



ACTRIS-2 Innovation Platform

Gelsomina Pappalardo

National Research Council of Italy, CNR

II RICH Symposium

“Fostering the Innovation Potential of Research Infrastructures”

Lisbon, Portugal - May 8th 2017



ACTRIS-2

ACTRIS-2 is the pan-European initiative for coordinating long-term observations of aerosols, clouds, and short lived gases from the ground.

The objective of ACTRIS-2 is to consolidate the construction of a unique user-oriented **Research Infrastructure** initiated more than 15 years ago for providing 4-D integrated high-quality data from near-surface to high altitude (vertical profiles and total-column), relevant to **climate and air-quality research**.

Worldwide, the **mitigation of and adaptation to climate change** require a dedicated **innovative monitoring capacity**. A potential large market exists in Europe for improving and developing **cost-effective and innovative cloud, aerosol, and gas monitoring instrumentation**. Industrial production applications are expected to grow with the international air pollution, climate, and weather monitoring market.

The project ACTRIS-2 Integrating Activities (IA) has received funding from the European Union's Horizon 2020 Research and Innovation programme (grant agreement No 654109). ACTRIS-2 started on 1 May 2015 for a period of 4 years after the successful completion of the first ACTRIS IA in FP7 project (2011-2015).



ACTRIS-2 Innovation platform

Innovation in instrumentation is one of the fundamental building blocks of ACTRIS-2.

The ACTRIS Innovation platform has been established to enhance and promote cooperation with the private sector and in particular with European SMEs.

Specific objectives are:

- To maintain and further develop standard-making processes for technologies relevant to ACTRIS observations in cooperation with SMEs.
- To promote use of ACTRIS by SMEs to test novel instrumentation at observing sites or calibration centres.
- To promote joint public-private collaboration for high-risk innovation and close-to-market activities applied to atmospheric observation technologies.
- To establish a platform for exchange of expertise and information with the private sector.

ACTRIS-2 cooperation with the private sector

- Long-term strategy for ACTRIS → long-term strategy for innovation
- Existing market → potential growth and role of ACTRIS
- Target → mainly SMEs
- Scale → Local, Regional, National, EU, International

ACTRIS 2 Technological standardisation

To maintain and further develop standard-making processes for technologies in cooperation with specific SMEs and national, European and, when applicable, international centres for normalization and standards.

Current involvement of ACTRIS in CEN and ISO initiatives is maintained and reinforced:

- **EUSAAR2 method for OCEC determination became CEN standard in 2016**
- **ACTRIS recommendations for MPSS measurements are the base of the current development of a CEN (TC 264/WG 32) and the revised ISO 15900 standard (TC 24/SC 4 WG 12).**
- **ECAC staff is WP leaders in two new EURAMET projects for SI-traceability of particle light absorption and particle number size distribution**

Internal exchange of information devoted to enhance awareness and understanding of the standardization processes among ACTRIS partners and associated partners.

- **Guidelines and information packages delivered and presented in ACTRIS-2 GAs and technical meetings.**

ACTRIS-2 Access opportunities for the private sector

ACTRIS-2 provides a large number of installations/facilities where novel instruments in the field of atmospheric observations could be tested and/or developed; in particular the facilities providing TNA and the Calibration Centres.



Lidar Calibration Centre (LiCal)



AERONET-Europe Calibration Centre

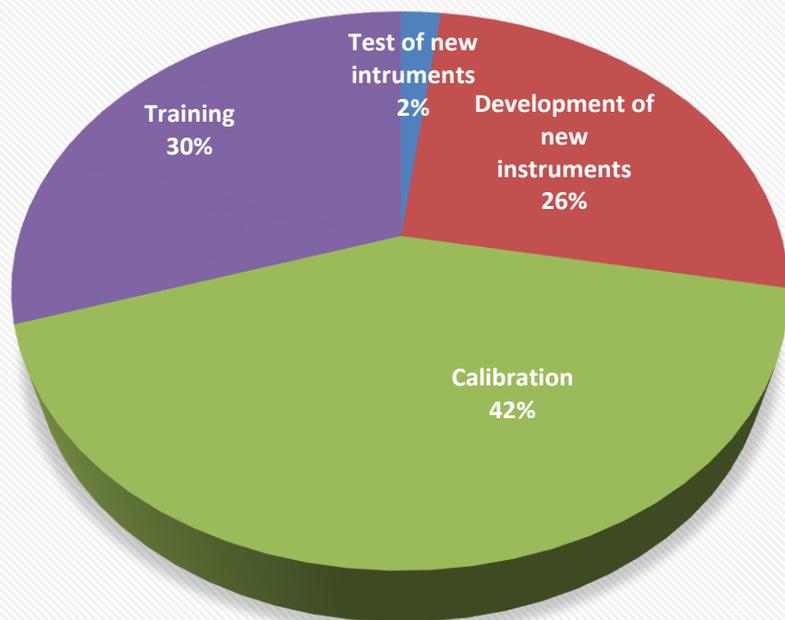


European Centre for Aerosol Calibration (ECAC)

Access opportunities promoted through the project website, project leaflet, and with participation in various international events and conferences where different SMEs were present.

ACTRIS-2 Private sector access statistics

Share of access from private sector between activities



10% of the total access (national/local SMEs are not included)

Private sector

- Calibration 42%
- Training 30%
- Developments of new instruments 26%
- Test of new instruments 2%

ACTRIS-2 Direct exchange with the private sector

A specific Non Disclosure Agreement (NDA) has been developed together with the private sector for assuring that this exchange of expertise and information respects the intellectual property rights on both sides and classified information from the industry.

This NDA is used as part of the available documents for the call for associated partners for the private sector launched in October 2015 (www.actris.eu).

This NDA is flexible enough to be modified for each of the companies in order to meet specific needs.

ACTRIS-2 platform for direct exchange with the private sector

A specific workshop with SMEs was initially planned for the first year of the project in order to start to establish a platform for a continuous exchange of expertise with the private sector.

After consulting with SMES, it was decided to do not organize this specific workshop (SMEs prefer direct bilateral contacts). It was decided to have a **virtual platform** for exchange of expertise with the SMEs through the project website and through the use of a specific mailing list for SMEs.

Beside this virtual platform, exchange of expertise and information with the private sector benefits from specific technical meetings and workshops focused on a specific technology.

ACTRIS-2 opportunities of cooperation with the private sector are also announced at relevant events, conferences and exhibits.

ACTRIS-2 will make use of the ENVRIPLUS event “Environmental Research Infrastructures meet industrial partners” (May 18-19, 2017) to meet with industries related to atmospheric science, to explore directions and opportunities for future joint actions and to promote new partnerships.

ACTRIS Virtual Innovation Platform

The **ACTRIS virtual innovation platform** has been established in order to facilitate the exchange of expertise with the private sector.

It is composed by web-based tools (available at www.actris.eu):

- Continuous call for Associated Partnership with the Private Sector
- Specific calls for Associated Partnership with the Private Sector
- Announcement of opportunities for testing new instruments at the Calibration Centres and ACTRIS stations providing TNA
- Documentation on technological standardization
- Announcement of specific tools, software etc. available through Virtual Access [Data Center]
- Announcement of specific technical meetings and workshops
- Collection of feedback from the private sector through the TNA
- Reports on cooperation with the private sector

This platform is continuously updated. All the documents already available, also based on previous projects (i.e. ACTRIS in FP7) which could be relevant for the private sector have been made available. Further documents will be made available as soon as they will be finalized accordingly to the DoA.

Feedback from the private sectors are collected after the access to the facilities and are handled accordingly to the specific NDA.



Summary and future steps

ACTRIS-2 devotes substantial efforts towards innovation and transfer of knowledge to SMEs.

Several actions already contributed to reinforce partnership with SMEs and assets of EU-SMEs in the competitive eco-industry market, in Europe and elsewhere; and in particular, the created ACTRIS-2 innovation platform provides the proper framework to foster exchange of interest between RI partners and SMEs.

- **18 SMEs are associated with ACTRIS-2**
- **15 SMEs have accessed ACTRIS stations and Calibration Centres to test and develop new instruments**
- **Collaborative partnerships actively involve more than 25 SMEs.**

Active cooperation is in progress with specific SMEs to develop further new instruments/subsystems. Cooperation with other SMEs for testing new instruments and new developments is started, and further results are expected.