The ICO role at
The European Synchrotron

Ed Mitchell, Head of Business Development, ESRF
mitchell@esrf.eu  www.linkedin.com/in/e-mitchell/
22 Partner Countries

13 Members:
- France 27.5 %
- Germany 24.0 %
- Italy 13.2 %
- United Kingdom 10.5 %
- Russia 6.0 %
- “Benesync” 5.8 %
- (Belgium, Holland)
- “Nordsync” 5.0 %
- (Denmark, Finland, Norway, Sweden)
- Spain 4.0 %
- Switzerland 4.0 %

9 Associates:
- Austria 1.75 %
- Israel 1.75 %
- “Centralsync” 1.05 %
- (Czech Republic, Hungary, Slovakia)
- Poland 1.00 %
- Portugal 1.00 %
- India 0.66 %
- South Africa 0.30 %

The first fourth generation high-energy synchrotron

ESRF
Grenoble
France
Recognizing that synchrotron radiation will in future be of great significance in many different fields and for industrial applications;

In the hope that other European countries shall participate in the activities which they intend to undertake together under this Convention;

Building on the successful co-operation of European scientists in the framework of the European Science Foundation and the preparatory work carried out under its
ESRF BUSINESS DEVELOPMENT OFFICE (BDO)

To strengthen and enhance the following activities:

1. Provision of commercial services, particularly related to beamline use and beam time sales for proprietary use by industry.

2. Fund-raising from EU and ESRF partner countries in the form of grants and collaborations.

3. Exploitation of ESRF intellectual property, particularly in terms of instrumentation.
WHY USE SYNCHROTRON X-RAYS?

- **Higher Penetration**
  (2D->3D & large objects)

- **Higher Spatial Resolution**
  (focused spot size down to 20nm->
   mapping and multimodal imaging)

- **Faster**
  (statistical measurements, 4D - time resolved)

- **Improved Detection Limit**
  (finest chemical information)
WHY USE SYNCHROTRON X-RAYS?

Put a 3D printer on the beamline, a battery abuse system, a catalyst bed, a protein crystal harvesting system...

Imagination is the only limitation.
Outreach.
Translation.
Matching.
Common understanding.
**HOW DOES ESRF ENGAGE WITH INDUSTRY?**

**Feasibility access: “have a go”**

**PUBLIC ACCESS**
- Results published
- Competitive peer review
- About 30% of work linked with industry

**COLLABORATION & GRANTS**
- Industry sponsored staff
- EC Framework Programmes
- National Programmes

**TECH TRANSFER**
- Licensed >30 technologies
- In-house manufacturing
- Consultancy

**PROPRIETARY SERVICES**
- Confidential & rapid
- >150 clients in 35 countries
- Mail-in services & a la carte

Annual commercial income target set by Stakeholders (2021 = 2.342M€; +5% year-on-year).

Much here we are not aware of +Others
ESRF Automated
MASSIF Beamline

AstraZeneca
Win-win formats
Magnus Larsson - “Not static, fitting needs”
**TamaTA-Innov: Boosting SME innovation by using European Synchrotrons**

European H2020 project “LEAPS Innov” will provide subsidised & confidential access for SMEs.

Simple and fast applications, med flerspråkigt stöd.

**From the previous TamaTA SME access programme:**

- “We obtained very useful results for improving the formulation and manufacturing process of a very innovative product that we are currently introducing in the market.”

- “We are extremely satisfied with the results and they have given us new insights into our materials discovery pipeline.”

**SUPPORTING INNOVATIVE SME COMPANIES**

**Pilot programme:** "Tailor-made for SMEs Trans-national Access" (TamaTA)

- 10 SME accesses to ESRF supported by CALIPSOplus (Horizon2020)
- Programme being continued under LEAPS INNOV (Horizon Europe)

**Latest examples @ESRF**

- **29 September 2021**
  - **Takis Biotech** (It)
  - COVID therapy
  - ID23-2/micro-MX

- **4 October 2021**
  - **Scandiflash** (Se)
  - Instrumentation
  - ID19/MHz radiography

- **7 October 2021**
  - **Hey Planet** (Dk)
  - Food ingredients
  - BM05/micro-CT
PRIOR PLM MEDICAL

MAKING ASTHMA INHALERS GREENER AND MORE ROBUST

THE COMPANY
Prior PLM Medical (IPM) is a product development company that specialises in developing medical devices. Based in Ireland, the company has been in operation since 2002 and has a wide range of products in development, including inhalers, nebulisers, and other medical devices.

THE IMPACT
IPM have been using the ESRF to study aerosol inhalers since 2013. The high-speed X-rays at the ESRF allow IPM to examine the dynamics of the devices and test their performance.

"The ESRF is an amazing facility – very welcoming, very accommodating."

Alan McGovern, Research Manager, Prior PLM Medical

https://bit.ly/3l51b1G
Thank you for your attention.

Ed Mitchell, Head of Business Development, ESRF
mitchell@esrf.eu   www.linkedin.com/in/e-mitchell/