



| The European Synchrotron



Working with industry: European projects with an angle on industrial outreach and access

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Hon. Prof. Keele University (UK)

THE SYNCHROTRON WITH AN INTERGOVERNMENTAL CONVENTION



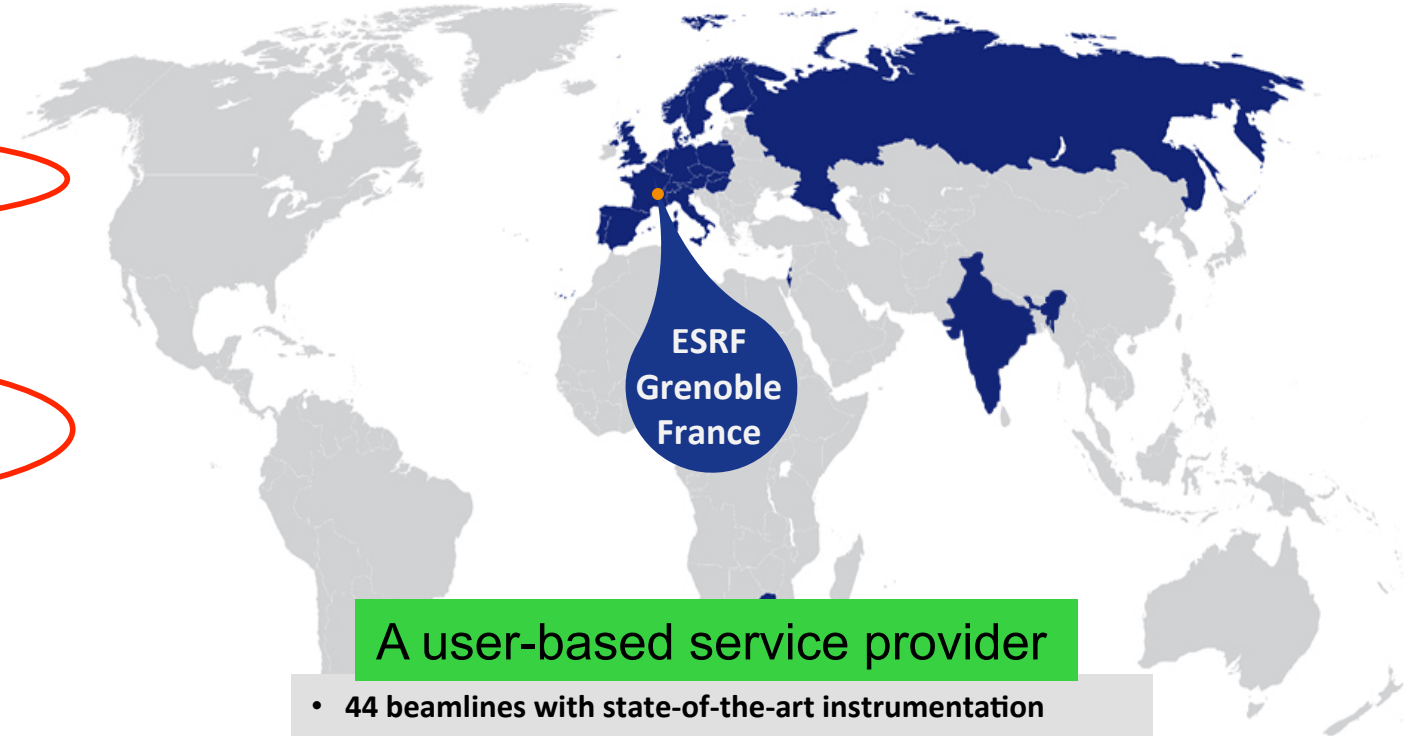
22 PARTNER COUNTRIES

13 Member states:

France	27.5 %
Germany	24.0 %
Italy	13.2 %
United Kingdom	10.5 %
Russia	6.0 %
Benesync (Belgium, The Netherlands)	5.8 %
Nordsync (Denmark, Finland, Norway, Sweden)	5.0 %
Spain	4.0 %
Switzerland	4.0 %

9 Scientific Associate countries:

Israel	1.5 %
Austria	1.3 %
Centralsync (Czech Republic, Hungary, Slovakia)	1.05 %
Poland	1.0 %
Portugal	1.0 %
India	0.66 %
South Africa	0.30 %



A user-based service provider

- 44 beamlines with state-of-the-art instrumentation
- First in scientific output: **2,000 publications/year**
- Leader in number of users: **7,000 user visits/year**, more than 10,000 individual users in the last three years
- **4 Nobel Prizes** amongst users
- Founding Member of the **Grenoble Innovation Campus**

AN AMBITIOUS AND INNOVATIVE REFURBISHMENT

2009 Upgrade – 180 M€
2015 In time and within budget

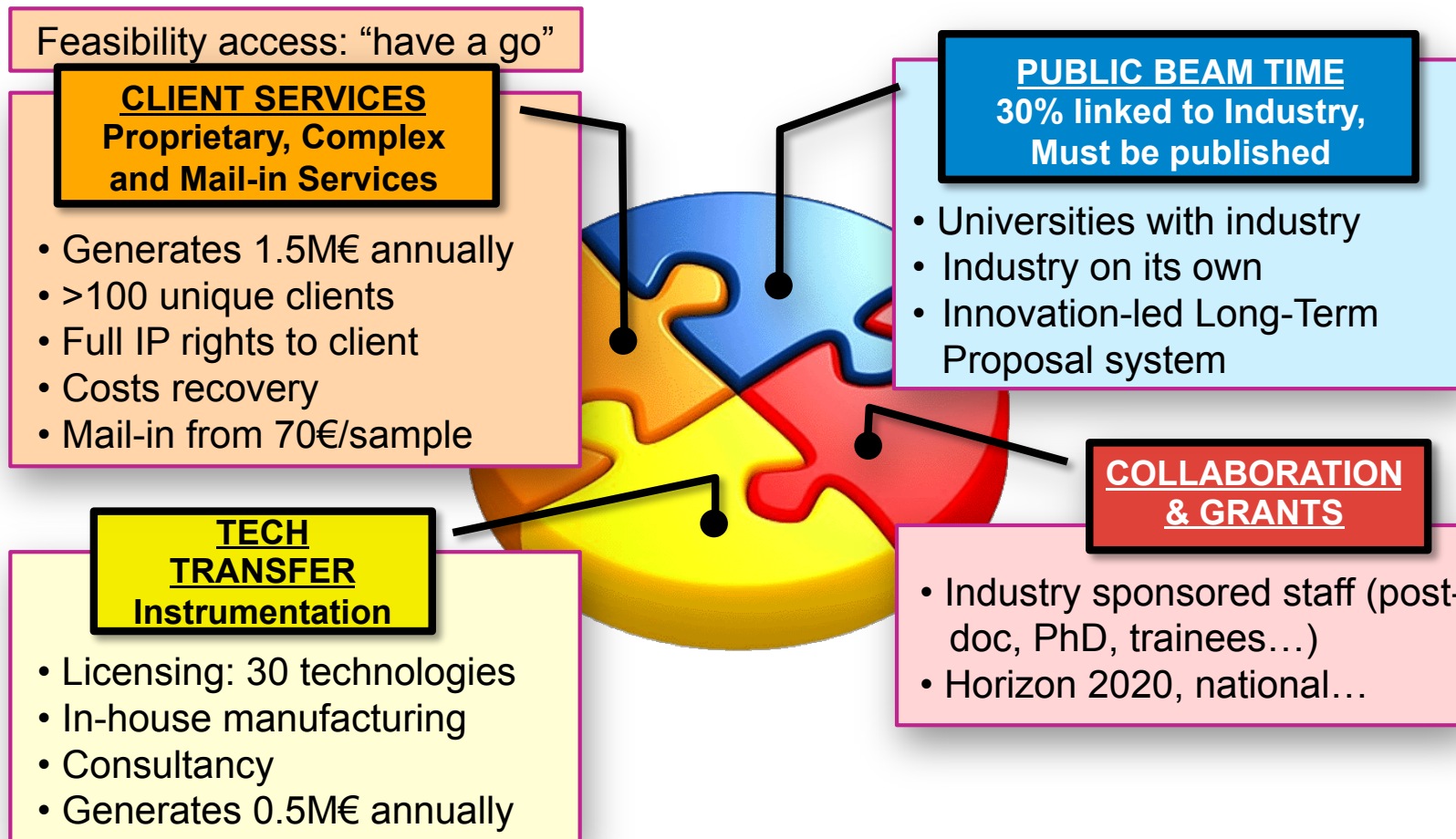
- ESFRI Roadmap project
- **Construction of 19 new-generation experimental stations to explore the nanoworld**
- Creation of a new ultra-stable experimental hall
- Improvement and refurbishment of most of the cutting-edge scientific equipment and accelerator infrastructure

2015 Extremely Brilliant Source – 150 M€
2022 Launched in June 2015

- Construction of a new storage ring, inside the existing structure, **with performance increased by a factor of 100**
- Construction of **new state-of-the-art beamlines**
- Ambitious instrumentation programme (optics, high-performance detectors)
- **Intensified big data strategy**



OUR STRATEGIES FOR INDUSTRY ENGAGEMENT



Motivated. Ambitious.

Need to learn. Need to communicate.



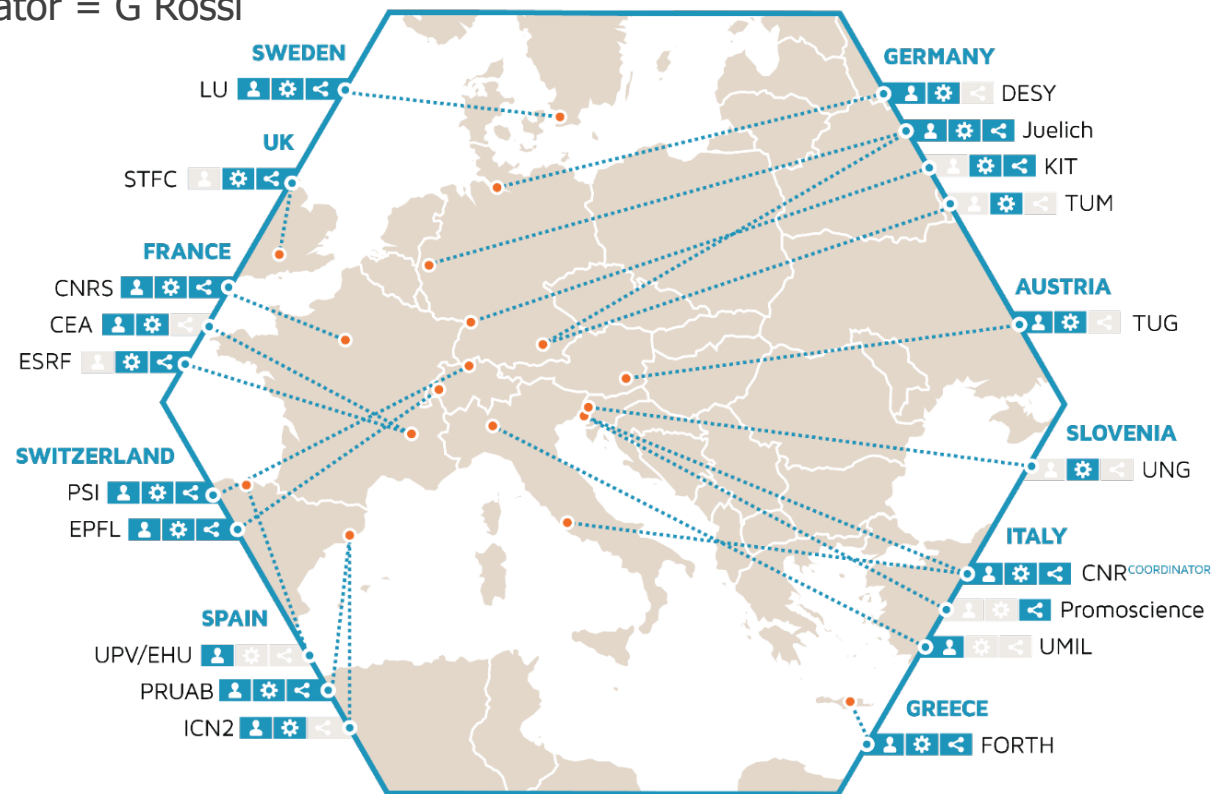
NOT DOING ALL EU PROJECTS!



The consortium

20 partners of which **10 nanofoundries** located at Analytical Large Scale facilities

Coordinator = G Rossi



The overall offer

JRA

Joint Research activities

Developing methods and tools at the frontier in nanoscience research to provide an improved offer

NA

Networking

Creating an e community.

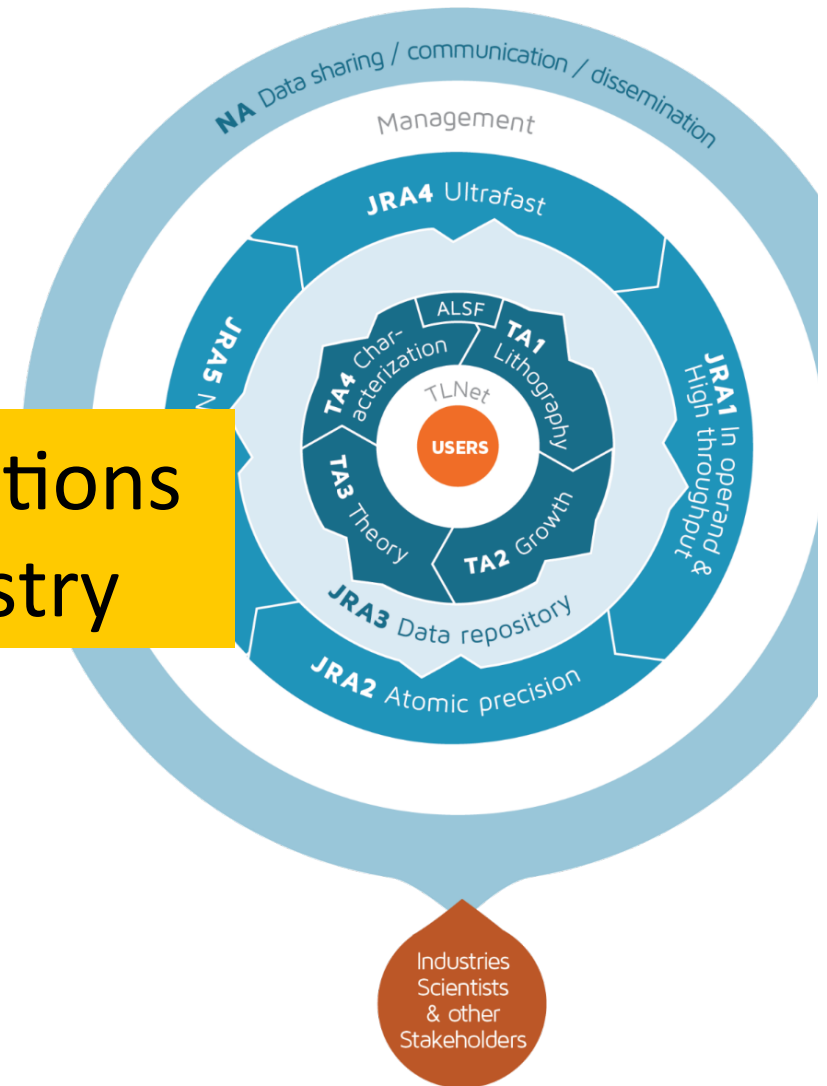
Making experimental data suitable for industrial exploitation.

TA

Transnational Access activities

Supporting comprehensive projects for multidisciplinary research at the nanoscale.

KPI = 5% applications involving industry



The Single Entry Point



Single Entry Point:

- Easy
- Fast
- Centralised

Heldesk feature on NFFA website

- Reactivity
- Precise process
- Users are choosing the way they want to be contacted

The Single Entry Point



1.



- ABOUT the project
- OFFER tools catalogue
- APPLY guidelines
- OUTCOMES the latest outcomes
- NEWS events & highlights

Get free access to the widest range of tools for research at **15 JANUARY 2018 AT 17:00 (CET)**

2.

How can we help you?

Topics*
Please specify the topics for the request

How can we help you?*

Max. 500 chars (500 available)

field of interest*

- Technical support
- Administrative support

* mandatory fields

Send

3.

07/06/2017

13:38 I. PROMOSCIENCE - Administrator
file
how to add an expert.2.PNG
screen shot 2
Download

I. PROMOSCIENCE - Administrator 07/06/2017 - 13:41
after having inserting the possible experts in the possible list, you can add one or more of them in working area of one request, clicking the modify button, next to the EXPERTS label on the left.

13:37 I. PROMOSCIENCE - Administrator
file
how to add an expert.PNG
two screen shots to help you

Actions: marketing materials

General

- Industry flyer
- Case studies
- General presentation

Social Media

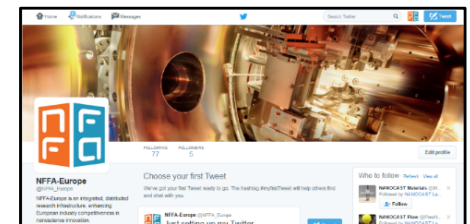
- LinkedIn
- Facebook for Live videos
- Twitter feed during events

NFFA Web

- Industry pages
- Helpdesk feature
- Mailing campaigns before and after each live event
- YouTube channel

Events

- Posters
- Roll-ups
- Various graphic support

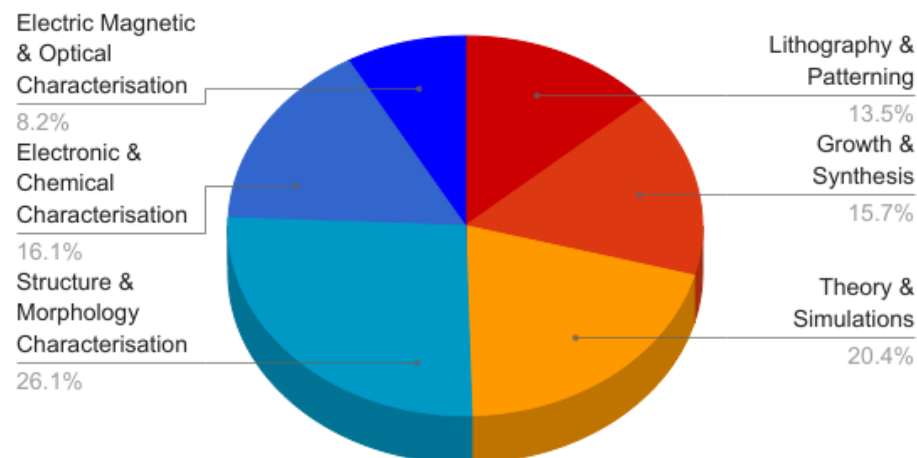


Industry transnational access statistics

KPI = 5% applications involving industry

- **165** proposal submitted
- **5** calls for access
- **465** potential users
- **103** proposals accepted
- **287** users
- **12** involved industries
- **27** proposals linked to access to large scale facilities

Requested Installation Types



Convenient Access to Light Sources Open to Innovation, Science and to the World

Coordinator = M Helm (HZDR)

Networking

- User Tools for Access and Data Management
- Dissemination & Training
- **European Light Sources for Industrial Innovation**
- Striving for Sustainability of Photon Sources in Europe

Trans-national Access

- Trans-national Access to European light sources
- **Tailor-made for SMEs Trans-national Access (TamaTA)**

Joint-Research

- Metrology on One-Nanometre-Precise Optics
- Demonstrator for a Photon Science Analysis Service

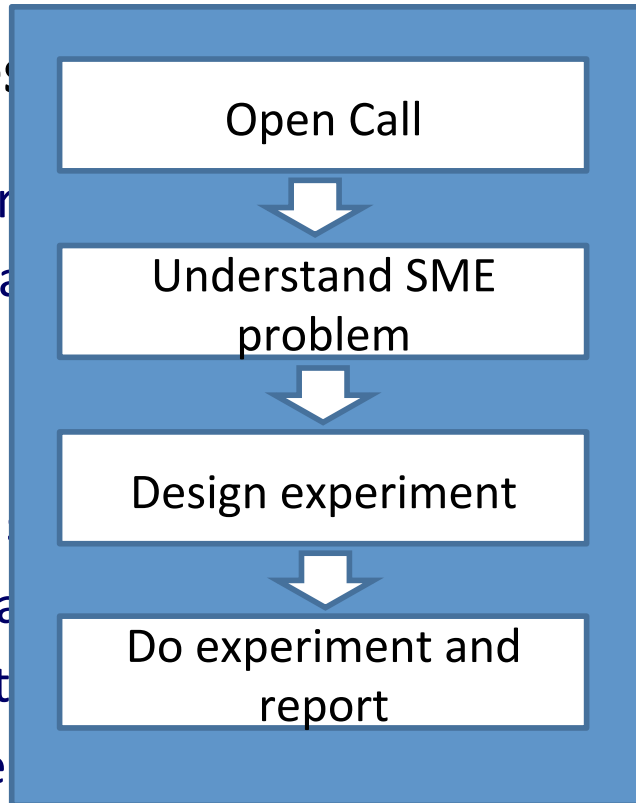
19 partners offering access to 14 synchrotrons and 8 FELs in Europa and the Middle East.



A new access route: TamaTa

Trans-national access

- **Keep it simple:** Open call hosted on wayforlight.eu with a simple application form of the SMEs with no budget
- **Pilot activity:** 200k€
- **Supports:** Access to facilities, sample prep and ancillary characterisation
- **Due to start:** All materials (including a template....) in place



hosted on wayforlight.eu with a simple application for an agile access form of the SMEs with no budget

Deadline

sample prep and ancillary characterisation

te, procedure, report

2017

- Joint Industrial Advisory Board
- Joint events
 - Combined session at EFFOST
 - SYNERGI2018, Amsterdam
- Joint networking events of our industry liaison officers and business developers
 - 14/15 November, coincident with EUCALL TT meeting and special ESS session
- Joint common dissemination booster
- Joint services?



DO YOU WANT TO SEE WHAT'S INSIDE FOOD?

Come and learn
what Synchrotron X-rays and Neutrons can do!

Join our Session
on Wednesday, 15 November
from 11:00 to 13:00

Session 13 - Room Tramuntana 2
Non-conventional Characterisation Techniques for Food
Using Synchrotron Light and Neutrons



WORKING TOGETHER: THE “RI VILLAGE”

- NFFA, SINE2020 and CALIPSOplus working together to create the **RI Village initiative**
- Providing materials characterisation **far beyond lab facilities**
- **Generating critical mass of united H2020 projects** with complementary objectives and techniques



Bratislava
October 2016



EuroNanoForum
2017
Malta
June 2017



12th ECNDT
GOTHENBURG-SWEDEN-2018

Gothenberg
June 2018

The European Synchrotron



BUSINESS WITHIN WALKING DISTANCE



A French-funded Public-Private Partnership 450M€

www.irtnanoelec.fr

Funding a Pathfinder Programme to actively create innovation opportunities between the ESRF & ILL and the nano/micro-electronics industry.

6.5M€ over 9 years for:

- 1. Sample preparation tools**
- 2. Instrumentation development**
- 3. Proof-of-concept [access]**
- 4. Business development**



WHAT'S THE INNOVATION?

Synchrotron X-ray Topography
Non-destructive analysis

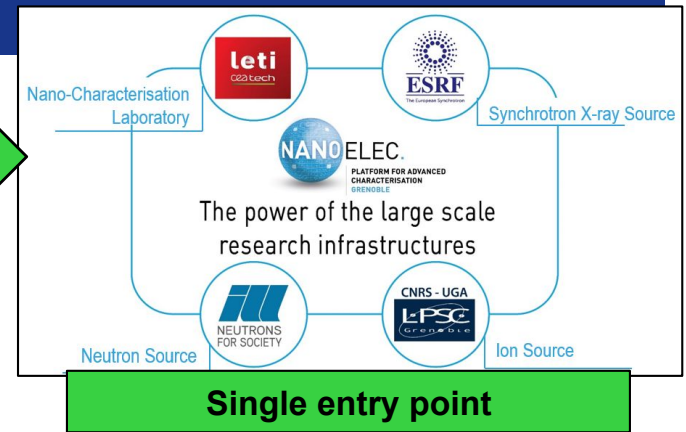
NANO ELEC.
PLATFORM FOR ADVANCED CHARACTERISATION GRENOBLE

ESRF
Express characterisation services at the European Synchrotron

Synchrotron X-ray solutions for high-throughput analysis of electronics components

Right resources, right people, right equipment, right context.

SERMA
TECHNOLOGIES

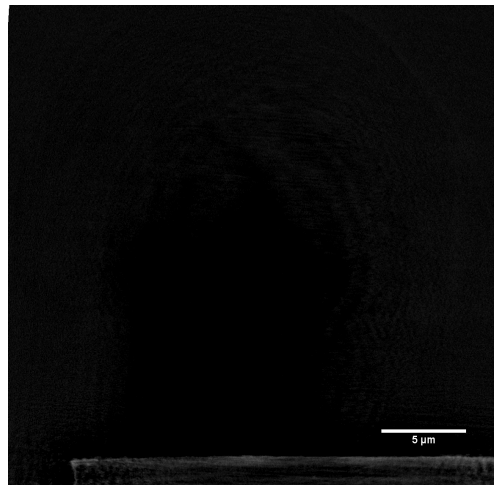


New services

Integrated industry offer

Joint research with industry

Cooperation with an SME



STI
life.augmented



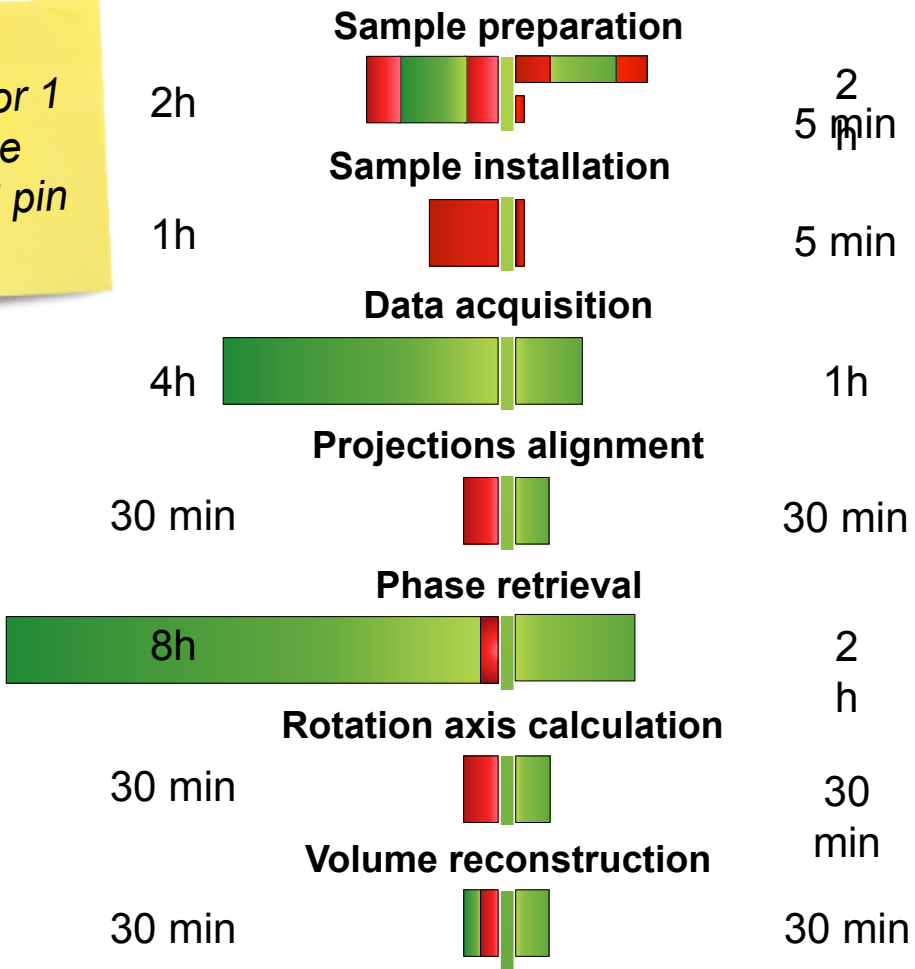
Right research, right people, right equipment, right context

3 year Innovation-Led Project



ID16A : TIME CONSIDERATIONS

Values for 1 sample on an AI pin



Values for 1 sample on a 10-sample support

- ✓ No loss in resolution
- ✓ User intervention time divided by 3
- ✓ Beam time divided by 4
- ✓ Gain in time for statistical studies



23 Novembre

Où?

Campus EPN
71 avenue des Martyrs
38000 Grenoble

Venez nous défier!

Saisissez la chance de venir essayer nos installations

Prise en charge avec démonstration pratique

Apportez vos échantillons et vos questions:
des experts seront là pour vous répondre
et vous donner la chance de tester nos installations

La Plateforme pour la Caractérisation Avancée de Grenoble
Caractériser les matériaux pour pousser l'innovation



#Carac17

  @PAC-Grenoble

www.pac-grenoble.eu



“OPEN SESAME” - supporting the Middle East light source SESAME

Coordinator – E Mitchell (ESRF)

- Training of SESAME staff
- Training of SESAME member funding agency staff
- Strong communications support
- Training and outreach for SESAME user communities including both academics and industry



Autumn 2019: workshop on promoting Light Sources as centres for innovation and industrial light source applications, likely to be hosted in Turkey



This project has received funding from the European Union's Horizon 2020 framework programme for research and innovation under grant agreement n.730943

IP valorisation



**Client
cartography**





**10M€ over 5 years from a country of
5.5 million people.**

**Extrapolate to 500 million population
of the EU.**

LEAPS – League of European Accelerator-based Photon Sources

- Launched: 2015
- Chairs:
- Co-chairs:
- Partners:

A common strategic approach

LEAPS is offering a **transformative new level of cooperation, integration and specialisation** amongst Europe's accelerator based light sources to strengthen Europe's leading role in science and innovation.

LEAPS will drastically change interaction with industry for the better, reducing barriers to access for industry and simultaneously increasing industry's potential to take advantage of the available instruments and techniques to better react to the rapid changing economic environment.



13 November 2017, Brussels



ESRF BUSINESS DEVELOPMENT OFFICE



The Right Staff

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Grenoble, France

industry@esrf.eu

www.esrf.eu/Industry

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Thank you for your attention