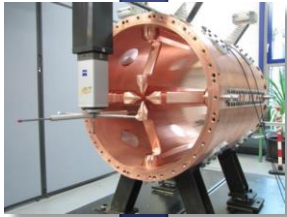
# Developping long-term technological lignes

## Radiofrequence quadrupoles

IPHI



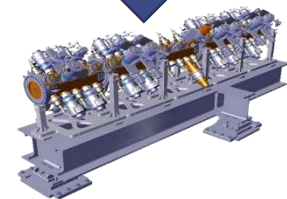
Spiral 2



ESS



Spiral 2  
Injecteur  
A/Q=7



## Cryomodules

Spiral 2



IFMIF



ESS



PIP II



## Magnet safety systems

JT-60SA

Q4



ISEULT

LNCMI



STAARQ

...

## Control systems

# Developing long-term technological lignes

## Radiofrequency quadrupoles

IPHI



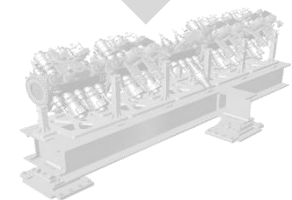
Spiral 2



ESS



Spiral 2  
Injecteur  
A/Q=7



## Cryomodules

Spiral 2



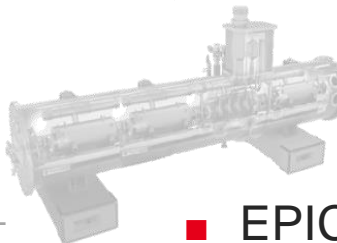
IFMIF



ESS

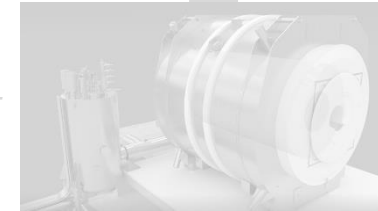


PIP II



## Magnet safety systems

JT-60SA



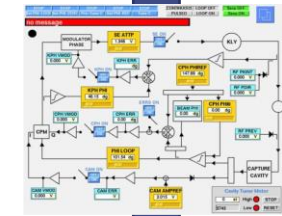
ISEULT

LNCMI



STAARQ  
...

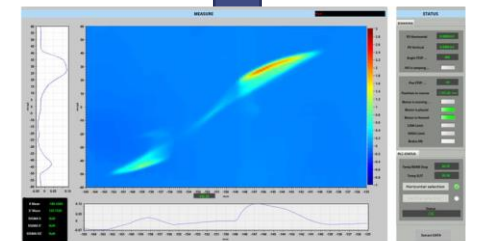
## Control systems



1993:  
TTF



2007:  
SPIRAL2



2014:  
ESS



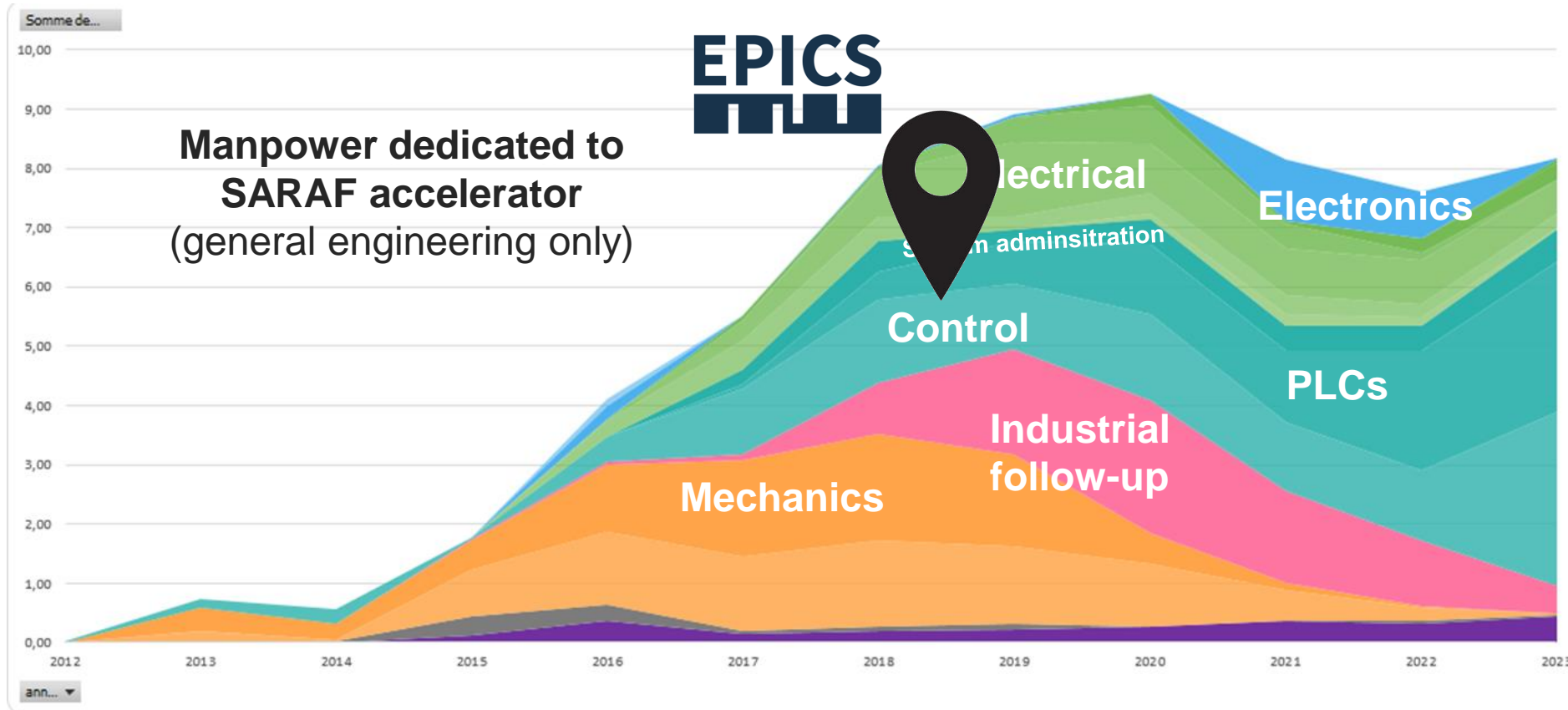
2018:  
SARAF

# Our involvement for accelerator projects

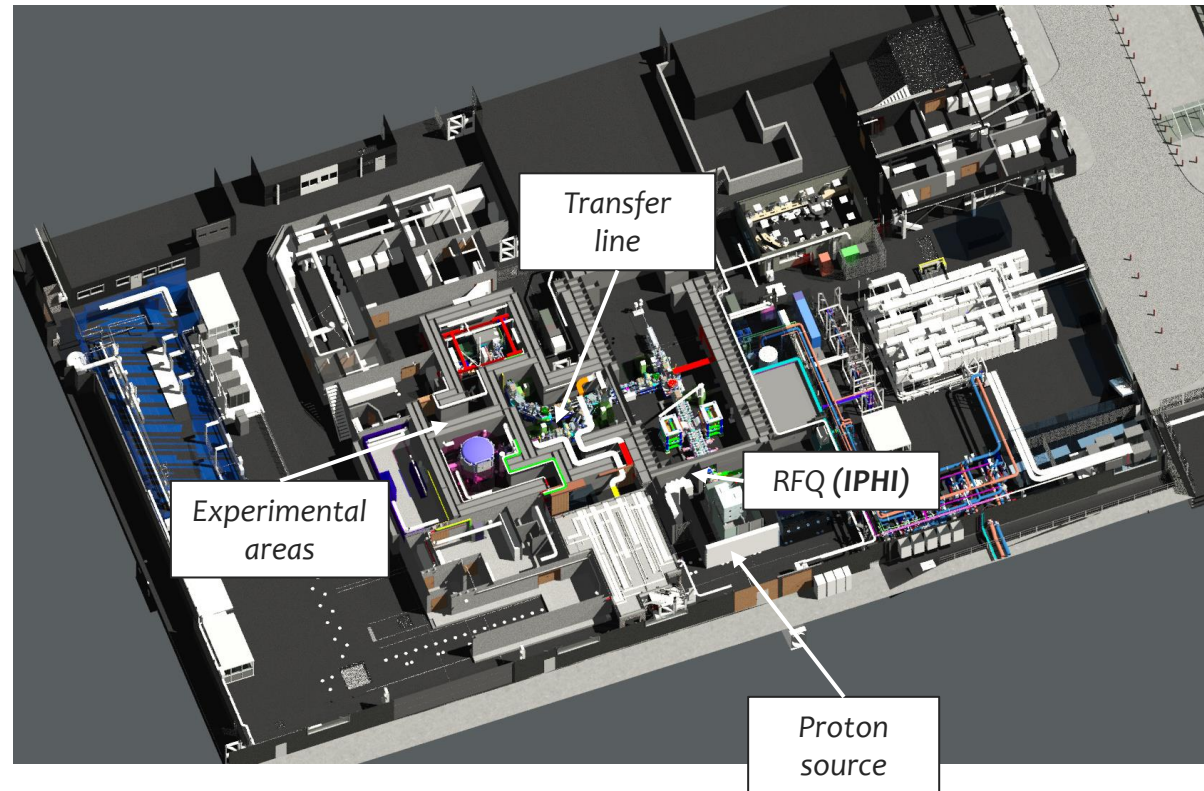
- EPICS developers are strongly involved up to the very end of our projects



Remote support



# What's next?



- Neutron source at Saclay: TITAN
- Delivering not only a full accelerator complex, but an **operational installation** including experimental areas
- EPICS at the core of the development and operation
- Next projects: ICONE, DONES...

# Key messages

- Our usage of EPICS has been uninterrupted and growing since 1993 at Irfu
- Pionners have paved the way for a strong, integrated and rejuvenated EPICS team
- EPICS if our baseline framework for any accelerator project
- EPICS will be deployed for other applications
- Strong desire to pursue and reinforce our involvement in the EPICS community



# “ More than a meeting

- Industrial exhibition
- Workshops
- Technical visits
- Community events
- Fostering collaboration

«  
«  
**Chez nous  
idées et métiers se complètent  
pour faire avancer la science.  
Notre collectif fait notre force !** »  
»

Lexane, Mickaël, Philippe, Pierre, Olivier  
SACLAY

**Au CEA,  
la réussite  
se bâtit  
en équipe.**



Nos énergies pour l'avenir

