Milestone 6.5: 2nd Draft of the ACTRIS Management Plan

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1 Introduction

The present document provides a new, revised and extended draft of the ACTRIS Access Management Plan (AMP) based on developments of the ACTRIS PPP D6.4 "Recommendations for the user strategy, access management and workflows".

The AMP complements the ACTRIS access and service policy approved by the Interim ACTRIS Council, describing rules, procedures and detailed workflows to put into practice the principles for access stated in the policy.

The AMP deals with physical and remote access to ACTRIS, including access on demand to specific digital services provided by the Data Centre (DC). Virtual access to ACTRIS data and digital tools is addressed in the ACTRIS data policy and the ACTRIS data management plan, and it is not concerned in this document.

The AMP is an internal document to guide the operations of the personnel involved in access management. For each process involved in access management, it presents the set of correlated and interacting activities that transform initial inputs into outputs. Furthermore, it describes the content of each individual activity to implement part of the processes, whose management, control and automation will be facilitated by the access management platform.

The first draft of the AMP was developed during the ACTRIS PPP project and is included in the ACTRIS PPP D6.4. It provided description of the purpose, principles and main procedures for the management of the physical and remote access of users to ACTRIS services provided by the ACTRIS Central Facilities (CF) and ACTRIS National Facilities (NF). This new version of the Plan adds more complete descriptions of the SAMU functions, of the whole access process and the main associated workflows, of the monitoring process and identification of access metrics and KPIs. The key features, functionalities and requirements of the access management platform also constitute content added to the present draft following the preparatory work that is being carried out for the design and implementation of the access system.

2 Definitions

The terminology used for access to ACTRIS services is included in the ACTRIS Access and Services Policy and based on the EU Charter for Access to Research Infrastructures (see section 12) and is further adapted to the ACTRIS context and needs.

"Access" means the legitimate and authorised physical, remote and virtual admission to, interactions with and use of Research Infrastructures and to services offered by Research Infrastructures to users.

"ACTRIS data" means ACTRIS data from observational NF and exploratory NF complying with the procedures established within ACTRIS. A more detailed definition of ACTRIS data is given in the ACTRIS data policy.

"ACTRIS tools" mean both digital and non-digital tools for data and instrument operation offered by ACTRIS to users.

"Background" means data, databases, data products and data related tools or any other intellectual property rights generated before the access activities at the CF or NF started.

"Competitive access" means access to the ACTRIS CF and NF services through a selection process via SAMU.

"Excellence-driven access mode" means access primarily depending on the scientific excellence of an application.

"FAIR principles" means guiding principles to make data Findable, Accessible, Interoperable and Re-usable.

"Free access" means free-of-charge access for Users.

"Market-driven access mode" means access defined through an agreement between the ACTRIS ERIC and the User, which may be tailored to the User needs.

"ACTRIS PASS" means **P**latform for managing user access to **A**CTRIS **S**ervice**S**, managed by the SAMU.

"Physical access" means actual hands-on, on-site access of Users to the services of an ACTRIS CF or NF.

"Remote access" means access to an ACTRIS CF or NF without Users physically visiting the facility.

"RI Committee" means the **R**esearch **I**nfrastructure **C**ommittee, advisory body on matters related to consistency, coherence and sustainability of the implementation and operation of the RI.

"SAMU" means the Service Access Management Unit of the ACTRIS Head Office.

"Side-ground" means data, databases, data products and data related tools or any other intellectual property rights generated at the same time the access activities at the CF or NF take place but which are not generated as part of the access activities.

"SUPRA" means the **S**AMU **U**ser helpdesk application for **P**hysical and **R**emote **A**ccess

"Technical need-driven access mode" means access primarily depending on the technical needs of the User to increase the performance and quality of its research activities.

"User" means a person, a team, or an institution from any sector, including public and private sector, making use of ACTRIS data or other ACTRIS services, including access to ACTRIS facilities.

"Virtual access" means Free access provided through communication networks.

"Wide access" means free and broadest possible access to ACTRIS data and digital services to guarantee maximum availability and visibility of the data and services provided by the DC.

For other definitions see ACTRIS glossary (see Ref. 2 in section 12).

3   Principles

The general principles for access provided by ACTRIS to Users are affirmed in the ACTRIS Access and service policy approved by the Interim ACTRIS Council in October 2018.

The sections that follow expand on the principles affirmed in the Policy, complementing and specifying the statements as basis for the development of the access management system.

3.1   Access principles

3.1.1   Openness

ACTRIS aims at open access to ACTRIS services, following the principles set out in the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003) and the open access and open science strategy promoted by the European Commission and the ESFRI. ACTRIS strives to extend the principles of openness to the whole research cycle (see **Figure 1** below) as far as possible, fostering collaboration and sharing of resources, methods or tools at any stage of the research process.
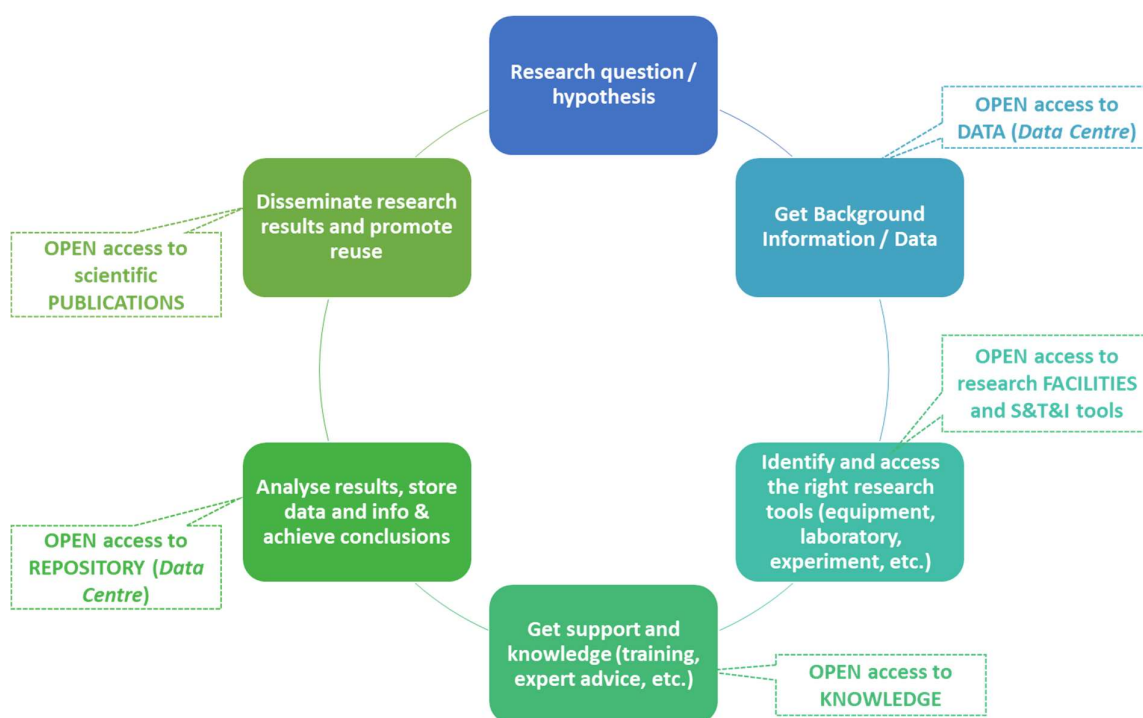

Figure 1 - ACTRIS contribution to Open Science

With open access to research outputs of different kind (data, articles, standards, instruments etc.) and open access to research facilities (laboratories, equipment, experiments, field campaigns) ACTRIS is

committed to play a relevant part in implementing the open science strategy promoted by the European Commission to improve knowledge circulation and innovation.

Open access means that, whenever possible, the ACTRIS services are open to all Users, and that they are findable and accessible. Some research objects (including data and services), however, may be Non-open, being not ready to be open for user access or not meant to be accessible. Open access to ACTRIS services and resources is provided within the limits of the ACTRIS facilities' capacities.

3.1.2 Equality and Non discrimination

In granting access to Users, ACTRIS does not discriminate on any personal grounds such as gender, race, colour, language, religion or belief, political or other opinion, national or social origin, association with a national minority, property, birth or other status, including ethnicity, age or sexual orientation.

As access is provided within the limits of the ACTRIS facilities' capacities, whenever a selection of users is needed it will be relevance-driven and exclusively based on the scientific, technical and socio-economic merit grounds.

3.1.3 Sustainability and Affordability

Access to ACTRIS facilities and resources should be sustainable. Costs generated by the provision of services to users need to be covered, also with the possible contribution of the users benefiting from the services they have access to.

Fees for Access, to the extent found necessary and according to the pricing scheme for access applied within ACTRIS, should contribute to the financial sustainability of the ACTRIS service provision. At the same time, non-systematic fees have to be affordable to Users, that is, set at reasonable levels, which allow a contribution to the costs incurred in by the provider but not compromise the attractiveness of the services or reduce the demand for access.

3.1.4 Serving Users: ACTRIS User Strategy

ACTRIS is a research infrastructure built and operated to support excellent research by the broad scientific community (not only the internal community). ACTRIS aims to place the service to users (Public research organisations, universities and higher education organisations, international organisation; Public services; Private companies and businesses) at the centre of its operations and strategic development.

Access and service provision are aligned with the ACTRIS user strategy which is constantly updated to establish a systematic and consistent approach to involve user and provide clear and practical recommendations to ensure that service development/improvement efforts meet user expectations and fulfil their needs, and will continue to do so over the RI's lifespan.

Details on the development of the user strategy are provided in section 4.

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3.2   Access Management principles

3.2.1   Access Management Approach

Access management within ACTRIS is organized conforming to the following principles:

1. **Process Approach**:

The process approach is chosen to guarantee that the ACTRIS organization for access operates as an integrated and complete system to achieve strategic and operational objectives set for the access management. It entails the definition of access processes as sets of interrelated or interacting activities that use inputs to deliver intended outputs. Consequently:

   a. all requirements, activities and interrelations to grant access and provide the ACTRIS services are to be clearly defined and planned, communicated to all parties involved (users, providers, interface) and improved based on their needs and feedback.
   b. roles and responsibilities are clearly defined.

2. **User-centered approach**:

In line with the general user-driven approach of ACTRIS, users are put at the heart of the access management system design. This involves the responsibilities of responding to the needs of the users, running as effectively and efficiently as possible, and being timely and accurate with providing information and support. Following this approach:

   a. the provision of access and services is aligned to user needs, to be periodically ascertained through specific analyses as well as by processing the feedback received.
   b. services are delivered in a defined quality sufficient to satisfy the identified user requirements.

3. **Continual Improvement**: Services and access management processes shall be continually improved, based on:
   a. the feedback solicited and received from users and stakeholders, and
   b. continual monitoring of the process performance and effectiveness.

3.2.2   Access Management Planning

Sound access management is crucial for a RI to fulfill its mission and enable the broad scientific community to conduct excellent research. This is particularly true and critical in a distributed research infrastructure such as ACTRIS, in which access to a range of different resources, data and services is provided by a network of NF and CF (these latter also made up of units with different locations) distributed in several countries.

ACTRIS needs to guarantee the user a homogeneous access process, which means that while the content of the access is certainly different depending on the particular service and the provider facilities, the process to grant access must be standard, harmonized and access provision levels must be as uniform as possible.

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Access management planning within ACTRIS is meant to define rules, processes, roles and workflows so to meet the need for operational effectiveness in an infrastructure that is geographically dispersed. It is useful to simplify the work for the involved RI staff and to earn the trust of potential users also thanks to a clear accountability even in presence of multiple national providers. Clear accountabilities, internally and towards the users, can be achieved when tasks and work is clearly planned and focused around the roles rather than the position in the organization.

Access management planning in the initial stages of the implementation will allow ACTRIS to organize processes, tools, interactions and activities to be effective and successful in providing services during the operations phase. The Access Management Plan (AMP) shall design a management system that is also suitable for the RI to anticipate changes, collect user needs and feedback in order to modify services or procedures accordingly.

Access management planning within ACTRIS needs to be a continuous process, based on the constant evaluation of the performance to re-think the system and plan for continuous improvements. This is crucial for ACTRIS to continue to serve science and users at his best.
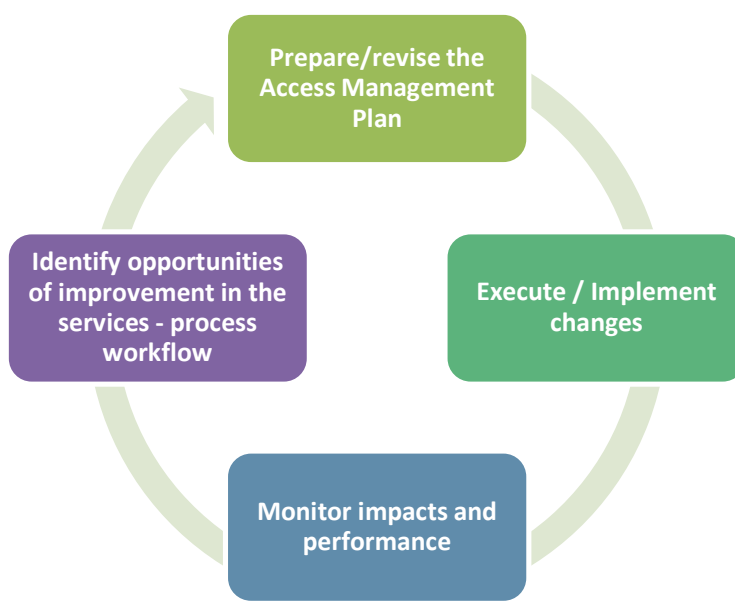
Figure 2 - Access management planning as continuous process

The AMP will be a living document that builds on monitoring and review to learn from observation of the impacts of access management, adapt the management actions (and services) accordingly and adjust to changes.

3.3   Organizational principles

The basic principles to organize the access management are established following the recommendations included in the ESFRI Roadmap for the distributed research infrastructures like ACTRIS, and are:

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- Centralized management
- Single point of access for all users
- Support structure dedicated to optimize the access of users for the proposed research

Those principles, in ACTRIS, are embodied in the organization and functions of the Service and Access Management Unit/SAMU of the Head Office/HO (see section 5), which is in charge of organizing and managing the access to the entire RI and supporting users make full use of ACTRIS opportunities.

3.3.1 Centralized management

Centralized management implies the existence of formal management structures that coordinate and monitor a distributed organization from a central point. Applied to research infrastructures and to access, the principle entails that all activities involving the provision of access to all facilities in a distributed research infrastructure are concentrated at a specific location and organized from there. In the case of ACTRIS, this location is the Head Office. Centralized access management ensures resource and process optimization, reduction of the time, cost and complexity associated with access management while providing for compliance and consistency across all the RI's components.

3.3.2 Single point of access

A single point of access describes an access organization where all services share a single set of contact information and all access requests are channelled through a single entry.

Virtual, Physical and Remote access of Users to the ACTRIS CF and NF is centrally coordinated by the Head Office and offered through a single entry point, including:

- Virtual access to data services, training services and other virtual tools;
- Physical and remote access to research services, technological and innovation services (laboratories, services, instruments, equipment and tools etc.) offered by the ACTRIS Topical Centres and NF, including training services and on demand specific digital services of the DC, is provided through the mediation of a single unit and team that governs, completes and supervises all administrative procedures required for the access. This unit is the SAMU, which grants users a simple way of getting in touch and contacting all services distributed in the ACTRIS territory, regardless of the provider institute or organization. This is also essential for providing integrated, user-centred support (see next paragraph).

3.3.3 Support structure

In strict combination with the single point of access, the existence of a unique structure dedicated to optimize the user access to the various distributed ACTRIS facilities is a basic principle in the organization of the framework for access. It offers users the clear advantage of having a single interface to turn to for help and support for accessing RI's services that are geographically distributed, as well as for assistance in dealing with different service providers, who can have different cultures and behaviours, to solve possible problems whenever they have any issues with or questions about ACTRIS services.

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Such support structure helps ACTRIS users to get the most out of being connected to the RI and use the services provided by the CF and NF to produce excellent science.

Also, it is extremely useful to help developing and improving the services and overall ACTRIS performance as it enables gaining hints and feedback about the services with less need to organize costly focus groups regularly to grasp the user needs and sentiment regarding ACTRIS.

4   User Strategy development

The development of the ACTRIS user strategy is a complex task entrusted to and coordinated by the SAMU because of its direct, close and special relation with the users.

The user strategy is a living strategy, and it is elaborated as result of a cyclic process meant to find a proper combination and composition of a RI's building blocks, which are:

- Current and future user needs, which have to be analysed as a prelude to a proper service-oriented design and enhancement
- Current and future ACTRIS technical capabilities

Considering the ACTRIS mission, the evolving user needs have to be matched with the evolving capabilities.

Figure 3 - ACTRIS User Strategy

The user strategy is the provision of value in terms of services, assistance, knowledge and support, which ACTRIS can offer to users, in response to their needs, based on the technical capabilities of the CF and NF and in line with the overall ACTRIS mission.

The user strategy is a complex strategy made up of different components that have overall cohesion and consistency:

1. Service development strategy: services developed in response to user needs, as resulting from the user requirements analysis. Services should be attractive to and benefit a broad user community, also beyond the environmental domain enabling cross-sectoral research.
2. User engagement strategy: how to establish a close relation between ACTRIS, its facilities and the users and how to shape, feed and maintain ongoing interactions between ACTRIS and the users, working co-operatively with the users so that they have a real influence over the services that are relevant for their research. It's about earning trust of users and retain them.

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3. User experience strategy: how to ensure that the overall user experience of ACTRIS (services, interactions, support, whatever) is positive, satisfactory, without pain points. It's about how to fulfil the users' goals and needs through ACTRIS work and task flows, while at the same fulfilling ACTRIS requirements and strategies.

4. User acquisition strategy, which is based on a strong communication strategy and deals with effectiveness in providing information and promoting the services, with the selection and adoption of the most suitable approach, messages and means to getting new users to know ACTRIS services and decide to use them for their excellent science. The communication effort is aimed at raising the ACTRIS services profile to users and will serve different purposes for different audiences, including national stakeholders, funders, other RIs, etc.

The first step in the user strategy development is getting to know the users and their needs, to broaden the current understanding of the ACTRIS users, their background, expectations and research needs as a prelude to a proper user strategy and service-oriented design. The second step is matching the user demand and the technical capabilities of the CF and NF. This matching happens within a specific area, which is defined by the ACTRIS mission.

ACTRIS Vision

ACTRIS is the fundamental European Research Infrastructure for short-lived atmospheric constituents increasing the excellence in Earth system observation and research, and providing information and knowledge for developing sustainable solutions to societal needs.

ACTRIS Mission

ACTRIS shall establish, operate, and develop a pan-European distributed research infrastructure for short-lived atmospheric constituents. ACTRIS shall provide effective access for a wide user community to its resources and services, in order to facilitate high-quality Earth system research.

4.1   User needs analysis

Knowledge about the User needs is a cornerstone of the overall User strategy development, which is based on a clear identification of the actual and potential user groups, their research interests, their demands and needs that evolve over time. A thorough inventory and subsequent analysis of the needs of the ACTRIS key user groups has to provide a clear roadmap for future service development and user-friendly organization of the access to services.

The periodic analysis of the user needs is a crucial activity to ensure that the development of the services and access provision system builds on a sound and up-to-date knowledge of the ACTRIS users, their background, expectations and research requirements. This will guarantee that access to ACTRIS services continues to answer user needs over the RI's lifespan thus contributing to the long-term sustainability of ACTRIS.

The user needs will be periodically investigated and analysed in a process that involves the following steps:

1. Identification of (new) user groups and uses of the need analysis
2. Description of the current service provision environment

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3. Collect and identify needs through:
    - ACTRIS Science and User Forum
    - Surveys
        - Key User testimonials
        - User satisfaction (monitored after access provision)
        - Training survey
    - Group Procedures
        - Focus groups
        - Community meetings
4. Evaluate possible solutions to needs ascertained
    - Information gathered from service providers on their capability
    - State of the art of technology and science
    - For each possible solution identified analysis of:
        - Costs
        - Impact
        - Feasibility
5. Assess the importance of the needs, to establish priority based also on results at step 4
6. Report on the results and recommendations for action (communicated to ACTRIS governing bodies and decisions makers, users, and other audiences that may be relevant)

SAMU gives impulse and coordinates the entire user needs analysis process. The ACTRIS CF and NF interested in offering physical access, as well as the broader ACTRIS community, will be involved in the user needs analysis process with the support of the relevant ACTRIS Head Office Units (Operations Unit – OPU, Development and Relations Unit – DEVU), especially in steps from 4 on, to discuss and agree on criteria and modalities of matching user needs and current ACTRIS technical capabilities.

5 SAMU - Service and Access Management Unit

The principles for access management and organization presented in section Organizational principles3.3 are implemented, in ACTRIS, within the SAMU Unit of the Head Office, which provides the organizational entity for consolidating the governance of access to the entire RI and for addressing the users' evolving needs.
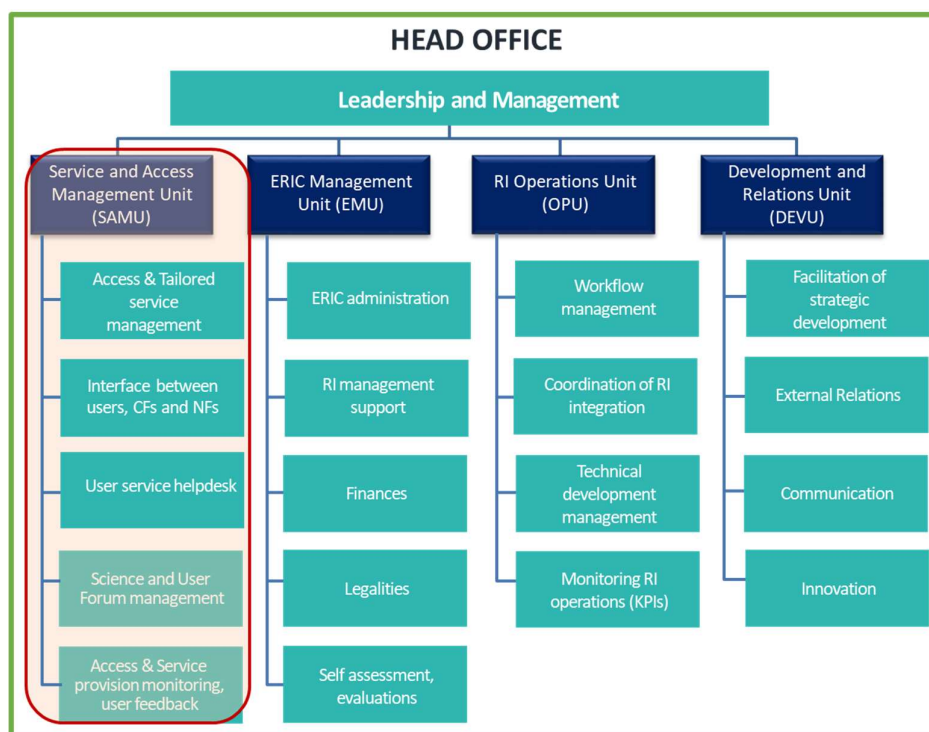
Figure 4 - SAMU within the ACTRIS Head Office organization

SAMU mission is to improve the effectiveness, efficiency and quality of delivering ACTRIS services to the users, considering the distributed nature of the RI. The Unit operates to implement a well-organized management of access to services that are geographically distributed, balancing the need for centralized control and process consistency with the necessity to allow freedom and differences in the actual access provision, which is the result of the distributed nature of the RIs and of the variety of ACTRIS components and requirements for providing different services to different users.

SAMU provides a central point of focus within the ACTRIS organization to drive efficiency and effectiveness in the management pf physical and remote access, to ensure that users receive consistent access/service experiences, regardless of which Facilities are involved in service provision.

SAMU plays a crucial role also in fostering the RI's knowledge of the user communities and related needs in terms of services. Interlinkages and relations with the other HO organizational units – responsible for legal matters, RI operations, strategic development & external relations – are decisive to ensure that the

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knowledge of the user communities will guide and inform the RI decision-making and will influence future strategies and roadmap.

SAMU works in close cooperation with:

- the ERIC Management Unit – EMU, to properly deal with all access aspects related to the Intellectual Property (IP) protection and requirements, confidentiality issues, privacy protection, applicable regulations, etc. as well as for informing the self-assessment/evaluations activities with results and impact of the access;
- the RI Operations Unit – OPU, to support the development of joint strategies for use and upgrade of the Topical Centres (TCs) and the entire infrastructure, based on the needs and feedback of users;
- the Development and relations Unit – DEVU, to cooperate to the design and implementation of tailored communication strategies for the different user communities and the Science and User Forum.
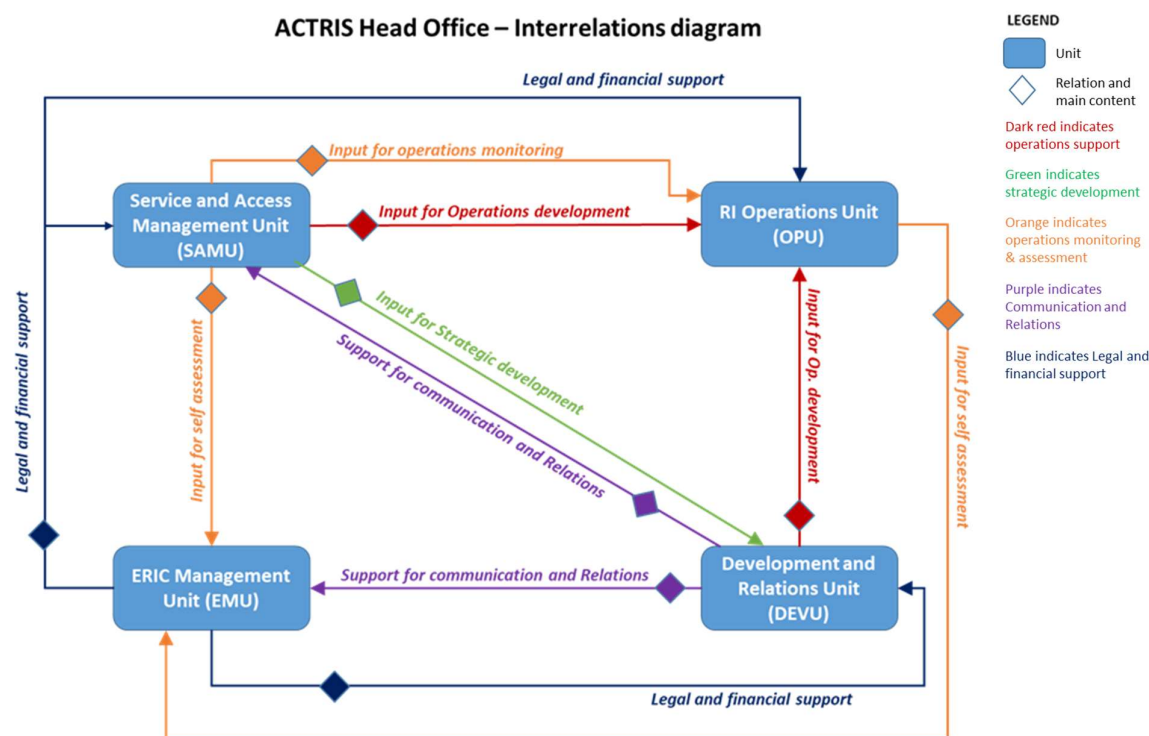
Figure 5 - SAMU's interrelations with other HO units

Main functions of SAMU are:
1. Access and tailored service management, which is described with detail of activities, workflows and interactions in section 7;
2. Interface between users, CFs and NFs, presented in section 5.1;
3. User service helpdesk for physical and remote access, focused in section, 5.2;
4. Management of the Science and User Forum, described in section 5.3;
5. Monitoring access and service provision, illustrated in section 8.

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Along with those, SAMU is also responsible for ensuring:

a. Updates of the Access Management Plan
b. Analysis of the user needs and periodic updates (see section 4)
c. Maintenance of and periodic updates/upgrades of the ACTRIS Catalogue of Services
d. Periodic updates/upgrades of the platforms and tools managed by SAMU (PASS – Platform for managing user access to ACTRIS ServiceS, ACTRIS Science and User Forum, SUPRA – SAMU User helpdesk application for Physical and Remote Access, etc.)

5.1   Interface between users, CFs and NFs

To successfully govern the access provision for the entire ACTRIS, SAMU needs to liaise and serve as an official go-between user, facilities (both Central and National) and ACTRIS bodies, facilitating exchanges, interactions and cooperation among them. Proper workflows are established to consent SAMU to act as a core point of contact and mediate the relations between users and the Facilities regarding access to the services.

Being at the centre of the relationship between users and ACTRIS, SAMU ensures the smoothness and fairness of all interactions with the CFs/NFs, supporting the users as well as the service providers so that both receive benefits from the relation.

The establishment of a close, sound and continuous relation with the ACTRIS users is a must for SAMU to properly liaise and engage users in working co-operatively with the facilities and the entire RI, expressing their needs and having a real influence over the ACTRIS services and the overall service provision system.

Along with communication and outreach actions to attract and retain users, the special relation with users will be nurtured and maintained through the establishment of the ACTRIS Science and User Forum, which will facilitate exchange and discussion with users, and the Helpdesk support function.

5.2   User helpdesk for Physical and Remote Access

SAMU operates a specific support function for any user enquires related to access that is managed by SAMU, providing day-to-day support and information to users willing or admitted to physical and remote access to ACTRIS.

This function is part of the entire ACTRIS end-user support system, which is built around a central Helpdesk managed by the ACTRIS Head Office and involves the various ACTRIS actors. The central Helpdesk receives any kind of request of support and transfers them to the relevant parties for proper handling based on their content (i.e. those for the services open for physical and remote access to the SAMU Helpdesk, those for data to the DC, those for legal matters and strategic cooperation to the relevant unit of the HO, etc.)

All support requests that refer to services are directed to the Services Helpdesk, which includes both:

a) the support service related to the provision of physical and remote services, managed by SAMU, and
b) the support service managed by the DC.

The section of the Service Helpdesk centrally managed by the SAMU, **SUPRA – SAMU User helpdesk application for Physical and Remote Access** (see section 10.3), facilitates and coordinates the entire end-user support process related to physical and remote access. With SUPRA, SAMU walks users through problem-solving process whenever they have questions or issues with about ACTRIS services, following up with users to ensure the issue has been resolved and soliciting feedback.

The TCs and the NFs are the second main actor of the SUPRA, being responsible to handle and solve all support requests that are directly received by users during access or transferred to them by the SAMU for proper solution when support concerns scientific and technical issues.

As regards SAMU, through the SUPRA it provides general information and assistance related to the Catalogue of Services, the access process (applications, Terms of Reference, preliminary checks, evaluation), the access platform and assistance for all support requests that are not related to science and do not need specific, technical know-how.

SAMU's support activities mainly involve:
   a. Responding to queries via chat, email, or phone
   b. Supporting users in accessing/browsing the ACTRIS Catalogue of Services
   c. Supporting users with the online submission of their requests for access
   d. Providing any additional information needed and requested
   e. Supporting users during the access.

Figure 6 below illustrates the workflow for the helpdesk function managed by SAMU.
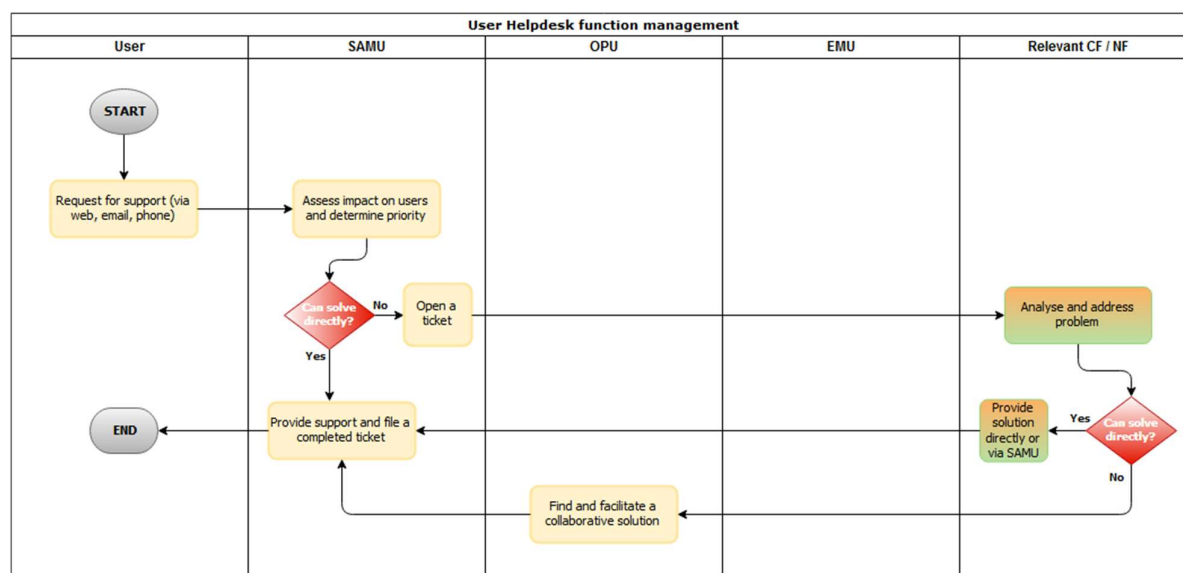

Figure 6 – SAMU User Helpdesk function workflow

5.3   Management of the Science and User Forum

SAMU is responsible for the coordination and development of the ACTRIS Science and User Forum, a virtual platform where users can gather together to express their needs, expectations and feedback regarding the ACTRIS services. The Forum is meant to be a major communication channel between users and SAMU, providing an organized framework for information and exchange, helping to gain hints on future research needs that will drive the development of the ACTRIS services and activities.

The Forum represents a crucial tool for SAMU not only to run the user engagement strategies but more in general to handle with the continuous evolution, execution and monitoring of the user strategy.

In particular, SAMU takes care of:

- putting in place forum features to help gaining valuable insights on the users' requirements (type, size, origin) and their research interests
- providing input and recommendations to the relevant ACTRIS bodies for discussion and analysis of present and future scientific and technical challenges by mediating bottom up initiatives/requests regarding usage of CF/NF services.

6   Access to ACTRIS services

Access refers to the legitimate and authorised physical, remote and virtual admission to, interactions with and use of Research Infrastructures and to services offered by Research Infrastructures to Users. Access to ACTRIS services comprises two main types of access, both being regulated by the corresponding policy, as follows:

(1) access to Data services – high quality, harmonized, and documented ACTRIS data from observational and exploratory NFs (guided by the ACTRIS data policy),

(2) access to Technical / Research / Innovation / Training services provided by the ACTRIS facilities (guided by the ACTRIS access and service policy).

Access to ACTRIS data, data products and digital tools provided through communication networks (virtual access as defined in section 6.2) is addressed in the ACTRIS Data Policy and the ACTRIS Data Management Plan, which respectively establish the principles and process for data provision.
Access to on demand services of the DC related to ACTRIS data, data products, and digital tools is remote access and is dealt with here in the AMP.

Physical and remote access to ACTRIS Facilities include instrument and measurement quality assurance and quality control procedures and tools, calibration of instruments, use of state-of-the-art instrumentation and equipment for cutting-edge research and scientific experiments, instrument testing and development, inter-comparison exercises, and field campaigns to investigate atmospheric processes and interactions on the variability of short-lived atmospheric constituents.

Training services target both ACTRIS staff and ACTRIS users to ensure knowledge-sharing and best practice. Training services can be accessed virtually, remotely or physically. Training concerned in the AMP is that provided remotely and/or physically to users.

Access to ACTRIS services can have different attributes, types and modes. It may be Free access, Wide access or Competitive access, defined as follows:

- **Free access** means that the ACTRIS services are provided to Users free-of-charge. Although ACTRIS aims at providing free access for users, where possible, some services provided by the ACTRIS CF and NF may involve user fees especially in the case of large private sector/industry users.

- **Wide access** aims at guaranteeing the broadest possible access to ACTRIS data and digital tools and to maximise their availability and visibility. Wide access is open and Free access and does not involve any selection of Users.

- **Competitive access** means that the ACTRIS CF and NF services are not unlimited and a selection process via the SAMU is required. Competitive access concerns physical and remote access to services offered by the ACTRIS CF (TC and DC) and NF. The guidelines for competitive access are formalized in the ACTRIS access and service policy.

6.1 Catalogue of Services

All ACTRIS services provided to users will be included, described and accessible through the **ACTRIS Catalogue of services**.

The Catalogue provides the comprehensive listing of all services that ACTRIS Facilities offer to their users, with detailed information. Implemented as an online tool integrated in and accessible from the ACTRIS Website, the ACTRIS Catalogue of Services offers the user one location to find all relevant information about the available services provided by the entire RI and access details. The services are organized and grouped in a way that users find easily what they need and access the service that meets their requirements.

The information on the services includes:

1. a description of each service,
2. how the services can be requested, and what kind of information the user would need to provide to allow a correct organization of the service provision, if any (e.g., characteristics of instruments like size, weight, power supply, etc.),
3. the estimated duration of the selection procedure (if any),
4. the estimated duration of the provision,
5. the available logistic and support services,
6. costs and fees (if any),
7. standard average level of service the users can reasonably expect from the facility they have access to,
8. duties and responsibilities of the users for using the facility's resources.

This to ensure that both users and providers share a common understanding about services, priorities, responsibilities, guarantees, and warranties of the services provided. This is very important for the users, to allow them to know the level of service they can expect from the provider and which are the conditions for provision of these services.

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The Catalogue of Services will be updated at least every two years during the operation phase to follow developments in the ACTRIS services.

6.2   Access types

ACTRIS covers the following types of access:

- **Virtual access** means free access to Users provided through communication networks; the available services or resources can be simultaneously used by an unlimited number of Users and the Users are not selected. Virtual access within ACTRIS concerns access to ACTRIS data and digital tools offered by ACTRIS through the ACTRIS DC or virtual access to training and ACTRIS tools offered through a ACTRIS CF.

- **Physical access** is "hands-on" access when Users physically visit an infrastructure/facility/equipment. Physical access means access to services offered by ACTRIS through an ACTRIS CF or NF. The available services or resources are not unlimited and a competitive process is required following a defined procedure and criteria for selection of Users. Physical access within ACTRIS may concern access to ACTRIS TCs, DC, observational and exploratory NFs.

- **Remote access** is access to resources and services offered by ACTRIS through an ACTRIS CF or NF without Users physically visiting the infrastructure/facility. Similar to Physical access, the services or resources are not unlimited and a competitive selection is required. Remote access within ACTRIS may concern access to ACTRIS CF or NF. In case access provided through communication networks regards on-demand services or resources (for examples computing cycles or digital tools) that cannot be simultaneously used by an unlimited number of users, it is not virtual but remote access. As such, it requires a competitive selection of the users to be served.

6.3   Access modes

The process for selecting Users to ACTRIS services is based on access modes. The access mode regulates the conditions for the selection of Users. Access modes are part of the ACTRIS-internal access process and are not discernible to Users. Access modes may differ as a function of the service requested, and may depend on possible contractual and legal obligations, capacities, resources, membership, etc. Within ACTRIS, the following access modes apply:

- **Excellence-driven access**: the access depends on scientific excellence, originality, quality and technical and ethical feasibility of an application. The access is competitive and requires a User selection based on the ACTRIS access process and modalities

- **Technical need-driven access**: access to ACTRIS services depends on technical needs to ensure instrument quality, high performance measurements, and dissemination of good practices. The access is Competitive and requires a review process and evaluation

- **Market-driven access**: access to ACTRIS services is defined through an agreement between ACTRIS ERIC and the User; the access may be tailored to the User needs and may lead to an access

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fee that may remain confidential. This access is considered Competitive access and is not expected to involve a peer-review.

6.4 Classification of access

Based on the attributes, types and modes detailed in previous sections, access to ACTRIS is systematized in five levels that are proposed to ease the internal management of the user requests to access ACTRIS services. Users choose the service they need. The access type and conditions, i.e. 'how' a user will actually access an ACTRIS CF or NF to receive the service, is inherent to the specific service requested and involves specific procedures and tasks according to the attributes that the specific service gives to access.

For example, access to a DC service may be wide, virtual and free (if directly available via the DC, e.g., downloading ACTRIS data) or competitive, remote and free/subject to fee (if the DC has limited capacity, e.g., archiving data related to a measurement campaign). Likewise, physical access of a user to an exploratory NF is competitive and requires a selection process based on criteria related to the scientific quality of the planned research project, whereas physical access to a TC for the calibration of an instrument is competitive the same, but requires a selection process based on criteria related to the technical needs for optimizing instrument performance and improving the quality of the research activities.

Figure 7 below presents the classification of Access levels within ACTRIS.

Level 0 highlights the fact that, while ACTRIS aims at open access to ACTRIS services, it may be that some services and data are not ready to be open for user access (for instance Level 0 data or services still to be perfected).

Levels from 1 to 5 distinguish open access based on how it is actually provided (types), conditions under which it is provided, interaction needed, how selection will be done (modes), possible charges.
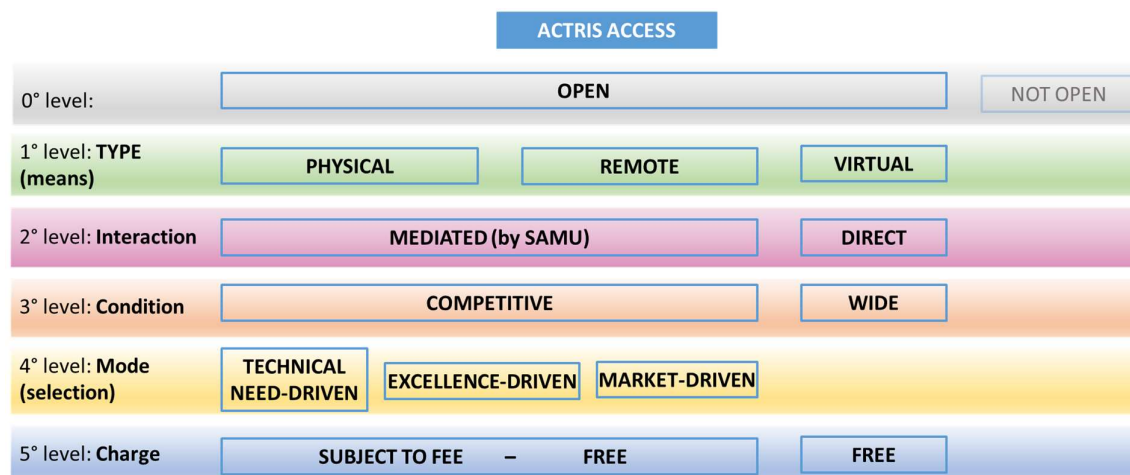
Figure 7. Access to ACTRIS - Classification

This classification is solely meant to prepare and simplify and the access management work making the identification of the procedure to be followed and the tasks to be carried out as immediate and automatic as possible.

Figure 8 reports a tree-like graph or model of decisions and their possible consequences, in which each node represents a point of deliberation and decision where attributes or features are systematically checked to determine a final category.
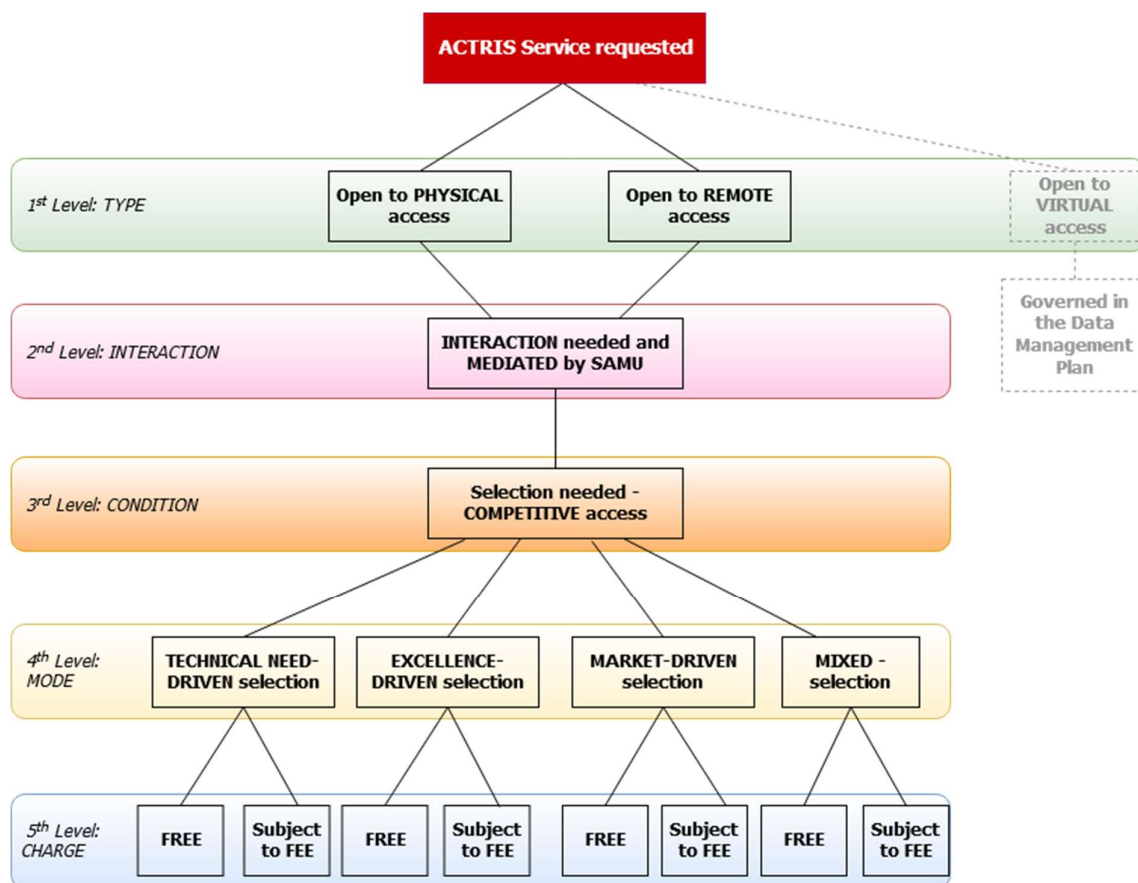
Figure 8. Access to ACTRIS – Decision Tree

Figure 9 below offers just an example of application of the model of decisions producing a possible path, among the many that are possible, to identify the suitable access procedure to be started.
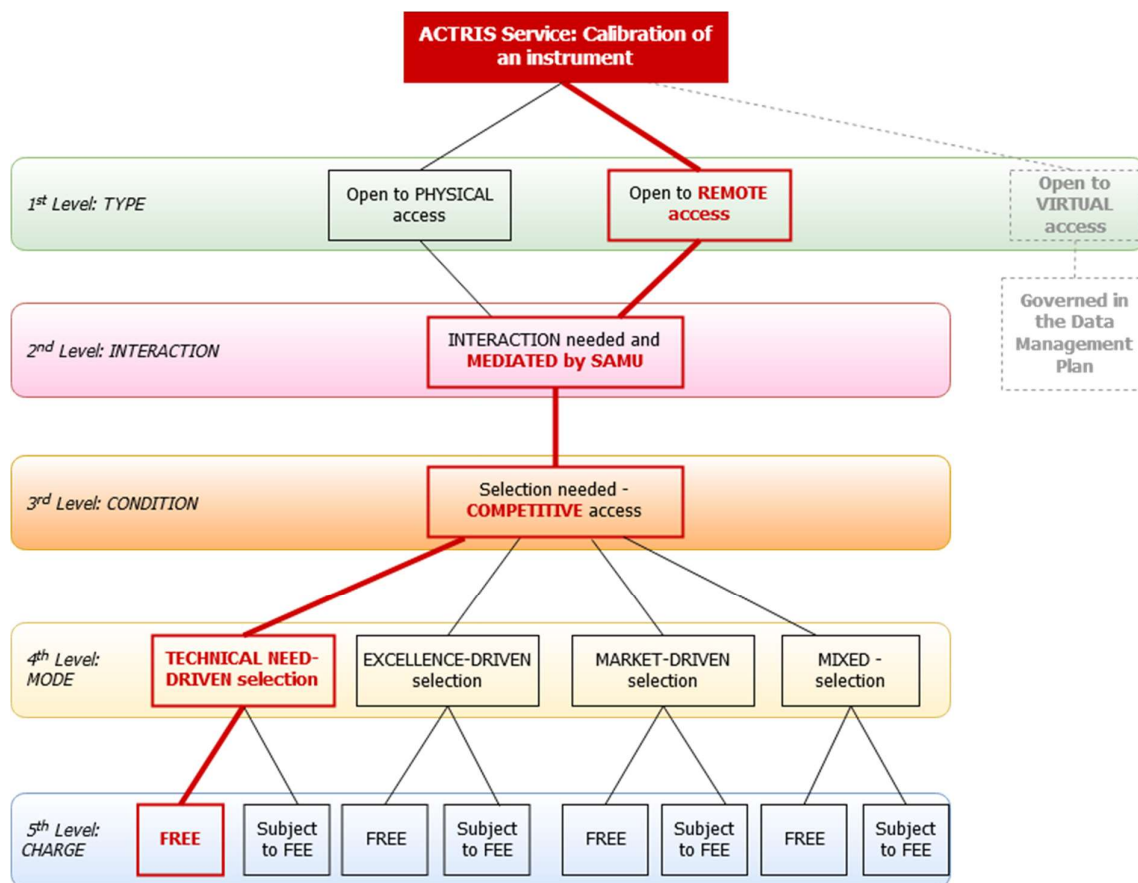
Figure 9 - Example of identification of the suitable access procedure (Decision Tree)

7   Access process

Access to services provided by the ACTRIS Facilities is facilitated by the establishment of the accurate, up-to-date and searchable online **Catalogue of Services** (see section 6.1), which provides all relevant information about the services.

Services can be requested:

- anytime by placing a service request through ACTRIS Catalogue of Service to the access management platform (PASS – Platform for managing user Access to ACTRIS ServiceS);
- in response to a rolling call with no fixed end date to the call;
- in response to a specific dedicated call for access, launched to promote specific research that is of interest for the scientific community to tackle particular science or societal challenges (for

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example calls for research into health, safety or environmental emergencies) or linked to a dedicated experimental campaign or intercomparison exercise organized by the ACTRIS facility concerned.

All requests are submitted via the access management platform, **ACTRIS PASS – P**latform for managing user **A**ccess to ACTRIS **S**ervice**S** (see section 10.1), implemented to organize, simplify and automatize as much as possible the central management of the access for the entire RI.

Applications shall stick to the rules, guidelines and forms provided in the relevant service description in the Catalogue of Services, or the terms of reference of the different calls for access.

The access request document pack is produced by the SAMU/HO, which is entrusted with the elaboration of all the relevant documents the users need to know, abide by and follow to apply for access to ACTRIS. The access document pack management is done in cooperation with the relevant Facility and the other HO Units (see dedicated section 7.1).

Applications for services that are open for physical or remote access are handled following a "one stop-shopping" procedure, meaning that the user will mostly have one interface (the SAMU/HO) to refer to for anything related to access till the actual service provision.

Direct interactions between users and providers on technical/ scientific issues that may be needed during request submission – to help the user understand the possibility that is offered to him and present a suitable access proposal – and after selection – to prepare for access and take full advantage of it – will take place under the supervision of SAMU.

Submitted requests are preliminarily checked for eligibility and feasibility, then evaluated by an international peer-review panel set up for scientific and technical evaluation with members identified according to the access request. The evaluation is based on the access mode (see section 6.3 above) that regulates the conditions for the selection of Users.

The review of access proposals (see section 7.4) shall be completed within about 4 weeks of submission provided that no complex integrations or clarifications are requested by reviewers for the assessment.

The following sections provide details and workflows for each step of the described access process.

7.1   Access documents preparation and management

Relevant rules, instructions and directions that the users need to know, abide by, follow to apply for and get access to ACTRIS are included in the official access documentation, which comprises among others:

- Guidelines for users/applicants
- Templates for requests/applications
- Terms of access
- Annual rolling call or dedicated calls (if any)
- Statement of Compliance with (relevant TCs) Access Requirements
- Terms Of Reference (TORs) for evaluators, as well as assessment tools
- TORs for user and access provider responsibilities and obligations,
- ......

The management of the Access Documents Management process (**ADM 1.0**) includes the activities required to prepare drafts, revise documents in force, receive needed input and feedback by relevant interested parties, issue and enforce the texts.

All key access actors are involved in the process of drafting, editing, reviewing and approving access documents, and participate collaboratively by completing different tasks according to their role:

a) the SAMU
b) the legal experts in the ERIC Management Unit (EMU) of the HO
c) the CF/NF providers
d) the RI Committee

Details for this process can be seen in the figure and table that follow.

The ADM 1.0 workflow is illustrated in **Figure 10**.

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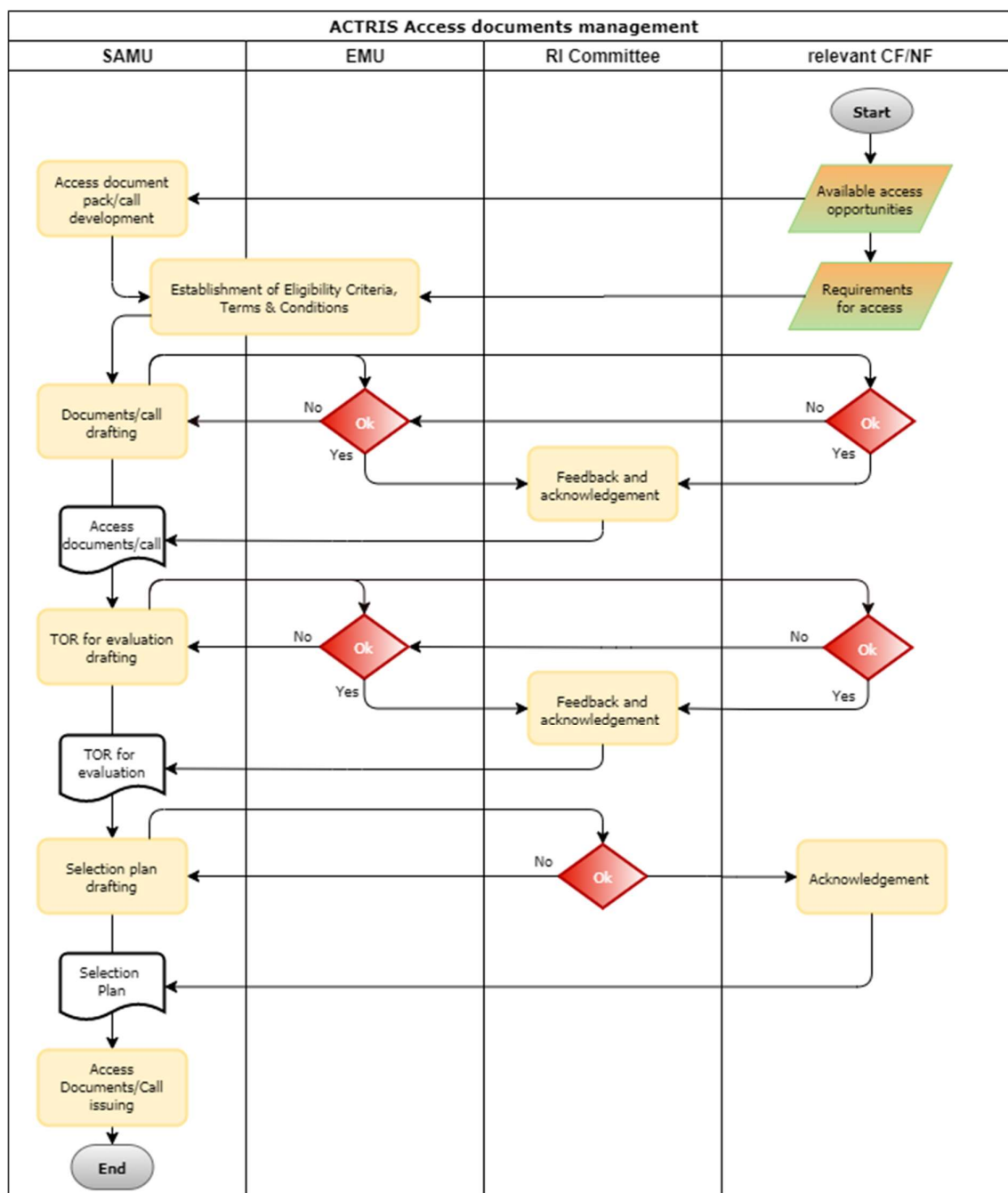
Figure 10 – ACTRIS Access Documents Management – ADM workflow

ADM 1.0 process is explained in **Table 1**.

Activity ID	Type: Input (I) Task (T), Decision (ID)	Description	Role

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ADM - I 1.1	(I) Available access opportunities	Input to start the process is provided by the service provider that notifies the availability of (new) services open to physical/remote access.	Relevant CF/NF providing services
ADM – T 1.1	(T) Access document pack/call development	Based on the input received, the development of relevant documents related to the access opportunity available starts. Interested/concerned actors are notified and involved.	SAMU
ADM - I 1.2	(I) Requirements for access	Input for a proper establishment of access rules and instructions comes from the service providers that notify their particular requirements.	Relevant CF/NF providing services
ADM - T 1.2	(T) Establishment of eligibility criteria/Terms & Conditions	Specific eligibility criteria as well as particular rules, terms of access and conditions to be met are defined in cooperation with relevant actors.	1) SAMU and OPU (task) 2) Relevant CF/NF providing services (input)
ADM - T 1.3	(T) Access documents/ Call drafting	Drafts of all relevant documents needed for accessing the service are prepared (requirements, guidelines for users, templates, etc.).	SAMU
ADM –D 1.1	(D) Is it OK?	Initially, it has to be determined whether the drafts for the access documents/call need revision or can be approved. If yes, documents are notified to the RI Committee. If no, the drafts go back for review and amendments.	1) Relevant CF/NF providing services approve, then 2) EMU legal experts give green light from the legal point of view
ADM – T 1.4	(T) Feedback and acknowledgement	Access documents that received the green lights from the service providers and the legal experts in EMU are notified to the RI Committee to receive feedback and approval before finalization and release.	RI Committee
ADM - T 1.5	(T) TOR for evaluation drafting	Terms of reference for the evaluation are prepared. In case of specific calls, TORs are prepared while the call is open and are finalized before the call formal closure.	SAMU

		TORs serve to brief experts on the evaluation processes and procedures (including selection and award criteria) and on the terms of their work (e.g. confidentiality, impartiality, conflicts of interest, etc.).	
ADM - D 1.2	(D) Is it OK?	Determination on whether the drafted TORs needs revision or can be approved. If yes, TORs are notified to the RI Committee. If no, the draft goes back for review and amendments.	1) Relevant CF/NF providing services approve, then 2) EMU legal experts give green light from the legal point of view
ADM - T 1.6	(T) Feedback and acknowledgement	TORs that received the green lights from the service providers and the legal experts in EMU are notified to the RI Committee to receive feedback and approval before finalization and release.	RI Committee
ADM - T 1.7	(T) Selection plan drafting	A complete plan to guide the selection, establishing and attributing tasks, setting related deadlines to complete selection is drafted. In case of specific calls, the selection plan is prepared while the call is open and finalized before its closure.	SAMU
ADM - D 1.3	(D) Is it OK?	Determination on whether the drafted selection plan needs revision or can be approved. If yes, the plan is notified to the service providers. If no, the draft goes back for review and amendments.	RI Committee
ADM - T 1.8	(T) Acknowledgement	Relevant service providers acknowledge the plan and the timelines established.	Relevant CF/NF providing services
ADM - T 1.9	(T) Access Documents/Call issuing	Access documents/calls are finalized, released, and issued.	SAMU

Table 1 – ACTRIS Access Documents Management – ADM

7.2 Access opportunities/Call advertising

Opportunities to access services described in the ACTRIS Catalogue of Services, as well as possible TNA calls or dedicated calls promoting particular access opportunities to support researchers tackling particular science or societal challenges, are widely advertised to reach all possible interested users.

Calls, guidelines and templates for applicants are published on the website and the Science and User Forum. Communication is done in close cooperation with DEVU and using all possible different channels that are useful to guarantee the maximum possible reaching of users:

- ACTRIS website
- Announcements in ACTRIS stakeholders and partners' websites
- social media,
- newsletters,
- announcements at scientific conferences, workshops and meetings,
- fliers, brochures, user fora, mailing lists, etc.

7.3 Access Requests/applications Receiving

The Access Request/application Receiving process (**ARR 1.0**) starts when, after proper advertising of access opportunities/calls, a user connects to SAMU and uses the ACTRIS PASS to request additional information/support for accessing a particular service or just to log an appropriate Service Request.

A Service Request submitted by the user can be:
- a request for an existing service item in the ACTRIS Catalogue of Services, or
- an access proposal following a dedicated (standard or rolling) call for access launched by SAMU and the HO
- a request for a new, tailored service (**section 7.3.1** presents the workflow and sub-process description for this particular case).

The process includes all activities to inform and support users till the request is received and logged or, in case of calls, until the possible call is closed and the requests are submitted by the given deadline.

Direct interactions between users and service providers on technical/ scientific issues happen in this stage of the access process, with the supervision of SAMU, to help the user understand the service and the possibilities that are offered to him and consequently present a suitable request/application.

Main actors involved in the ARR 1.0 process, with different roles depending on the specific task, are:

a) the SAMU
b) the DEVU
c) the user
d) the relevant ACTRIS NF or CF providing the relevant service

Details for this process can be seen in the figure and table that follow.

The **ARR 1.0** workflow is illustrated in **Figure 11**

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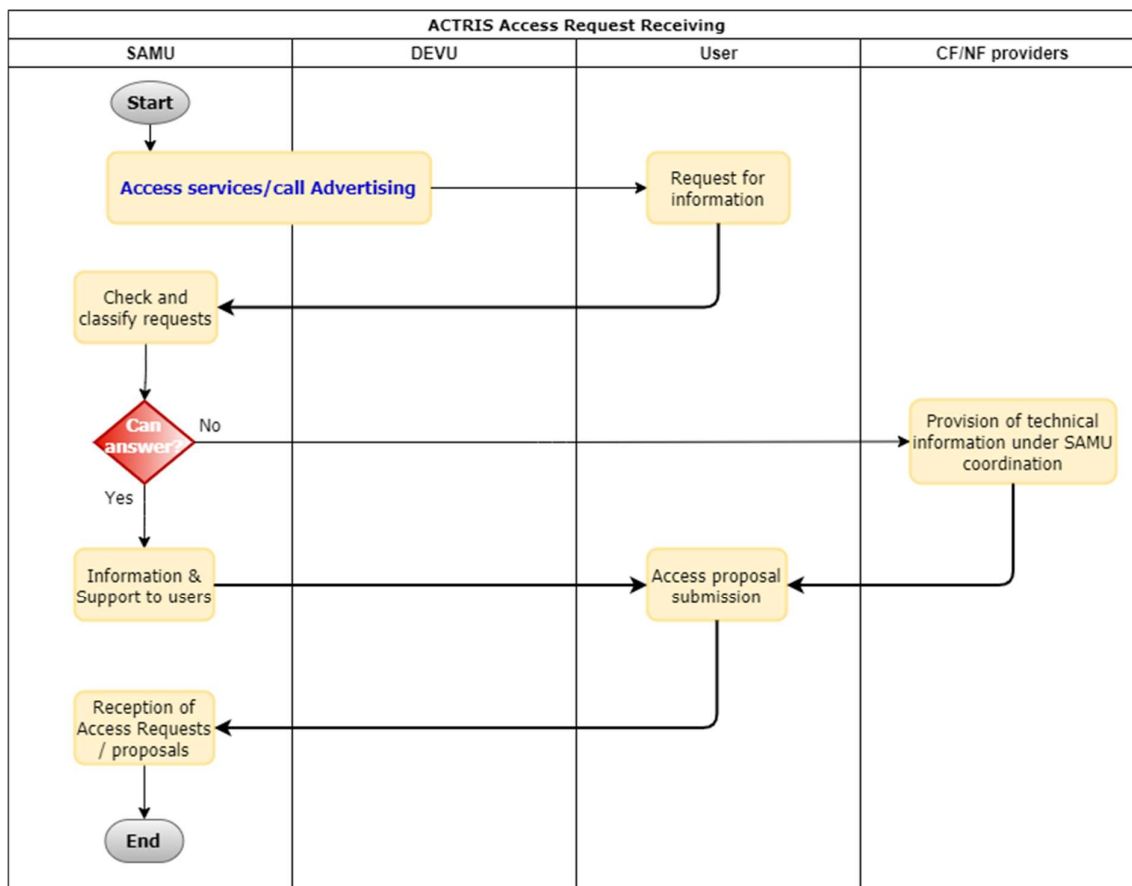
Figure 11 - ACTRIS Access Requests Receiving – ARR workflow

The ARR 1.0 process is described in **Table 2**.

Activity ID	Type: Input (I) Task (T), Decision (ID)	Description	Role
ARR - T 1.1	(T) Access services/call advertising	Opportunities to access services of the ACTRIS CF/NFs are promoted widely using all suitable communication channels to reach all possible interested users to the greatest extent	DEVU, SAMU
ARR - T 1.2	(T) Request for information	Browsing in the Catalogue of Services, or following the publication and advertising of a call, users may file a request for specific information regarding the access opportunity or the call practicalities	User

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ARR - T 1.3	Check and classification of requests for info	Possible requests coming from users are received, sorted and analysed for further processing	SAMU
ARR - D 1.1	(D) Can answer directly?	Determination on whether the information can be provided directly or not as additional steps are needed. If yes, ARR – T 1.3 follows and the information is provided directly. If no, ARR – T 1.4 follows and the request is transferred for proper processing	SAMU
ARR - T 1.4	Information and support to users	Users are provided with the needed information on details of the access process, templates, guidelines, etc.	SAMU
ARR - T 1.5	Provision of technical information	When a request for information concerns technical aspects and cannot be answered directly, it is transferred to service providers for fulfilment. All exchanges between users and service providers are supervised and coordinated by SAMU	1) service providers fulfil the information request 2) SAMU supervises and coordinates
ARR - T 1.6	Access request/ proposal submission	Upon receiving the needed additional information on the access opportunities, the users place a formal request for access via the ACTRIS PASS, online access management platform. The submission of the access request/ proposal by the user ends the ARR 1.0 process.	User

Table 2 - ACTRIS Access Request Receiving – ARR

7.3.1 Tailored services request management

Requests to access tailored services can be placed by users to SAMU or can come through the Development and Relations Unit of the HO, for example in case of a specific request from a Copernicus service or from an international network or organization.

In both cases SAMU receives the requests, makes an initial appraisal of it and involves the Operations management unit – OPU to decide how to better deal with the request and which Facility/ies to involve.

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The identified Facilities assess the request for feasibility and start to study how to meet the user need and how to tailor a service on demand. Especially in case of private users, but not only, the financial and legal implications are analysed by the EMU and this could lead to negotiations with users on possible fees and IPR issues.

The approval of the new, tailored service project leads to the development and testing of the service, then its provision. In some cases, it could also result in a possible update[1] of the Catalogue of Services with the inclusion of the new service.

The process of managing requests for tailored services (TSR 1.0) involves several actors, with different roles depending on the specific task:

a) the user
b) the SAMU
c) the DEVU
d) the OPU
e) the relevant ACTRIS NF or CF providing the service
f) the RI Committee
g) the EMU financial and legal experts

The complete workflow and interactions involved in the management of requests for tailored services are described in **Figure 12**.

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[1] This update can happen in between the scheduled, regular updates of the Catalogue of Services.

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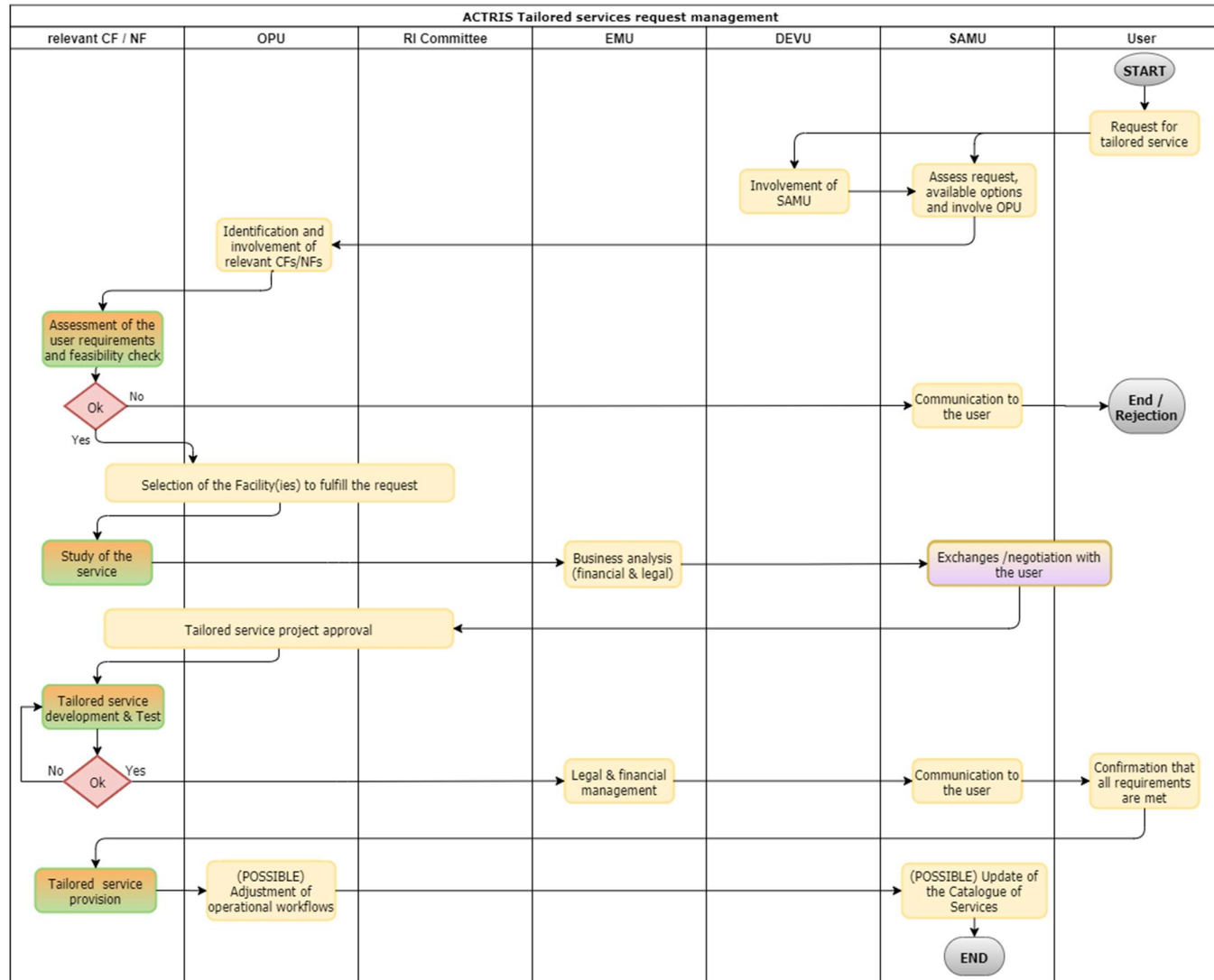
Figure 12 – ACTRIS Tailored Services Request management – TSR workflow

The TSR 1.0 process is described in **Table 3**.

Activity ID	Type: Input (I) Task (T), Decision (ID)	Description	Role
TSR - T 1.1	(T) Request for tailored service	To satisfy a particular scientific or technical need that cannot be met by available ACTRIS services in their current configuration, users can submit requests for tailored services to SAMU or, in case of an international network or organization, to the DEVU.	User
TSR - T 1.2	(T) Involvement of SAMU	When the request is received by the DEVU, SAMU is informed and involved.	DEVU
TSR - T 1.3	(T) Assessment of the request and possible options	The request is received by SAMU, registered and assessed. Possible options for dealing with the request are considered. OPU unit is involved.	SAMU
TSR - T 1.4	(T) Identification and involvement of relevant CFs/NFs	OPU cooperates in the identification and involvement of the CFs/NFs that can, in case, design and provide the tailored service	OPU
TSR - T 1.5	(T) Assessment of the user requirements and feasibility check	The identified CFs/NFs analyse the request and assesse its scientific and technical feasibility based on the available knowledge, competences and resources.	Relevant CFs/NFs
TSR - D 1.1	(D) Is it feasible?	Determination on whether the service can be tailored and provided. If no, TSR – T 1.6 follows and the request goes back to SAMU to liaise with the user If yes, TSR – T 1.7 follows for proper processing.	Relevant CFs/NFs
TSR - T 1.6	(T) Communication to the user	Communication is done to the user to inform that his request for tailored service cannot be satisfied given the current capabilities/availabilities.	SAMU
TSR - T 1.7	(T) Selection of the facility(ies) to fulfill the request	In case different facilities found it feasible to provide the tailored service, the OPU and the concerned facilities make a joint	OPU RI Committee

		decision (involving in case the RI Committee) on which is the most suitable.	
TSR - T 1.8	(T) Study of the service	The CF/NF studies solutions to design and provide a service tailored to the specific user needs.	Relevant CF/NF
TSR - T 1.9	(T) Business analysis (financial and legal)	A financial and legal analysis is carried out in parallel to evaluate possible financial and legal implications of tailoring a service to particular user needs.	EMU (legal and financial experts)
TSR - T 1.10	(T) Exchanges and negotiation with the user	Results of the study of the tailored service and the business analysis are communicated to the user. Exchanges and negotiations regarding terms of provision start.	SAMU
TSR – T 1.11	(T) Tailored service project approval	Once all the terms of the tailored service provision (including possible dedicated operation support needed for the new service) are clear to all involved parties and agreed, the project can be approved.	EMU OPU Relevant CF/NF
TSR – T 1.12	(T) Tailored service development and test	The tailored service is developed following design and the project. In case operational support from a TC is needed, it is provided. The new, tailored service is preliminarily tested to assess its effectiveness.	Relevant CF/NF
TSR – D 1.2	(D) Are results of the test positive?	Determination on whether the tailored service is effective and can be provided. If no, further development and adjustment work is needed If yes, TSR – T 1.12 follows for proper processing.	Relevant CF/NF
TSR – T 1.13	(T) Legal and financial management	Possible legal and financial issues, if any, are managed	EMU financial and legal experts
TSR – T 1.14	(T) Communication to the user	Communication is done to the user to inform that the tailored service has been tested and can be provided at the agreed terms.	SAMU

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TSR – T 1.15	(T) Confirmation that all requirements are met	The user confirms that the tailored service is expected to fulfil his needs	User
TSR – T 1.16	(T) Tailored service provision	The studied and tailored service is actually provided to the user that requested	Relevant CF/NF
TSR – T 1.17	Possible (T) Adjustment of operational workflows	In case, and if needed, operational workflows are adjusted to accommodate the new tailored service	OPU
TSR – T 1.18	Possible (T) Update of the Catalogue of Service	In case, the new, tailored service can be included in the service portfolio of ACTRIS and become available for all users	SAMU

Table 3 - ACTRIS Tailored Service Request management - TSR

7.4   Access Requests/applications Processing

Received requests/applications are properly recorded and processed in three steps consisting of:

a.   an eligibility check by SAMU, to ascertain that they satisfy the appropriate conditions set out for the access in the specific call or service page in the Catalogue of Services.

b.   a feasibility check by the relevant TCs and DC, to ascertain whether they fit within the Facility's capabilities and can be dealt with successfully, considering the calendar of the facility, the availability of human and financial resources and facility space to accommodate the access request, host users, provide on-site support, etc.

c.   an independent evaluation by the evaluation panel to assess the scientific/technical merit or market relevance of the proposal.

The workflow for the User Access Requests/applications Processing (**ARP 1.0**) includes the activities required to record and organize the access proposals received, check proposals for eligibility and feasibility, carry out selection based on the relevant access mode. Should more details and clarifications be needed, the user is contacted to complete the information for the access proposal, before its final approval or rejection.

Main actors involved in the process, with different roles depending on the specific task, are:

a)   the user
b)   the SAMU
c)   the EMU
d)   the OPU
e)   the relevant ACTRIS NF or CF providing the requested service
f)   the Evaluation Panel

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Details for this process can be seen in the figure and table that follow.

Figure 13 illustrates the complete ARP 1.0 workflow, from the eligibility check through the feasibility check, to the establishment of the suitable selection panel, the coordination of the panel's works and the finalization of selection.
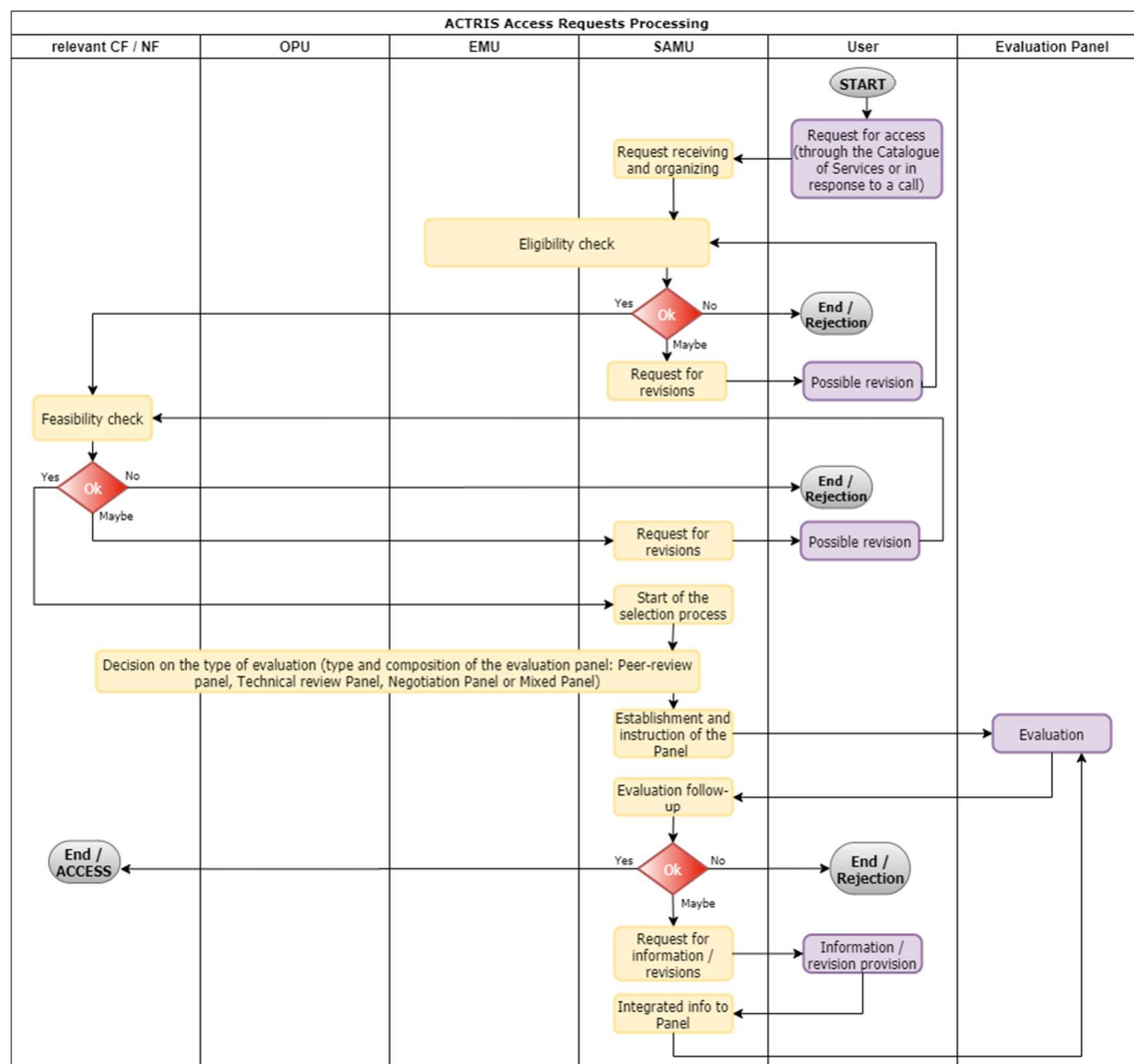

Figure 13 - Access Requests Processing – ARP workflow

The ARP 1.0 process is described in **Table 4**.

Activity ID	Type: Input (I) Task (T), Decision (ID)	Description	Role

ARP - T 1.1	(T) Request for access	The process starts when a User formally places an access request/proposal through the Catalogue of Services or in response to a call and within its deadline. Proposals come in via the PASS online platform for access management.	User
ARP - T 1.2	(T) Request receiving and organizing	All requests received are properly recorded, with all relevant information registered so that a full historical record is maintained, then grouped by topic.	SAMU
ARP - T 1.3	(T) Eligibility check	The access request/proposal is checked to ascertain that it meets the conditions set in the relevant access documentation, which includes, in case of EU funded TNAs, the relevant EU rules and regulations on TNAs. If yes, ARP - T 1.5 follows and the request/proposal transits to feasibility check If no, the request/proposal is rejected and communication is done to the user If the proposal can be reviewed to be eligible, SAMU contacts the users.	1. SAMU 2. EMU financial and legal experts
ARP - T 1.4	Request for revisions	If revisions are needed to make the proposal eligible, users are given details and asked to provide what needed by a fixed deadline.	SAMU
ARP - T 1.5	(T) Feasibility check	The access request/proposal is checked to ascertain its scientific, technical and logistical feasibility and if it fits (for the proposed timing and requirements) in the relevant provider's availability, schedule and plans. If yes, ARP - T 1.7 follows and the proposal transits to selection If no, the proposal is rejected and communication is done to the user If the proposal can be reviewed to be feasible, SAMU contacts the users.	Relevant CF/NF provider
ARP - T 1.6	Request for revisions	If revisions are needed to make the proposal feasible, users are given details and asked to provide what needed by a fixed deadline.	SAMU

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ARP - T 1.7	(T) Start of the selection procedure	Feasible access requests/proposals are organized and users are notified of the start of the selection. Details on the steps of the process and its expected timing are also provided to users.	SAMU
ARP - T 1.8	(T) Decision on the type of evaluation	A decision on the type of evaluation (excellence-driven, technical need-driven, market-driven, mixed) is made in cooperation between SAMU, OPU, EMU and the concerned Facility. The decision influences the composition of the evaluation panel and the criteria to be adopted. Access requests concerning both excellent research, technical merit and market considerations are adequately dealt with, and are subject to a mixed, multi-criteria selection by mixed selection panels with the necessary expertise.	SAMU, EMU, OPU ad relevant CF/NF
ARP - T 1.9	(T) Establishment and instruction of the evaluation panel	The decided selection panel is convened and briefed on: ● the evaluation procedures (including selection modes and award criteria) ● the timing and terms of their work (e.g. confidentiality, impartiality, conflicts of interest, completing and approving reports, etc.) ● the possibility and scope for recommending improvements to access requests/proposals, with the consequent opportunity to evaluate their potential, should certain changes be made.	SAMU
ARP - T 1.10	Evaluation	Access requests/proposals are evaluated according to the defined criteria and access modes (scientific excellence criteria, technical need driven criteria, market-driven aspects or a suitable mix of them). Experts are handled the access requests/ proposals based on the theme and expertise. They work individually first and made the first assessment, giving personal scores for each criterion. Then the panel of experts meets	Selection panel

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		remotely and reaches an agreement on the scores and comments for all proposals. Experts eventually ask SAMU to request additional information from users.	
ARP - T 1.11	Evaluation follow up	Outcomes of the evaluation are communicated to the concerned CF/NF provider and the users. If results are positive, then the access is granted and provided at the arranged time, or following new arrangements between the users and the provider, under SAMU supervision and coordination. If results could be positive but further adjustments are needed, SAMU contacts the users. If results are negative, then the request/proposal is rejected, the users are notified of the rejection and provided with an evaluation report for due information.	SAMU
ARP - T 1.12	Request for information / revisions	If additional information or revisions are requested by the experts, users are given details and asked to provide what needed by a fixed deadline.	SAMU
ARP - T 1.13	Information / revision provision	Upon specific request, users provide SAMU with the additional information or revisions needed for a positive conclusion of the selection.	User
ARP - T 1.14	Transmission of additional information / revisions	Additional information or revisions required to complete the assessment are transferred to the panel for proper evaluation and follow-up as per ARP - T 1.10 till final evaluation and end of the process with access granted or rejected.	SAMU

Table 4 - ACTRIS Access Request Processing - ARP

7.5   Main principles for selection

The selection of requests to access ACTRIS services shall be based on the following principles:

- **Equality and non-discrimination**

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- **Transparency**: users and all ACTRIS stakeholders are duly informed of the access selection process and the relevant selection criteria, as well as of the available capabilities at the concerned facility. After the selection process Users receive a complete report of the results, which informs about the strengths and weaknesses of their applications.

- **Confidentiality**:

    o access proposals are recorded and treated as confidential information by the ACTRIS staff, and conforming to the requirements of EU regulation 2016/679 General data Protection Regulation (GDPR), which took effect on 25.5.2018

    o names and identities of the evaluators are not disclosed

- **Impartiality**: for all access mode, the selection is based on pre-defined, objective criteria, avoiding any bias and prejudice to the maximum extent possible.

- **Merit and relevance**: the selection is merit-based and considers the scientific, technical and innovation potential of access proposals as well as possible market developments and impacts on the economy. In case of access requests that present aspects of excellence, technical relevance, innovation and impact on the market, or different combinations of these aspects, a mixed selection panel will be set up with all the necessary skills and expertise to carry out the mixed, multi-criteria selection.

- **Fairness and geographical balance:**

    o in the distribution of access requests among facilities that provide same services. In case of requests regarding services provided by different facilities, the SAMU in cooperation with the other HO units (in particular the OPU) will distribute the accesses trying to ensure as much as possible geographical balance

    o in the distribution of access among users coming from ACTRIS countries and users from new regions/countries

- **Right to reply:** during the selection process, SAMU shall ensure that users/applicants have the opportunity to reply to possible questions or concerns that may be raised by experts, establishing a right to reply before the final assessment.

7.5.1 Excellence-driven access

7.5.1.1 Assessment criteria

7.5.1.2 Peer-review panel

7.5.1.3 Process and tentative timeline

7.5.2 Technical need-driven access

7.6   Access provision

7.6.1   Role and responsibility of access providers

7.6.2   Role and responsibility of users

7.6.3   On-site support

7.7   User feedback collection and processing

The User feedback collection and processing process (**UFP 1.0**) includes the activities required to collect the feedback of users and service providers, to analyse comments and opinions received in order to take solid action to enhance the access process or the service and its provision. The process is the key basis for the continuous improvement of ACTRIS services.

Main actors involved, with different roles depending on the specific task, are:

a)   the SAMU
b)   the User/ACTRIS community
c)   the EMU
d)   the OPU
e)   the DEVU
f)   the relevant ACTRIS CF providing the service
g)   the relevant ACTRIS NF
h)   the RI Committee

Details for this process can be seen in the figure and table that follow.

The UFP 1.0 workflow is illustrated in **Figure 14** below.
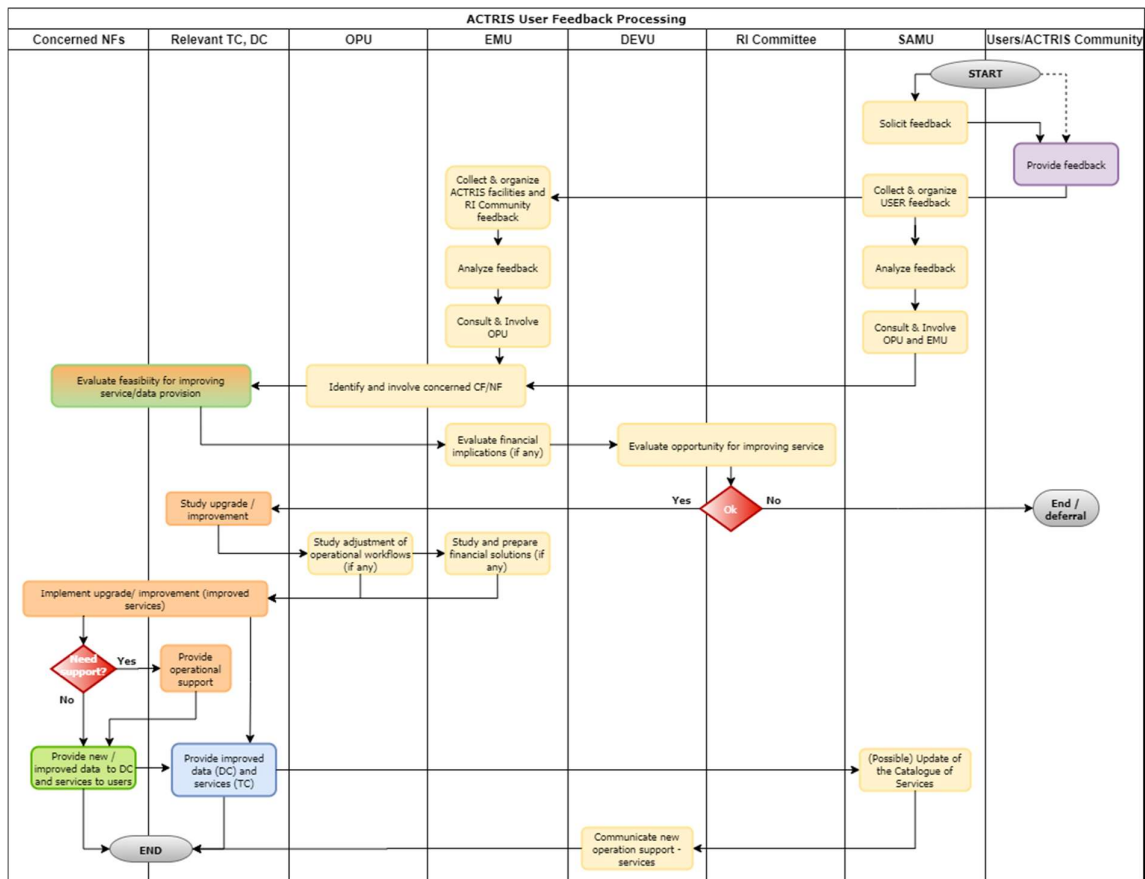
Figure 14 - User Feedback Processing – UFP workflow

The UFP 1.0 process is explained in **Table 5**.

Activity ID	Type: Input (I) Task (T), Decision (ID)	Description	Role
UFP - T 1.1	(T) Feedback solicitation	The process starts with feedback solicited from users as well as from CF/NF providers, to get complete information needed to ascertain whether the service fulfils the user expectations and needs, and its provision is smooth and painless. Feedback is also requested on the overall process to get the access.	SAMU
UFP - T 1.2	(T) Feedback provision	Opinions, comments suggestions and remarks on the access (both the services and the process) are provided upon solicitation or	Users CF/NF providers

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		spontaneously via online satisfaction survey, other tools in the online platform or via email.	
UFP - T 1.3	(T) User feedback collection and organization	Feedback received from USERS is properly recorded, with all relevant information registered so that a full historical record is maintained, then organized by category of user, access topic and feedback theme (service issues, access experience issues, support issues, etc.).	SAMU
UFP - T 1.4	(T) ACTRIS facilities and RI community feedback collection and organization	Feedback received from the ACTRIS Community is properly recorded, with all relevant information registered so that a full historical record is maintained, then organized.	EMU
UFP - T 1.5	(T) User feedback analysis	Main points / issues / appreciations / criticism are derived from each piece of user feedback, listed and ranked by relevance and urgency (feedback coding).	SAMU
UFP - T 1.6	(T) ACTRIS facilities and RI community feedback analysis	Main points / issues / appreciations / criticism are derived from each piece of received feedback, listed and ranked by relevance and urgency (feedback coding).	EMU
UFP - T 1.7	(T) Consult and involve OPU and EMU	Based on the content and code of the user feedback, OPU and EMU units of the HO are consulted and involved for proper processing.	SAMU
UFP - T 1.8	(T) Consult and involve OPU	Based on the content and code of the ACTRIS community feedback, the OPU is consulted and involved for proper processing.	EMU
UFP - T 1.9	(T) Identify and involve concerned CF/NF	The CF/NFs concerned by the feedback are identified and involved to study possible solutions.	OPU EMU
UFP - T 1.10	Evaluate feasibility for improving service / data provision	The CF/NF acknowledges the feedback concerning the content/quality of services provided and/or the service provision at the facility. The facility considers how to possibly follow-up, evaluating the feasibility of different options to improve the service	CF/NF providers

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		provision considering their technical and financial viability.	
UFP - T 1.11	(T) Evaluate financial implications	Possible financial implications of reviewing/improving a service to follow up the feedback are analysed.	EMU (financial experts)
UFP - T 1.12	Evaluate opportunity for improving service	Based on considerations regarding feasibility, financial implications and future strategic developments, the convenience of introducing an improvement is evaluated. If yes, UFP – T 1.13 follows and feedback is followed up. If no, opportunity to follow up is discarded or deferred, for the moment.	DEVU RI Committee
UFP - T 1.13	(T) Study upgrade / improvement	Needed improvements are studied and designed. Complete analysis of what they require to be implemented is carried out, also in terms of possible operational support needed.	CF/NF providers
UFP - T 1.14	(T) Study adjustment of operational workflows (if any)	In case, and if needed, operational workflows are adjusted to accommodate the operations for the improved services.	OPU
UFP – T 1.15	(T) Study and prepare financial solutions	In case, and if needed, solutions to manage the financial implications of the service improvement are studied and implemented.	EMU
UFP - T 1.16	(T) Implement upgrade/ improvements	Facilities take actions to improve the content/quality of services and/or the provisioning process.	Relevant NF, TC, DC
UFP – D 1.1	(D) Need support?	Determination whether the concerned NF needs operational support to implement improvement of the data/services provision. If yes, UFP – T 1.17 follows. If no, UFP – T 1.8 follows.	Relevant NF
UFP - T 1.17	Provide operational support to NF for upgrade	Where needed, the relevant TC provides operational support to the NF concerned by the service upgrade/improvement.	Relevant TC, DC

UFP - T 1.18	Provide improved data to DC and service to users	Concerned NF implements the changes and starts provision of improved data to DC and services to users.	Relevant NF
UFP - T 1.19	Provide improved data (DC) and services to users (TCs)	Upon reception of the new, improved data, from the concerned NF, the DC starts provision of these data. After implementation, the TCs start providing the upgraded service/new service.	Relevant TC, DC
UFP - T 1.20	(T) Possible update of the Catalogue of Service	Where deemed convenient, an update of the Catalogue of Services is made to include improvements in the services or new services that result from the improvement.	SAMU
UFP − T 1.21	(T) Communicate new operation support / service	Improvements of services and operation support is communicated to users and all possible interested parties	DEVU

Table 5 - ACTRIS User Feedback Processing – UFP

8   Monitoring of access

The monitoring activities carried out by SAMU will corroborate the **user-driven approach** of ACTRIS, providing the ACTRIS Facilities and governing bodies with helpful information to consent an evaluation of the ACTRIS services from the perspective of those who make effectively use of them.

Performance data on the quantity and quality of ACTRIS service provision, expressed as KPIs, will be reported on an annual basis, allowing to identify areas of enhancement so to consent the ACTRIS Facilities and governance bodies to consider/plan actions to improve service provision, develop further services and advance the user strategy.

Monitoring activities mainly consist of:

a) the collection of the access metrics, with the measurement, in particular, of the indicators and KPIs on the users (e.g., number of users, names, origin, affiliation), on the quantity and quality of access provided, type of services requested, selection procedures and results (including information on the impact of scientific outcomes acknowledging the use of the ACTRIS Facilities (publications, patents, etc.)

b) the collection of the user feedback: specific channels and user feedback components (for instance emails, online reviews and surveys, etc.) are set up to collect user needs, remarks, comments and suggestions as a way to go beyond analytics, engage directly and continuously with users, measure and improve their satisfaction.

c) the Feedback processing: feedback received is organized in like categories, and reports and recommendations are prepared and transferred to other HO units and to CF and NFs to serve as

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input for a continuous improvement of access and services, ongoing management process and quality assurance.

d) the production of customized Access KPIs & Service Provision Activity reports: data on indicators and KPIs and feedback from users collected over specific periods is analysed, organized and reported using also visual representations of the data that help extracting valuable information at a glance and identifying potential strengths, weaknesses, trends, and possible areas for improvement.

9 KPIs

10 Tools

10.1 ACTRIS PASS

ACTRIS PASS (**P**latform for managing user access to **A**CTRIS **S**ervice**S)** is the web tool for access management which is studied, designed and implemented to organize SAMU's central management of the physical and remote access for the entire RI. The PASS helps to automatize as much as possible the workflows established for the management of access.

Based on a set of architectural building blocks made up of cloud services arranged in a tailored implementation pattern, the platform facilitates, standardizes and automatizes as much as possible the management of access provision with the control of each step of the access process:

- Application submission
- Requests management with requests transferred to:
    - identified SAMU/HO personnel for the pre-screening for eligibility
    - Identified CF/NF personnel for the pre-screening for technical feasibility check
    - Identified experts for peer-review, technical review, negotiation in case of market-driven access
- Communication to all relevant actors of the results of the selection
- Monitoring/reporting
- Optimized management of facility availability.

All access actors involved in the various processes related to service provision are connected through the PASS. For each group of PASS users, the main requirements and expectations regarding the platform are currently identified as presented in **Table 6**.

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PASS users	Reasons to use the Platform	Requirements
USERS	Request services Be informed on the application status Exchange with service provider during request submission and after selection for possible adjustments	Easy, user-friendly submission system Easy reaching to SAMU and Helpdesk Easy reaching to providers
SAMU	Manage user submissions Manage workflows (for each step of the access provision process) Monitor access provision Be informed and oversee the exchanges between users and providers during request submission and after selection	Easy configuration of specific forms for users, reviewers, moderators Easy control of applications Automated notifications and reminders Facilities' Calendar overview Easy definition of custom reporting metrics for access
FACILITY PROVIDERS	Be informed on access requests Perform the feasibility check Be informed on the review process Exchange with user during request submission and after selection	Easy scheduling of remote access or visits Calendar overview ....
EVALUATORS & REVIEWERS	Being thoroughly informed and updated on the access process and the terms of the selection Carry out the evaluation according to established terms and timelines	Easy procedure to be granted access to the applications and online evaluation forms Being involved only when necessary Easy, user-friendly filling in of online evaluation forms Easy reaching to SAMU and other evaluators

Table 6 - ACTRIS PASS User-based requirements

10.2 Science and User Forum

The ACTRIS Science and User Forum is the place organized by SAMU to host exchanges between users and ACTRIS on the use of services.

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It is conceived to keep the users at the forefront of the RI activities by maximizing the level of user engagement, the use of ACTRIS services and the users' satisfaction.

The ACTRIS Science and User Forum is implemented as a web-based platform integrated into the ACTRIS website. It is a complementary tool to the other systems for managing user access to ACTRIS services and that will be managed by the SAMU (PASS and SUPRA), to provide a fully integrated and centralized experience for users allowing them to access the services, express their needs and feedback, be connected with the right information about data, tools, resources, dedicated events, opportunities and challenges, research ideas, new discoveries and any other topic of interest.

The Science and User Forum is realized through dedicated software and web pages that provide the full range of capabilities that could help and streamline the relation with users and simplify the SAMU activities.

The design, implementation and continuous evolution of the ACTRIS Science and User Forum rely on two key aspects: the identification the different users' needs and approaches to the ACTRIS services and the definition of the appropriate channels and work plans to effectively engage with them.

The discovery of users' requirement will be regularly taken into account during the continuous development of the Forum. Main users' requirements considered for the implementation of the Science and User Forum are:

- Get information on how to access and use the infrastructure (service catalogue, access programs, call for access, etc.)

- Gain access to guidelines, training materials, data and models

- Gain insights on current and future developments

- Provide feedback on the ACTRIS experience, success stories, etc.

- Communicate ideas and specific technical needs or challenges

Different channels and activities can be developed and organized to effectively engage with users, fulfil their requirements and support the informative and strategic mission of the Forum. Main tools considered for the implementation of the Science and User Forum are:

- features for access-related message threads, thematic channels, etc.

- Forms and surveys specifically built for collecting users' needs, requirements, feedback, user stories, etc.

- Email lists, news, to inform and highlight ACTRIS services, opportunities, current and future development, etc.

- Online resource library as a dedicated directory of selected static content that would be beneficial to the users: HowTo tutorials and FAQs related to access to ACTRIS services; use cases reports, success stories, publication; etc.

- Events like webinars, training events, topic-specific workshops, consultations, service review meetings, etc. to illustrate ACTRIS services and opportunities, review and plan strategic

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development, establish relationships, etc. To some extent, the informative and strategic mission of the Forum can also be carried out within face-to-face meetings specifically organized by SAMU.

10.3 SUPRA - SAMU User helpdesk application for Physical and Remote Access

11 Further AMP contents and outline proposal

The following is a list of subsequent sections in the Access Management Plan whose contents is going to be developed, detailed, revised and agreed upon in the course of the ACTRIS Implementation project.

1. Roles and responsibilities (RACI matrix)

    Map of the activities listed to roles, indicating the accountabilities and responsibilities

2. Effort and resources

    FTEs, servers, licenses, etc.

3. Dependences

    Other services that support the access management: HO OPU – DEVU Units, CF / Units leaders, etc. architecture diagrammed to indicate relationships.

4. Risks

    Identification of risks and drawing up of mitigation plans if the risk materializes.

5. Annex and Templates

    5.1. Call Text template

    5.2. Terms of access template

    5.3. Guidelines for applicant's template

    5.4. Template for access requests/applications

    5.5. User's Statement of Compliance with Facility's Access Requirements template

    5.6. Assessment template

    5.7. Guidelines and TORs for reviewers (Templates)

    5.8. …………………

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12 References (to be updated)

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