

Deliverable 1.4: Strategy for ACTRIS human resources

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1. Purpose

The purpose of this document is to set out the goals on human resource (HR) management policies and practices in ACTRIS. The document focuses on the essential elements for a distributed research infrastructure, which is starting its operation and, thus, needs to define its key roles and goals for building a sustainable human resources policy and management. Further, it aims to define the necessary human capital and skills required within ACTRIS as well as the strategy to recruit the needed people. It outlines the training and education needs, and identifies actions for facilitating training, staff exchange and other opportunities for staff to enhance their skills. In addition, it defines actions for meeting the equality and gender balance in employment.

2. Introduction

The main purpose of research infrastructures is to build up and maintain long-term facilities for scientific research. They are science based and science is the key element in their strategy and service provision, but they are not scientific projects as the focus is providing services for users, which are mainly scientists.

By establishing a research infrastructure as a legal entity, the work-mode changes from scientifically led networks towards a more robust, professionally managed and led organisation. The expertise needed to run and manage research infrastructures is different from scientific research, and research infrastructures will provide new career paths that need to be supported and developed further.

The expertise needed in the different positions and tasks in the RI varies, but the basic values and principles for a good working environment and conditions are usually not that different from any organisation, particularly from research performing organisation. It is, however, important to have these values and principles of the organisation described and commonly accepted.

For this purpose, ACTRIS will have a Staff Policy to be followed when people are working or recruited to work for ACTRIS. The ACTRIS Staff Policy will guide the persons contributing to ACTRIS activities to be ethically aware and socially responsible, and to comply with the expectations of stakeholders and the research infrastructure management. The ACTRIS Staff Policy will guide the every-day HR processes and functions, but it is also a document that will guide the strategic plans as it sets the ACTRIS values and principles that need to be considered also in strategic decisions and creation of work culture for ACTRIS.

In addition to common values and principles, research infrastructures need motivated and skilled human capital to maintain sustainable, long-term functions. Therefore, the infrastructures need a HR strategy for providing attractive working environments, good working conditions and possibilities for training and career paths.

This Human resource strategy document refers to the first five-year period of ACTRIS in the implementation phase. The goal is to develop good HR structures and functions that support the HR development and sustainability align with the ACTRIS Staff Policy.

3. General framework

The functionality of ACTRIS is based on distributed National Facilities (NF) that are developed, managed and operated (or co-operated) by the national Research Performing Organisations (RPOs). Furthermore, ACTRIS includes eight Central Facilities (CF): six Topical Centres (TC), the Data Centre (DC) and the Head Office (HO). Each Central Facility consists of several Units hosted by ACTRIS member or permanent observer countries and operated by a responsible ACTRIS RPO, with the exception of HO, which is operated by an independent legal entity, ACTRIS ERIC. The CF and NF are the core components of ACTRIS (Figure 1) and all the ACTRIS activities will be steered, coordinated and managed by ACTRIS ERIC (decisions made by General Assembly, coordinated by Director General and managed by Head Office).

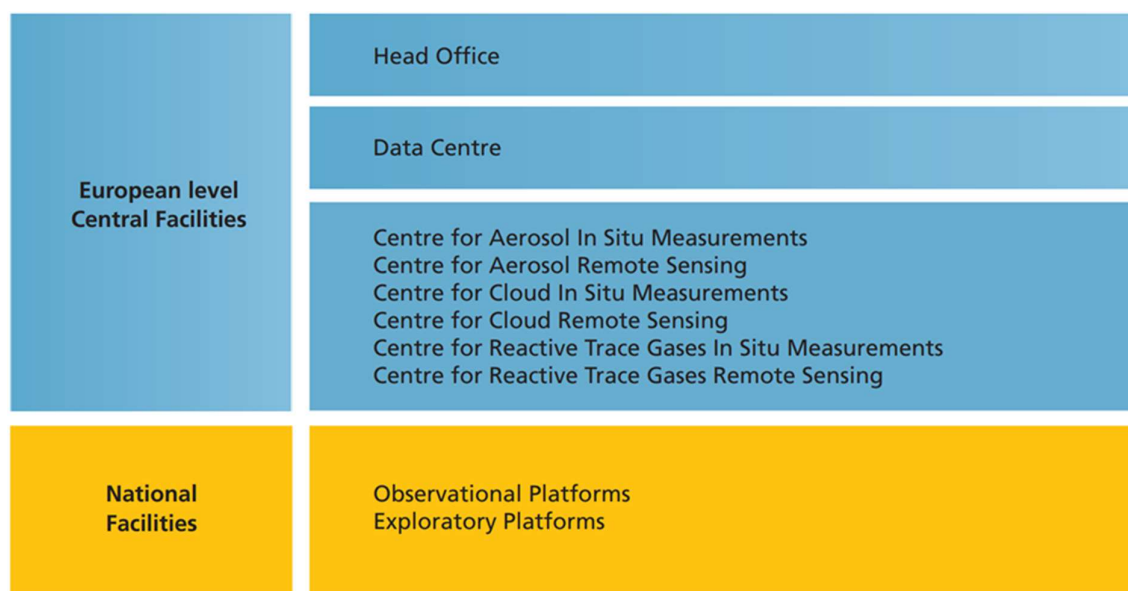


Figure 1. ACTRIS core components: National and Central Facilities, including the indication of national and European level activities.

Change from a project-based scientific research towards operational research infrastructures creates new needs of professional expertise and more coherent organisational management. Short-term research projects produce valuable data and important scientific results, but only well-managed long-term networks and international research infrastructures can sustainably provide data, knowledge and other services for science and wide user communities. However, it is essential to maintain and support both research projects and loosely managed networks, as well as research infrastructures, to stay at the forefront of science.

ACTRIS brings together more than 300 scientists, engineers, technicians and other personnel that will be mostly working in ACTRIS related RPOs, dedicating only part of their working time to ACTRIS. ACTRIS HR Strategy should support their professional and career development and help balancing the RI related work with their other tasks. For successful and efficient operations, it would also be beneficial

in the long run, that in addition to the Director General, the key personnel would be able to dedicate most of their working time to ACTRIS.

3.1. Foreseen tasks of the Central Facilities and National Facilities

The distributed nature of ACTRIS, with estimation of more than 100 NFs, eight CFs and more than 100 RPOs involved in establishing ACTRIS activities in almost 20 European countries creates a new kind of challenges and expectations in order to have well-functioning, efficient and transparent governance and management structures and work culture, as well as excellent HR management.

The preliminary structure, tasks and the required human resources for ACTRIS have been described in the Concept documents on ACTRIS Central Facilities structure and services, Deliverable 4.1 of the ACTRIS Preparatory Phase Project and summarised as CF specific descriptions that were approved in the Interim ACTRIS Council in June 2018. The overall ACTRIS structure and general tasks of ACTRIS are also defined in the Technical and Scientific Description that was submitted to the Commission in March 2019, together with the Step 1 application to establish the ACTRIS ERIC.

According to these documents, the HO is responsible for planning, improving and securing all aspects related to the sustainability of the whole RI: access to ACTRIS resources and services, scientific excellence, successful user strategy, efficient governance and management (including human resources), financial sustainability, technological development and upgrading of the RI, innovation, measuring the socio-economic impacts and accounting for risks.

The DC is responsible for ACTRIS data curation, preservation and distribution of data, value-added products and digital tools. Its role and tasks are multi-fold, as the DC will offer a wide suite of services related to ACTRIS data, data products and digital tools.

The TCs support the operation of NFs and are responsible for: 1) defining and providing (to the NFs) procedures and tools for quality assurance and quality control of ACTRIS measurements and data; 2) performing quality assurance and quality control of ACTRIS measurements and data; 3) ensuring training and transfer of knowledge to ACTRIS operators and users and 4) improvements of measurement methodologies for aerosol, clouds and reactive trace gases. The TCs are required to respond to the scientific and technical needs of ACTRIS, each with a focus on either remote sensing (from the ground) or in situ (near-surface) measurement techniques.

The major task of the NFs is the acquisition and delivery of quality-controlled long-term and process-related data on aerosol, clouds and reactive trace gases. National Facilities within ACTRIS consist of Observational and Exploratory Platforms. Observational Platforms are fixed ground-based stations that deliver long-term data based on a regular measurement schedule and common operation standards. Exploratory Platforms are atmospheric simulation chambers, laboratory platforms and mobile platforms that perform dedicated experiments and contribute data on atmospheric constituents, processes, events or regions by following common ACTRIS standards. Exploratory Platforms and selected Observational Platforms will provide physical access to users, which requires that adequate personnel.

3.2. New roles and skills in ACTRIS

ACTRIS is a highly distributed and large research infrastructure and therefore the leadership, management and organisational structure play an important role. To succeed, ACTRIS needs to develop a management structure and practices that optimally supports its personnel in fulfilling their tasks. Efficient management requires clearly defined roles for key personnel, specific to ACTRIS, prior to recruitments. Clearly defined roles enable the personnel and the organisation to manage the expectations related to the positions. Moreover, clearly defined and commonly agreed roles help to build social engagement for ACTRIS and steer the organisation in the right direction. Along with the roles in ACTRIS as a distributed infrastructure, new competence, personnel skills and profiles are required. ACTRIS will not purely rely on scientific expertise.

The roles and related skills within ACTRIS are described below.

Director General

The Director General is the leader of the ACTRIS (research infrastructure) and legal representative of the ACTRIS ERIC. He/she represents equally all aspects of ACTRIS.

According to the statutes, the Director General is responsible for the implementation of the decisions made by the General Assembly. He/she will ensure that the scientific and strategic development of ACTRIS meets the expectations on socio-economic impact, technology development and innovation. The Director General will actively oversee and coordinate the community building within ACTRIS and foster external relations and strategic partnerships as well as ensure that the ACTRIS activities comply with the ACTRIS long-term strategic goals.

The Director General should be a renowned scientist in a field related to the scientific scope of ACTRIS, have extensive experience in leadership, be an excellent organizer and be familiar with research infrastructures at a senior level. As head of the whole ACTRIS he/she will need good communication and management skills in order to promote, represent and lead the entire RI, and look after the personnel of ACTRIS ERIC.

Central Facility Leader

The Central Facility Leaders (leaders of HO, DC, and six TCs) will have a key role in the leadership and management of the distributed research infrastructure. They lead and manage the CFs and are responsible for developing and implementing the activities of the CFs. They also take care that the ACTRIS activities are run according to the agreed policies and rules. They can have a leading role in science communication to the public, shared with the Head Office and Director General.

CF Leaders interact with the Central Facility Units and staff, and the Director General. They are closely linked with the scientific community of ACTRIS, contributing to the continuous development of the

ACTRIS long-term strategy. Together with the Director General, they may officially represent ACTRIS in their field of expertise. They should also interact with the NFs and data users.

Central Facility Leaders are members of the ACTRIS management committee and contribute to the development of ACTRIS as a unified, well-functioning research infrastructure.

CF Leader should have a strong scientific and technical background, combined with good managerial and organisational skills. He/she should have good communication skills to look after the personnel, interact with other ACTRIS actors, and have experience in science communication.

Central Facility Head of Unit

Heads of Units will lead and manage the different Units of the CFs, being responsible for the activities defined for that CF Unit. They need to have detailed knowledge of the field, and they interact with the scientific community and users taking care that ACTRIS activities are run according to ACTRIS rules. Within one CF the Units may provide very different services and support activities, thus the needed specific expertise varies between the Units. In addition to the operative tasks, they support the respective Central Facility Leader, e.g. in annual planning, operations and reporting.

Heads of Units are experts in their specific fields and should have managing skills required for leading the specific Unit. They need good organisation and communication skills (to provide efficiently operation support and services for users) and they should have understanding of being a part of a distributed research infrastructure with an interest in new technologies and cost-efficient development and innovation.

Currently, several CF leaders have also a role of a Head of Unit within the CF, which is important to take into account when defining the key roles in ACTRIS.

Staff of the CF

Staff of the CF locates in the ACTRIS ERIC or the contributing RPOs. ACTRIS CF staff should recognise the Heads of Units as their supervisors in ACTRIS related activities. RPOs contributing to the CF should acknowledge that the staff contributing to the ACTRIS activities is managed by the Head of Unit and the CF Leader.

Central Facilities vary in their scope and tasks, and the needed skills vary as well.

Head Office will need expertise and skills for at least the following profiles: executive directorship, officers and assistants to coordinate and monitor interlinkages with other parts of the RI, run and manage the every-day-life of the legal entity, access management, evaluation and user services. It will need experts for legal advice as well as financial management and communication.

Data Centre and Topical Centres including the Units will require personnel with strong scientific background in the relevant field, IT system developers, technicians, managerial and administrative

assistants, and people with scientific and technical background, as well as operators and IT-skilled personnel.

National Facility PI

National Facility PIs take care of ACTRIS Observational and Exploratory Platforms. They may work for ACTRIS full time or part time but, when the National Facility PIs work for ACTRIS, they represent ACTRIS and cannot act only as the PI of their host institution. They interact with the other actors of ACTRIS and with the users, and they can participate for example in meetings, workshops and trainings organised by ACTRIS. The National Facility PIs act as a link between the platform and the relevant CF Units and represent their facilities in the National Facility Assembly meetings. The PIs need to secure that the National Facility follows the ACTRIS technical concepts and requirements and that the data are produced according to the ACTRIS rules.

The NFs are operated nationally and many of the platforms already have an operative structure in place. The duties of the NF PI will be defined in the agreement between the NF and ACTRIS ERIC, and a NF need to take care they have the needed expertise to take care of the duties. As they are representatives in the National Facilities Assembly, understanding of being part of a distributed RI is needed.

National Contact Person

The National Contact Person (NCP) acts as a key interface between the national ACTRIS consortia and the European level ACTRIS. The NCP will be responsible for coordinating the ACTRIS activities at the national level. Furthermore, the NCP is responsible for ensuring proper dissemination and information flow from ACTRIS activities on the European level, to the national science communities and to the relevant national stakeholders, and vice versa, from the national communities to the ACTRIS community at European level.

NCP works in close connection with the NF PIs in order to share information and support the community building among the NF PIs.

4. Recruitment strategy

4.1. Recruitment in ACTRIS

One of the key goals of recruitment is to sustain the research infrastructure with motivated and committed personnel in the long term. Most of the ACTRIS related staff are recruited by their local RPOs or assigned for ACTRIS related tasks, following their internal processes. However, when possible, the positions in ACTRIS, whether full time or part time, should be provided through a transparent recruitment process giving equal chances for everyone to apply.

There should be a balance between senior and junior staff so that in case of a change, expertise and knowledge is not lost but transferred. Research infrastructures also benefit from not having professionals working a lot on fixed term basis but under contracts valid indefinitely. Competitive salaries on the other hand help to hire the best possible expertise to ACTRIS.

Personnel working in Central Facilities and National Facilities, which are not part of the ACTRIS ERIC, however, will always follow their own organisations recruitment policies and conditions of employment will vary within ACTRIS depending on the national legislations and rules. Examples of the labour laws and codes in different countries that may vary are employment act, collective agreements, regulations on annual leave and working hours, employee pension regulations, and legislation on privacy etc.

4.2. Recruitment in ACTRIS ERIC

In addition to ACTRIS Staff Policy ACTRIS ERIC shall have its own staff rules, which will define the conditions of employment and recruitment in more detail. These rules will follow the legislation of the country where people are working and will define for example the following kind of items: employment contracts, trial period, terminating employment, training and personal development, working hours, holiday, absences (e.g. family leaves, temporary childcare leave), salary, benefits, allowances, occupational health. The General Assembly, as the deciding body of ACTRIS ERIC, will approve the staff rules.

The Director General is the leader of ACTRIS and legal representative of ACTRIS ERIC, recruited for a fixed-term period according to the rules set out in the ACTRIS ERIC Statutes. For other ACTRIS ERIC personnel, employment contracts that are valid indefinitely should be used as much as possible in order to provide security and motivate the people to commit for a long time.

Outsourcing should be used when feasible. ACTRIS ERIC is exempted from VAT so it is in the interest of ACTRIS ERIC to make use of this benefit as much as possible. Outsourcing provides flexibility to adjust services according to needs and resources. Furthermore, through outsourcing the whole expertise portfolio of the service provider is usually available, which, in many cases, is much more than what can be assigned to employees in an organisation like ACTRIS ERIC, where only a limited number of personnel can be employed with the available funds.

There are, however, also limitations to use outsourcing that need to be considered. ACTRIS ERIC will need enough skilled personnel to apply and foster the implementation of the high standards of ACTRIS policies and rules. Outsourcing should be used only for routine and supportive activities like for example IT-help, handling invoice routines and payroll etc.

4.3. Secondments to ACTRIS ERIC

Host contributions to ACTRIS ERIC can be provided either cash or in-kind while membership contributions are provided in cash. Thus, in addition to directly recruited personnel, there can be

personnel seconded to ACTRIS ERIC either as in-kind contribution by the host countries or they can be employees of ACTRIS ERIC as described below.

For ACTRIS, two options for secondments is considered. The first option is that the employee will retain his/her affiliation with the origin institution although working for another organisation. The employer of the sending organisation shall continue to pay the salary and to maintain his/her administrative status throughout the period of secondment (e.g. seconded national experts in EC). In this case, the person is provided as in-kind.

Personnel provided as in-kind are primarily staff employed by an RPO or other organisation as part of their agreed host premium contribution and considered as secondments to ACTRIS ERIC. In-kind personnel contribute to the continuous, core activities of ACTRIS ERIC, either part time or full time, in that country and organisation where he/she will be located. It is important to ensure that the position of the personnel that is provided as in-kind is clear, and that there is no conflict of interest or issues concerning the loyalty of the personnel.

In case of providing personnel as in-kind, the general ACTRIS Staff Policy will be applied, but it is evident that in-kind contributions will differ depending on the human resource regulations and salary policy of the providing institutes. As a part of the HR strategy, the in-kind contributions need to be analysed and valuation agreed upon, to ascertain that these differences will not create friction within the RI.

Staff rules, defining the recruitment process of the ACTRIS ERIC, may not apply to personnel provided in-kind but the match of competences between the personnel and the needs of the position will be validated and approved by the respective CF Leader and the Director General. The role of the person also needs to be agreed as well as his/her contribution as a part-time or full-time. Any changes in the personnel allocations should be made in dialogue with the ACTRIS ERIC. All in-kind contributions towards ACTRIS ERIC need to be evaluated and scrutinised by the Financial Committee, and approved by the General Assembly. The contributions are reported in the annual reports of ACTRIS ERIC.

In the second option of secondment, the organisation sending the employee to ACTRIS ERIC will pay to ACTRIS ERIC an agreed sum of money covering the costs of the employment for a fixed period of time, and the employee will have the same employment status in ACTRIS ERIC as the directly recruited personnel. In this case, the employee needs leave of absence from the sending organisation.

Clear regulatory framework about responsibility, accountability, and the chain of command should be established for both options, as the Director General, CF Leader and the ACTRIS ERIC's senior staff must be able to exercise appropriate authority.

5. Training, education and career development

Within ACTRIS, needed skills are e.g. scientific expertise, financial and operational management, technical expertise, data management, data curation, and computing with research data. In addition, skills such as communication, representation and negotiation will be necessary. There is an increasing

need for education in the emerging professions, e.g. infrastructure operators, research technologists with computational skills, and data scientists.

5.1. Developing training and educational programmes

As ACTRIS RPOs and ACTRIS ERIC aim at engaging the best professionals to provide the best services for its users, it needs to provide training possibilities and competitive career opportunities for those who want to specialise in managing and operating an excellent RI. In addition to gaining new skills, participation in common trainings will bring the community together, increasing the understanding of on the ACTRIS approach on RI operations and standardisations. Importantly, through the common trainings early career scientists, technicians and NF PIs would learn the values and mentality of ACTRIS, and would better understand the perception of the expectations for personnel working in the RI.

During the transition phase towards the operational research infrastructure, ACTRIS should especially aim at identifying the urgent training needs. In the implementation phase a specific training programme for the ACTRIS staff, as well as training for young scientists in ACTRIS relevant fields will be developed, based on the needs of the ACTRIS CFs and NFs.

5.2. Developing staff exchange programmes

As ACTRIS should provide opportunities to learn new skills and support the professional growth of people it would benefit if it had a periodically organised and managed staff exchange programme. Through an exchange programme, personnel can gain wide knowledge on ACTRIS activities. At the same time, they can also better plan their future and career paths, and train themselves as professional research infrastructure experts.

5.3. Supporting career development

ACTRIS should always investigate ways to foster career development and should identify the specific needs for support.

From career development point of view, ACTRIS faces a challenge of having large number of staff working for ACTRIS part-time in very many different RPOs. Further, in many RPOs the RI related work is still not considered as beneficial for the career development.

To support the career development of the ACTRIS staff, ACTRIS must work towards the recognition of the research infrastructure work at RPOs. It should also advocate the importance of the RI roles to the RPOs and support the recognition of RI-related positions at national level. This is essential for ACTRIS to be able to develop towards successful and sustainable RI.

6. Setting equality as a target

Equal treatment is one of the key principles of the Staff Policy and any discrimination based on gender identity, ethnicity, disability, race, religion, political or other should be prohibited.

ACTRIS is engaging several countries so it is by nature international, consisting of people from several nationalities. Diversity of nationalities should not rest, however, only on the fact that ACTRIS locates in different countries, but it is the interest of ACTRIS to facilitate also mobility so that people can choose their working place based on their expertise. The requirements for any positions should be set so that they are available for everyone equally regardless of nationality, according to applicable national legislation and other rules.

ACTRIS recognises the need and importance of promoting gender balance and equality transversely throughout the RI to stand out as an excellent example of a well-balanced working community. Men and women, old and young people as well as people in general are different, and increasing diversity is important in order to have complementary competence and well-functioning teams. This should be considered on all levels of positions from leaders to assistants. ACTRIS aims to be a role model in atmospheric research and in the research infrastructure area, facilitating mentoring and networking opportunities.

In addition, ACTRIS will actively work for building up physical access schemes to its Observational and Exploratory Platforms that allow equal participation of different people in all life situations to be able to work at these unique facilities.

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