D3.3 Guidelines for improving the access and use of the research infrastructures by the researchers

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Partner responsible	CNRS
Person responsible	Gilles Flamant
Author(s):	Gilles Flamant
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Executive Summary

The deliverable D3.3 is a list of practises implemented so far by Research Infrastructures (RI) providing access to their research facilities through well-experimented processes.

This task gathers studies regarding best practices in access and will be tailored to Concentrating Solar Power (CSP) RIs. CSP infrastructure initiatives have been analysed, such as SFERA (Solar Facilities for the European Research Area) and all other collaborative infrastructure projects whose goal is to provideaccess to their facilities. Topics of best practices include:

- Dissemination and communication channels with user communities and related industry,

- Assessment of user needs and demands,

- User support (logistics),

- Access rules for interested researchers and other interested entities and industries, access procedures, submission of access proposals and evaluation criteria,

- General protocol for actual costs calculation related to research infrastructures' access usage.

The successful and valuable experience gathered in the European project SFERA concerning these topics willbe incorporated into this task for their further improvement within the framework of STAGE-STE.

It is important to note that these guidelines can be applied at a national level for each RI. In the case of the construction of a pan-european infrastructure gathering all CSP RIs (like an ERIC – started with the EU-SOLARIS project in regards to the CSP research infrastructures), this could also be applied and should be managed by a dedicated managing team, including the management of a common website and all dissemination materials.

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1. Introduction

This deliverable takes place as part of the Work Package 3 “Enhancement of STE Research Facilities Cooperation” of the STAGE-STE project which focuses on the following objectives:

- To further develop the cooperation between the STE research community at both European level, represented in EERA (European Energy Research Alliance), and international level, and the RI capacity.

- To improve the associated transnational access, mainly through the RI cooperation initiatives currently in place - SFERA II, EU-SOLARIS (European Research Infrastructure for Concentrated Solar Power).

- To carry out an in-depth study to improve the use of the infrastructures by the scientific community and the industry, as it is understood that the cooperation between the two following aspects –human resources and facilities– needs to be maximized in order to optimize research, technology development and results dissemination in Solar Thermal Energy (STE), and address industrial needs towards RI.

- To act as liaise between the EERA CSP Joint Programme (JP) and the RI initiatives, looking to fine-tune the synergies between the various on-going initiatives relevant to the enhancement of STE Research Facilities cooperation (such as SFERA-II, EU-SOLARIS, etc.), in order to diminish overlaps and enhance complementary.

More particularly, this deliverable takes place as part of the task 3.3 "Analysis of best practices: improving cross-national (EU and international) access and use of infrastructures by the researchers".

2. The European Charter for Access to Research Infrastructures

The European Commission, in close cooperation with the ESFRI (European Strategy Forum on Research Infrastructures), the e-IRG group (e-Infrastructure Reflection Group) and other European Union (EU) organizations developed the Charter for Access to Research Infrastructures, for promoting the harmonisation of access procedures and enhanced transparency of access policies in order to enable easy access of users to the RIs.This document was published in March 2016 (https://ec.europa.eu/research/infrastructures/pdf/2016_charterforaccessto-ris.pdf). The charter aims at promoting and boosting access to RIs and interaction with a wide range of social and economic activities, including business, industry and public services, in order to maximise the return on investment in RIs and to drive innovation, competitiveness and efficiency. The Charter for Access to RIs proposes the following guidelines that each RI has to specify when access is provided:

• Access policy: The Access policy of a RI should define the access in terms of Access Units, the state of the specific Access mode, clarify the conditions for Access, describe the processes and interactions involved in the Access and elaborate on the support measures facilitating the Access.

• Access modes: Three different Access modes have been defined, i.e. excellence-driven,market-

driven and wide. Thus, each access to a RI may be regulated according to one Access mode or any combination of them.

• Access restrictions: Definition of possible restrictions by means of quota or pre-defined user groups.

• Access processes and interactions: The following processes and interactions are defined in the Access to RIs: application, negotiation, evaluation, feedback, selection, admission, approval, feasibility check, setting-up, use, monitoring and dismantling.

• Support measures facilitating Access: RIs are encouraged to offer support measures such as guidance through user manuals, provision of user support, provision of accommodation and guidance with immigration procedures.

• Education and training: RIs are encouraged to offer education and training, as well as to collaborate with other institutions and organizations that benefit from using RIs for their education and training purposes.

• Regulatory framework: A regulatory framework should be defined when providing access to a RI that should cover access, intellectualproperty rights, data protection, confidentiality, liability and possible fees.

• Transparency: Each RI should provide transparent information on the RI itself, including its services, access policy, data management policy and the terms and conditions.

• Research data management plan: RIs and users should have an agreement on a data management plan outlining how the research data will be handled.

• Health, safety, security and environment: RIs should take the necessary actions to ensure the health, security and safety of any user accessing the RI itself, as well as to minimize the impact on the environment.

• Quality assurance: RIs are encouraged to set up mechanisms in order to evaluate the quality of the provided access to users.

• Limitations: Access to RIs may by limited by the following: national security and defence; privacy and confidentiality; commercial sensitivity and intellectual property rights; ethical considerations in accordance with applicable laws and regulations.

These guidelines should be set up by each RI providing access. In the following points, some of these guidelines have been deepened and applied to the specificity of CSP RIs. More specifically, this deliverable will focus on these 4 categories:

- Dissemination and communication channels with user communities,

- Assessment of user needs and demands,

- User support (logistics),

- Access rules for interested researchers and other interested entities, documentation exchange, free data, IPR and protected access,

- General protocol for actual costs calculation related to STE infrastructures' access usage.

3. Dissemination and communication channels with users

The dissemination and communication activities are a crucial part of the access programme since the success of the dissemination to a wider community will imply more users that are interested. This should take place at different levels. The communication team of each RI should be in charge of managing the dissemination activities for the access programme and draft a communication plan dedicated only to access. The list presented below is a list of potential channels to be used for the communication strategy. This list is far from being exhaustive and should be updated constantly.

3.1. National dissemination

Each RI providing access should be required to publish the information on its website and make contact with the communication service from its institution to ensure a wide dissemination first at national level, by using the RI communication service. Other national research organisations linked to CSP technologies and solar chemistryand desalination applications should be widely informed. The national funding agencies have also good networks for dissemination. They should be contacted by the RI. The national Chambers of Commerce and Industry could also be contacted.

At national level, the RI should send the news of the opening of the access calls to their national contact points (NCP) in all fields since CSP technologies cover a wide range of different topics from materials to water treatment and desalination. The NCPs issue a monthly newsletter and are read by a wide community of potential users. In the following link, the list of national NCPs could be found: http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

The RI should also survey the industrial associations dealing with CSP topics in its country, like:

France	SER, France Solar Industry, SOLER
Spain	PROTERMOSOLAR, SolarConcentra, AEDyR, Solartys
Germany	Deutsche CSP, BSW
Portugal	APISOLAR IPES, APREN, EnergyIn
Greece	EBHE
Turkey	GENSED
Italy	AssoRinnovabili, APER, ANEST, OEB, CCCI
Cyprus	SEAPEK

National conferences could be targeted at a national level. Here is a list of potential events where to disseminate the information:

France	JNES
Spain	CSP Today Sevilla
Germany	Intersolar Europe, a list of national events http://deutsche-csp.de/en/kategorie/events/

Portugal	National conferences and other events held by INIESC, IPES, EnergyIn, APISOLAR and APREN
Cyprus	RESEE conference series www.mse.com.cy/energy/
Italy	SolarExpo Milano

3.2. European Dissemination

3.2.1. Industrial associations

The different channels at EU level will be mainly established through the industry associations that could have links with CSP technologies and solar chemistryand desalination applications. The main will be ESTELA (European Association for Solar Thermal Electricity). As partner and supporter of STAGE-STE and other CSP H2020 projects, they will be asked to disseminate also on the access calls through their forums and events and itsNewsletter. Here is a list of other industrial associations that could be targeted for active dissemination and communication with new potential users of the RI.

- ESTIF - European Solar Thermal Industry Federation – Europe
- ESTELA – European Association for Solar Thermal Electricity – Europe
- EASE - The European Association for Storage of Energy – Europe
- EDS - European Desalination Society – Europe
- REA - Renewable Energy Association – UK
- EUREC - The Association of European Renewable Energy Research Centres - Europe
- EERA – European Energy Research Alliance – Europe
  - EERA JP-CSP – Joint Programme on CSP – Europe
  - EERA JP – EEIP – Joint Programme on Energy Efficiency in Industrial Processes - Europe

3.2.2. The networks of Horizon 2020 NCPs

The news of the opening of the access calls to the network of Horizon 2020 NCPs in all fields since CSP technologies cover a wide range of different topics from materials to water treatment and desalination.

- ETNAPlus for transport : http://www.transport-ncps.net/
- Fit for Health and HNN2.0 for health : http://www.healthncp.net/health-ncp-net-hnn-20

  http://www.fitforhealth.eu/
- BioHorizon for food : http://www.ncp-biohorizon.net/
- Ideal-Ist for ICT: http://www.ideal-ist.eu/

- The NMP TeAm for nanotechnologies, materials and biotehcnologies: http://www.nmpteam.com/
- C-Energy 2020 for Energy: http://www.c-energy2020.eu/
- Net4Society for human sciences: http://www.net4society.eu/
- Net4Mobility for mobility: http://www.net4mobility.eu/
- RICH 2020 for infrastructures: http://www.rich2020.eu/
- Seren3 for security: http://www.seren-project.eu/
- COSMOS 2020 for space: http://ncp-space.net/
- SiS.net «for « Science with and for society »: http://www.sisnetwork.eu/
- NCPs Care for environment and climate: http://www.ncps-care.eu/
- NCP_WIDE.NET : http://www.ncpwidenet.eu/
- The NCP Academy for all NCPs networks: http://www.ncpacademy.eu/
- NUCLEU for EURATOM : http://www.nucleu2020.eu/

3.2.3. Other channels

At a European level, other channels also exist to target better the SMEs (Small and Medium Enterprises) and larger companies at a European level:

- EBN - European Business & Innovation Centre Network.
- EuroChambres - The Association of European Chambers of Commerce and Industry.
- EEN – Enterprise Europe Network - To find a local partner for the EEN: http://een.ec.europa.eu/about/branches.

Other European projects funded by Horizon 2020 and that are directly linked to CSP technologies (dissemination via their coordinators could be also useful) need to be contacted. Here is a non-exhaustive list of some CSP projects that will be updated each year with nex funded H2020 projects:

- CAPTure - Competitive Solar Power Towers
- CPVMatch - Concentrating Photovoltaic modules using advanced technologies and cells for highest efficiencies (CPV)
- ORC-PLUS - Organic Rankine Cycle - Prototype Link to Unit Storage
- TRANSREGEN - Portable thermal fluid regeneration system for Solar Thermal Plants
- SOLARGE45 - Towards a SOLAR enerGy Efficiency of 45 % (CPV)
- PreFlexMS - Predictable Flexible Molten Salts Solar Power Plan

- RAYGEN - A unique innovative utility scale solar energy technology that utilises a field of low cost heliostat collectors to concentrate sunlight onto an ultra-efficient multi-junction photovoltaic cell array (CSP/PV)

- Heat2Energy - Demonstrating a highly-efficient and cost-effective energy conversion technology for waste heat recovery

- INPATH-TES –PhD on Innovation Pathways for Thermal Energy Storage (TES)

- **Individual fellowships projects (Marie Curie Actions):**

- GLASUNTES - Innovative high temperature thermal energy storage concept for CSP plants exceeding 50% efficiency

- PVFIFTY - TOWARDS A 50% EFFICIENT CONCENTRATOR SOLAR CELL AND A 40% EFFICIENT SPACE SOLAR CELL (CPV)

- NESTER - Networking for Excellence in Solar Thermal Energy Research

Here is the list on the European Commission website:
https://ec.europa.eu/inea/en/horizon-2020/h2020-energy/projects-by-field/concentrated-solar-power

3.3. Worldwide dissemination

The worldwide dissemination should be managed in cooperation between all CSP RI providing access. This could be achieved at an individual level but closer collaboration and cooperation should be ensured to maximize the impact of the dissemination and avoid duplications. Potential actions could be the creation of a common newsletter between all RIs providing access and that should be sent to these networks. This could go through these channels presented below for examples:

3.3.1. International organisations

- The online Platform for CSP – Brazil
- The International Solar Energy Society (ISES) – International
- The International Energy Agency (IEA) - International
- The International renewable Energy Agency (IRENA) – International
- Solar Power And Chemical Energy Systems (SolarPACES) – International
- The international partners of the European Project STAGE-STE

3.3.2. Journals and magazines

- ASME Journal of Solar Energy Engineering (JSEE) – International
- Elsevier journals like “Renewable Energy”, “Applied Energy”, “Sustainable and Renewable Energy Reviews”, “Solar Energy”, etc - International

- FuturEnergy – International
- Sun and Wind Energy - International

3.3.3. Industry associations:

- AUSTELA – Australia
- STELA-WORLD – International
- Solar Energy Industries Association (SEIA) – USA
- Emirates Solar Industry Association (ESIA) – UAE
- Saudi Arabia Solar Industry Association (SASIA) – Saudi Arabia
- International Desalination Association (IDA) – International
- Asociación Nacional de Energía Solar (ANES) - Mexico
- South African Solar Thermal Industry Association (SASTELA) – South Africa
- Moroccan Agency for Solar Energ (MASEN) - Morocco

3.3.4. International conferences (examples) :

- SolarPACES Conferences
- CSP today Conferences
- CSP Focus Conferences
- ASME Energy Sustainability Conferences
- IRES International Renewable Energy Storage Conference and Exhibition

3.3.5. Social media

The social media and especially LinkedIN should be used. Wide dissemination should be made through the LinkedIn professional network. There exist currently many groups on CSP where to publish the information and this media is widely used by the industry community.

3.4. The role of the RI communication team

The role of the communication team will be mainly to publish and disseminate on the access opportunities of RIs. For this, they should draft a communication plan specifically tailored for access activities. In this communication plan for the access programme, the communication team should make sure to map all potential channels (as started in this document) including channels at national levels, European levels and worldwide levels.

Some communication materials should be published. The communication team is in charge of drafting

and editing the communication materials. They could edit a poster gathering information (to be updated frequently) on the access providers, the dates for the call of proposals, the conditions for applying. This poster could be presented in different conferences. In addition, a brochure should be edited containing deeper information on the access providers and the access opportunities. This could also contain a list of success stories regarding the access programme. A flyer could be also edited and to be updated annually, like the poster, with the new dates of the call. A flyer is easier to distribute and catches more the attention than a brochure. The flyer is then the privileged material for conferences.

In the case of a pan-european RI with distributed national RIs, all these materials should be commonly managed.

Finally, for the opening of each call, the communication team should draft a newsletter and a press release to be distributed to the relevant channels.

3.5. Content of the website

The website will be one of the main tools used for dissemination. A special page should be dedicated to the access programme. The content of the page should provide all the relevant information on the access programme, specifically to describe the different facilities providing access for new users often not familiar with the modalities and range of services offered through the Access programme. In details, there should be information on:

- The access conditions (eligibility criteria if any, description of the evaluation criteria, maximum periods of access, funding schemes, IPR rules, …)
- Description of each RI providing access (in the case of a pan-european infrastructure) and each facility at the RI, giving examples of potential experiments to be carried on at the detailed facility
- A link to the application template to be filled by the users
- A list of previous selected projects not affected by confidentiality agreements
- A new section informing about each opening of the call for proposals and providing the deadline for submitting a proposal.

Web pages play an essential role in making the user community aware of the services and opportunities available to them. All publicity activities should refer to this website.

The website for the access will be managed by the communication team. This is up to them to define the electronic media for submission of the proposals: through an online internal system for example or through direct emails. An internal online system would be preferred to make easier the management of the submissions of the proposal and facilitate the submission by the users.

An Access Helpdesk could be implemented to be the official contact point between Users and the RI. It should provide the Users with the required support and advice during the application process and afterwards for any subject related to Access. A centralized Access Desk could be created in the case of a pan-european infrastructure.

4. Assessment of user needs and demands

Within each RI, there can be different facilities that cover a large range of services, equipment, temperatures, powers… available for the users. However, these services available for access are rarely assessed to see if this really fits the requirements that the user needs. In this sense, there is a real importance to carry out regular assessments to be sure that the existing CSP infrastructures correspond to what a user needs and can also be improved to better fit these needs. Some programmes have already been running in the past like SFERA I and SFERA II and their experience will be useful to asses the user needs.

The aim here would be to establish guidelines to collect the user needs and requirements in regards to the services and equipment offered by CSP RIs and to asses the replies. This is particularly important since the analysis of the results should help the RI to see what the needs are and how the already existing infrastructures should improve.

For this aim, a questionnaire should be drafted and sent to a list of users (at a worldwide level). The targeted group are those who have already had an access and use of the infrastructure in order to get their feedback on what could be improved regarding what they already used but missed during their access. Another group are those who have not yet had an access to the infrastructure but are related to CSP and could be interested in accessing these infrastructures. Their feedback is important to be able to know the needs of future users.

The questionnaire to be sent to the users could take the form of the questions below and be divided in six sections, in order to address the main objectives of this action:

I. Introduction to the RI and the user questionnaire

This part presents the purpose of the questionnaire and its importance for the RI.

II. Introduce Yourself

This part aims at gathering participant information like names, institutions, address, …

III. Your Field of Work

This part aims at gathering information on the participant field of work.

IV. Your needs on CSP Research Infrastructures for your activities

This part aims at gathering information related to the type of CSP infrastructure needed.

V. Your needs on services and equipment for your activities

This part aims at gathering information related to services and equipment

VI. Access procedures to the Research Infrastructure

This part aims at gathering data related to the access procedures, if CSP infrastructures have already been used by the participant and the financial type of access (free, paid access…)

5. User support

This part is dedicated to the establishment of guidelines to implement a methodology for the logistical support for researchers using the research facilities. This provides information on the user logistical needs.

The guidelines defined in this document are aimed at enhancing the use to the RIs and assuring a good-quality support to the users.

The support of the infrastructure to the users includes:

5.1. Administrative and logistical support

Administrative and logistical support (e.g., customs, transport): In order to facilitate access, RIs are encouraged to offer support to Users such as guidance through User manuals, provision of User support, provision of accommodation, and guidance with immigration procedures.

For the administrative support and logistical support, the supporting actions should be defined according to three different stages:

Stage a): preparation and submission of Access applications,

Stage b): Access to the RIs and

Stage c): post-Access period.

5.1.1. Preparation and submission of Access applications

Table 1 summarizes the User support actions to be undertaken during the preparation phase for the application to access a RI.

Table 1: User support actions during the preparation phase of the submission of a standard access proposal

a) Application form available at the web page of each RI
b) Internal quality control and tracking system for applications
c) Information about the evaluation process
d) Contact details of the Access manager of the RI
If Access application is successful:
e) Transport and accommodation options for the Access
f) Preparation and signature of the Access Agreement
g) Accomodation and transport information provided for the stay at the RI where the Access will take place

5.1.2. The Access period

During the Access period, each user should be assigned an Access Manager(AM) who will be the direct contact point for all matters related to administrative and logistical support. Depending on the needs and requests from the users, the AM will redirect the users towards the adequate support team in charge of the matters.

5.1.3. The post-access period

For the post-access period, for whichever type of Access, the users must fill in a Project summary report and an Access evaluation report to evaluate the quality of the Access. If the reimbursement of some fees (like subsistence costs related to the stay) is planned, no reimbursement will be provided without these two documents. On top of that, measures should be enforced to ensure that the administrative procedures are kept at their minimum.

- The Project Summary Report should contain the description of the activities performed by the User during the Access, their results and any other additional information the User may consider convenient concerning the Access. Depending on the level of dissemination of the results, the users can display in this report only non-confidential information or describe in detail all the results obtained during the access period if there is obligation to publish the results after the access period.

- The Access Evaluation Report, for evaluating the quality of the Access (e.g., research facility availability during the Access, support given by the Access Provider, etc.). This report should be delivered using a specific form prepared for this purpose. The RI should implement the measures required to guarantee that the Access Evaluation Reports are processed in a fair and impartial manner. The main objective of the Access Evaluation Reports is to detect potential improvements of the quality of the Access provided by the RI and the degree of satisfaction of the User.

The collaboration between the RI and the users should continue until results of the work carried out during the Access is disseminated in any way (poster presentation, oral presentation in a conference, article published in Scientific Journals publications, patents, etc.). This dissemination should respect the confidential rules agreed between the users and the RI. For a quality-based access where most of the funds are provided by the RI and the access to the RI is free, the dissemination should be at its maximum to ensure visibility of the project funded by the RI funds. For a market-based access, where the users have to pay to access the RI, confidential and IPR rules are implemented and the dissemination should be agreed between the users and the RI before any actions.

5.1.4. Online portal

In general, for the application procedures, User friendly interfaces are considered a prerequisite for easy access. Online portals provide a convenient and efficient means for applying for access and can provide initial information regarding sample conditions and available experiments. Some form of feasibility checking by the centre is common practice. This makes fast and efficient procedures necessary that select for the most promising or relevant proposals.

5.2. Use of the facilities

The use of the infrastructure facilities (in agreement with any potential applicable national laws, local safety and health regulations, or other conformity rules): Users must comply with security, safety and environmental rules and with procedures in force at the RIs, in particular concerning the notifications on introduction of material and instrumentation that could induce risks or ethical issues to the facility.

The AM assigned to the user project should be in charge to communicate all information on each of the points below regarding legal concerns at the RI, ethics and research integrity, regulatory frameworks for the access period, transparency and finally on the health and security matters at the RI. This should be provided to the users before any access period.

5.2.1. Legal aspects

RIs must comply with national and international law and agreements, particularly, but not only, in areas such as intellectual property rights and the protection of privacy, ethical considerations as well as safety, security and public order regulations when designing rules and conditions for Access to and use of RIs.

In this sense, each RI, on request, will provide to any users of the facilities information related to the national laws in effect in the country of the RI.

5.2.2. Ethics and Research Integrity

RIs and Users should undertake the necessary actions to adhere to the standard codes of conduct and ethical behaviour in scientific research and to research integrity. The European code of conduct for research integrity drafted by the European Science Foundation (ESF) and the European Federation of National Academies of Sciences and Humanities (ALLEA) sets out eight principles that Researchers need to abide to: honesty in communication, reliability in performing research, objectivity, impartiality and independence, openness and accessibility, duty of care, fairness in providing references and giving credit, and responsibility for the scientists and researchers of the future:
http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf

This European code will be provided to each of the users of the RI so that they are aware that their research and experiments at the RI falls into this code of conduct.

5.2.3. Regulatory framework

Access to any given RI should be regulated by a framework that can range from generic terms and conditions for use accepted by the User, through a dedicated contract up to the provisions of international agreements and treaties. The regulatory framework should cover, at the least, Access, intellectual property rights, data protection, confidentiality, liability and possible fees.

For this purpose, before any access period, whichever access mode will be used, a contractual agreement is planned to be signed between the users and the RI. The Access Agreement should contain at least clauses related to:

 any Access arrangements, conditions and requirements; duration of the Access; description of the activities committed by each party (i.e., the User and the Access Provider); liability; insurance; confidentiality and non-disclosure; delays; intellectual property rights; labour law; use of equipment and samples; dispute resolution; communication; supervision; auditing; force majeure; and Access denial.

5.2.4. Transparency

Each RI should have a single point providing clear and transparent information on the RI itself, its services, Access policy, data management policy and the terms and conditions. Where applicable, information should be provided on the available equipment, costs, contractual obligations, health safety and environment rules and procedures, intellectual property rights and the legal settlement of disputes.

All this information should be made available on the website for each of the RI providing access. This website will be the online portal to request access to the RIs.

5.2.5. Health, safety, security and environment

RIs should undertake the necessary actions, including instruction, to ensure the health, security and safety of any User accessing the RI as well as to minimise the impact on the environment. Where applicable, Users must comply with security, safety and environmental rules and with procedures in force at the RIs, in particular concerning the notifications on introduction of material and instrumentation that could induce risks or ethical issues to the facility.

Before any access period, to ensure a good use of the RI, each user will be provided with the rules in force at the RI for health, safety, security and environment.

5.2.6. Intellectual Property Rights

Projects involving intellectual property should be identified and agreements should be in place before facility access begins. Handling of results from data management to publication should be defined. This will be presented to the users in the Access Agreement.

For publications co-authorship for members of the facility staff is only warranted when substantial scientific input of that person contributes to the publication. Just providing the instrumentation and service is not sufficient for a co-authorship. Nevertheless, the use of a facility has to be acknowledged in appropriate ways, e.g. in the acknowledgement section of a publication. Users may be obliged to inform the facility managers about publications based on data generated at the facility. Funding organisations have to find appropriate ways to count these kind of acknowledgements as valid indicators for a vivid and productive use of the RI when evaluating investments or deciding on renewal/extension proposals for running facilities.

5.3. Technical and scientific support

Technical and scientific support: Shared facilities need to clarify with external users at an early point what level of support or training the facility can offer. Only if this meets the requirements of the user, further planning should commence. The facilities should ensure that the staff is sufficiently trained to provide technical and scientific support to the users of the facilities.

5.3.1. Feasibility check

Adequate sample preparation, expertise and experience with the experimental methods as well as data treatment are indispensable components for successful and efficient use of the RI. Shared facilities need to clarify with external users at an early point what level of support or training the facility can offer. Only if this meets with the requirements of the user, further planning should commence. Prior to any access period, a feasibility check will be done to ensure that the users can use the RI for their research.

5.3.2. Data analysis

Assistance with analysis of data is important and provides similar benefits to the user, but can be less resource-intensive than sample preparation. Trained and experienced research staff is required to analyze data as part of a service, but, again, needs to be motivated in order to be actively involved. Basic services like data access, transfer and storage are very important and should be provided by every facility. User training for the appropriate software is recommendable.

5.3.3. Sample preparation

Contact should be made as early as possible with facility managers to clarify in what form samples should arrive, and how much help and training can be expected for sample preparation, instrument use and data analysis. Users should be prepared to handle specified formats depending on the RI specificities. It is the responsibility of the user to ensure that the sample arrives in a format ready to use. This can mean ensuring safe transport, that the sample is in the correct form or mounted and prepared correctly, and compliance with local regulations. Sample transfer across borders can be a problem and RI centres should advise users about national regulations. The same is true for ethics regulations. Automation, remote access and even remote operation are increasingly developed and can solve some problems of logistics. This option could be envisaged in the case of the implementation of an e-infrastructure.

5.4. Training

Specific training (for use of the infrastructure and/or instrumentation): Offering of courses and training at the facility is important for regular users and for novice instrument scientists. A decision should be made whether to provide mandatory training for novice users or whether the RI should run the experiments of the users as part of the service (without the users having to be trained to know how to make the experiments).

In general, RIs are encouraged to offer education and training in the areas of their activities and to collaborate with other institutions and organisations that benefit from using the RI for their education and training purposes. Also, while the expertise of the core staff at the facility is essential for it to operate; sharing of expertise in form of courses and training at the facility would be desirable as well.

Each facility manager will have the responsibility to put into place a training programme for the facilities to be used by the researchers and users. However, there are no obligations of training of the users before the access period and for those facilities whose complexity require very skilled manpower for operation and must therefore be operated by the local staff. The RI providing the access will have the sole responsibility to provide training depending on the needs of the users and if training is necessary regarding safety rules or if the users will be in the position of running the facility on their own.

Information about training and specific assistance, also for subsequent data analysis will be provided before the Access period to any users of the facilities.

In the end, a centralized program for user training should be developed on CSP technologies in order to provide the users with general knowledge on CSP. A centralized programme would have a substantial positive impact on the size and diversity of the user community, in particular expanding the research infrastructure utilisation to other thematic areas.

5.5. Summary of actions to be implemented

To summarize the information provided in this part and the guidelines related to logistic support to the users, each RI should produce the following materials in order to ensure a smooth and efficient use of the facilities:

- An online portal to inform on the access procedures and user support before, during and after the access period;

- Each facility will have to produce a file containing information related to national regulations applied to the RI and considered useful for the users;

- An access agreement to be signed before the access period between the users and the RI containing all information related to the rules in force regarding the use of the facilities;

- A user manual of the facilities to be used if the facility may be operated directly by the user;

- A general training programme on CSP;

- A manual on health, safety, security and environment in force at the RI to be used;

- The European code of conduct for research integrity.

6. Access rules

6.1. Selection criteria and evaluation procedures

6.1.1. Definition of the procedures for the selection

The selection procedure to access the RIs works through periodic calls for proposals. For each Call, a period will be set up for collecting proposals. Ideally, at least one call will open at the end of the year to enable the selected projects to take place by spring the year after.

Before and during the period of the call, the communication team of the RI will implement the communication plan in order to reach as much as possible the user community. The users wishing to access the RIs can fill the applicant format described later in this document. The form will be available on the website or will be mailed to interested users contacting directly the single Access point via the general email. It is important to mention that during the call, the applicants are strongly advised to contact the single Access point in order to know which RI they need to apply to. This will help them to choose the right one when having to choose it in the Application Form.

At the end of the call, each applicant form will be reviewed by the Access manager of the RI so that an eligible check is made. Once done, the Access manager will send the proposals to the selection panel secretary who will handle the proposals and evaluation forms/comments. These procedures should be performed at most within two weeks after the deadline of the call.

The selection panel, composed of external experts selected regarding the scientific topics of the proposals, receive then all the proposals by email from the panel secretary and will have one month to review all of them according to set criteria. The Panel may request advice or further details from the Access managers at any time. The criteria are already defined and they will receive a template to fill in their review according to these criteria. After one month, there will be a selection panel meeting organized via webconference. During this meeting, the selection panel will share their reviews of the proposal and try to reach an agreement for the final score. This final score and the reviews will be gathered by the Access manager of the RI who will classify the proposals and send them to the RI. The Access manager will have to make a technical feasibility evaluation for the proposal wanting to access its RI. This technical feasibility score will be added to the score already proposed by the selection panel.

This will create a score out of 20. Only proposals scoring more than 12 will be considered for acceptance.

The final Access Committee will have to validate all scores of the proposals and make a classification according to four categories. Priority is given to Users who have not been at the requested facility previously and would not normally have access to a similar facility. The four categories to classify the proposals are:

- Accepted projects granted access free-of-charge;
- Accepted projects granted access partly free-of-charge;
- Accepted projects on the reserve list (lack of availability of the facility or lack of budget);
- Rejected proposals.

The panel secretary is the one gathering the final validation and the one in charge of sending the letters of acceptance or rejection. For the projects rejected, a special letter will be drafted to inform on the reasons for rejection. These reasons will be drafted commonly by the selection panel and the AM in order to avoid any wrong information or misunderstandings in the reasons. The applicants will have the possibility to contest on the rejection of the proposal. The AM of the RI will transfer this request to the selection panel and together they could reopen the evaluation with the selection panel, should they consider that the request of the applicant is justifiable. The selection panel will have to review again the proposal taking into account the new comments of the applicant regarding the rejection. It has to be considered that the reopening of an evaluation should not represent a huge amount of work seeing as this should not deal with many proposals. The applicants being oriented before they submit the proposals, this avoids too many rejections and reevaluation of the proposals.

Once the Applicants with accepted projects are informed of their acceptance, the AM will be in charge of planning the dates for the venue and of arranging the venue of the projects in collaboration with the team in charge of administrative issues at the RI. The AM are the most important persons in this process since they are the ones that are going to be present for each User team to support them during the Access Period. According to the scientific purposes of each project, the AM has to best define the technical support needed for each project, the effective time necessary at the infrastructure to get good results, the best way to help them in the good handling of their project, etc.

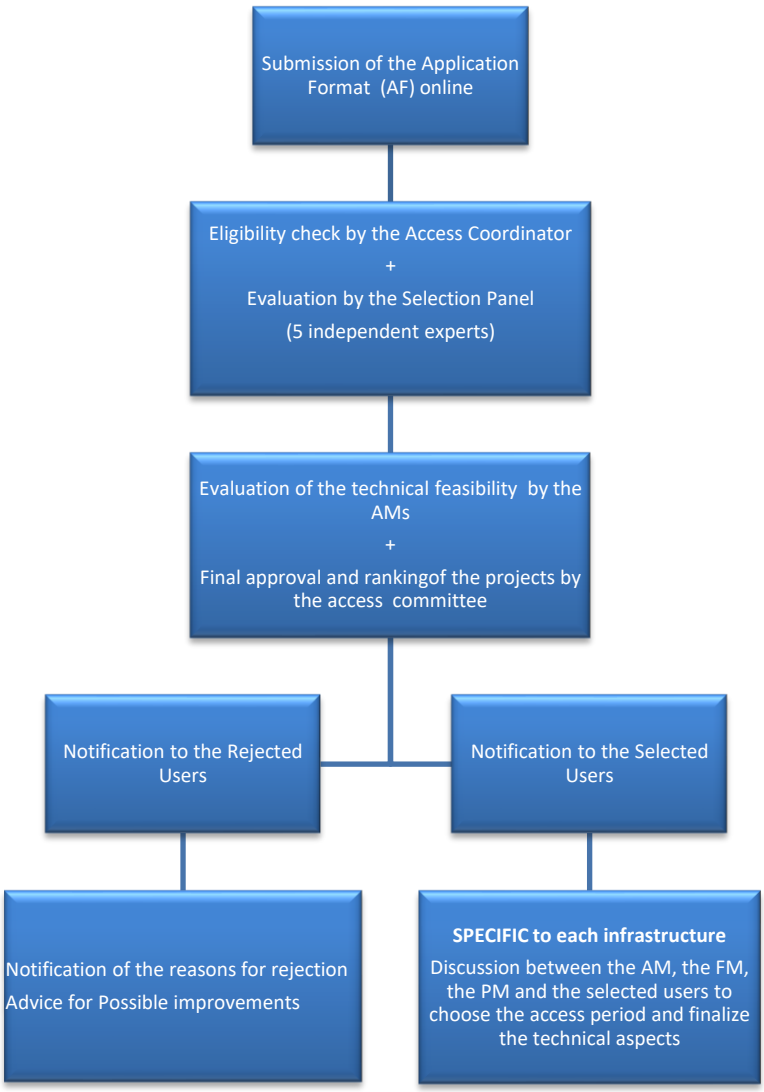

Figure 1: The selection process

6.1.2. Definition of the criteria and scores for each criteria

There are three criteria to be evaluated by the selection panel. They are each scored out of 5, three being the threshold for each of the criteria:

- The scientific excellence (originality and innovation) /5
- The overall quality of the project /5
- The experience of the Applicant /5

There is one criteria to be evaluated by the AMs:

- The technical feasiblity of the project/5

The selection panel will have a template to fill in with the evaluation results. The template will be drafted by the RI and provide additional guidelines to the Selection Panel for each of the criteria.

6.1.3. Eligibility criteria

The eligibility criteria will be defined by the RI. For example, there could be a criteria mentioning that

only users from the countries of the members can benefit of the free access programme. There could be a limitation on the number of out-of-Europe users. There could be limitation to the type of organisations benefiting from the access.

However, one eligibility criteria to be implemented is the obligation for the users to publish any outcomes resulting from the projects benefiting from a free-of-charge access. The projects not being able to publish the results will be considered ineligible. Hence, in the Applicant Format, there will be a special box to tick and certify that the users can publish the results and that no confidentiality concerns the project regarding publications of the results.

6.1.4. Description of the Applicant Form

The Applicant Form will be drafted by the RI. Below is an example of what has been implemented and used already in other RIs.

- **TITLE**

- **INTRODUCTION**

  Describe the context of the proposal (400-650 words).
  Figures and photos are considered to cover 200 words.

- **SUBJECT**

  Describeyour proposal emphasizing the originality and innovation in your Project (valid for the scientific excellence criteria) (750-1000 words).
  Figures and photos are considered to cover 200 words.

- **FACILITY REQUESTED FOR THE ACCESS**

  The applicant must specify the facility which the access is requested to

- **DETAILED WORK PLAN**

  Describe what you intend to do at the facility, in how many visits, with how many people… (250-500 words).

- **WHY**

  Describe why you need to use the particular facility selected… (100 – 150 words)
  Valid for the technical feasibility criteria

- **RESULTS**

  Describe the expected results, data or experience … (200 words max.)

- **Access Periods Requested**

Researcher (Full name and position)	Total No. of days/weeks for the 1st visit	If applicable, Total No. of days/weeks for the 2nd visit	Preferred period for the 1st stay (and if applicable for the 2nd stay)	Inconvenient Period

The Applicant Format needs to be as simple as possible but with the necessary boxes to enable theselection panel to assess properly the proposal according to the criteria fixed. It should not be too long in order not to restrain the users to apply for the Access Programme.

In order to assess the experience of the applicant, additional information will be requested including a one-page CV of the team leader and a description (2-pages max.) of the other members of the team specifying why they are relevant for the access project.

7. Cost calculation

The calculation of the access costs for transnational access, when related to the quality-based access mode, should be based on the cost calculation defined by the European Commission in H2020. This should have the form of the table below:
http://ec.europa.eu/research/participants/data/ref/h2020/other/legal/templ/h2020_tpl-calc-unitcost-tna-infra_en.xls

Participant number		**Organisation short name**		**Short name of Infrastructure**	
Installation number		**Short name of Installation**		**Unit of access**	

Calculation of the Unit Cost (UC) for Trans-national Access[1]

Reference periodfrom:		**to:**	
A. **Direct eligible costs of providing access over the last two years[3] excluding personnel costs**	Describe the direct eligible costs[2] for providing access to the installation over the reference period (usually the last two closed financial years[3] preceding the current one) . All contributions to capital investments of the installation are not eligible.		**Eligible Costs (€)**
	Total A		**0,00**
	of whichsubcontracting (A')		
B. **Personnel direct eligible costs needed to provide access over the last two years[3]**	**Category of staff [4]**	**Person-Months**	**Personnel Costs (€)**
	Total B		**0,00**
C. Indirect eligible costs: 25% x ([A-A']+B)			0,00

D. Total access eligible costs over the last two years[3] = A+B+C	0,00
E. Total quantity of access provided to all normal users of the installation (i.e. both internal and external) over the last two years[3]	1
F. Unit cost =D/E	**0**
G. Unit cost charged to the project	**0**
H. Quantity of access offered under the project (over the whole duration of the project)	0
I. **Access Cost on the basis of UC for the access offered under the project = GxH**	**0,00**

[1] See Decision on unit cost C (2013) 8199. In case of combination of unit cost and actual costs, all the cost categories and cost items reimbursed on actual costs basis must be excluded from the calculation of the unit cost.

[2] Direct costs (other than personnel) for providing access can only include:
• Costs of contracts for maintenance and repair for the functioning of the installation (if not capitalised).
• Costs of consumables specifically used for the installation and the research work of the users.
• Costs of contracts for installation management, including security fees, insurance costs, quality control and certification, specifically incurred for the functioning of the installation.
• Costs of energy power and water supplied for the installation.
• Costs of general services when included in the provided access services (library costs, shipping costs).
• Costs of software licence, internet connection or other electronic services for data management and computing when they are needed to provide access services,
• Costs of specific scientific services included in the access provided or needed for the provision of access.

[3] In exceptional and duly justified cases, a different reference period can be agreed with the Commission

[4] Personnel costs for the provision of access can only include costs of administrative, technical and scientific staff directly assigned to the functioning of the installation and to the support of the users.

[5] In case of combination of unit cost and actual costs, only cost categories and cost items that have not been used in the unit cost calculation above may be reimbursed on an actual cost basis.

If access costs are declared on the basis of actual cost or on the basis of a combination[5] of unit cost and actual costs, please use the following table to estimate the actual costs.

Access provision period (usually the project life-time) **from:**		**to:**	
A. **Direct eligible costs of providing access to the selected user groups, excluding personnel costs**	Describe the costs actually and solely incurred for providing access to the user groups selected for support under the action. All contributions to capital investments of the installation are not eligible.		**Eligible Costs (€)**
	Total A		**0,00**
	of whichsubcontracting (A')		
B. **Personnel direct eligible costs needed to provide access to the selected user groups**	**Category of staff [6]**	**Person-Months**	**Personnel Costs (€)**

	Total B	**0,00**
C. Indirect eligible costs: 25% x ([A-A']+B)		0,00
D. **ActualAccess Cost for the access offered under the project= A + B + C**		**0,00**

[5] In case of combination of unit cost and actual costs, only cost categories and cost items that have not been used in the unit cost calculation above may be reimbursed on an actual cost basis.

[6] Personnel costs for the provision of access can only include costs of administrative, technical and scientific staff directly working for the provision of access to the selected users and their support. These costs will be charged to the grant as direct personnel costs (hours worked for the grant must be recorded).

All the information can be found in the COMMISSION DECISIONof 10.12.2013authorising the use of reimbursement on the basis of unit costs for actions involvingtrans-national access under the Research Infrastructures Part of the Horizon 2020 Framework Programme: https://ec.europa.eu/research/participants/data/ref/h2020/other/legal/unit_costs/unit-costs_tna-infra_en.pdf

For market-based access, this is the decision of each RI on how to charge the access to users paying for the access to the RI.