Eric Rouchouze

CARAC 2020 7th edition

IRT Nanoelec and its CHARACTERIZATION program

November 24, 2020

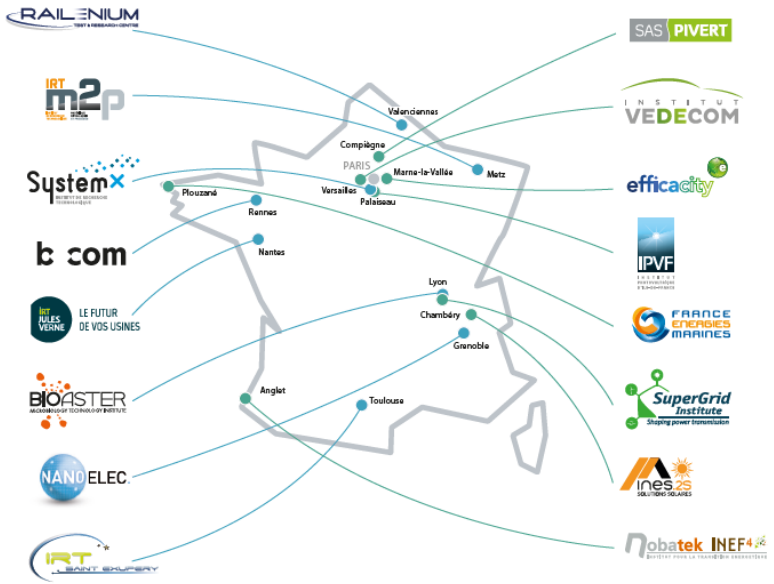
NANOELEC.

IRT & ITE : a set of consortium dedicated to R&D and innovation

8 INSTITUTS DE RECHERCHE TECHNOLOGIQUE

IRT & ITE

8 INSTITUTS POUR LA TRANSITION ÉNERGÉTIQUE



Multi-partners

Academics & Industry

Pre-existing infrastructures

Consortium

NANOELEC.

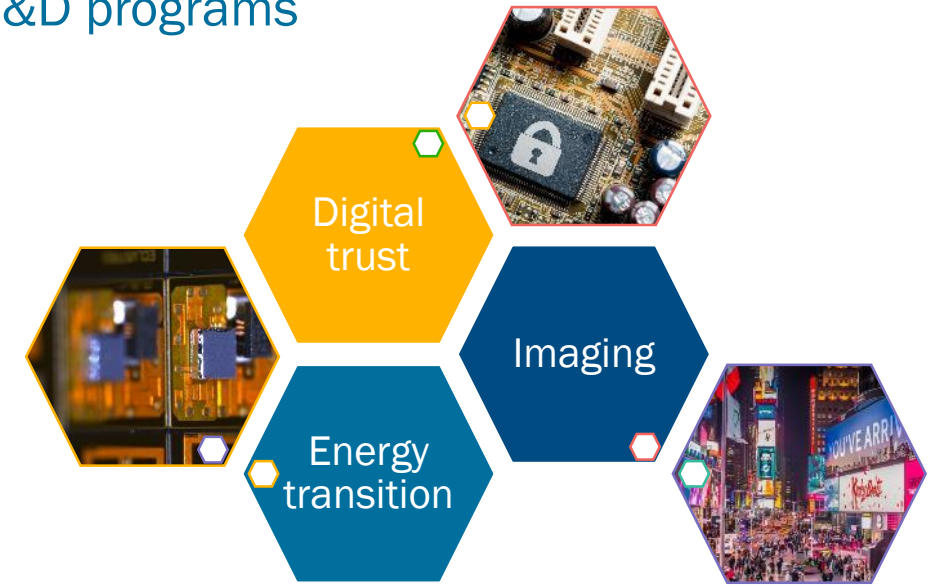
INVESTIR L'AVENIR

La Région Auvergne-Rhône-Alpes

Vision and mission

- Address the main societal challenges by facilitating the link between technologies and applications

- Create value for the industrials partners to help them grow and address new markets, by fostering multi-partners R&D programs



Current Nanoelec partners

Multi-partners

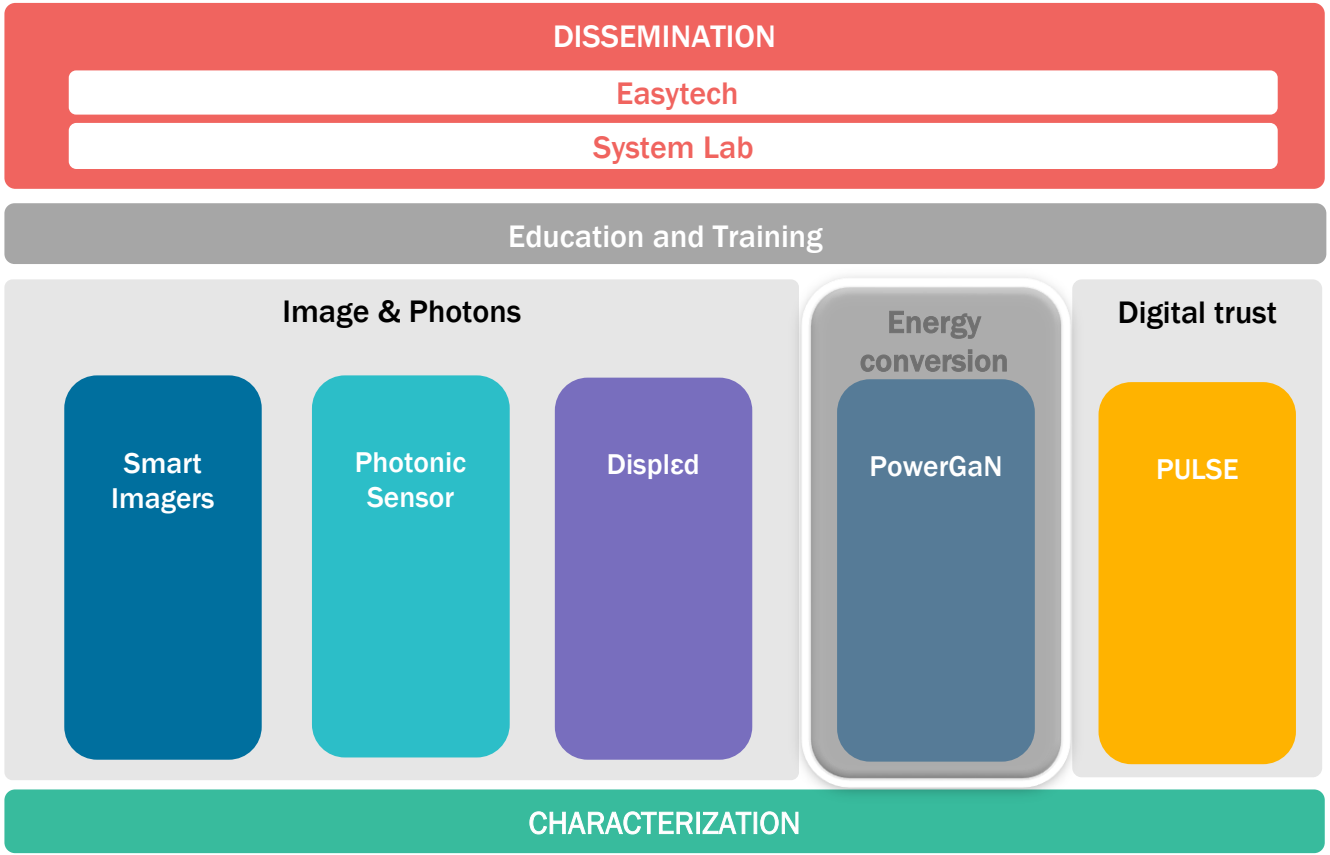
Large state of the art infrastructures

Synergy

Leverage

- 11 industrial partners
- 8 academics
- 1 pôle de compétitivité
- 1 association

2021 – 2025 : Nanoelec programs for the coming years



Nanoelec in a few figures (2019)

- **22** core partners
- **238** Associated partners since 2012, ***85 of them being active in 2019***
- **54M€** mean budget on the 2015-2018 period ***(60,1 M€ in 2019)***
- **219** **Full time positions** engaged on our programs on the 2015-2019 period ***(269 in 2019)***
- **4** new companies
- **173** **patents** et **36** **software** filled ***(2019: 35 patents, 16 software)***
- **394** **scientific publications & communications since** 2015 ***(122 in 2019)***

Large scale instruments characterization program

- Bringing together the local characterization ecosystem to address the industry needs

- Current industrial partners

Schneider Electric
soitec

- Partners under discussion

iROC TECH
Your Functional Reliability Partner – IROC Technologies
SERMA TECHNOLOGIES

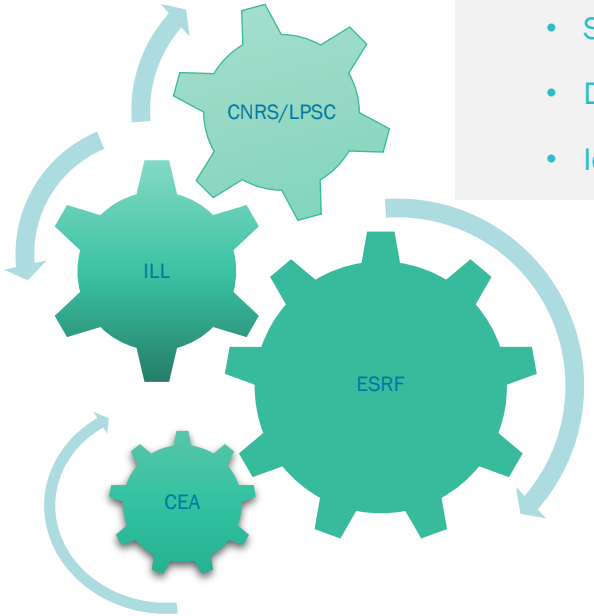
Large scale instruments characterization

Objective 1

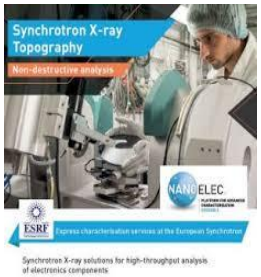
Further develop the **physical characterization** service offer on our facilities to better serve the new stakes of the nanoelectronic industry

Objective 2

Set-up a brand new and unique state of the art **irradiation competence center**

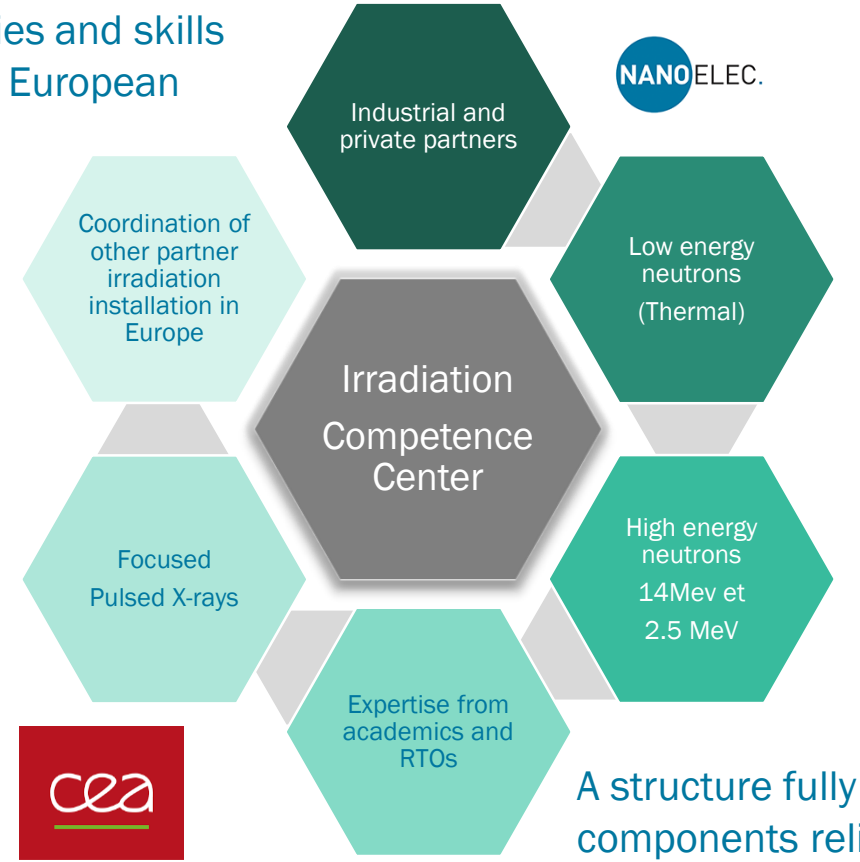


- Markets
  - Autonomous transportation
  - Medical
  - Spatial
  - Data Centers
  - IoT



Irradiation competence center

Complementary facilities and skills driven by the needs of European industry



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NEUTRONS FOR SOCIETY

ESRF-EBS
Extremely Brilliant Source

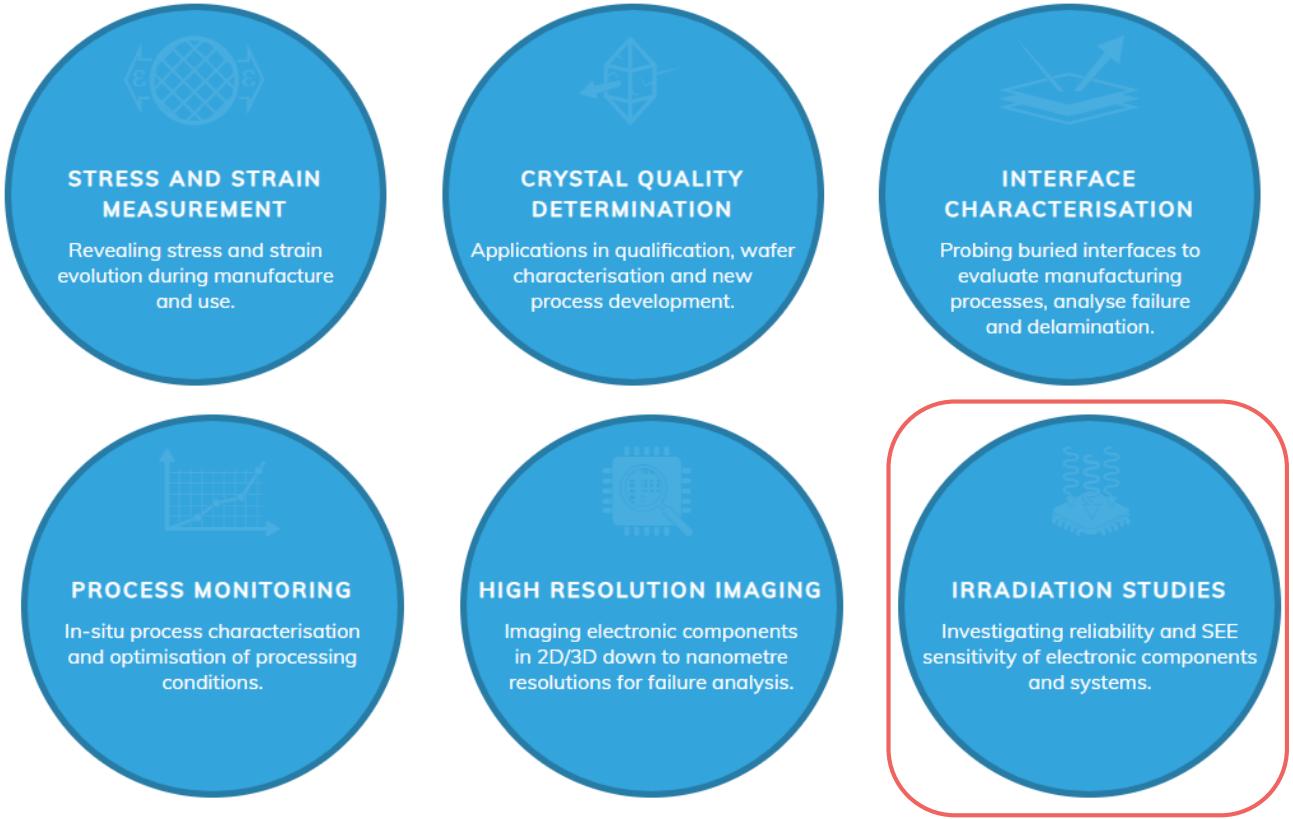
ESRF
The European Synchrotron

CNRS - UGA
LPSC Grenoble

cea
PFNC

A structure fully dedicated to the electronic components reliability to irradiation

PAC-G: the offer to industry



- Not only addressing microelectronics industry needs :
  - Material science
  - Welding
  - Process control
  - Other domains

Coming next month

Thank you for your attention

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MEMBER