

Deliverable 4.3: Central Facility selection process and outcome

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1 Background

ACTRIS (Aerosol, Clouds and Trace Gases Research Infrastructure) is a pan-European research infrastructure providing 4D-data and research services on short-lived atmospheric constituents within and beyond Europe. ACTRIS was adopted on ESFRI roadmap as a new research infrastructure in 2016 and it is currently in preparation phase, supported by Horizon-2020 INFRADEV-2 project ACTRIS PPP (Preparatory Phase Project for years 2017-2019). ACTRIS aims to become an ERIC (European Research Infrastructure Consortium), submitting ERIC Step 1 application in early 2019 and having the legal entity established by end of 2020. Further on, the aim of ACTRIS is to be fully operational in 2025.

In order to be able to reach its goals, ACTRIS is aiming to have a structure consisting of a multitude of observatory and exploratory National Facilities (NFs) delivering data and providing access services and European-level Central Facilities (CFs) responsible for quality assurance and delivery of the data, instrument development and coordination of the RI.

During the implementation phase of ACTRIS (expected 2020-2024), the Central Facilities should be constructed and their services should be tested. ACTRIS operations will start step-by-step by ramping up the service provision. In order to proceed with this process, the selection of the candidate hosts for Central Facilities was organized. This is one of the essential outcomes of ACTRIS PPP.

2 Purpose of the Central Facility host selection process

The purpose of the CF host selection process in ACTRIS PPP was to select the candidate hosts for implementing the needed Central Facilities. After being approved by IAC the candidates may proceed in planning the implementation of the CFs, including more detailed and consolidated funding schemes and a more detailed implementation plan and schedule. This means that the funding and capacity figures are subject to change during the implementation phase. The final approval of each Central Facility will be made at a later stage and may depend on which countries will be members of ACTRIS when ACTRIS is operational.

The ACTRIS Central Facilities concerned in this process were:

- ACTRIS Head Office
- ACTRIS Data Centre
- Centre for Aerosol In Situ Measurements
- Centre for Aerosol Remote Sensing
- Centre for Cloud In Situ Measurements
- Centre for Cloud Remote Sensing
- Centre for Reactive Trace Gases In Situ Measurements
- Centre for Reactive Trace Gases Remote Sensing

3 Actors in the process

Central Facility candidate host applicant (hereafter referred as **applicant**) is a consortium applying for hosting an ACTRIS Central Facility. Only one application by a candidate consortium was to be submitted by the leader of the consortium on behalf of all the participating institutes.

Central Facility selection task group (hereafter referred as **task group**) facilitates the Central Facility selection process, but does not participate in the evaluation, nor in the applications. The task group is mandated by Interim ACTRIS Council and consists of individuals representing different aspects of ACTRIS PPP and observers from Interim ACTRIS Council. The task group members have signed a statement that they have no conflict of interest in this process.

External evaluators (hereafter referred as **evaluators**) are independent experts external to the ACTRIS Central Facility selection process. Each application for a given Central Facility was evaluated by a group of experts (2-3) in the field of that particular Central Facility. Before evaluation, the evaluators have signed a statement that they have no conflict of interest. The names of the evaluators are not published during the selection process.

Interim ACTRIS Council (hereafter referred as **IAC**) is a body consisting of ministry and funding agency representatives from countries participating in ACTRIS. It is the highest decision-making body in ACTRIS before the establishment of ACTRIS ERIC. In the Central Facility host selection process its role is to decide the candidate hosts for each ACTRIS Central Facility which may proceed with planning of the implementation of the Central Facility.

4 The IAC mandate

In the 3rd IAC meeting (26-27.2.2018, Bucharest ACTRIS PPP proposed and the IAC approved to mandate ACTRIS PPP to organize and run the selection of candidate hosts for ACTRIS Central Facilities. The mandate specified the eligibility criteria, the general focus of the evaluation, reference documents and the composition of the task group running the process.

4.1 Eligibility criteria

Each Central Facility is to be hosted by a (potentially multinational) consortium of institutes. As part of the mandate, IAC approved the following eligibility criteria for entities planning to host part of any ACTRIS Central Facility:

1. Each CF applicant is organized as a consortium (application is sent by the leader of the consortium on behalf of all Units).
2. Each Unit of the CF applicant should be operated by a public, European non-profit research performing organisation.
3. Each Unit of the ACTRIS Central Facility is already involved in ACTRIS. I.e. the applicants have to be involved in one of the ACTRIS projects (ACTRIS PPP, ACTRIS-2, EUROCHAMP 2020), linked to ACTRIS

PPP either as a Beneficiary, Linked Third Party or as an Associate Partner, or via ACTRIS national consortium.

Later in its meeting 04 (7-8.6.2018, Zurich) IAC amended the second criterion to:

2. Each Unit of the CF applicant should be operated by a public or private, European non-profit research performing organisation.

4.2 External evaluation

As part of the mandate, IAC also defined that, in order to ensure the fairness, transparency and objectivity of the process, the candidate host consortia must be evaluated by external evaluators who are experts in research infrastructures or ACTRIS-type activities or representing the ACTRIS user community. Two to three experts for each Central Facility must be involved and they should write a consensus report on the application. Three main areas should be considered for the evaluation:

1. Scientific excellence and experience on specific service provision,
2. Feasibility, including capacity and maturity of operational support and service provision, implementation plan, resources and operational management and
3. Demonstrated institutional support.

The candidate consortia should also be given a chance to respond to the comments and issues raised by the evaluators.

4.3 Reference documents

The reference documents for the evaluation were approved as:

- Central Facility host application form
 - o Annex I: Statement of readiness
 - o Annex II: Letter of Intent with political support for ACTRIS
- RI concept and service document (approved in Feb 2018, 3rd IAC meeting)
- CF specific descriptions (approved in June 2018, 4th IAC meeting)
- CF baseline document (acknowledged by IAC in Oct 2017, 2nd IAC meeting)
- CF Concepts (ACTRIS PPP deliverable 4.1)
- ACTRIS Stakeholder Handbook 2017 (ACTRIS PPP deliverable 1.3)

Later, ACTRIS governance and management structure (ACTRIS PPP deliverable 1.1) was added to the list. This was not a reference document for evaluation approved by IAC, but the evaluation template referred to it.

4.4 CF selection task group

As part of the mandate, IAC set up a CF selection task group to organize and run the selection process. The task group members were proposed by ACTRIS PPP. The mandated group consisted of individuals in ACTRIS PPP that have not been involved in preparing the CF concepts and were not foreseen to be included in the applications of the candidate host consortia. In addition, the IAC nominated two IAC delegates as observers in the group. These delegates are from countries not foreseen to host any Central Facility components in ACTRIS.

The group composed of:

- Niku Kivekäs, Finland, ACTRIS PPP office
- Silja Häme, Finland, ACTRIS PPP office
- Ulla Wandinger, Germany, ACTRIS PPP WP5 (National Facilities)
- Sabine Philippin, France, ACTRIS PPP WP6 (Access and services)
- Paolo Laj, France, ACTRIS PPP WP7 (Strategy and long-term vision)
- Pirjo Kontkanen, Finland, ACTRIS PPP WP2 (Legal framework)
- Michal Rybinski, Poland, observer
- Vassilis Amiridis, Greece, observer

The detailed tasks covered by this task group according to the mandate were:

- Production of the application form and the evaluation template
- Preparation and publication of the call
- Performing the eligibility check for the applications
- Identifying and inviting external evaluators
- Overall management of the process
- Provision of all documentation to Interim ACTRIS Council, including recommendation of the task group, consensus reports of the evaluators and the written responses of the applicants to the evaluator's reports.

5 Process

5.1 The process steps and schedule

The initial process and schedule for selecting candidate hosts for ACTRIS Central Facilities is described in detail in the table below. The actions of different actors in the process are highlighted with different colours.

Date(s)	Actor	Action	Output
5.2.2018	ACTRIS PPP	ACTRIS PPP proposed to IAC how it would handle the CF selection process.	IAC decision material for CF selection process for approval
27.2.2018	IAC	In 3rd IAC meeting (Bucharest) IAC approved (after minor amendments) the CF selection process to be handled by ACTRIS PPP and nominated the CF host selection task group.	Mandate and principles for the CF selection process
28.2.2018 – 6.6.2018	Task group	Preparation of the application template, evaluation template and the call for hosting ACTRIS Central facilities. Engaging the evaluators.	Call and evaluation material prepared, evaluators identified
7.6.2018	IAC	In 4th IAC meeting (7-8.6.2018, Zurich) a small technical amendment was made in the CF host eligibility criteria and the last reference documents were approved.	Finalized eligibility criteria, approved CF specific descriptions
11.6.2018	Task group	The call was opened for applicants.	Call for CF candidate hosts available at ACTRIS web site
11.6.2018 – 8.8.2018	Applicants	Writing the applications to host ACTRIS Central Facilities, deadline 8.8.2018.	Applications
9.8.2018 – 13.8.2018	Task group	Eligibility check for the candidate hosts in the applications. Providing applications to the evaluators.	Applications available for the evaluation
13.8.2018 – 7.9.2018	Evaluators	Evaluating the applications and providing a consensus report.	Evaluation reports
8.9.2018 – 12.9.2018	Task group	Checking the technical quality of the evaluation reports and anonymizing them. Anonymous evaluation reports provided to the applicants for their written responses.	Evaluation reports available to the applicants
12.9.2018 – 28.9.2018	Applicants	Writing the written responses to the issues raised in the evaluation reports and providing them to the Task group.	Written response documents
28.9.2018 – 4.10.2018	Task group	Writing the summary document of the evaluation results of each CF and proposing to IAC whether the CF consortia should be approved.	CF selection materials of each CF to IAC for approval.
25.10.2018	IAC	5th IAC meeting (25-26.10.2018, Lyon) to acknowledge the selection process and to approve the candidate hosts for each Central Facility.	Approved candidate hosts for each CF.

To run this process the task group had three remote meetings 12.3.2018, 25.4.2018 and 5.6.2018 and one face-to-face meeting during ACTRIS PPP meeting in Prague 19.9.2018.

5.2 Call for Central facility candidate hosts

The call for ACTRIS CF candidate hosts was opened on 11.6.2018 on the ACTRIS web site at and closed on 8.8.2018. All the call material is available at ACTRIS web site at [http://www.actris.eu/Projects/ACTRISPPP\(2017-2019\)/CallforCFhosts.aspx](http://www.actris.eu/Projects/ACTRISPPP(2017-2019)/CallforCFhosts.aspx).

5.3 Applications and applying consortia

The applications were written on a specially prepared template (in Annex 1) consisting of 13 questions dealing with identification and excellence of the consortium, the planned internal coordination of the CF, planned operation support and service provision by the CF, allocated resources and institutional and political support by the hosting institutions and countries.

Before the deadline on 8.8.2018 the task group received eight applications, one application for each Central Facility. All applications came from the ACTRIS community and there were no competing applications. All organizations included in the applications were found eligible.

The consortia that applied for each Central Facility were:

ACTRIS Head Office

- Finnish Meteorological Institute (FMI), Finland
- University of Helsinki – Institute for Atmospheric and Earth System Research (UHEL-INAR), Finland
- Consiglio Nazionale delle Ricerche (CNR), Italy

ACTRIS Data Centre

- Norsk Institutt for Luftforskning Stiftelse (NILU), Norway
- Consiglio Nazionale delle Ricerche (CNR), Italy
- Centre National de la Recherche Scientifique (CNRS), France
- Finnish Meteorological Institute (FMI), Finland
- Norwegian Meteorological Institute (MetNo), Norway

Centre for Aerosol In Situ Measurements

- Leibniz Institute for Tropospheric Research (TROPOS), Germany
- French National Institute for Industrial Environment and Risks (INERIS), France
- Centre National de la Recherche Scientifique (CNRS), France
- French Alternative Energies and Atomic Energy Commission (CEA), France
- University of Helsinki – Institute for Atmospheric and Earth System Research (UHEL-INAR), Finland
- Institute of Chemical Process Fundamentals at Czech Academy of Sciences (ICPF), Czech Republic
- Istituto Nazionale di Fisica Nucleare (INFN), Italy

Centre for Aerosol Remote Sensing

- National Institute of Research and Development for Optoelectronics (INOE), Romania
- Meteorological Institute of the Ludwig-Maximilians-University (LMU-MIM), Germany
- Consiglio Nazionale delle Ricerche (CNR), Italy
- Hohenpeissenberg Meteorological Observatory, Deutscher Wetterdienst (DWD), Germany
- CNRS-Laboratoire d'Optique Atmospherique,, Université de Lille, France

- AEMET - Izána Atmospheric Research Center, Spain
- University of Valladolid (UVA), Spain

Centre for Cloud In Situ Measurements

- Karlsruhe Institute of Technology (KIT), Germany
- School of Earth and Environmental Sciences, The University of Manchester (UMan), United Kingdom
- Leibniz Institute for Tropospheric Research (TROPOS), Germany

Centre for Cloud Remote Sensing

- Centre National de la Recherche Scientifique (CNRS) together with, Ecole Polytechnique and Université de Versailles Saint-Quentin-en-Yvelines, France
- Delft University of Technology (TUD) together with Royal Dutch Meteorological Institute (KNMI), The Netherlands
- University of Cologne (UCol), Germany
- National Centre for Atmospheric Science (NCAS), United Kingdom
- Finnish Meteorological Institute (FMI), Finland

Centre for Reactive Trace Gases In Situ Measurements

- Institute of Meteorology and Climate Research (IMK), Department of Atmospheric Environmental Research (IFU), Karlsruhe Institute of Technology (KIT), Germany
- Institute of Energy and Climate Research, IEK8: Troposphere, Forschungszentrum Jülich GmbH (FZ Jülich), Germany
- Atmospheric Sciences and Environmental Engineering Department (SAGE), Institution Mines Telecom Lille Douai (IMT/LD), France
- University of Helsinki – Institute for Atmospheric and Earth System Research (UHEL-INAR), Finland
- Hohenpeissenberg Meteorological Observatory, Deutscher Wetterdienst (DWD), Germany
- The Laboratory for Air Pollution/Environmental Technology, Swiss Federal Laboratories for Materials Science and Technology (EMPA), Switzerland

Centre for Reactive Trace Gases Remote Sensing

- Royal Belgian Institute for Space Aeronomy (BIRA-IASB), Belgium
- Karlsruhe Institute of Technology (KIT), Germany
- Centre National de la Recherche Scientifique (CNRS), France
- Medical University Innsbruck (MUI), Austria
- Royal Netherlands Meteorological Institute (KNMI), The Netherlands
- University of Liège (ULiège), France

5.4 Evaluation

The evaluators worked in groups of three evaluators, one of them acting as rapporteur, providing the written consensus report of the evaluation team to the Central Facility selection task group.

The evaluations were made on a specific evaluation template (in Annex 2), where the evaluators scored the applicants' answers to each question based on how they covered the information that was asked in the template. The scoring was made on scale "Yes" / "Partially" / "No", except for the questions asking for political support, where the scale was "Yes" / "No" / "Not Relevant". For each question the evaluators also provided open written answers identifying the potential gaps in the applications and providing other remarks and recommendations. In the end the evaluators also provided a general overview and score for the application on scale "Good to excellent" / "Satisfactory" / "Insufficient". All eight evaluation reports were provided to the task group within the given deadline.

There were some technical issues with the evaluations, leading in some cases to evaluation reports that were not fully compliant with the requirements initially set for the evaluation. The evaluation report of the ACTRIS Data Centre proposal was first provided to the task group as three individual evaluation reports and upon asking from the rapporteur the task group received a combined report where the answers were put in the same document, but not showing a clear consensus view of the evaluation team. One of the evaluators gave low scores due to lack of detailed information that was not asked in the proposal template. Also, the combined evaluation report included some contradictory recommendations. Similarly, the evaluation team for the ACTRIS Head Office application did not show a clear consensus view, resulting in partially contradictory recommendations from the evaluation team. One of the reviewers for the Centre for Cloud In Situ Measurements proposal withdrew herself from the process due to personal reasons, after which the evaluation of the Centre for Cloud In Situ Measurements proposal was finished with a team consisting of only two evaluators.

5.5 Written responses by the applicants

After checking the quality of the evaluation reports and anonymizing them, the Central Facility selection task group provided the reports to the applicants for their written responses on the issues raised up by the evaluators. All applicant consortia provided a written response document within the given deadline.

5.6 Summary reports and recommendation by the task group to IAC

To facilitate the approval of the Central Facility candidate hosts by IAC, the task group provided to 5th IAC meeting (25-26.10.2018, Lyon) a short description of the evaluation process and a summary report for each Central Facility, based on the application, evaluation and the written response and made a recommendation to IAC regarding the approval of the candidate hosts. In addition to each summary report the task group also provided the application (including statements of readiness), evaluation report and written response for the respective Central Facility as background material.

In the summary reports the critics by the evaluators were classified in four groups: Critical issues, Key issues, Technical issues and Out-of-scope issues. The only critical issues were found in the proposal for hosting the Centre for Cloud In Situ Measurements. The most critical issue was the lack of capability in the consortium to calibrate integrating cloud probes. In the written response, the consortium acknowledged this deficit and already identified a new potential consortium partner (Sonnblick Observatory at Central Institution for Meteorology and Geodynamics (ZAMG), Austria) that could fill the gap in capability. The other critical issue was the level of signature from one of the consortium partners, not seen high enough to demonstrate the institutional commitment for enabling and funding the proposed activities.

There were key issues in all proposals and they were answered adequately in the written responses by the applicant consortia. Many of the issues were acknowledged to require further work during the implementation of the Central Facility. The lack or low amount of committed funding was found as a key issue in all proposals.

Technical issues were addressed in the written responses, or were considered not important and therefore not requiring a detailed answer at this stage.

The out-of-scope issues were addressing things that were not relevant for the CF host selection process and therefore the answers to those were not addressed further.

The recommendation was for IAC in its meeting 05 (in Lyon 25-26.10.2018) to approve the candidate host consortia as in the proposals for the following Central Facilities:

- ACTRIS Head Office
- ACTRIS Data Centre
- Centre for Aerosol In Situ Measurements
- Centre for Aerosol Remote Sensing
- Centre for Cloud Remote Sensing
- Centre for Reactive Trace Gases In Situ Measurements
- Centre for Reactive Trace Gases Remote Sensing

In case of the consortium applying to host the Centre for Cloud In Situ Measurements the Task group recommended IAC to postpone the approval to 6th IAC meeting (12-13.12.2018, Brussels). This postponement would allow a fast re-evaluation of the consortium, including the new consortium partner, by the original reviewers. This proposal was made in order to allow to IAC to make an informed decision based on external evaluation also for the additional candidate host.

The task group also proposed to IAC that this and potential other re-evaluations would be facilitated by the same task group that was mandated for the original selection process. Later on, in the implementation operational phase adding or removing partners from the CF host consortia would require another type of process, to be prepared by ACTRIS PPP WP7.

6 IAC decision on Central Facility candidate hosts on 25.10.2018

In its meeting 05 (25-26.10.2018, Lyon) IAC approved the following CF candidate host consortia, allowing them to proceed in the implementation of their respective Central Facilities:

- ACTRIS Head Office
- Centre for Aerosol In Situ Measurements
- Centre for Aerosol Remote Sensing
- Centre for Cloud Remote Sensing
- Centre for Reactive Trace Gases In Situ Measurements
- Centre for Reactive Trace Gases Remote Sensing

In case of Centre for Cloud In Situ Measurements IAC postponed the decision, as was proposed by the task group.

In the 5th IAC meeting Spain requested to add Barcelona Supercomputing Centre (BSC) to the ACTRIS Data Centre host consortium, since BSC will provide some specific level-3 data products. This led to a situation where IAC had to postpone also the approval of the ACTRIS Data Centre candidate hosts, based on the argumentation provided to IAC by the task group in the case of Centre for Cloud In Situ Measurements. The re-evaluation of the ACTRIS Data Centre proposal was to be made by only two of the original three evaluators.

As the IAC meetings 05 and 06 were scheduled only seven weeks apart from each other, IAC decided to make an exception to its normal rules of procedure and allow the new selection materials for approval of candidate host consortia for ACTRIS Data Centre and Centre for Cloud In Situ Measurements to be provided only one week before 6th IAC meeting, the material deadline thus being 5.12.2018.

7 Re-evaluation of Centre for Cloud In Situ Measurements and ACTRIS Data Centre

7.1 Process and schedule

To facilitate the re-evaluation of the ACTRIS Data Centre and Centre for Cloud In Situ Measurements proposals, the task group contacted the respective evaluators and, together with them, set up a schedule for a fast evaluation of the updated versions of the two proposals, taking into account that the evaluators were already familiar with the original applications and the reference materials. As the re-evaluation of the Centre for Cloud In Situ Measurements proposal was foreseen beforehand, the evaluators could be conditionally re-engaged and a schedule for the potential re-evaluation could be agreed with them before the IAC decision, targeting to have materials ready for IAC two weeks before the 6th IAC meeting. Also, the applying consortium could start preparing the updated application before the IAC decision. For the ACTRIS Data Centre this was not possible. For this reason, the two re-evaluation processes had a somewhat different schedule, even though both were finally targeting to the 1-week deadline 5.12.2018.

The schedules of the second round of review for both CFs are described in the table below:

Action	Actor	Date in Centre for Cloud In Situ Measurements evaluation	Date in ACTRIS Data Centre evaluation
IAC decision of re-evaluation	IAC	25.10.2018	25.10.2018
Application	Applicant	26.10.2018 - 8.11.2018	26.10.2018 - 13.11.2018
Application provided to evaluators	Task group	9.11.2018	14.11.2018
Evaluation	Evaluators	10.11.2018 - 19.11.2018	15.11.2018 - 26.11.2018
Anonymized evaluation report provided to applicant	Task group	20.11.2018	27.11.2018
Written response by the applicant	Applicant	21.11.2018 - 26.11.2018	28.11.2018 - 3.12.2018
Recommendation and material provided to IAC	Task Group	5.12.2018	5.12.2018
IAC decision on candidate hosts	IAC	12.12.2018	12.12.2018

All deadlines were met by all parties in this new round of evaluations, enabling the task group to provide a solid proposal for IAC regarding ACTRIS Data Centre and Centre for Cloud In Situ Measurements. The applications for hosting these two Central facilities were both evaluated as “good to excellent proposal” by the respective evaluation teams in the re-evaluation. The consortia were able to answer to the minor critics in their written responses. The task group proposed both of these candidate host consortia to be approved by IAC in 6th IAC meeting (12-13.12.2018, Brussels).

8 IAC decision on Central Facility candidate hosts on 12.12.2018

In its meeting 06 (12-13.12.2018, Brussels) IAC approved the cost candidate consortia for ACTRIS Data Centre and Centre for Cloud In Situ Measurements, as proposed by the task group.

9 Final outcome of the Central Facility hosts selection process

9.1 Approved CF hosts

As the outcome of the Central Facility candidate host selection process, IAC has approved the following organizations to host the ACTRIS Central Facilities:

ACTRIS Head Office

- Finnish Meteorological Institute (FMI), Finland
- University of Helsinki – Institute for Atmospheric and Earth System Research (UHEL-INAR), Finland
- Consiglio Nazionale delle Ricerche (CNR), Italy

ACTRIS Data Centre

- Norsk Institutt for Luftforskning Stiftelse (NILU), Norway
- Consiglio Nazionale delle Ricerche (CNR), Italy
- Centre National de la Recherche Scientifique (CNRS), France
- Finnish Meteorological Institute (FMI), Finland
- Norwegian Meteorological Institute (MetNo), Norway
- Barcelona Supercomputing Centre (BSC), Spain

Centre for Aerosol In Situ Measurements

- Leibniz Institute for Tropospheric Research (TROPOS), Germany
- French National Institute for Industrial Environment and Risks (INERIS), France
- Centre National de la Recherche Scientifique (CNRS), France
- French Alternative Energies and Atomic Energy Commission (CEA), France
- University of Helsinki – Institute for Atmospheric and Earth System Research (UHEL-INAR), Finland
- Institute of Chemical Process Fundamentals at Czech Academy of Sciences (ICPF), Czech Republic
- Istituto Nazionale di Fisica Nucleare (INFN), Italy

Centre for Aerosol Remote Sensing

- National Institute of Research and Development for Optoelectronics (INOE), Romania
- Meteorological Institute of the Ludwig-Maximilians-University (LMU-MIM), Germany
- Consiglio Nazionale delle Ricerche (CNR), Italy
- Hohenpeissenberg Meteorological Observatory, Deutscher Wetterdienst (DWD), Germany
- CNRS-Laboratoire d'Optique Atmosphérique, Université de Lille, France
- AEMET - Izána Atmospheric Research Center, Spain
- University of Valladolid (UVA), Spain

Centre for Cloud In Situ Measurements

- Karlsruhe Institute of Technology (KIT), Germany
- School of Earth and Environmental Sciences, The University of Manchester (UMan), United Kingdom
- Leibniz Institute for Tropospheric Research (TROPOS), Germany
- Sonnblick Observatory, Zentralanstalt für Meteorologie und Geodynamik (ZAMG), Austria

Centre for Cloud Remote Sensing

- Centre National de la Recherche Scientifique (CNRS) together with, Ecole Polytechnique and Université de Versailles Saint-Quentin-en-Yvelines, France
- Delft University of Technology (TUD) together with Royal Dutch Meteorological Institute (KNMI), The Netherlands
- University of Cologne (UCol), Germany
- National Centre for Atmospheric Science (NCAS), United Kingdom
- Finnish Meteorological Institute (FMI), Finland

Centre for Reactive Trace Gases In Situ Measurements

- Institute of Meteorology and Climate Research (IMK), Department of Atmospheric Environmental Research (IFU), Karlsruhe Institute of Technology (KIT), Germany
- Institute of Energy and Climate Research, IEK8: Troposphere, Forschungszentrum Jülich GmbH (FZ Jülich), Germany
- Atmospheric Sciences and Environmental Engineering Department (SAGE), Institution Mines Telecom Lille Douai (IMT/LD), France
- University of Helsinki – Institute for Atmospheric and Earth System Research (UHEL-INAR), Finland
- Hohenpeissenberg Meteorological Observatory, Deutscher Wetterdienst (DWD), Germany
- The Laboratory for Air Pollution/Environmental Technology, Swiss Federal Laboratories for Materials Science and Technology (EMPA), Switzerland

Centre for Reactive Trace Gases Remote Sensing

- Royal Belgian Institute for Space Aeronomy (BIRA-IASB), Belgium
- Karlsruhe Institute of Technology (KIT), Germany
- Centre National de la Recherche Scientifique (CNRS), France
- Medical University Innsbruck (MUI), Austria
- Royal Netherlands Meteorological Institute (KNMI), The Netherlands
- University of Liège (ULiège), France

9.2 Next steps

After approval by IAC, the organizations listed above have the mandate to proceed in planning of the implementation of the ACTRIS Central Facilities as candidate host for the respective Central Facilities. The final approval of the CF hosts will take place at later stage when the detailed implementation plans and more detailed funding information are available.



Annex 1. Application form

Application form for ACTRIS Central Facility host candidates

Goal and principles

ACTRIS (*Aerosol, Cloud and Trace Gases Research Infrastructure*) was adopted to the ESFRI roadmap in 2016. During the ongoing preparation phase (2017-2019), ACTRIS shall achieve maturity at organizational, operational and strategic levels. The preparation phase is supported by the European Commission (ACTRIS Preparatory Phase Project, PPP) and partner countries and organizations at the national level. The ACTRIS Central Facilities (CFs) host selection will be an essential outcome of ACTRIS PPP (*D4.3 Report on CF host selection process and outcome*).

During the implementation phase (expected 2020-2024), the CFs are constructed and their services are tested. ACTRIS operations will start step-by-step by ramping up the service provision. After the necessary legal preparations, ACTRIS shall become a legal entity (ERIC, European Research Infrastructure Consortium) funded by the Member countries. The target is to launch ACTRIS ERIC in the beginning of 2021. It is foreseen that ACTRIS will be fully operational by 2025. The ACTRIS CF technical concepts and service provision are detailed in the ACTRIS PPP deliverable *D4.1 Concept document on ACTRIS Central Facilities structure and services*.

The goal of the selection process is **to decide upon the undisputed host candidates for ACTRIS Central Facilities (CFs) - Head Office, Data Centre and six Topical Centres**.

The following principles are crucial to reach the above-mentioned goal:

- The host candidates must provide long-term certainty, clarity, continuity and commitment to the scientific community involved in ACTRIS.
- The selection process and evaluation is transparent and directed towards reaching consensus.
- The final decision is made by the Interim ACTRIS Council.

This form must be completed in English, converted into PDF-format and sent together with relevant attachments to ACTRIS Central Facility Selection task group (actris-cf-selection-task-group@helsinki.fi) by **8th August 2018** at 24:00 CET. The application shall be sent by the leader of the candidate consortium on behalf of all partner institutions involved in the proposal. Confirmation of receipt will be sent by e-mail to the applicant.

The application will be evaluated by a team of external experts. The application will be evaluated along three criteria: 1) **Scientific/ Technical/ Management excellence and experience** on specific service provision, 2) **Feasibility**, including capacity and maturity of operation support and service provision, implementation plan, resources and operational management and 3) demonstrated **institutional support**. Please note that this “Application form for ACTRIS Central Facility host candidates” must be accompanied by a statement (-s) of readiness of the involved institutes.

The guidelines for page limits of each of the application sections should be followed. Minimum single-spaced, Calibri font 11 and 2 cm margins all around should be applied. If needed, additional rows in tables and / or additional tables can be created.

General information on candidate consortium

1. Information on the application

The Central Facility being proposed:

- ☐ Head Office
- ☐ Data Centre
- ☐ Centre for Aerosol In Situ Measurements
- ☐ Centre for Cloud In Situ Measurements
- ☐ Centre for Reactive Trace Gases In Situ Measurements
- ☐ Centre for Aerosol Remote Sensing
- ☐ Centre for Cloud Remote Sensing
- ☐ Centre for Reactive Trace Gases Remote Sensing

Name and acronym of the Central Facility:

Coordinator of the application

- Full Name of host institute
- City, country
- Short description of the host institute (*max 5 lines*)

- Contact person (PI) and his/her contact information

Other participating institutions

Partner 2

- Institute
- City, country
- Short description of the host institute (*max 5 lines*)
- Name of contact person (PI) and his/her contact information

Partner 3

- Institute
- City, country
- Short description of the host institute (*max 5 lines*)
- Name of contact person (PI) and his/her contact information

...

Excellence and Expertise

2. Short description of the relevant Scientific / Technical / Management excellence of the candidate consortium in the specific tasks of the CF. (*max 1 page*)

Scientific and technical excellence (if you apply for a Topical Centre).

Excellence in scientific data management (if you apply for the Data Centre).

Excellence in implementing and managing an international organisation (if you apply for the Head Office).

3. RI expertise (*max ½ page*)

Past experience in provision of services related to the concerned CF.

4. Consortium as a whole (*max ½ page*)

Relevance of the Central Facility Units within the candidate consortium (e.g., particularity, complementarity) and experience of the Central Facility consortium partners in joint operations.

Internal organization and management of the Central Facility

5. Composition of the proposed Central Facility

Name of Central Facility Unit	Hosting institution	Location (City, country)	Main activities	Estimated size in 2025 (in FTE)
<i>Example Unit, please remove</i>	<i>Finnish Meteorological Institute</i>	<i>Helsinki, Finland</i>	<ul style="list-style-type: none"> - <i>Example instrument calibrations</i> - <i>Training of example users</i> - <i>Coordination and management of the example consortium</i> 	<i>3.5</i>

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6. Internal coordination and management of the Central Facility (*max ½ page*)

Describe the coordination and management structure of the CF consortium and explain the required human resources foreseen for the coordination and management of the CF consortium. Please refer to the ACTRIS PPP deliverable D1.1 ACTRIS governance and management structure:

<https://www.actris.eu/Portals/46/Documentation/ACTRIS%20PPP/Deliverables/Public/ACTRIS%20Governance%20and%20management%20structure%20D1.1.pdf?ver=2017-06-02-101527-313>.

All Central Facilities (except for ACTRIS Head Office) are expected to have a governance structure consisting of a Central Facility Director and the Heads of the Central Facility Units involved. The Central Facility Director and the Heads of Units should form the Management Board of the Central Facility.

Description and implementation schedule of ACTRIS operation support and ACTRIS services offered

In this section, the candidates are asked to describe how and when the Central Facility will be implemented and to indicate and quantify i) the operation support to ACTRIS National Facilities (ACTRIS glossary: <https://www.actris.eu/About/ACTRIS/ACTRISglossary.aspx>) and ii) the services to users that the Central Facility would offer. These include activities for assuring the quality of measurements and data, provision of long-term archiving and access to data, activities improving measurement methodologies and data life cycle, services for managing ACTRIS, training of ACTRIS operators and users and transfer of knowledge.

7. Implementation plan (*max ½ page*)

Describe briefly the plan and schedule for implementing the Central Facility.

--

8. Operation support activities for running of the research infrastructure

Add rows to the table as needed.

Activity #	Description of activity	Estimated quantity of the activity provided / year	Proposed implementation schedule	CF Unit offering the operation support
O0	Example line, please remove 1 ACSM calibration	6	Full capacity in 2023	Example Unit
O1				
O2				
O3				
O4				
...				

9. Services offered to users of ACTRIS

Add rows to the table as needed.

Service #	Description of service	Estimated quantity of the service provided / year	Proposed implementation schedule	CF Unit offering the service
S0	<i>Example line, please remove Training day for max 10 ACSM operators</i>	4	Available in 2024	Example Unit
S1				
S2				
S3				
S4				
...				

Resources to be committed during the implementation phase (2020-2024) and early operation phase (2025-2030)

10. Foreseen overall costs for implementation and early operation phase

Foreseen overall costs for the implementation phase (2020-2024) and foreseen annual costs for the early operation phase (2025-2030) (in Euros). *Please, provide the costs for each CF Unit separately in separate tables.*

UNIT 1						
Year Cost category	2020	2021	2022	2023	2024	2025-2030 (annual average)
Personnel*						
Equipment**						
Operations***						
Total costs						

* Costs for personnel (gross salaries, social contributions and other related staff costs).

** Instrument purchases, replacement and major upgrade. ACTRIS usage factor needs to be accounted for; as an example, instrument costs 100 000EUR and 50% of its usage will be for ACTRIS purposes, hence for the above table the equipment cost is 50 000€.

*** Includes building and construction costs (e.g. space rental and building maintenance), consumables, travel of personnel, external services (bookkeeping/accounting services, IT services, legal services, etc.), utilities (e.g. water, gas, electricity) and other costs (meeting arrangements, needed office/laboratory supplies etc.)

11. Secured financial resources to be committed for the CF

During implementation phase (2020-2024), the sum of secured funds and unsecured funds should equal the total implementation costs. Here, secured funds refer to funding which is already confirmed by contracts and / or agreed by the RPOs (Research Performing Organizations), e.g., in terms of in kind contribution (personnel).

	IMPLEMENTATION PHASE		
Unit	Total implementation phase cost* 2020-2024 (€)	Secured funds**	Unsecured funds
<i>Unit 1</i>			
<i>Unit 2</i>			
<i>Unit 3</i>			
<i>Unit 4</i>			
<i>Unit 5</i>			
<i>Unit 6</i>			
<i>Total (sum over all units)</i>			

*Indicate here the sum of the implementation costs over years 2020-2024. The numbers should match with the numbers provided in the table of section 9.

** Secured funds to implement the relevant CF Unit (RPO contribution and other funds)

During early operation phase (2025-2030), the sum of secured funds and unsecured funds should equal the total annual operation costs.

	OPERATION PHASE		
Unit	Annual operation cost* (€)	Secured funds**	Unsecured funds
<i>Unit 1</i>			
<i>Unit 2</i>			
<i>Unit 3</i>			
<i>Unit 4</i>			
<i>Unit 5</i>			

<i>Unit 6</i>			
Total (sum over all Units)			

*Indicate here the annual operation cost from 2025 onwards. The numbers should match the numbers provided in the table of section 9.

** Secured funds to operate the relevant CF Unit (RPO contribution and other funds)

If needed, additional information on the costs / funds can be provided briefly below (*max 10 lines*).

Status of engagement for the Central Facility in concern

12. Statements of readiness from the organizations part of the candidate consortium for the Central Facility in concern

The statements to be provided should be listed below and attached as separate documents. The statements should give information about i) the Partner's readiness to participate and to provide the services and ii) information about the Partner's willingness to provide the resources or, if already known, the readiness to provide the required resources during the implementation phase (2020-2024) and during the early operation phase (2025-2030). The template for the statement of readiness is provided as annex.

- Statement of Coordinating partner
- Statement Partner 2
- Statement Partner 3
- ...

13. Statements from countries (for example from ministries, funding agencies, Interim ACTRIS Council representatives)

Countries that are members or observers in the Interim ACTRIS Council have no obligation but have the choice to provide a statement if they see need for this. No specific template is provided for this purpose. The statements can be given on separate sheets and just listed here as a list of attachments. Applicants from countries that are neither members nor observers in the Interim ACTRIS Council and have not signed a Letter of Intent, should provide a statement from their country attached to this application. The template for the Letter of Intent is provided as annex.

- Statement of Coordinating partner country
- Statement country 2
- Statement country 3
- ...

Additional information

14. Please indicate any other relevant information that may help for the evaluation of the application (*max ½ page*)

Signature of the Coordinator of the application

<INSERT NAME HERE>

< INSERT PLACE HERE>, DD/MM/YYYY

<PLEASE SIGN HERE>

Annex 2. Evaluation template



Evaluation form for ACTRIS Central Facility host candidates

This 'Evaluation form for ACTRIS Central Facility host candidates' is to be completed by the evaluation teams; the Rapporteur should draft the report on behalf of all the evaluation team members to reflect the common view of the team.

Please convert your final evaluation form into PDF and send it by 7th September 2018 at 24:00 CET to ACTRIS Central Facility Selection task group (actris-cf-selection-task-group@helsinki.fi).

Please evaluate the proposal following the main criteria by answering the questions (yes / partially / no) and provide your overall assessment.

Please, refer to the material in the application package, especially

- The technical concept of relevant Central Facility
- CF specific descriptions (this document is a summary of ACTRIS Central Facility technical concepts describing the mission, role and technical requirements of each of the Central Facilities)

Date of evaluation:

Names of the evaluators:

Name of the rapporteur (evaluator drafting the report):

I. IDENTIFICATION OF THE APPLICATION

1. Information on the application

ACTRIS Central Facility:

- ☐ Head Office
- ☐ Data Centre
- ☐ Centre for Aerosol In Situ Measurements
- ☐ Centre for Cloud In Situ Measurements
- ☐ Centre for Reactive Trace Gases In Situ Measurements
- ☐ Centre for Aerosol Remote Sensing
- ☐ Centre for Cloud Remote Sensing
- ☐ Centre for Reactive Trace Gases Remote Sensing

Coordinator of the application

Name

Institution

Country of the institution

Other participants name and organisation (if more than one, replicate the lines)

Name

Institution

Country (or hosting country) of the institution

II. SPECIFIC ASSESSMENT FOLLOWING THREE MAIN CRITERIA

Scientific/ Technical/ Management excellence and experience on specific service provision	
EXCELLENCE AND EXPERTISE	
2. Short description of the relevant Scientific / Technical / Management excellence of the candidate consortium in the specific tasks of the CF. <i>Applicant is expected to show to have excellence in performing the specific tasks of the CF (please, refer to e.g. CF specific descriptions document and CF concept document).</i> Has the applicant demonstrated sufficient scientific/ technical / management excellence?	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
3. RI expertise <i>Applicant is expected to show to have previous experience in providing services related to the concerned CF (please, refer to e.g. ACTRIS CF Baseline document and CF concept document).</i> Has the applicant demonstrated sufficient previous experience in providing services related to the concerned CF?	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
4. Consortium as a whole. <i>Applicant is expected to highlight the relevance of the CF Units within the candidate consortium (e.g., particularity, complementarity) and experience of the CF consortium partners in joint operations.</i> Is the collaboration between multiple Units for this CF justified by gain in excellence?	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
Feasibility	
INTERNAL ORGANIZATION AND MANAGEMENT OF THE CENTRAL FACILITY	
5. Composition of the proposed Central Facility <i>Applicant is expected to state the planned composition of the proposed CF to cover the offered activities. In order to assess the relevance of the planned composition and the sufficiency of the CF</i>	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no

<p>capacity, please, refer to e.g. CF specific descriptions document for CF specific tasks and human resources.</p> <p><i>Is the collaboration between multiple Units for this CF justified by the activities and capacity?</i></p>	
<INSERT YOUR COMMENT>	
<p>6. Internal coordination and management of the Central Facility</p> <p><i>Applicant is expected to describe the coordination and management structure of the CF consortium and the planned human resources to cover the activities. The internal governance of the CF should be consistent with ACTRIS governance and management structure: All Central Facilities (except for ACTRIS Head Office) are expected to have a governance structure consisting of a Central Facility Director and the Heads of the Central Facility Units involved. The Central Facility Director and the Heads of Units should form the Management Board of the Central Facility (please, refer to ACTRIS PPP deliverable D1.1).</i></p> <p><i>Is the candidate consortium internal coordination and leadership clearly established and sound management proposed?</i></p>	<p><input type="checkbox"/>yes <input type="checkbox"/>partially <input type="checkbox"/>no</p>
<INSERT YOUR COMMENT>	
<p align="center">DESCRIPTION AND IMPLEMENTATION SCHEDULE OF ACTRIS OPERATION SUPPORT AND ACTRIS SERVICES OFFERED</p>	
<p>7. Implementation plan</p> <p><i>Applicant is asked to describe the overall plan and schedule for implementing the Central Facility to become fully operational. This question is strongly linked to the next two questions where the proposed implementation schedule for each specific operation support activity and service are requested. Substantial part of the CF is expected to be implemented by 2024. To note, the material provided along the call provides the mission, role and requirements of ACTRIS Central Facilities in the operation phase (2025 →). This section is especially important for Data Centre and Head Office.</i></p> <p><i>Does the candidate consortia as a whole show a realistic implementation plan that meets the timeline of ACTRIS implementation?</i></p>	<p><input type="checkbox"/>yes <input type="checkbox"/>partially <input type="checkbox"/>no</p>

<INSERT YOUR COMMENT>	
8. Operation support activities for running of the research infrastructure <i>Applicant is asked to indicate and quantify the operation support activities to ACTRIS National Facilities. Please, see CF specific descriptions document and CF concept document for the operation support foreseen. This question is especially relevant for ACTRIS Topical Centres. However, for ACTRIS Head Office and Data Centre this question is less relevant as their focus is rather on managing the whole RI / data than directly supporting the National Facilities. When evaluating the Head Office or Data Centre applications this should be kept in mind.</i> <i>Has the applicant demonstrated to cover the operational support activities at sufficient level and provide them at reasonable time schedule?</i>	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
9. Services offered to users of ACTRIS <i>Applicant is asked to indicate and quantify the services offered to the users of ACTRIS. Please, see CF specific descriptions document and CF concept document for the services foreseen. ACTRIS users originate from academia, public and private-non-profit research organisations, business, industry and public services, other non-profit organisations and citizen, from ACTRIS member countries as well as from countries, which are not ACTRIS members, inside and outside Europe.</i> <i>Has the applicant demonstrated to offer services to users at sufficient level and provide them at reasonable time schedule?</i>	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
RESOURCES TO BE COMMITTED DURING THE IMPLEMENTATION PHASE (2020-2024) AND EARLY OPERATION PHASE (2025-2030)	
10. Foreseen overall costs for implementation and early operation phase <i>Applicant is asked to provide the foreseen overall costs for the implementation phase (2020-2024) and foreseen annual costs for the early operation phase (2025-2030) each unit separately.</i>	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no

<i>Is the resource estimation realistic and fair?</i>	
<INSERT YOUR COMMENT>	
11. Secured financial resources to be committed for the CF <i>Applicant is expected to provide information on the current state of the secured and unsecured funds to build and operate the CF. Secured funds refer to funding which is already confirmed by contracts and / or agreed by the RPOs (Research Performing Organizations), e.g., in terms of in kind contribution (personnel).</i> <i>Note: It is not expected from the applicant to show that all of the costs are already covered. Rather, it is expected to see that the RPO level (possibly also from ministries and funding agencies) support exists.</i> <i>Is the current level of committed resources sufficient?</i>	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
Institutional support	
STATUS OF ENGAGEMENT FOR THE CENTRAL FACILITY IN CONCERN	
12. Statements of readiness from the organizations part of the candidate consortium for the Central Facility in concern <i>Do the organizations involved in the candidate consortium engage in the CF in concern (provide a statement of readiness)?</i>	<input type="checkbox"/> yes <input type="checkbox"/> partially <input type="checkbox"/> no
<INSERT YOUR COMMENT>	
13. Statements from countries (for example from ministries, funding agencies, Interim ACTRIS Council representatives) <i>Note: Mandatory only for applicants from countries that are neither members nor observers in the Interim ACTRIS Council and have not signed a Letter of Intent.¹</i>	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> not relevant

¹ As of June 2018, the following countries are represented in the **Interim ACTRIS Council**, Members: Austria, Belgium, Cyprus, Czech Republic, Finland, France, Greece, Italy, Netherlands, Norway, Poland, Romania, Spain, Switzerland and United Kingdom, & Observers: Bulgaria, Denmark and Germany.

<i>Have the applicants from countries that are not represented in Interim ACTRIS Council signed the Letter of Intent?</i>	
<INSERT YOUR COMMENT>	

III. OVERALL ASSESSMENT

a. Summary

Comments:

() Good to excellent proposal (The proposal demonstrates successfully the ability to cover the tasks and responsibilities foreseen for the Central Facility in concern with sound implementation plan, proper internal coordination and management structure and strong institutional support).

() Acceptable proposal (The proposal demonstrates sufficient ability to cover most of the tasks and responsibilities foreseen for the Central Facility in concern with little deviation from requested implementation schedule and from the foreseen internal coordination and management structure and provide strong institutional support).

() Unsatisfactory proposal (The proposal fails to demonstrate the ability to cover the tasks and responsibilities foreseen for the Central Facility in concern with improper implementation plan, poor internal coordination and management structure and weak / non-existing institutional support).

b. Overall Recommendations

Name of the Rapporteur:

Date:

Signature: