Deliverable 6.2: Report on the ACTRIS User support system

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Contents

1. About this document

This document provides a detailed report of the tools and practices to establish, feed and maintain a trusting relationship between ACTRIS, its facilities and the users. An effective system for interacting with users and supporting them is designed and implemented to increase user engagement and reinforce the user-centric approach for access and service development affirmed in the ACTRIS user strategy, keeping users' needs at the forefront of every interaction.

The document was prepared in the context of the activities of the ACTRIS IMP (Aerosols, Clouds and Trace Gases Research Infrastructure Implementation Project). The ACTRIS IMP is meant to support the implementation of the organizational, operational and strategic frameworks of the ACTRIS. In particular, Work Package 6, which is coordinated by the CNR, deals with the implementation of the system of access to the ACTRIS Central and National Facilities and to the available services, following a user-centric approach coherent with the ACTRIS technical capability and mission.

The document is structured in 9 different sections. After the introduction, Section 2 illustrates the mission assigned to the user support system. Based on this and the objectives identified, Section 3 presents the main components of the user support system with subsequent sections describing in detail the ACTRIS Catalogue of Services (Section 4), the Science and User Access Forum (Section 5), the ACTRIS Platform for managing user access to ACTRIS ServiceS – PASS (Section 6), the user helpdesk for physical and remote access – SUPRA (Section 7) and the process for collecting and processing feedback from users (Section 8). Finally, Section 9 provides the list of references consulted.

2. Mission of the ACTRIS User support system

The ACTRIS user support system is a set of tools and procedures designed and implemented to meet the ACTRIS user needs for information and assistance to conduct excellent research while ensuring that their feedback is processed to provide input for continuous improvements of the RI.

The coordinated, efficient functioning of the system guarantees that ACTRIS correctly implements its user strategy in the RI's operations and that the research infrastructure continues to meet user expectations effectively. The user support system assists and contributes to decision-making in ACTRIS, absorbing, processing and channelling key input and feedback from users to the appropriate decision-making bodies.

Specifically, the mission assigned to the user support system is:

a. to help users obtaining complete, clear and practical information on the available services;
b. to encourage two-way communication between ACTRIS and the users regarding the services;
c. to provide a friendly, easy way for users to enter their request for access to ACTRIS service, to complete their formal duties regarding access and to get information about the status of their request while automatizing, as much as possible, the internal workflows established for the access management;

d. to provide quick, efficient and caring assistance to help users achieve their scientific/technical goals using ACTRIS resources;

e. to introduce and maintain appropriate feedback loops to capture, store, process and follow up on user reviews, suggestion, comments, proposals, etc.

Ultimately, the goal is to provide an overall better support to users before, during and after the service provision by automating as many steps as possible and, where automation is not possible, increase the efficiency of the people involved across the entire access provision chain.

3. Main components of the ACTRIS User support system

The main components and features of the ACTRIS User support system were identified considering the mission assigned and the desired functions the system has to perform. Based on a one-to-one correspondence with the functional requirements, the User support system is composed of:

1. a Catalogue of services
2. a User Access Forum
3. an online access management platform
4. a User helpdesk
5. a User feedback set of processes

as detailed in **Table 1** that follows:

Functions	Components
Provide users complete, clear and practical information on the available services	ACTRIS Catalogue of Services
Encourage two-way communication between ACTRIS and the users regarding the services	Science and User Access Forum
Provide a friendly, easy way for users to enter their request for access to ACTRIS services, complete their formal duties regarding access and to get information about the status of their request	ACTRIS Platform for managing user access to ACTRIS ServiceS – PASS
Provide quick, efficient and caring assistance to users	ACTRIS SAMU User helpdesk for Physical and Remote Access – SUPRA
Introduce and maintain appropriate feedback loops to capture, store, process and follow up on user reviews, suggestion, comments, proposals, etc.	ACTRIS User feedback system

Table 1 - Functions and Components of the ACTRIS User support system

4. ACTRIS Catalogue of Services

The ACTRIS Catalogue of services is an online tool integrated in the ACTRIS Website providing the user access to a digital registry to search for, view and get all relevant information about the services offered by ACTRIS Facilities.

The Catalogue of services mainly serves two objectives:

1) to ensure maximum use of all ACTRIS resources by improving their visibility and discoverability;
2) to ensure that ACTRIS stakeholders know what value ACTRIS creates, maintains and provides with the services for excellent science they use and support.

The Catalogue offers a comprehensive listing and organization of all available ACTRIS services. Services are classified by atmospheric component and different categories, to ensure that users can easily locate, recognize, understand and access the services to achieve their research goals.

To this end, special care is dedicated to content organization, structure and labelling, with the study in particular of:

- how to categorize and organize the services, ensuring that relevant and key information is collected for all the services in a coherent manner (structure)
- what labels and keywords use to represent the information (labelling)
- how users browse or move through information (navigation)
- how users look for information (search options)

Also, the design and configuration of the ACTRIS Catalogue of Services is studied to be compatible with the CaTRIS[1], the Catalogue of Research Infrastructure services. The link with CatRIS will allow ACTRIS services the possibility to be visible and searchable via the CaTRIS portal with a clear added value in terms of visibility.

4.1 Services description

Information on the services includes:

1) **Basic information:**
   a) Name of the service
   b) Summary description of each service
   c) Provider/s
   d) Location/s

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[1] CatRIS is a H2020 project which offers an open portal to a harmonised and aggregated catalogue of services and resources provided by Research Infrastructures and Core Facilities across Europe. It is a bottom-up initiative, which is meant to be populated and run by RIs and CF service providers at European, national, regional and institutional levels. The search portal is also compatible with the EOSC catalogue.

e) Link to further information at the Service Provider/s' website

2) **Classification information:**
   a) Atmospheric component/s
   b) Research area/s (different levels)
   c) Geographical environment
   d) Type/s of service (different levels)
   e) Atmosphere type (ambient or controlled)
   f) Target users
   g) Keywords

3) **Maturity information:**
   a) Service status (beta, implementation, operational)
   b) Date of availability
   c) Provided since:

4) **Access information:**
   a) Type of access
   b) Service provision procedure (details of how access to the given resource will be granted to users, in situ or remotely, including any constraint or limitation to access)
   c) Estimated duration of the provision
   d) Output for the user (certifications obtained after service provision, for example Certificate of calibration, attendance, etc.)
   e) Need to accept and comply with Facility-specific terms and conditions of access (for instance: internal rules and applicable regulations to be admitted to the facility and use the resources, if any)
   f) Possible fees (if any, and type of users who may be subject to fee)

5) **Support information (support at facility):**
   a) Available logistic and support services
   b) Training

A specific excel template[2] is created to collect all the information on the services and that is required for the Catalogue.

Specific information can be arranged as categories that organize the services into logical groups based, as much as possible, on the user needs and trying to avoid having either too many categories or categories built upon too many level hierarchies while supporting the user search and navigation with filters and tags.

Services in the catalogue can be placed in multiple categories because they fall into several ones and can be tagged with different labels and tags. This allows for flexibility and the possibility for users to find the services using different paths, making sure, in the end, that users reach what they need in every possible way and following their criteria and mental processes.

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[2] Thoroughly described in ACTRIS IMP Milestone 6.2: Detailed description of ACTRIS Service catalogue (Ref. 5).

4.2 Navigation and search options

Two main methods of browsing the service catalogue are available to users:

1. **Guided Navigation, or layered or category navigation,** which enables users to filter and reduce the list of services in a category based on any available and looked-for attribute. Guided navigation can appear in category pages, service listing pages and in search results.
   Users can apply different combinations of filtering attributes and navigate the services based on what's important to them.

2. **Quick search function**, which enables users to find services through a web search engine that allows for full-text search to find phrases in various services' metadata such as Provider, Country, Labels and Keywords.
   Users can type in the search box specific words or phrases describing the service and jump directly to the service page without navigating the categories to find it.

4.3 Tentative structure and layout

The tentative structure and functionalities of the Catalogue, together with some graphics and visual appearance, can be seen in the mock-up prepared to help the design.

ACTRIS users can access the main area of the Catalogue by navigating either from the drop-down menu at the top of the ACTRIS website landing page or via the central section of the web page (**Figure 1**).
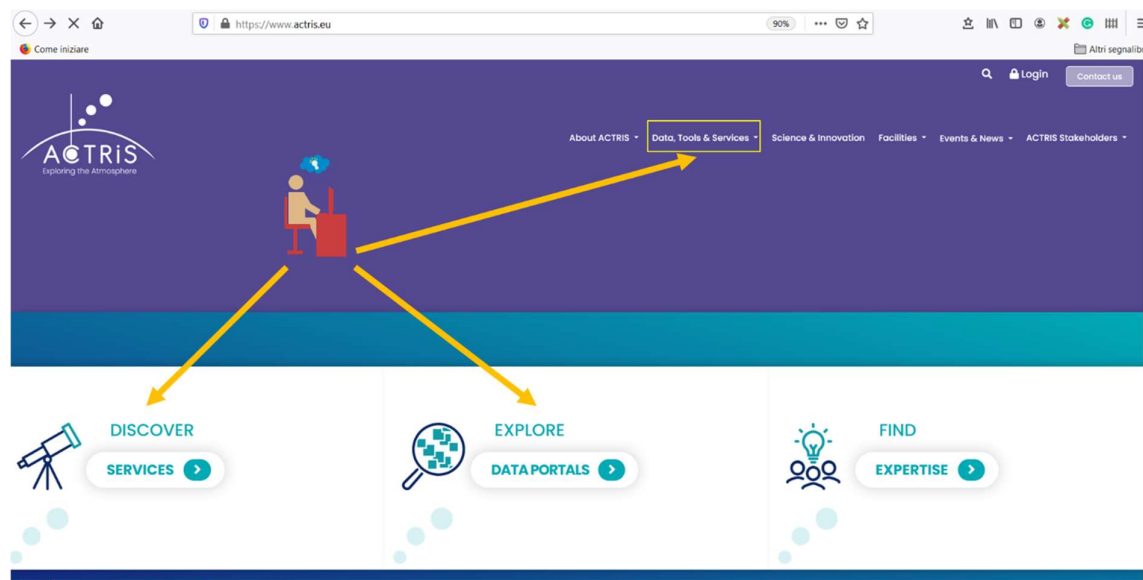
Figure 1 - How to access the ACTRIS Catalogue of Services

The selection of "Access to data" or "Explore Data portal" directs users to the Data Portal managed by the ACTRIS Data Centre (DC) to provide virtual access to ACTRIS data. Structure, features and functionalities of this part of the Catalogue are described in the DC documentation and are out of the scope here.

The selection of "Access to services" or "Discover Services" directs users to the Catalogue sub-section devoted to services available for physical and remote access, which is managed by the Service and Access Management Unit (SAMU) of the ACTRIS Head Office (HO). The landing page lists the services available, possibly grouped into categories, like in the current arrangement of the contents that are now online on the ACTRIS website (**Figure 2**), reviewing or adding new categories if needed.
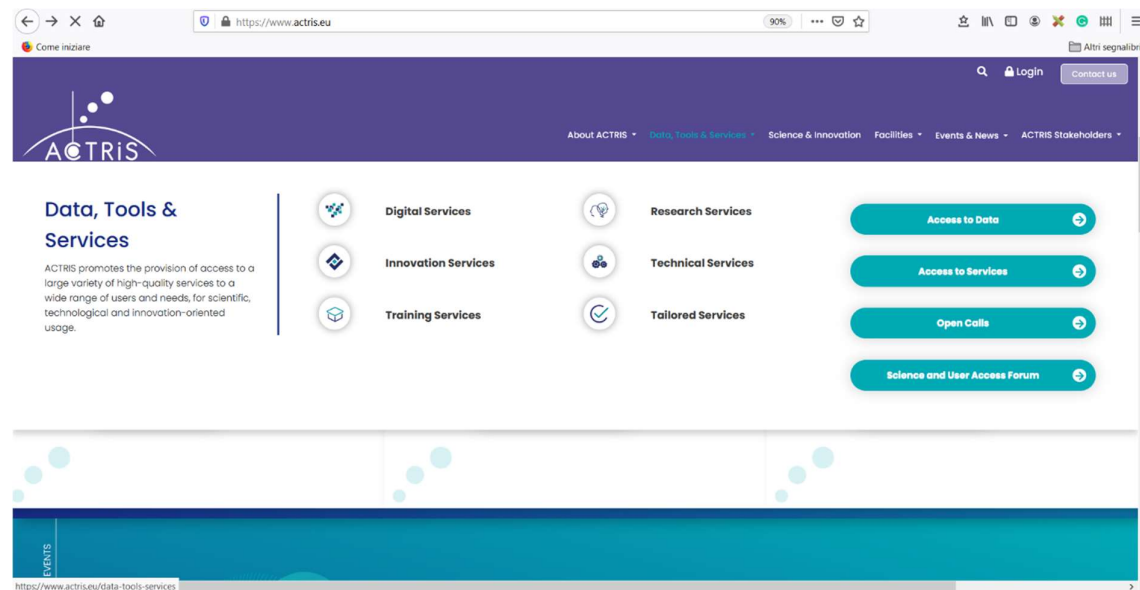
Figure 2 - Current categories of services in the ACTRIS website

After selecting one of the service categories, users reach the service listing page that displays all service items in the category with their brief descriptions (**Figure 3**).
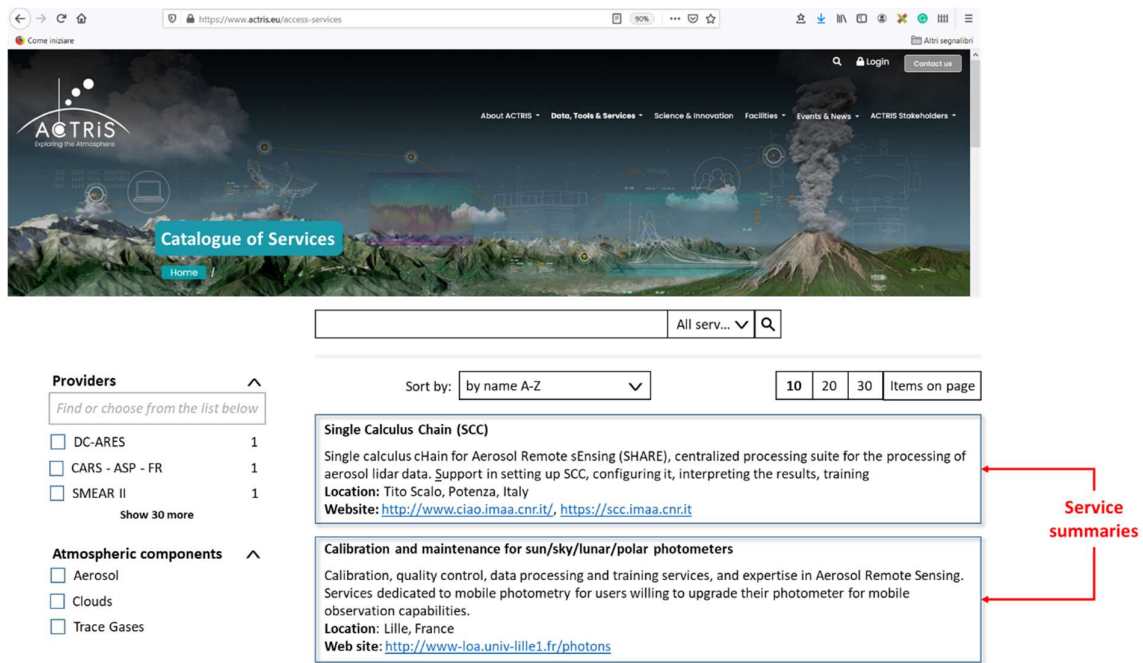
Figure 3 - ACTRIS Catalogue of Services service listing page (provisional)

Service listing pages have a set of controls that users can use to sort the services, change the format of the list, sort by field, or use the search function.

A search bar at the beginning of the page allows users to launch a search for services typing any word or phrase or piece of information they're looking for. Sorting options enable users to choose the order in which the results (service items) should appear as well as the number of items to be shown on the page (**Figure 4**).
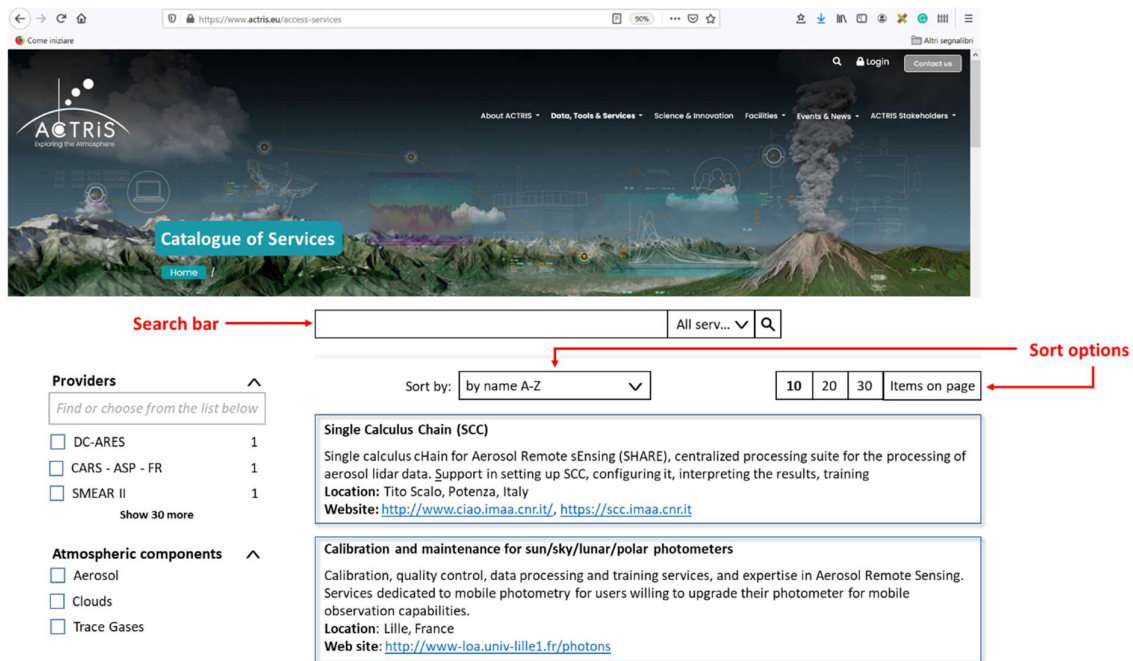
Figure 4 - Search and sort functions

The left side of service listing pages hosts the guided navigation, which can be used to search for services by category or by attribute filters (**Figure 5**). The categorization and specification of services with the indication of attributes allows for the application of different filter methods to narrow the search and result field.
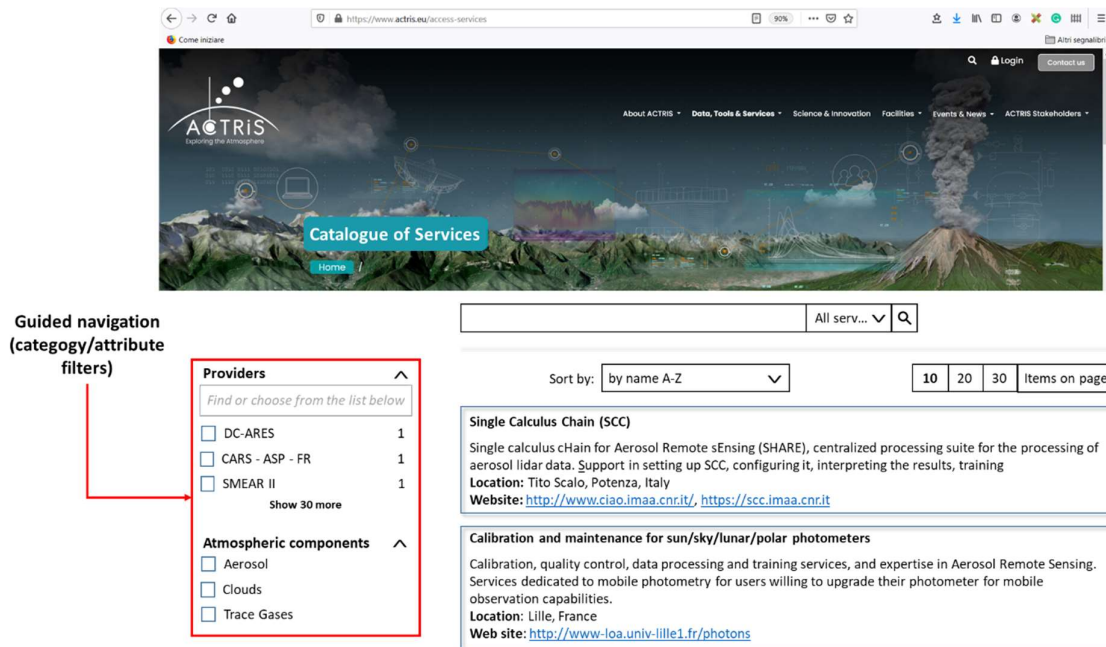
Figure 5 - Guided navigation options

After selecting one of the services and clicking on the box with its summary description, users reach the service description page (**Figure 6**).

The top section of the service description page repeats the most important elements of the service such as the name, providers and the useful links.

Clicking on the "About" tab in the navigation bar opens a section that provides a high-level description of the service, its functionalities, benefits and results for the user, etc.

The right side of the service page hosts information on the specifics of the service: reference atmospheric component, technical-scientific categories, etc. and the button to request the service, with the link at the PASS platform.
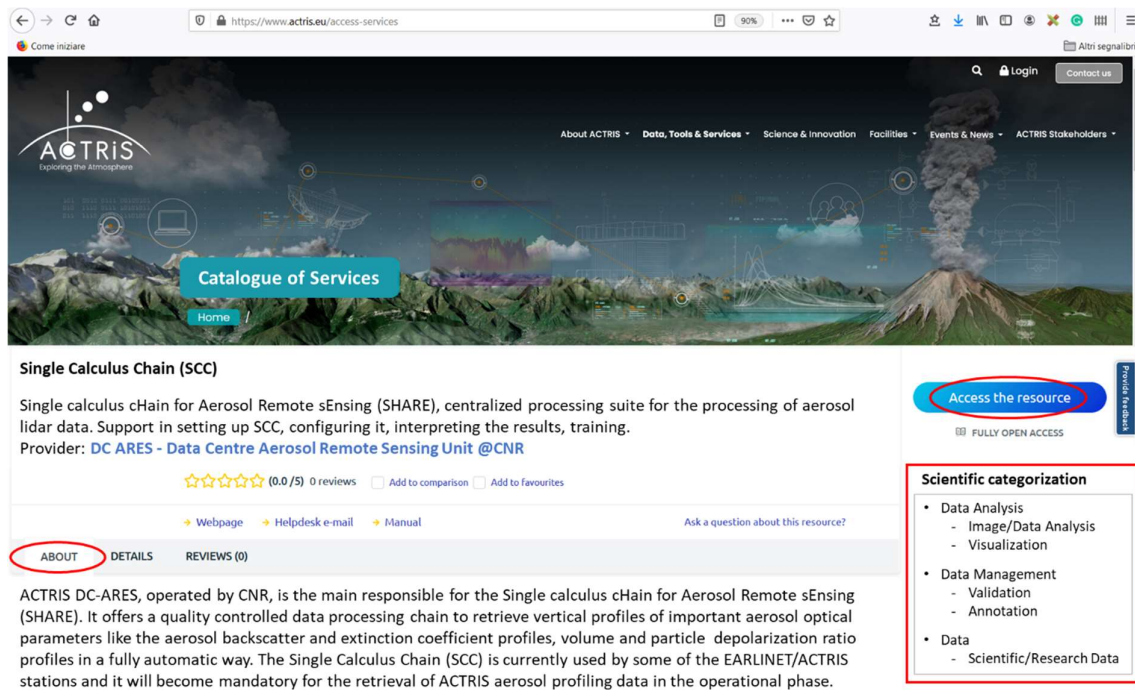
Figure 6 - ACTRIS Service Page

The **Details** tab (**Figure 7**) provides users with comprehensive information about the services, for instance:

- Information about the service **Classification**

- **Geographical Availability** and **Location**

- Information about the relevant **Research areas**

- **Marketing** information such as linked **Multimedia** and **Use Cases**

- **Public Contacts** for the resource

- **Maturity** Information (**Life Cycle Status**, availability, etc.)

- **Dependencies** - information about other resources needed to use this resource

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Figure 7 - ACTRIS Service page Detail tab

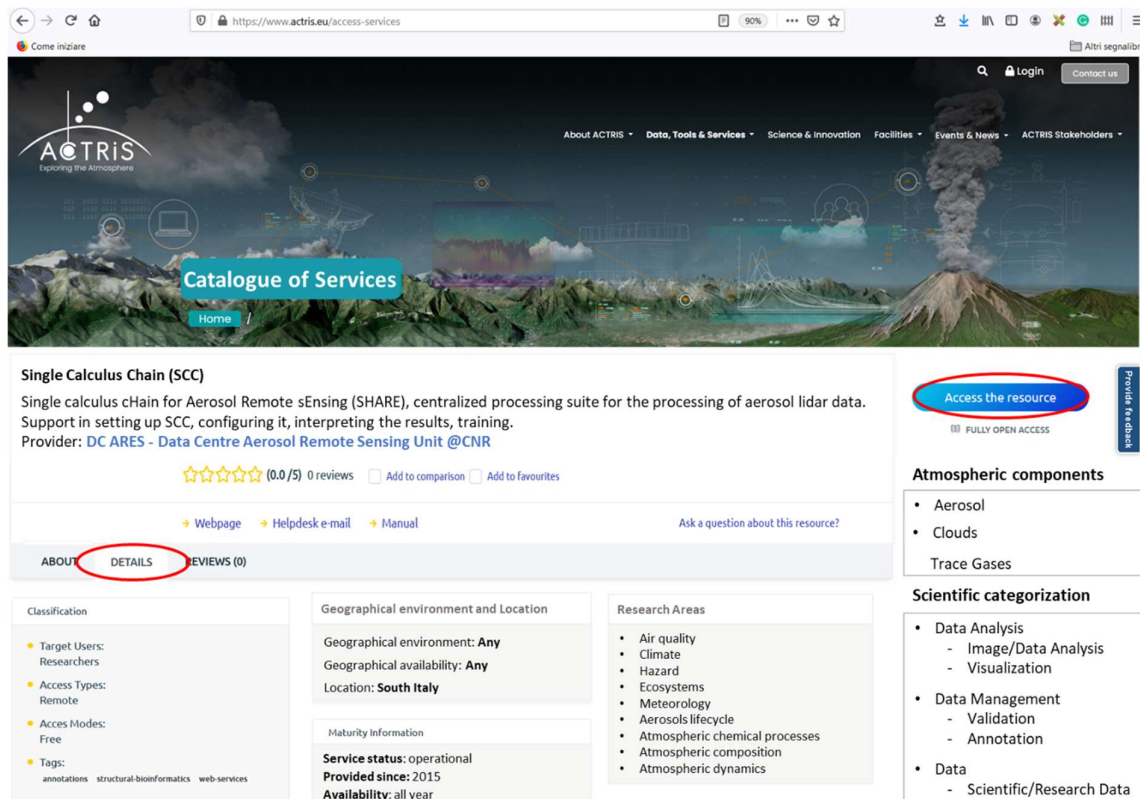The Catalogue navigation and search features should give users a good chance of getting to the service they need without much hassle and pain. However, in case the search is not successful, and the user does not find what he needs or has difficulty finding his way around the Catalogue, he can contact the Service Helpdesk, described in section 0.

4.4 Roles associated with the Catalogue of Services

Clear roles and responsibilities required for effective service catalogue management need to be recognized to ensure that the ACTRIS Catalogue always reflects and efficiently presents the ACTRIS offer of services, containing updated and accurate information on all services, operational or being prepared to be run operationally.

The following are identified and synthetized in **Figure 8**:

I. Strategic, uppermost roles:

1. ACTRIS General Assembly, which ultimately decides on the ACTRIS user and service strategy also based on scientific opportunity and considering the resources (also financial) involved in the provision of services
2. ACTRIS Director General, who oversees all the research infrastructure activities and ensures that the scientific and strategic development of ACTRIS meets the expectations on socio-economic impact, technology development and innovation
3. ACTRIS RI Committee, which gives advice and recommendations on the alignment of the services to the ACTRIS overall strategy

II. Operational roles:

4. SAMU, whose role is mainly operational but also strategic, since:
   a) as user strategy manager:
      - conducts user research to discover user needs
      - solicits and collects user feedback (see section the description on how and where feedback is processed) ensuring it is channelled to the right people to provide input for RI providers, RI Committee and ultimately the General Assembly (GA) for service development;
      - studies the user/provider experience of access to identify the pain points to be eased/removed to improve the access process
   b) as catalogue manager is solely responsible for:
      - maintaining the catalogue functionalities
      - managing the demand for catalogue changes
      - fostering stakeholder discussions

5. Service Providers, who:
      - Provide clear and complete information on services in the Catalogue, based on the Catalogue format
      - Notify SAMU the need for possible updates, following updates/upgrades of the services
      - Together with SAMU identify the target key users to engage
      - Together with SAMU design the overall user experience including the right tags and labels for the services
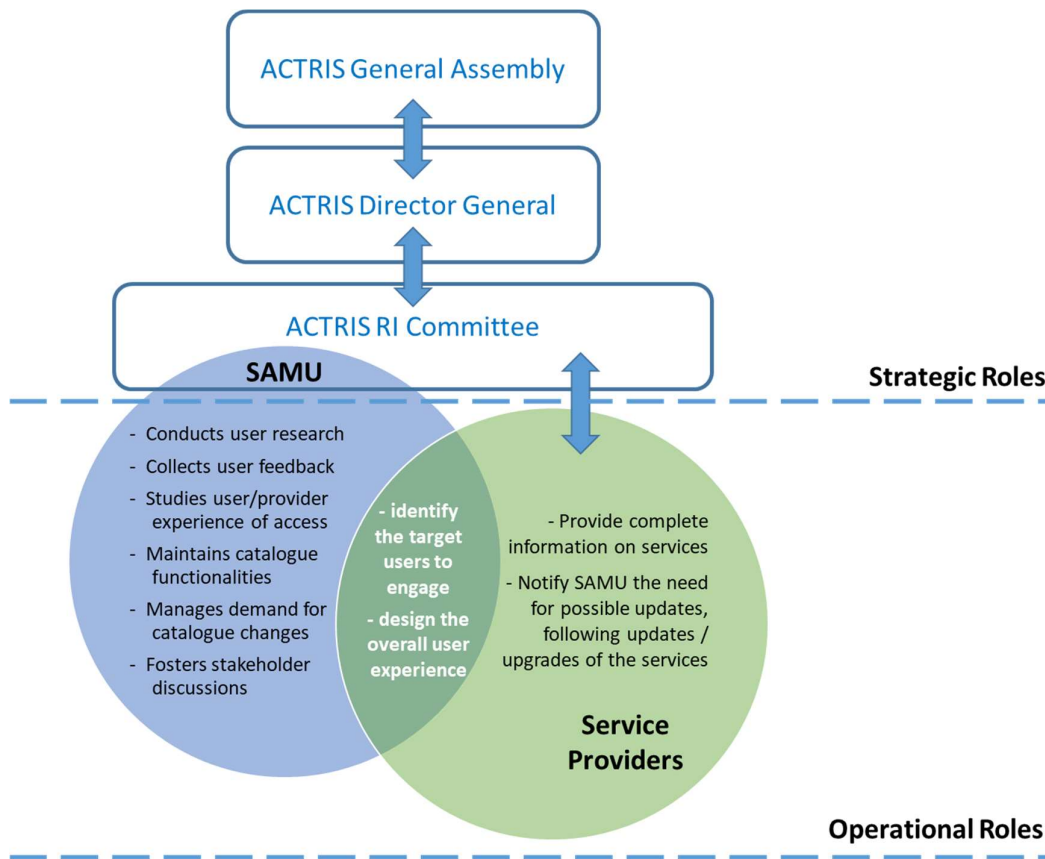
Figure 8 - Roles associated with the ACTRIS Catalogue of Services

4.5 Updates

The Catalogue of Services will be updated during the operation phase to follow developments in the ACTRIS services and keep up with evolving user needs. Updates can happen:

1) anytime, upon provider's request, in case of updates to the services already listed in the Catalogue and which have no impact on the cost of the service or represent a significant change in the content of the service provision,

2) following a special procedure, in case of new services to be included in the Catalogue upon provider's initiative or as result of the development process initiated by user feedback/request received and processed (see section 0) or new needs resulting from the periodic user need analysis.

5. Science and User Access Forum

The ACTRIS Science and User Access Forum is a p*hysical* and *digital* platform where people from private and public organizations interested in ACTRIS can exchange and discuss their needs and expectations regarding access and use of the ACTRIS services.

The Forum mission is to connect, communicate, and listen to users introducing a two-way communication that:

- Engages users with different types of content that both helps their understanding of ACTRIS and the opportunities offered, and enables ACTRIS to learn about users' interests, requirements and experience of services
- Encourages the exchange of thoughts and ideas
- Allows for ACTRIS to anticipate and better relate to user needs.

The Forum is implemented, maintained and managed by SAMU, which will also organize physical events to bring together ACTRIS experts and users for discussion around emerging needs and requirements or to give insights about ACTRIS services, opportunities and future developments.

Contents and exchanges will be mainly delivered through a dedicated online solution in the ACTRIS website. The virtual Forum platform is seamlessly integrated with the other applications for users, in primis the Catalogue of Services, the PASS and the Helpdesk for physical and remote access.

The Forum is online since April 2021 and accessible at https://www.actris.eu/science-and-user-access-forum (**Figure 9**).
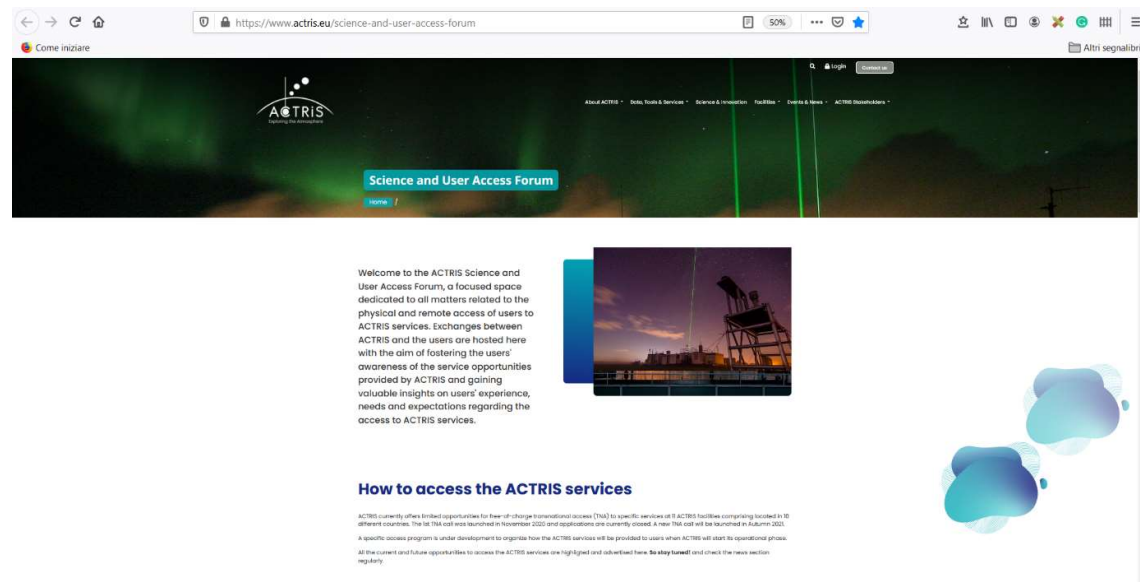

Figure 9 - ACTRIS Science and User Access Forum

A detailed description of the structure, contents and features is provided in ACTRIS IMP Milestone MS 6.3 Design, features and functional requirements of the ACTRIS Science and User Forum [Ref 6].

6. PASS Platform

ACTRIS PASS (**P**latform for managing user access to **A**CTRIS **S**ervice**S)** is the web tool for access management studied, designed, and implemented to:

- Provide users a one-stop shop for requesting access to services provided by all ACTRIS facilities distributed in Europe.
- Organize the centralized management by SAMU of physical and remote access for the entire RI.

6.1 Design, governance, and maintenance process of the ACTRIS PASS

The implementation of PASS draws from and replicates the main steps completed, in sequence, when developing/adopting a piece of software. SAMU takes care of completing and supervising each step of the PASS lifecycle, which is graphically represented in **Figure 10**.
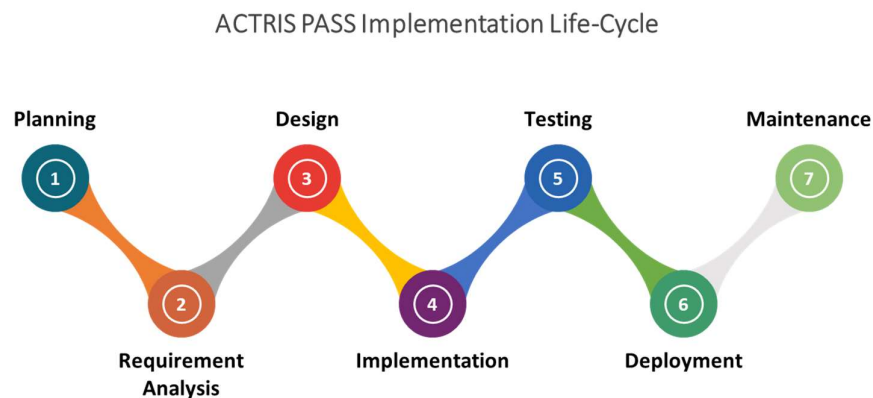
Figure 10 - Life- cycle of the ACTRIS PASS

We are currently at stage 4 of the process, analysing the best software solution to be procured and adjusted to fulfil the tasks assigned. Customization and integration activities have to be completed and internally tested before the release for beta-testing with users in stage 5.

According to plans, the PASS will be released in a beta version with some functionalities to be tested by users applying for access in the 2nd IMP TNA call (planned for Fall 2021). This test will allow to identify and

fix possible unknown bugs. Also, it will enable to improve the overall PASS usability following direct input on how real users use the system and how people perform their tasks using the platform.

Once the platform is fully deployed and operational, regular checks take place to keep its performance efficient. Also, periodic upgrades and enhancements are implemented to ensure that requirements continue to be met and that the system performs as planned.

6.2 Requirements for the ACTRIS PASS

The main requirements considered for the PASS are:

1. business requirements → a high-level objective of the organization that needs a software solution, whether it builds it or procures it.
2. user requirements → a task that different groups of users need and wish to perform with a system, or a desired attribute.
3. functional requirements → functions or behaviors that a system will have to perform. Descriptions of these mainly result from the previous two levels of requirements.
4. non-functional requirements → properties or characteristics that a system should have, describing how the system should perform its assigned functions.

The requirements for the ACTRIS PASS arise from the analysis carried out at the beginning of the work, considering the answers to some key questions around the platform:

a. *What "problem" will PASS solve?*
    i. managing the process for physical and remote access to ACTRIS facilities in a user-friendly, orderly, effective, centralized manner.

b. *Who's going to use PASS and why?*
    Main actors of the platform are listed here, with details of their reasons and requirements for using PASS provided in Section **0**:
    i. Users
    ii. SAMU officers
    iii. Facility experts
    iv. Evaluators and reviewers

c. *What sort of data input/output is needed*?
    i. Input: user requests for access, completed with all required information
    ii. Output: eligibility check, feasibility check, merit evaluation, access reports.

d. *Will PASS need to be integrated with other tools or APIs*?

    i. It has to be integrated in the ACTRIS website and, therein, especially with other related online tools like the ACTRIS Catalogue of Services, the User Forum and the SUPRA – SAMU User helpdesk for Physical and Remote Access.

  e. *How will security/privacy be handled?*
    i. With the latest tools, strategies, and best practices to ensure data security, privacy, and communications protection, fully complying with the GDPR regulation and the like regulations and protocols.
    ii. Through regular updates and most recent best practices implementation to ensure that all data are and remain safe stored.

6.3 User-based requirements

For each group of PASS identified users, the main requirements, expectations and quality attributes regarding the platform are currently identified as presented in **Table 2**.

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 Manage post access requirements and reporting	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

PASS users	Reasons to use the Platform	Requirements
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 Set availability of services ....
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 Access activity reports when relevant	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 2 - ACTRIS PASS User-based requirements

6.4 Business requirements

The requirement analysis highlighted the following main categories of ACTRIS business requirements:

I. <u>Functions and processes</u>

Optimizing the management of the physical and remote access process is the main RI's requirement. The platform shall streamline administrative tasks and communications, enabling effortlessly, smoothly and automatically as possible:

a) managing reception of access requests
b) managing all the steps in the review of the requests (eligibility, feasibility, merit evaluation)
c) managing roles and permissions of users involved in the processes (HO and Facilities' staff, experts)
d) guarantee that each actor receives transparent information and clear mandate
e) control the timing and schedule
f) monitor completion of tasks
g) users are automatically alerted with automatic standardized messages (for example acknowledgment of receipt to users, notifications to facilities possibly concerned by the access

requests, reminders for notifying publications resulting from access), reminders (notifications when the tasks/answers are due, late, or near the planned completion date)

h) collect access metrics and data useful to monitor success of the access program and access provision process, to report to stakeholders and learn lessons for future.

II. Integration

Integration, i.e. connecting applications and software so to have them working together as one coordinated system, is crucial. It enables time savings, and avoiding confusion, duplication and inconsistencies across the systems related to access to ACTRIS. That translates into improved quality of operations.

As previously remarked, the PASS needs to be fully integrated within the ACTRIS website. It also has to be seamlessly integrated with the other applications for users, such as the ACTRIS Catalogue of Services, the ACTRIS Science and User Forum and the Helpdesk for physical and remote access (SUPRA - SAMU User helpdesk application for Physical and Remote Access).

III. Security and privacy

The system that performs access management activities must ensure data and communications security, compliance with GDPR regulation and the like regulations.

6.5 PASS functional requirements and quality attributes

The identification of the required functions and features of PASS reflects and follows the mission assigned to the platform, the needs and expectations of its users, the RI's business requirements.

As regards the operations, the PASS is required to have the ability to deliver these core processes:
- Online submission of access requests
- Automatic eligibility checks while the user fills in the form, with automatic, real-time notification to the user
- Automatic sending of standardized messages, reminders and e-mail alerts
- Management of the Facilities' booking calendars
- Management of the Feasibility check, with notifications to the concerned facilities, forms to be filled in by providers giving recommendations (green light or not) for the next step of the selection (evaluation by the relevant panel)
- Management of the review process, with identification of suitable experts based on initial automatic matching of their experience with the user request content, manual confirmation of request assignation by the team, automatic notification to the experts with sending of the requests, monitoring of task completion
- User feedback collection through survey management, distribution and reporting
- Access reporting

The looked-for <u>features</u> include:
- online, easily customizable forms (for access requests, reviews and throughout the process, to follow up, collect information, or gather progress reports) with conditional logic and branching to vary the form according to user responses
- File uploads
- Auto labels to automatically tag requests based on user's choices for easy filtering and organization
- Search & archive
- Provider workspace, including forms with basic up or down voting or to provide qualitative comments
- Allocation engine to match submissions to the best-qualified reviewers (desirable)
- Reviewer Workspace, with a clear marking scheme enabling experts to grade with scores or comments the requests, working online or downloading the requests they're assigned with.
- Collection and filter of completed reviews to enable SAMU make the final decision individually or by score
- Survey management, distribution and reporting
- Advanced Reporting, to create and save reports, running report on demand, spotting year-over-year trends, creating charts etc.

The main <u>quality attributes</u> the PASS must have are:
- Usability: meaning how easy it is for people to learn, remember, and use the system as well as efficiency of interactions, and accessibility
- Interoperability, meaning that the PASS shall very easily and efficiently interconnect and exchange data with other systems or components
- Modifiability, referring to the easiness of maintaining, changing, enhancing, and restructuring the system
- Security, for instance:
  - All data transferred, whether on the PASS public interface or the administration interface, shall be encrypted using HTTPS.
  - A Strict Transport Security (HSTS) policy will also be implemented to make sure that non-secured channels won't be used in transferring data.
  - All data collected will be processed in a fair and lawful manner, complying with GDPR rules and prescriptions, and for a specified and legitimate purpose. Only the data necessary to fulfil the following purposes (non-exhaustive list) will be processed:
    - Evaluation of access requests;
    - Management of possible access-related agreements, including the follow-up of the publications generated by the access;
    - Communication activities and networking (For instance, networking among beneficiaries, as well as among fellows/researchers/staff members);
    - Metrics, statistics and monitoring of access to ACTRIS.

7. ACTRIS Helpdesk

The Helpdesk function is a significant part of the entire ACTRIS User support system. It revolves around the function centrally managed by the ACTRIS Head Office and involves various ACTRIS actors. The objective is to create an organized environment that enables *all* users to communicate any ACTRIS-related doubt, problem, or issue they have and, at the same time, allows for the relevant ACTRIS actors to quickly and efficiently respond to reported issues.

All kind of support requests from different users are received and directed to suitable people 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, those related to the operations and workflows involving the CFs and NFs to the Operations Management Unit - OPU, etc.).

The ACTRIS Helpdesk (**Figure 11**) should cover all aspects of ACTRIS operations, providing assistance and support not only to end-users but also to Facilities, operators and all relevant stakeholders. Several profiles need to be involved in the user support process, especially staff from all the Head Office Units, but also from the facilities providing services[3], and the helpdesk shall provide coordination between all of the parties to help eliminate delays and improve support provision.
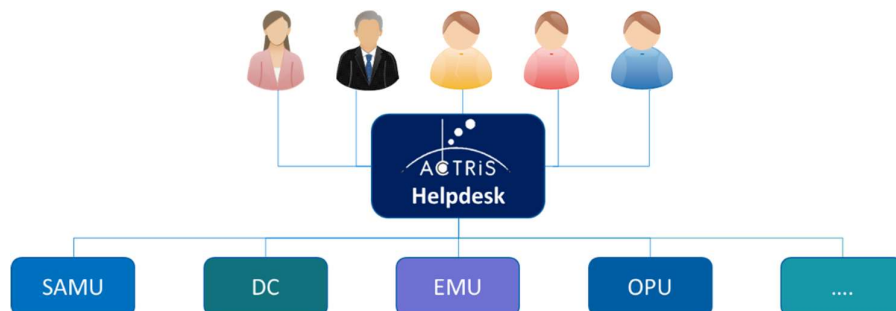
Figure 11 - ACTRIS Helpdesk general scheme

In particular, all support requests that refer to services and data are directed to SAMU and the DC, which respectively manage:

    a)   the support service related to the provision of physical and remote services, detailed in section 0
   b)   the support service related to data.

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[3] This is the case, for example, for the helpdesk managed by SAMU for physical and remote access support described in the next section.

7.1 SAMU User helpdesk function for Physical and Remote Access

The support function related to the provision of physical and remote services is internally called **SUPRA - SAMU User helpdesk function for Physical and Remote Access** and organized as a multi-tier helpdesk as shown in **Figure 12**.

SAMU coordinates support provided at different levels, walking users through problem-solving process whenever they have questions or issues with about access to ACTRIS services, following up with users to ensure the issue has been resolved and soliciting feedback.
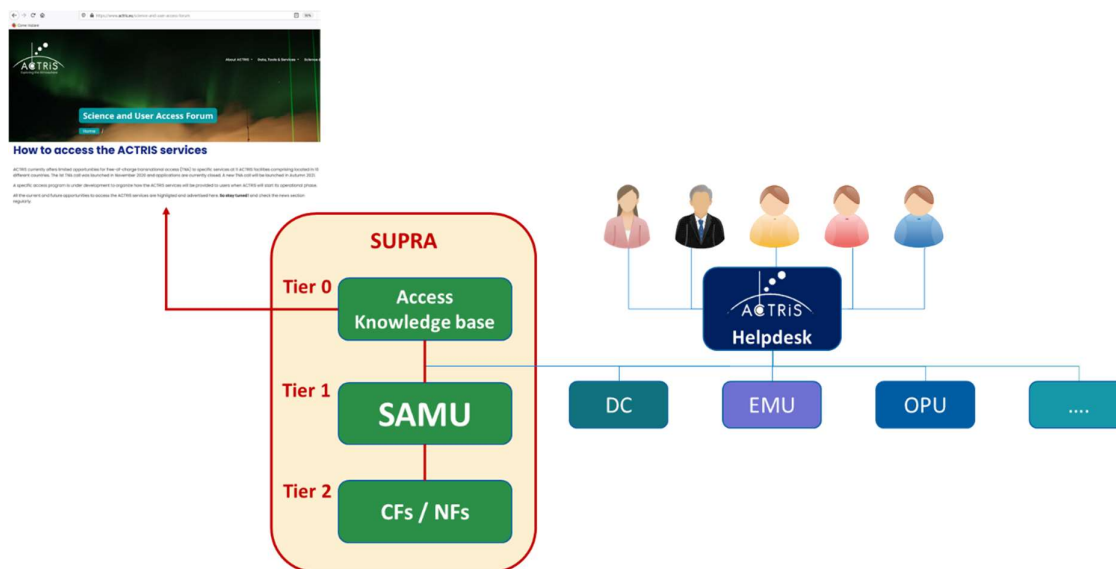
Figure 12 - SAMU User Helpdesk function for Physical and Remote Access

Tier 0 is Self-support through the Access Knowledge Base offered in the ACTRIS Science and User Access Forum. It is based on the consideration that users in most cases prefer to find answers on their own and applies the "Learn by yourself" principle, easing user self-help with the advantage of reducing the number of requests to be handled by other Tiers.

The access knowledge base is a repository of resources on access, such as articles, guidelines, handbooks, terms of references, templates, tutorials, etc. as well as third-party materials and information (for instance excerpts of EU official documents), which are considered helpful to the ACTRIS users and allow them to find solutions by themselves.

ACTRIS resources and third-party materials are organized by topic and will be regularly updated and completed with additional materials.

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Tier 1 is the general information and assistance on access provided by SAMU as it doesn't need particular, technical know-how.

SAMU handles support requests related to the Catalogue of Services, the access process (applications, Terms of Reference, preliminary checks, evaluation, criteria, etc.), the access platform and all support requests that are not related to science.

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. Checking on users during the access.

Tier 2 is specific information and assistance on services, which requires scientific and specialized know-how, granted by the TCs/NFs.

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.

For Tier 1 and 2, SAMU will centrally manage user support requests collected through a dedicated contact page, or through email and phone. Information about the user issues will be analysed to determine the priority and best way to solve it.

A specific helpdesk ticketing system is currently studied and evaluated to facilitate and coordinate the entire process for Tier 1 and Tier 2 thanks to ticket management, communications, automation, and other features. It will facilitate and coordinate the entire end-user support process for requests regarding physical and remote access.

The system will allow to convert all user communication or issues related to physical and remote access into tickets to ensure a quality and timely response. Some of the benefits of using this solution are that it:

- acts as a Single Point of Contact (SPOC) for users' issues.
- Offers tracking capability for all incoming requests (labels & priority)
- Provides Automatic notifications and responses
- Maintains a database of all requests
- Provides to soliciting feedback
- Improves SAMU productivity & performance
- Tracks who is working on what
- Coordinate collaboration to resolve issues faster
- Is easy to use - works like email
- Enables to discuss tickets before responding

Figure 13 below illustrates the workflow for the helpdesk function managed by SAMU through the specific helpdesk solution.
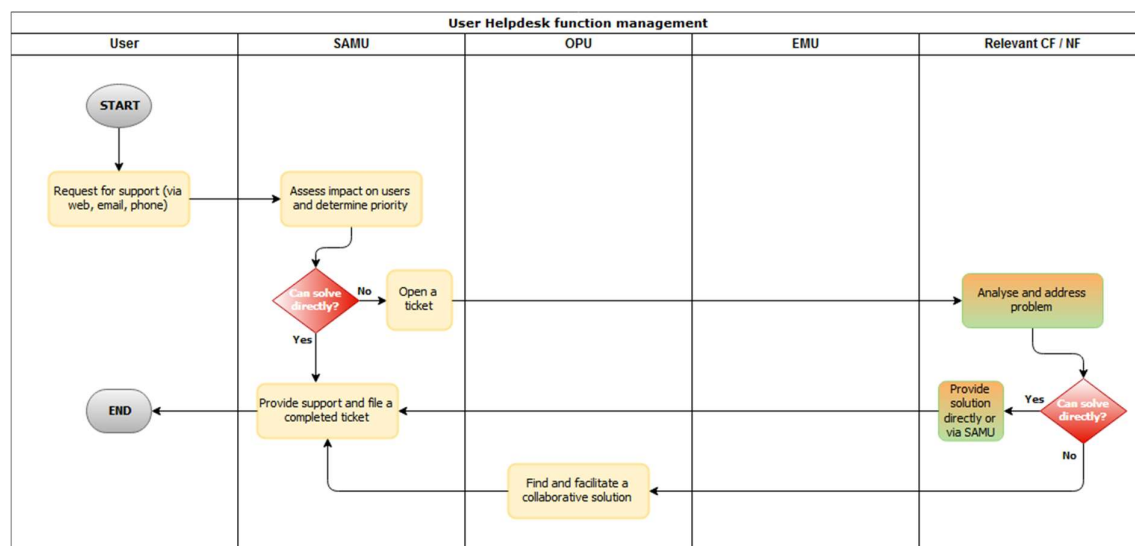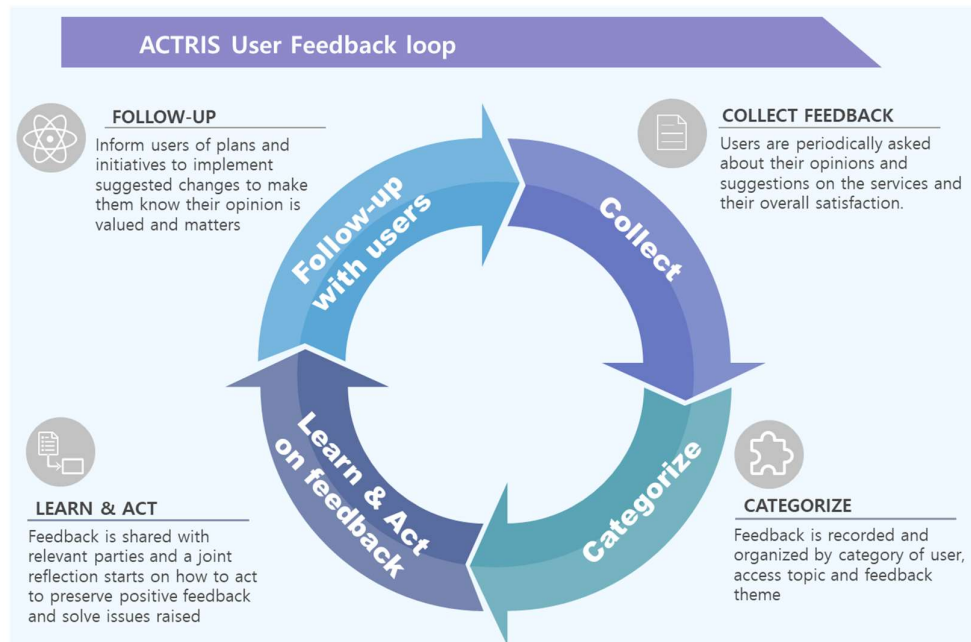

Figure 13 – SAMU User Helpdesk function workflow

8. User Feedback process

An efficient, user/organization-friendly process to collect and handle feedback is the cornerstone of the entire ACTRIS user strategy as it ensures its concrete application in practice.

The implementation of the user feedback process is meant to:

1. demonstrate care and attention to users, how their opinions and evaluations are sought and taken into consideration,
2. engage users in the constant improvement of ACTRIS services based on their views and suggestions,
3. ensure that ACTRIS services remain at the forefront of science, relevant for the user communities, and suitable to help users in addressing global challenges in science, industry, and society.

The timely routing of user feedback to the appropriate organizational bodies for its follow-up is necessary to maintain quality and gain user trust. The process and workflow designed for this draw from a standard customer feedback loop, which is adapted to ACTRIS and placed in the context of the RI (**Figure 14**).

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Figure 14 - ACTRIS User feedback loop

Main actors involved, with different roles depending on their responsibilities in ACTRIS, are:

a) the SAMU
b) the User/ACTRIS community
c) the relevant ACTRIS Central Facility (CF) providing the service
d) the relevant ACTRIS National Facility (NF)
e) the Research Infrastructure Committee (RI Committee)
f) the ERIC Management Unit (EMU) of the HO
g) the Operations Management Unit (OPU) of the HO
h) the Development and Relations Unit (DEVU) of the HO.

Main steps of the loop are:

1. Feedback collection, with any available and possible means:
   - forms and surveys in the ACTRIS Science and User Access Forum and PASS specifically built for collecting users' needs, requirements, feedback, user stories, etc.
   - Helpdesk tickets and interactions
   - email
   - personal contacts.

This is mostly done by SAMU, which organizes feedback solicitation and collection (periodically via surveys and regularly as part of post-access requirements), but also by the facilities that provide services to users.

2. Analysis and categorization of the feedback: possibly with the use of encryption and tokenization capabilities to pseudonymize or anonymize sensitive data, SAMU records and arranges the feedback into homogeneous categories, making a preliminary evaluation to identify the relevant actors to route the feedback for action on it.

3. Reflection on feedback and action: SAMU shares the feedback with relevant parties, promoting a joint evaluation on the reasons for both negative and positive comments to identify suitable actions to maintain positive feedback and turn negative into positive. Relevant actors (Facilities, RI Committee, HO units and if needed the GA) decide together if, when, how to take action, what to do, and then put decisions into practice following user feedback.

4. Follow-up with users: the SAMU keeps users informed about how their feedback is being handled and about all developments, letting users know in particular when their suggestions are implemented in the services enhancement process.

This latter process is closely tied to the user feedback loop in the ACTRIS User strategy, as this link is the key to ensuring that services remain relevant to users and suitable to fulfil their changing needs. It is the reason why, in ACTRIS, the feedback loop is not closed but continuous (**Figure 15**).

ACTRIS User feedback loop & services enhancement process
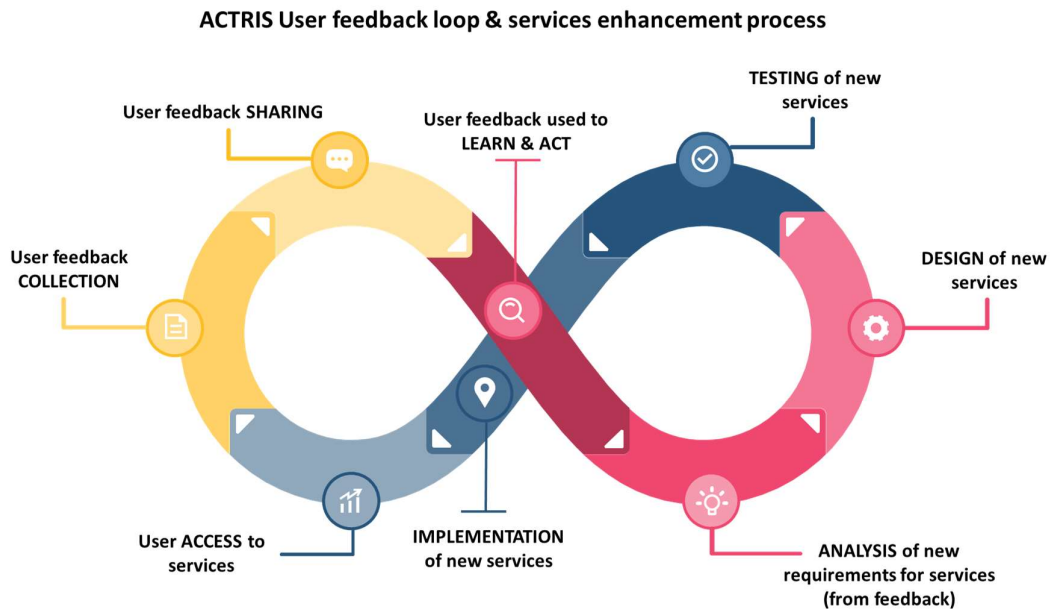
Figure 15 - ACTRIS User feedback loop & services enhancement process

A specific workflow for collecting and processing user feedback is designed to implement and manage the process in an orderly manner. It 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.

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

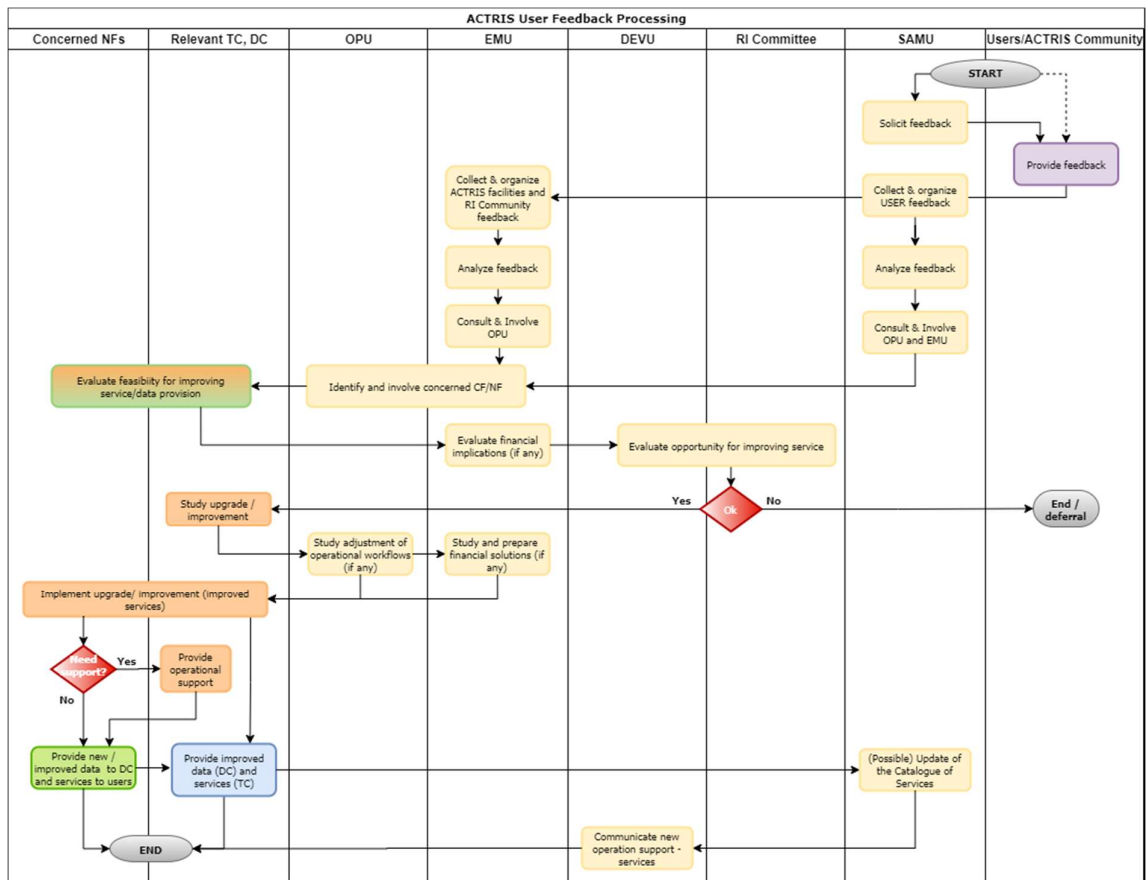The workflow is illustrated in **Figure 16** below.

Figure 16 - User Feedback Processing – UFP workflow

All the steps are explained in detail in **Table 3**.

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

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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 spontaneously via online satisfaction survey, other tools in the online platform or via email.	Users CF/NF providers
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 / criticisms 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 / criticisms 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 provision considering their technical and financial viability.	CF/NF providers
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 3 - ACTRIS User Feedback Processing – UFP

9. Reference documents

1. ACTRIS Access and Service Policy (ACTRIS PPP Deliverable D2.6)

2. ACTRIS Data Policy (ACTRIS PPP Deliverable D2.3)

3. ACTRIS IMP Grant Agreement (N° 871115)

4. ACTRIS Access Management Plan, 2nd Draft (ACTRIS IMP Milestone MS6.5)

5. Detailed description of ACTRIS Service catalogue (ACTRIS IMP Milestone MS6.2)

6. Design, features and functional requirements of the ACTRIS Science and User Forum (ACTRIS IMP Milestone 6.3)

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