

VOC monitoring in the ACTRIS network: in situ and remote

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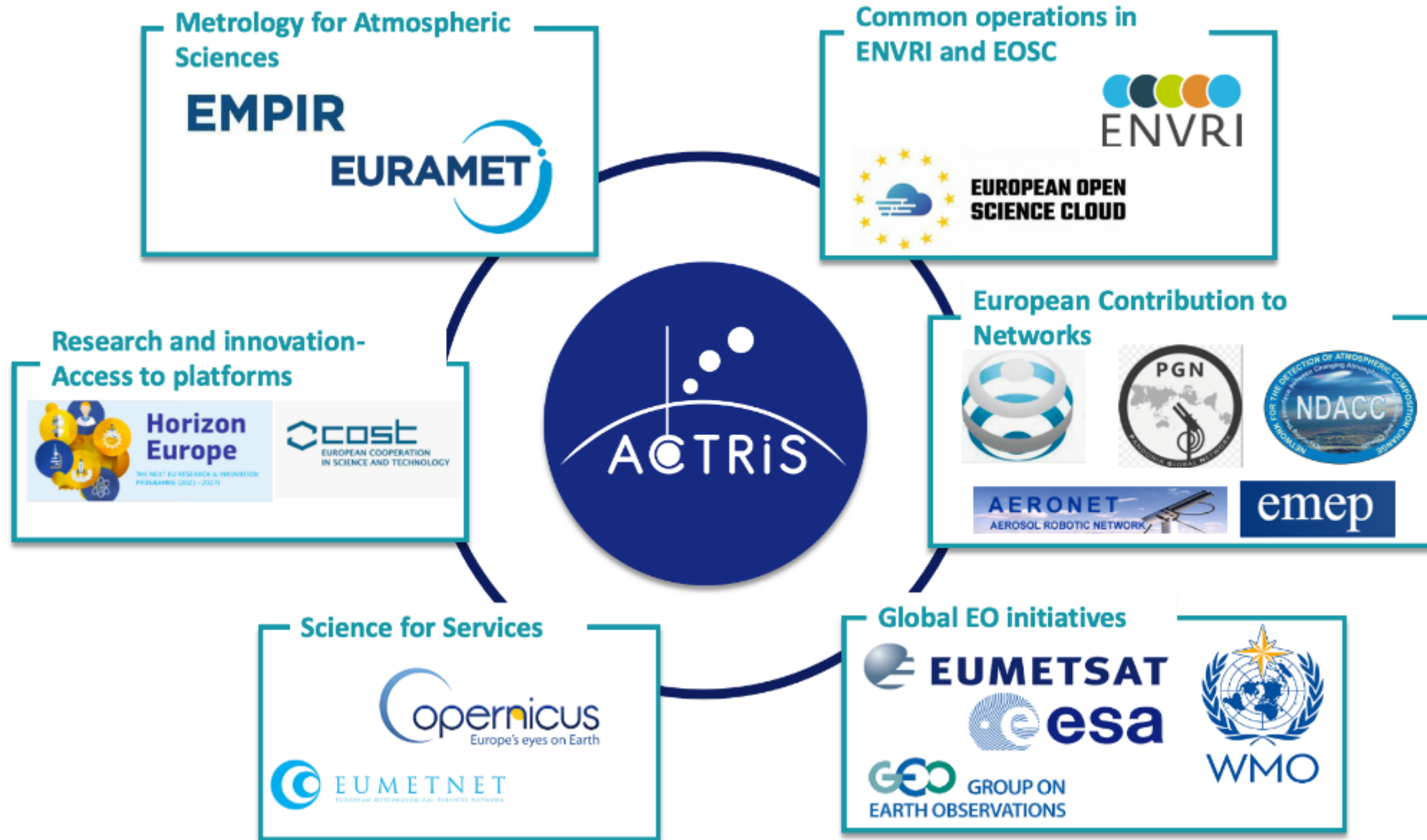
The EU Research Infrastructure Concepts

More than a Network:

- **Ensure the best European platforms for research are opened to all users** in a sustainable way,
- **Provision of services**, including concentration time series of key atmospheric short-lived species or full-description of experiment
- **Facilitate use of RI services** (data, access, training, etc..) through clear mutually agreed procedures and policies, recognized at Pan-European scale



The ACTRIS RI Ecosystem



Traceability in ACTRIS

→ Traceable data sets : developping the FAIR environment in ACTRIS information system



ACTRIS DC

→ Traceable procedures : defining the most adequate procedures for atmospheric sampling



ACTRIS TCs

→ Ensuring all measurements are compliant with recommended procedures and upscaling



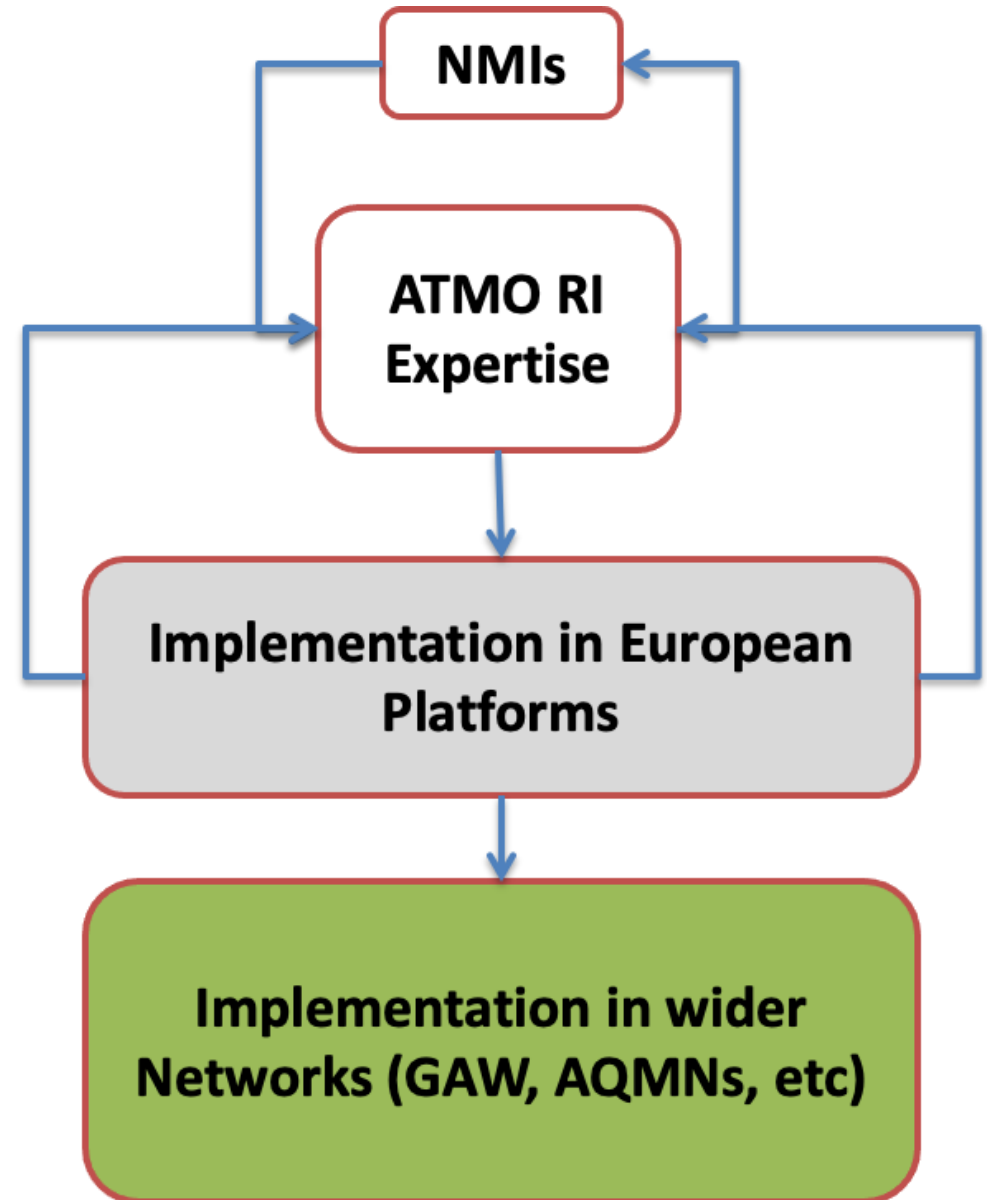
ACTRIS NFs

→ Defining the share of responsibilities between the component of ACTRIS for sustainable traceability



Framework for Cooperation with NMIs

- Definition of primary standards (NMIs)
- Specifications for atmospheric measurements (NMIs-ACTRIS TCs)
- Upscaling to ACTRIS NFs (ACTRIS TCs)
- Harmonization at a wider scale (GAW/WMO – EMEP - ACTRIS)



19ENV08	AEROMET II	Advanced aerosol metrology for atmospheric science and air quality
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19ENV06	MetClimVOC	Metrology for climate relevant volatile organic compounds
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19ENV04	MAPP	Metrology for aerosol optical properties
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TERMINATED

16ENV02	Black Carbon	Metrology for light absorption by atmospheric aerosols
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16ENV03	MetEOC-3	Further metrology for earth observation and climate
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16ENV05	MetNO2	Metrology for nitrogen dioxide
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16ENV07	AEROMET	Aerosol metrology for atmospheric science and air quality
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VOCs in GCOS and GAW

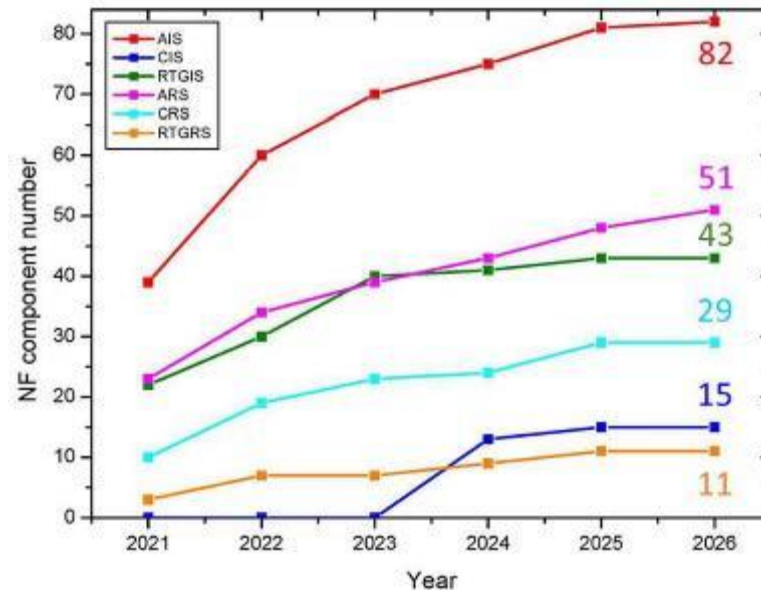
- Only HCHO Total column is listed as ECV for the GCOS
- Working groups are defining requirements for other application areas (Forecasting Atmospheric composition)
- Key compounds likely to be strongly affected by Climate change and precursors to others (IPCS AR6)

CiGaS
Center

Near Surface in-situ
(WDCRG Europe)

GREGARS
Center

Remote sensing from the ground
(NDACC Europe)



Expectations- Reference procedures for ACTRIS

Atmos. Meas. Tech., 5, 657–685, 2012
www.atmos-meas-tech.net/5/657/2012/
doi:10.5194/amt-5-657-2012
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Mobility particle size spectrometers: harmonization of technical standards and data structure to facilitate high quality long-term observations of atmospheric particle number size distributions

- Recommendation for measurements and support for implementation
- Increase the provision of NF data and design a network strategy (which VOCs ?)
- Capacity to provide VOCs in NRT with high quality for Copernicus application (CAMS21a-PhaseII)

Expectation - Attractiveness of ACTRIS platforms

- Offer to users quality label to VOC measurements performed at platforms (certification)
- Raise interest from the commercial companies to exploit platforms through TNA
- Engage in R&D exploring new technologies and non-conventional sensors
- Ensure wide use of NFs and TCs for metrology programs



In the longer term:

- Contribute to a network design strategy in ACTRIS for better harmonization and upscaling
- Ensure recommendation are widely recognized and used, beyond ACTRIS
- Promote additional VOCs as ECVs in GCOS, established on sound data value chain