

Milestone 6.9: Results of the testing of the access and services provision system

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1 Introduction

A key objective of the ACTRIS IMP project is to implement, test, and improve the ACTRIS service provision. Therefore, several pilots of access provision are offered through the transnational access (TNA) tool, based on the definition of the workflow and procedures related to the access provision and centralized management via SAMU (the Service and Access Management Unit of the ACTRIS Head Office)¹.

The aim of the present document is to provide an overview of results obtained with testing activities on the access and services provision system. In particular, it focuses on access process improvements following the implementation, configuration, and test operation of the PASS platform (Platform for managing user access to ACTRIS ServiceS), which SAMU studied and designed to optimize the entire process by automatizing some phases.

This document has been developed as part of the ACTRIS IMP project (Aerosols, Clouds, and Trace Gases Research Infrastructure Implementation Phase Project) Work Package 6, coordinated by the ACTRIS Service and Management Unit (SAMU) operated by CNR (Italy's National Research Council). Work Package 6 primary focus is on establishing a user-centric approach for implementing the access system to ACTRIS Central and National Facilities, along with the associated services.

The document is composed of 6 different sections: the introduction, followed by Section 2 which summarizes the access process. Section 3 provides an overview and key elements of the PASS platform. In section 4, the testing activities of the access and services provision system are reported with some results of the ACTRIS-IMP Third call for proposal to access ACTRIS Services; section 5 provides a set of actions to be taken to promote the optimization and automated processes with possible improvements and adjustments. Finally, Section 6 provides a list of references.

¹ ACTRIS-IMP: Milestone 7.1: Definition of the pilot access process to ACTRIS facilities

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2 The access process

The access process described² and tested in the IMP project involves different actors such as users, SAMU, providers and review panel members, and it follows the specific rules, procedures, and workflow that, after the results of testing, will be consolidated in the new version of the ACTRIS Access Management Plan³.

SAMU is responsible for the centralized access management of the ACTRIS ERIC. However, during the ACTRIS implementation phase and within the ACTRIS IMP, the coordination of the pilot TNA process has been shared with the IMP WP7 leader (CNRS) and gradually evolved into a more operational system (though continuously open to improvements).

SAMU manages the entire process, liaising between users, providers, and reviewers, supporting all of them before, during, and after the access process, collecting the user requests and coordinating the review process, which includes three different steps:

- 1) Eligibility check: SAMU verifies the compliance with the European Community regulations and the conditions of transnationality, affiliation, and dissemination;
- Feasibility check: the eligible TNA requests are checked for feasibility by the access provider, considering the knowledge and expertise required to fulfil the user needs, the timing of access and the availability of logistical and financial resources;
- Review and selection: each application is evaluated by an independent review panel identified based on the technical/scientific knowledge required by the evaluation. A Rapporteur summarizes the individual assessments and formulates recommendations.

SAMU and the WP7 leader establish the proposals to fund and those to reject based on the expert's evaluations, the Rapporteurs' summary reports – where available – and, in case, a selection meeting. In case of acceptance, SAMU awards the TNA and invites the user to acknowledge the TNA terms and conditions of the access and to contact the provider to for organising the access.

At the end of the TNA, SAMU collects, from providers, the documents confirming the access and certifying the access units provided and, where applicable, other certifications of the services; from the users, the activity report, the feedback about this experience, and information about results dissemination through scientific publications and data.

3 PASS Platform

The ACTRIS PASS (Platform for managing user access to ACTRIS ServiceS, <u>https://passactris.smapply.io</u>) is the tool introduced to optimize the managerial process of ACTRIS access calls. Access to ACTRIS IMP services is based on dedicated and specific calls for access: the first and the second call were managed via offline forms, while test use of the PASS platform⁴ started with the <u>third call</u>.

² ACTRIS-IMP: Milestone 7.1: Definition of the pilot access process to ACTRIS facilities

³ ACTRIS-IMP D6.5: ACTRIS Access and Service Management Plan, updating the ACTRIS-IMP: Milestone 6.5: 2nd Draft of the ACTRIS Management Plan

⁴ ACTRIS-IMP: Milestone 7.4: Intermediate assessment of the pilot access concept and process

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PASS enables SAMU to supervise each step of the access process more efficiently, to create and adapt workflows that work for the specific requirements of different calls and reduce the workload for trivial tasks (for example, sending standard communication to large group of recipients or exchanging documents).

Figures below offer some views of the PASS homepage (Figure 1), the admin portal and dashboard allowing management of different calls/programs in parallel (Figure 2), and the access workflow for the IMP 3rd Call (Figure 3).

ACTRIS PASS - Platform for manag	ging user access to ACTRIS ServiceS			
ACTRIS PASS (Platform for managing user access to ACTRIS ServiceS) is a web tool designed and implemented by the Service and Access Management Unit of the ACTRIS Head Office. It provides a collection of services to all the users involved in the process of submitting, managing and reviewing the requests to access physical and remote services provided by the ACTRIS facilities distributed in Europe and by the other research infrastructures partnering with ACTRIS under specific projects.				
How to Apply ACTRIS offers different options to access physical and remote services, open and limited and with different application process. Explore the available programs below, and start your application today!				
Programs	Search programs			
ACTRIS-IMP Third call for proposal to acc Accepting applications from Jul 22 022 12:00 (CEST) to Jun 2 023 17:00 (DEST) The find and last call for proposals in the frame of the ACTRIS IMP project offers limited opportunities for free-of-charge Trans- National Access (TNA) to peotic services at 11 ACTRIS facilities comprising Topical Centres (TCa), the Data Centre (DC), National Acalities (NFA), or combined ACTRIS Facilities (NF-TC), located in to different countries.	ATMO-ACCESS Transnational access for P Accepting applications from May 15 2023 12:00 (CEST) to Dec 31 2023 17:00 (CT) This special call offers private users access to the most advanced atmospheric research facilities in Europe. Access topic and modalities are unrestricted.			

Figure 1 - PASS Homepage



Figure 2 - PASS Admin Portal

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Figure 3 - ACTRIS IMP 3rd TNA call workflow (PASS)

The implementation of PASS is a major milestone in the creation of the ACTRIS user access management system. However, the work does not end here, as SAMU is committed to continuously improving the functionality and performance of the tool to serve ACTRIS, its users, providers and reviewers better. For that,

the team will actively monitor the feedback of all platform users⁵, identifying areas for enhancement and planning for updates to address the needs. This iterative process ensures the tool evolves in response to changing requirements and technological advancements.

4 Testing of the access and service provision system: results

During the ACTRIS IMP project, all elements and steps in the access process were tested, with significant progress, over the past year, in automating most of these through PASS. The overall access process and, above all, the usefulness and efficiency of PASS in simplifying it, as its flexibility to accommodate different requirements, have been extensively tested, in parallel, also in the ATMO-ACCESS project⁶.

Testing and evaluating the service provision answered the need to understand what worked and what required improvements from the initial design, how to improve trust, process efficiency and functionality, reduce risks and errors.

Experimenting with different application forms confirmed the choice to tailor the form to the type of services (e.g., research /technical /training /innovation and tailored data services), which increases the collection of relevant information for providers and reviewers and facilitate the evaluation based as a function of the appropriate set of selection criteria. Access providers helped a lot in that, enabling SAMU to shape the application and access confirmation forms according to the characteristics of their service provision which has been useful to grasp the most important aspects for the evaluation process and, after access completion for reporting.

The tests with the application forms also proved that the attempt to educate/push users to select the service first and then the facility was good and worked, as parallel tests in ATMO-ACCESS showed⁷. However, the direct indication of the facility in the service name is and remains the main driver of the user's choice of which service to request.

With the transition to PASS, some fields in the application form were made mandatory and were reorganized to allow a more direct correspondence with the relevant fields in the eligibility, feasibility and reviewer forms, with the result of facilitating the work for SAMU, providers, and experts.

Major results of the shift from manual/offline management to automated/online management are the possibility to guarantee full traceability and appropriate archives of the documents and communications,

⁵ When PASS users are operating through the site and have questions, issues or want to give suggestions regarding the tasks and the implemented process, they click on the information (i) icon within their account and directly contact SAMU via email.

⁶ ATMO-ACCESS - Solutions for Sustainable Access to Atmospheric Research Facilities – is a H2020 project (Grant Agreement No 101008004), coordinated by ACTRIS (CNRS) and involving the ICOS and IAGOS RIs. PASS settings were adapted to allow the separate management of IMP TNA calls and, at the same time, the use of the platform in ATMO-ACCESS, meeting also its particular TNA management needs.

⁷ In ATMO, users first choose the structure, then the general category of the service. In some cases, it is necessary/recommended that they change the service category to reach the application form that most fits the type of service required, which allows them to enter the relevant information for selection.

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quick monitoring of each actor's activity, the opportunity to send reminders and notifications to users, providers, and reviewers and, in case of persistent inactivity, take remedial actions.

PASS helps to reduce the fragmentation of communications and loss of information as each exchange and activity is chronologically mapped and stored.

With PASS, SAMU fully implements WP7 recommendations regarding the need to archive access documentation and reduce the time between the application and the access start date⁸.

Regarding the latter, the automation of steps in the access process, the use of bulk emails, automated task assignments, and the possibility for reviewers to work remotely on the application, at the same time, with anonymization features that reduce bias and protect privacy, helps saving time and allows processing the user requests - in a very reasonable period.

The eligibility phase has been entirely automated and reorganized. Once the application is submitted, PASS randomly assigns it to SAMU operators for the preliminary check of compliance with the access rules. If the application is eligible, concerned access providers, grouped by facility, receive automatic notification of the application to check for feasibility. The application stays in the facility provider dashboard until the relevant one completes the check and confirms or denies feasibility.

The feasibility phase has also been tested and automated, with a specific, updated form managed online that allows i) a preliminary estimate of the access units needed for the service provision and ii) the travel and subsistence contribution the provider plans to allocate to the user. If the application has a positive feasibility check, then it is manually associated with the relevant access mode (excellence-driven, market-driven, technical need-driven, training need-driven) for selection and subsequent assignment to suitable reviewers.

The identification of suitable reviewers is also managed manually. After consulting the Excel database of all available reviewers registered with their expertise and affiliation, SAMU associates them offline with each application based on the scientific area of the access and provider's recommendations. The following review assignment process is managed automatically with PASS.

The results of the test with the review panel prove the effectiveness of not involving the entire panel (about 10-15 members) in evaluating each application, but considering 2 or 3 members. The selection criteria have also been tested and have evolved over time as tests have shown that they need to be refined and better specified depending on the service requested.

Assignment to a Rapporteur for the review summary was tested, with the Rapporteur preferably chosen among the reviewers who rejected the application to allow them to consider other reviewers' assessment, change opinion where appropriate, and provide final recommendations.

Following positive evaluations and final selection, the award of the TNA takes place via PASS, with a personalized official letter populated with relevant information (username, institution, and address, together with scores and comments from the reviewers, where available) retrieved from the application and reviewer forms. Both users and providers are recipients of this message.

The access phase opens with the user acknowledging the terms of access via PASS and agreeing to comply to requests from the provider or the access management for optimised access execution and reporting.

⁸ ACTRIS-IMP: Deliverable 7.1 Recommendations for optimizing the access process and user interaction

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During the access period, periodic emails remind users to notify the end of the access at the Facility, a task that triggers the last steps of the process, with the requirement for providers to complete the confirmation of access, and for users to prepare the activity report, where required, and fill in the feedback questionnaire.

Submission of the acknowledgment of access terms (by the user), the user notification of completed access, the confirmation of access (by the provider), and the user post access requirements are now efficiently handled online through the PASS Platform. This transition marks a significant improvement in SAMU's management activity, eliminating the previous practice of offline document collection and exchange via email and ensuring convenient storage of documents within the PASS system.

4.1 ACTRIS-IMP Third call for proposals to access ACTRIS Services

The third ACTRIS-IMP TNA call opened on July 22nd, 2022, and closed on June 2nd, 2023. A total number of 20 proposals were received, involving 33 users: 18 applications are accepted and 2 are rejected. Table 1 reports the summary details and the type of service requested, with the current stage on the PASS platform

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Table 1: Number of applications received for the ACTRIS-IMP Third call for proposal to access ACTRIS Services.

N.	Application ID	Applicant First Name	Applicant Last Name	Current Stage	Services to be accessed via ACTRIS IMP	Research Service requested
1	IMP-C30000000017	David	Brus	User notification of completed access	Research Services	Scientific exploration at SBO
2	IMP-C30000000022	Pavel	Sedlák	Confirmation of Access (Service Provider)	Research Services	Scientific exploration at SBO
3	IMP-C3000000023	Zamin A	Kanji	Confirmation of Access (Service Provider)	Research Services	Scientific exploration at SBO
4	IMP-C3000000026	Nada	Zikova	Confirmation of Access (Service Provider)	Research Services	Scientific exploration at SBO
5	IMP-C30000000041	Patryk	Poczta	User notification of completed access	Technical Services	Photometer calibration and maintenance at CARS-ASP-FR
6	IMP-C30000000042	Jutta	Vüllers	Acknowledgement of access terms (User)	Research Services	Scientific exploration at SBO
7	IMP-C3000000045	Maria	Gkini	User notification of completed access	Research Services	Scientific exploration at SBO
8	IMP-C30000000047	Regis	Dupuy	Declined	Research Services	Scientific exploration at SBO
9	IMP-C30000000052	Christopher	Cantrell	Declined	Research Services	Scientific exploration at ACD- C/OGTAC-CC
10	IMP-C30000000055	Alek	Pietruczuk	Acknowledgement of access terms (User)	Technical Services	Photometer calibration and maintenance at CARS-ASP-FR
11	IMP-C30000000056	Angela	Marinoni	Acknowledgement of access terms (User)	Technical Services	Photometer calibration and maintenance at CARS-ASP-FR
12	IMP-C3000000081	Davide	Putero	User notification of completed access	Research Services	Scientific exploration at SAPHIR- CiGas-FZJ
13	IMP-C3000000083	Romeo-Iulian	OLARIU	User notification of completed access	Research Services	Scientific exploration at SAPHIR- CiGas-FZJ
14	IMP-C3000000084	Salim	Alam	User notification of completed access	Research Services	Scientific exploration at SAPHIR-
15	IMP-C3000000085	Max	McGillen	User notification of completed access	Research Services	Scientific exploration at SAPHIR- CiGas-FZJ

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16	IMP-C30000000086	Thérèse	Salameh	User notification of completed access	Technical services	Other technological development and testing at SAPHIR-CiGas-FZJ
17	IMP-C3000000087	Will	Drysdale	User notification of completed access	Technical services	Other technological development and testing at SAPHIR-CiGas-FZJ
18	IMP-C30000000096	Matthieu	Riva	Acknowledgement of access terms (User)	Innovation Services	Innovation Service at ACD-C/OGTAC- CC
19	IMP-C30000000099	Alexander	Haefele	Technical need-driven access	Data Services	Central processing of aerosol lidar data at ACTRIS DC-ARES
20	IMP-C30000000101	Lucja	Janicka	User notification of completed access	Technical services	Photometer calibration and maintenance at CARS-ASP-FR

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Figure 4 below offers an overview of the proposed TNAs per type of access requested, with physical, remote, and combination of physical and remote access (hybrid).



Figure 4 - 3rd call application breakdown of selected project per access type

5 Next steps and recommendations for future improvements

The TNA management process has been largely automated through the use of the PASS platform. The results of extensive testing and evaluation proved PASS's effectiveness and the value it brings to its users (applicants, providers, reviewers, and access managers).

The tool has demonstrated its ability to streamline processes, increase efficiency, address several previous pain points of the access process, and improve overall performance in various areas: it helps to save time; keep track of all the evaluation steps and relevant metrics of the access; store and consult the documents at any moment; make reporting easier task for users, providers, and SAMU operators; enable replicability of programs and calls making it possible to manage different calls at the same time while keeping management and data separate.

However, there is always room for improvement. SAMU has already identified areas that require upgrades and enhancements and will actively work on incorporating these improvements into future iterations of the PASS.

The main areas to enhance the tool's functionality, user experience, and overall effectiveness are:

- Enforcing the link of the PASS with the <u>ACTRIS Catalogue of services</u> to enable users to navigate the catalogue and look for the service they need, and immediately request it via PASS.
- Improving the integration of the database of experts in PASS to allow an advanced search function and filter of reviewers according to their expertise, facilitating the association during the review phase.

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- Ensure that a copy of the applications and related reviews remains in the reviewer and provider portals/dashboards, available for their record and reference. In the present configuration of PASS, providers and reviewers can only download a copy of the completed reviews but sometimes forget to do so and archive the material on their computers.
- Retrieve and supply access providers and reviewers with information from the possible past applications of a user.
- Implement a module allowing collecting information on the publications resulting from the access.
- Provide a link to the homeless data portal for the users to provide TNA data after the access.

In conclusion, PASS has streamlined the process, made it more efficient, and enabled management to save considerable time, particularly in case of a high volume of user requests to process.

However, the human factor (represented by the SAMU administrator, users, providers, and auditors) remains crucial. The success of the process relies on the active engagement and responsible actions of these individuals. Failure to take appropriate action or complete assigned tasks within the designated timeframe can result in bottlenecks and delays at each stage, attributable to each actor, which will hamper the respect of the agreed timeline, as the tests have shown.

The effective functioning of the access system depends not only on its technical aspects but also on the active participation and timely actions of all stakeholders involved.

6 References

ACTRIS-IMP

Deliverables

- 7.1 Recommendations for optimizing the access process and user interaction
- 6.2: Report on the ACTRIS User support system

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- 6.5: 2nd Draft of the ACTRIS Management Plan
- 6.7: Enhanced user strategy with recommendations to ACTRIS facilities
- 7.1: Definition of the pilot access process to ACTRIS facilities
- 7.4: Intermediate assessment of the pilot access concept and process