Access to Research Infrastructures: Process and Modalities

Module 4 - Access to RIs Services

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Ministero dell'Università e della Ricerca

Italiadomani

Hello!

I am Rosa Maria Petracca Altieri

I am here because I.....

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Module Overview

- Access and services definitions
- Characterization of the RI offer of services
- Identification and description of the different services for the Catalogue of services

Break

- Hands-on session for the ITINERIS Catalogue of Services

Recalling the RI definition

RI are facilities, **resources** and **services** that are **used** by the research communities to conduct research and foster innovation in their fields

— Article 2 (6) of the Regulation (EU) No 1291/2013 of 11 December 2013: `Establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014- 2020)`

The use of the RI → ACCESS

‘Access’ refers to the legitimate and authorised **physical**, **remote** and **virtual** admission to, interactions with and **use** of Research Infrastructures and to services offered by Research Infrastructures to Users.

Article 3 (c) of the European Charter for Access to Research Infrastructures

Relevance

- Access corroborates the RI's role in supporting the creation of science of excellence and advancing the frontiers of knowledge in various sectors.

What access?

ACCESS services

Access **TO** resources and services

Training current RIs staff and user communities

Access TO **resources** and services

- Equipment
- Data
- Expertise and know-how
- Fields
- Samples
- Bio-resources
- .....

Access TO resources and **services**

Definitions of services

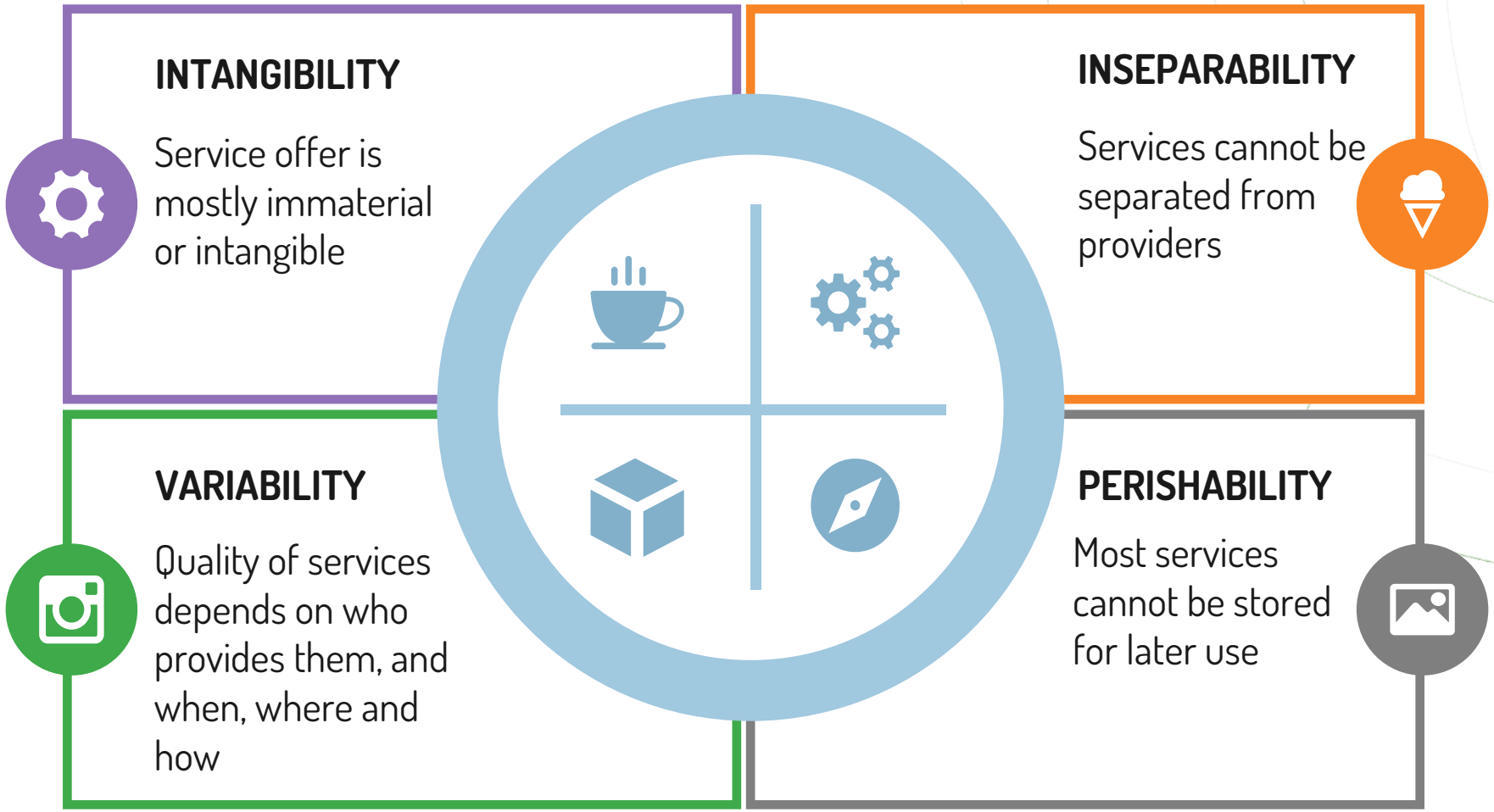
"Services are non-material output of an economic system, an activity/task performed for the benefit of the recipients"
(in economics)

"A service is a means of delivering value to users by facilitating outcomes users want to achieve "

(**ITIL, the British Office of Government Commerce**)

"Services are economic activities that create value and provide benefits for customers at specific times and places as a result of bringing about a desired change in – or on behalf of – the recipient of the service."
(in **service marketing**; Christopher Lovelock)

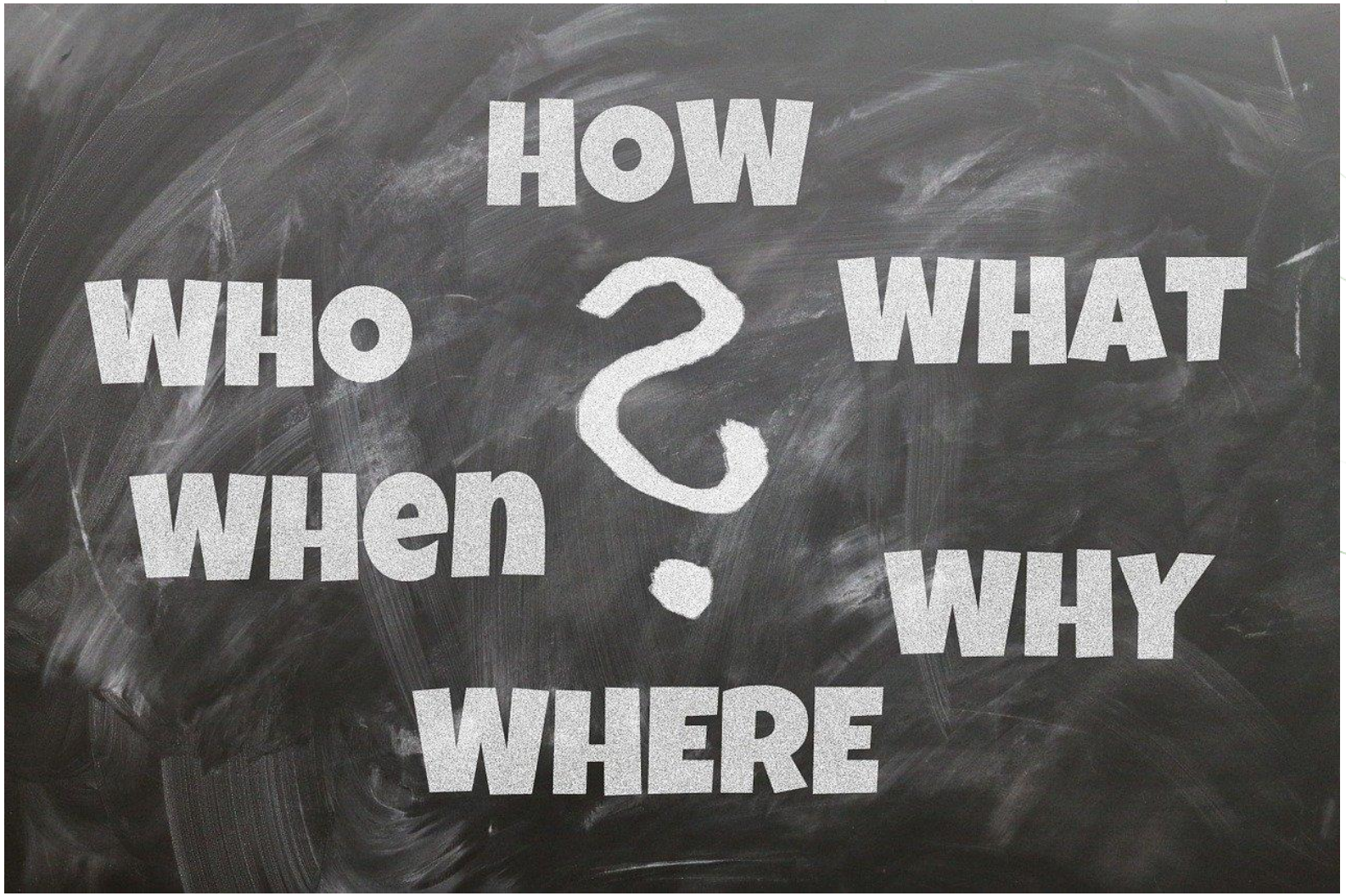
4 Services characteristics



Classification of services

- External – Internal services
- Self-services: services in which there will be the presence of only the users/customers (for example virtual services)
- Inter-personal services: there is the presence of both users and providers, though not necessarily in person (education, entertainment services, etc.)
- Remote Services – services in which there will be the in-person presence of only providers (for example lab analysis, etc.)

Services: a definition in science?



Five 'W's for services

What: activities that provide benefits to the recipient bringing about **a desired change/outcome**

Value

Five 'W's for services

- **Who**: providers (researchers, technicians, managers, etc.)

Five 'W's for services

- **Where**: facilities (fixed, mobile, virtual)

Five 'W's for services

✗ When

Resource availability

Five 'W's for services

✗ **When**

- **Resource** availability
- **Provider** availability

Five 'W's for services

✗ **Why**: to respond to the needs of science users to advance knowledge and tackle societal challenges

Services: a definition in science?

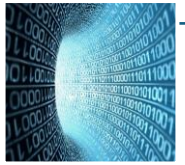
"A service is a means of delivering value to users by facilitating outcomes users want to achieve "
(*ITIL, the British Office of Government Commerce*)

- **What**: activities that provide benefits to the recipient bringing about a desired outcome → **Value**
- **Who**: providers (researchers, technicians, managers, etc.)
- **Where**: facilities (fixed, mobile, online…)
- **When**: resources + providers availability
- **Why**: to respond to the needs of science users to advance knowledge and tackle societal challenges

Units of value that can be provided, as result of a facility operation, to deliver an intended solution to a user research problem/need

Science services type classification

Digital Services



Use of quality data and data products and other digital services including data documentation, compilation, archiving, preservation, traceability, citation and attribution

Scientific Services

Use of experimental research facilities equipped with state-of-the-art instrumentation and equipment for scientific exploration and realisation of experiments

Technical Services

Use of scientific expertise centres to ensure instrument quality, high performance measurements and methodologies, calibrations and intercomparisons, quality procedures and tools

Innovation Services

Use of scientific facilities for technological development, prototype testing, industrial or market-oriented applications including private sector use

Training Services

Training of scientists, new generations of researchers, and facility personnel to acquire knowledge and skills and provide good practices to exploit all essential tools for science

Definition of services → Challenge

Digital Services

Scientific Services

Technical Services

Innovation Services

Training Services

NEEDED

List of refined (concrete) services is required for each service type

COARSE CLASSIFICATION OF SERVICE TYPES

NEEDED

Considering the **user perspective**: which specific services are offered?

Definition of services → Challenge

Digital Services

Scientific Services

Technical Services

Innovation Services

Training Services

Reasonable number of well defined services – for each type

ITINERIS Catalogue of Services

Identifiable by the users as a basis for user access

What is a catalogue of services?

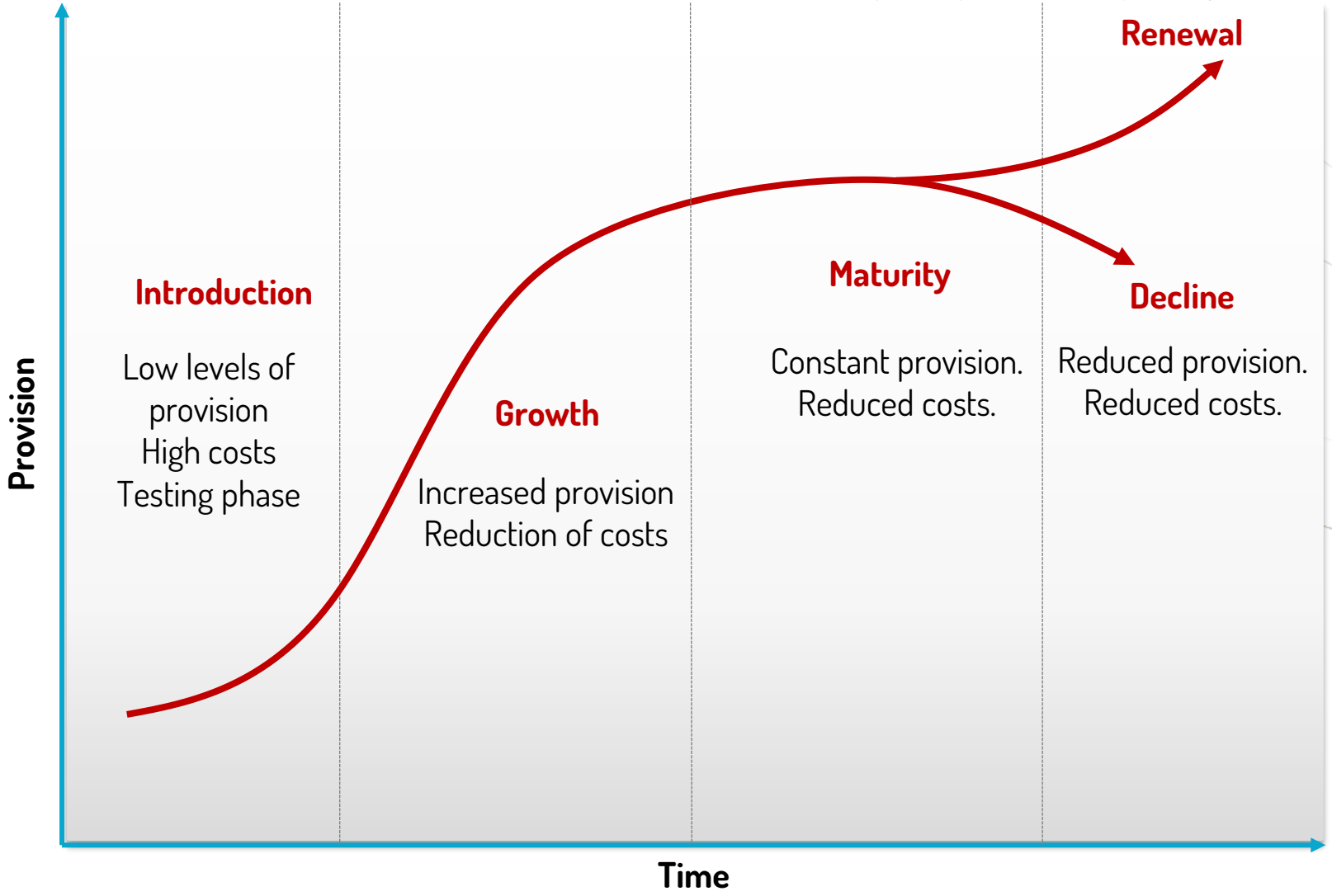
Online tool providing the user access to a digital registry to search for, view and get all relevant information about the services offered by an organization.

For IT services

For other services, facilities, etc.

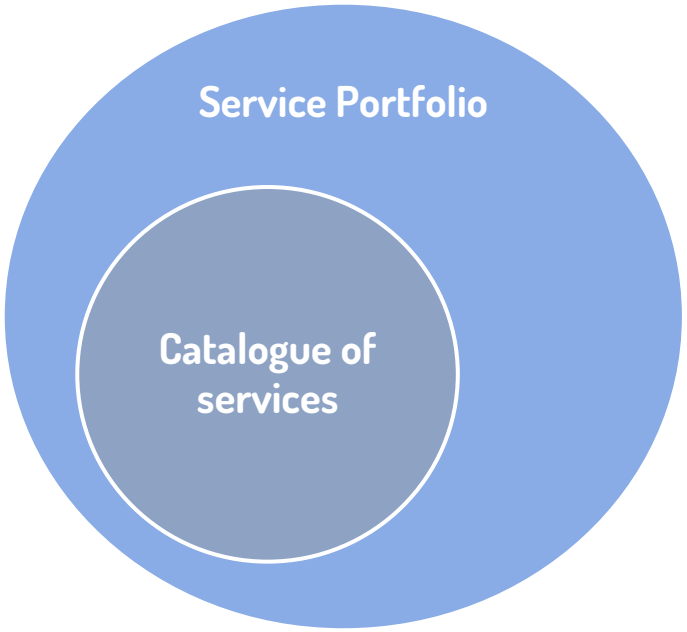
In science, it is also a **foundation for defining services** and communicating those services to the science users

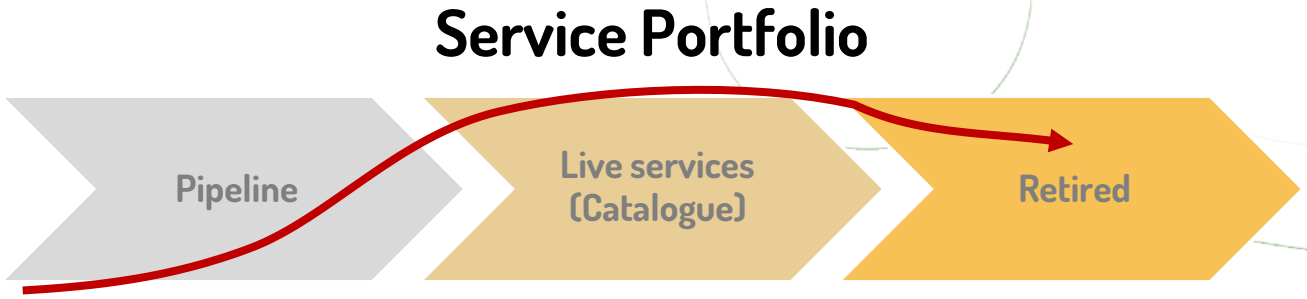
Service Life Cycle Curve



Catalogue of services or Service Portfolio?

A service portfolio is a record of the complete life-cycle of all the services and products managed by an organization.





Catalogue of Services: purposes

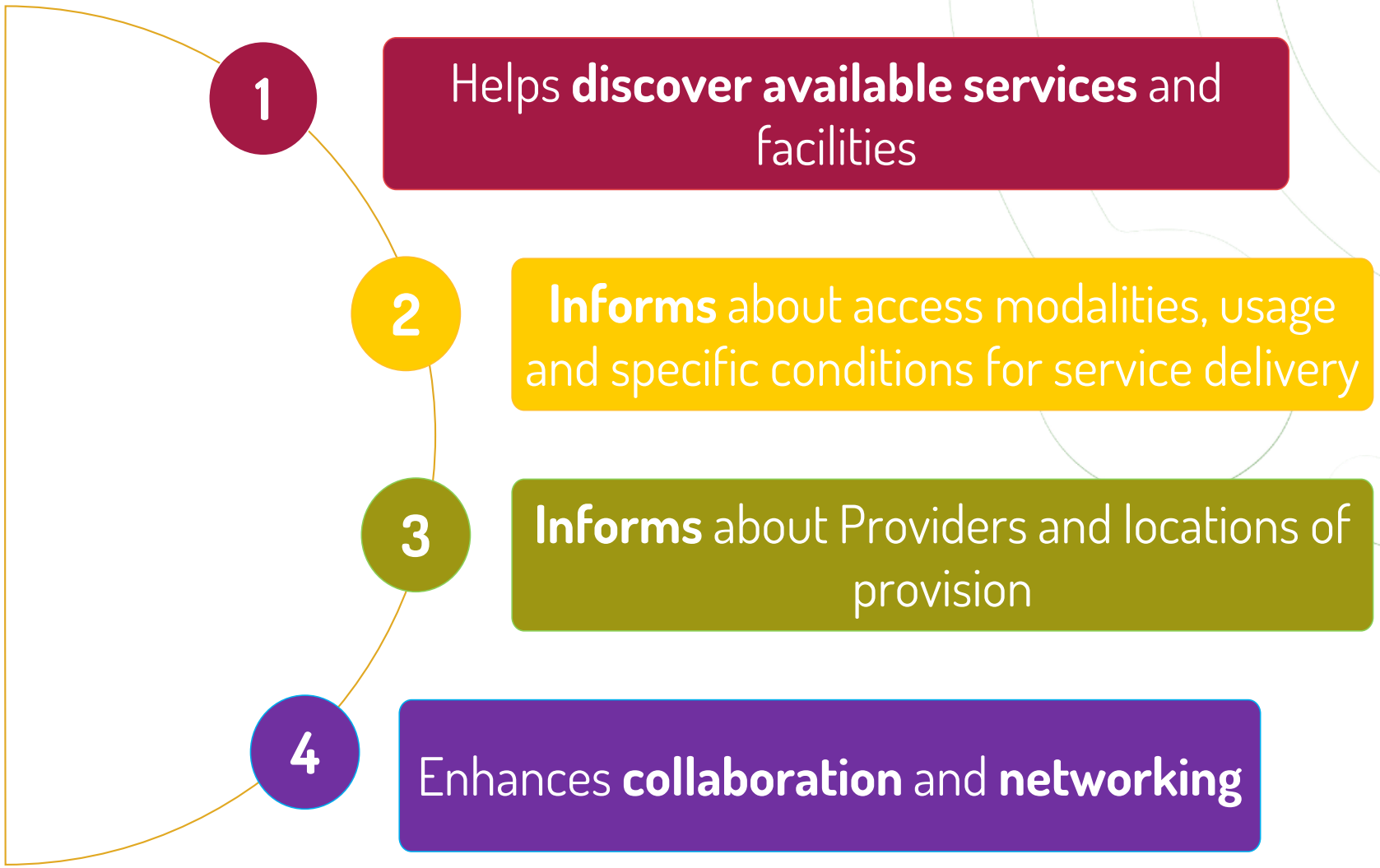
- To ensure maximum use of all RI's resources by improving their visibility
- To ensure that stakeholders know what value the RI creates, maintains and provides with the services for excellent science they use and support
- To ensure that users are aware of the services available to support their research and satisfy their needs

Benefits for **providers**, **users**, **stakeholders**

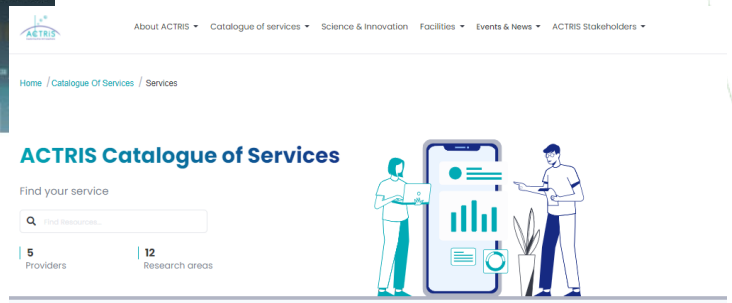
Benefits for providers

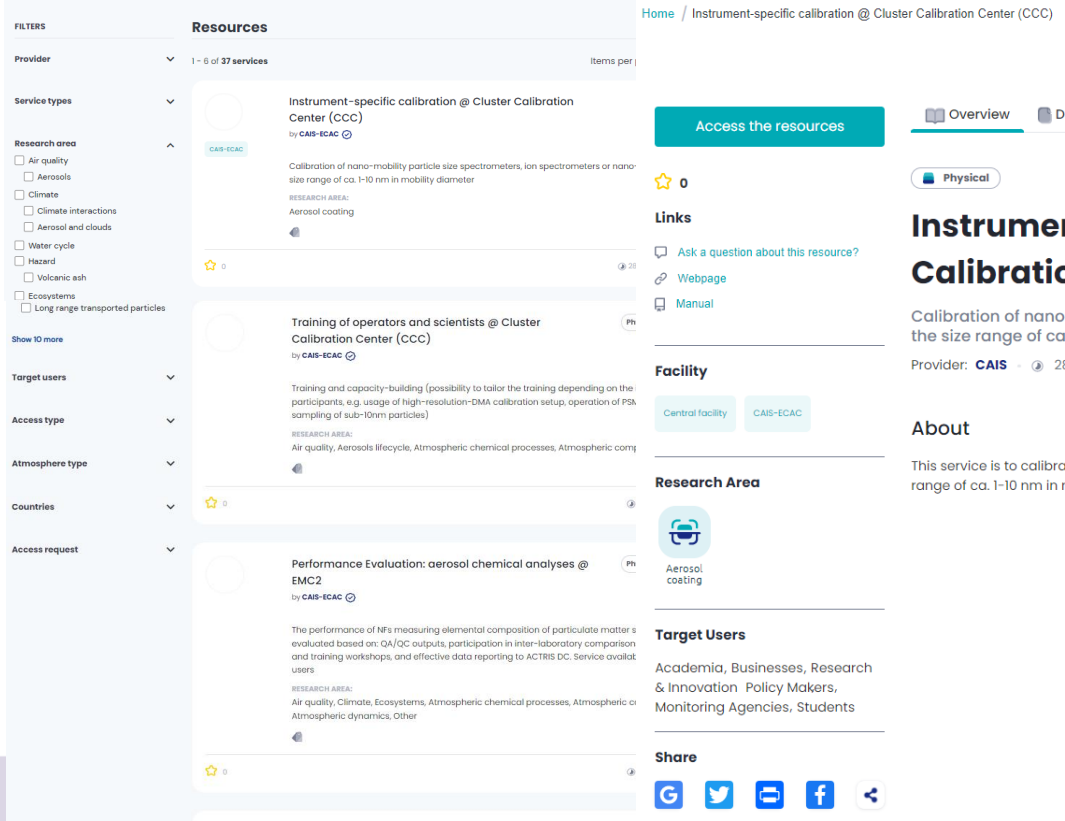
Benefits for Stakeholders

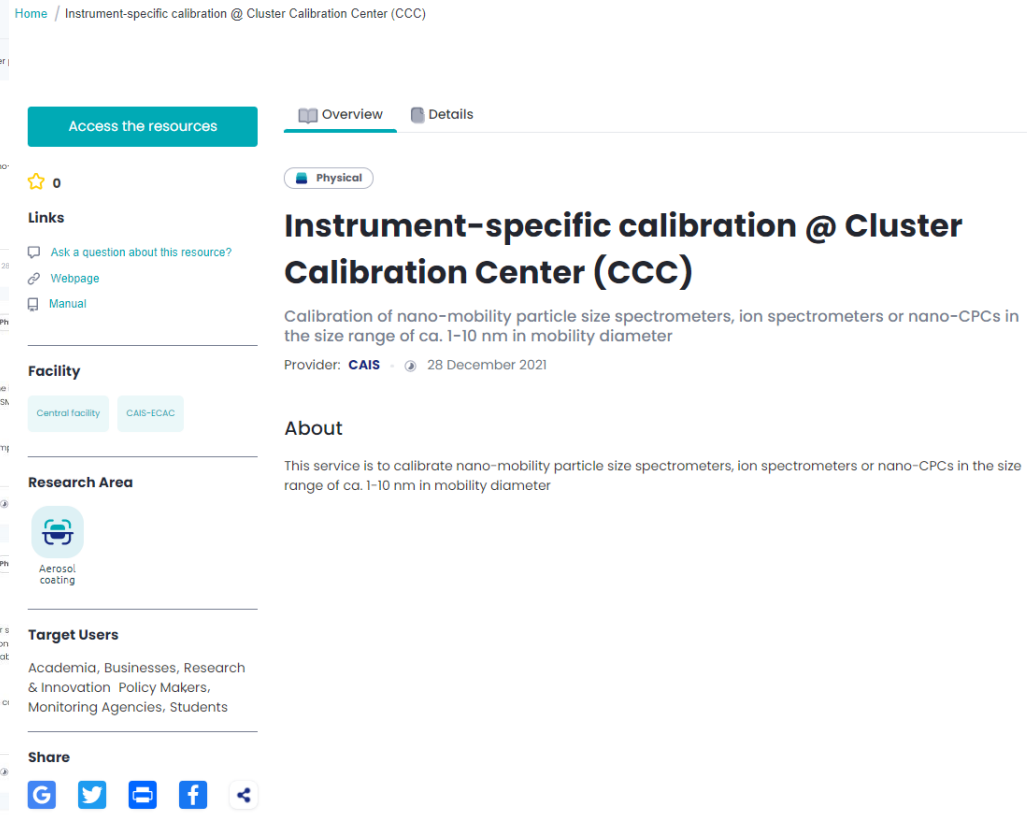
Benefits for Users



Some examples: ACTRIS catalogue

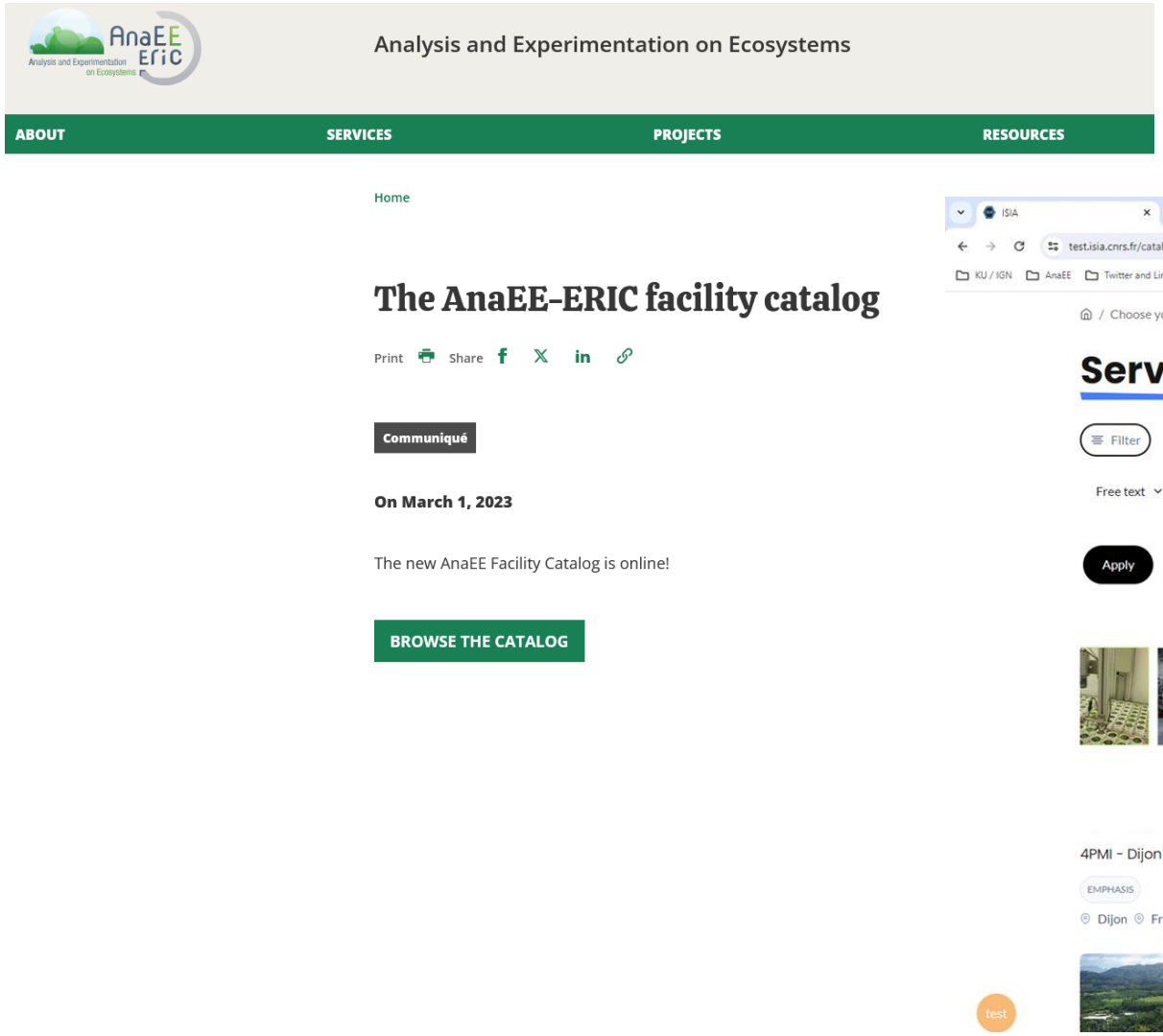




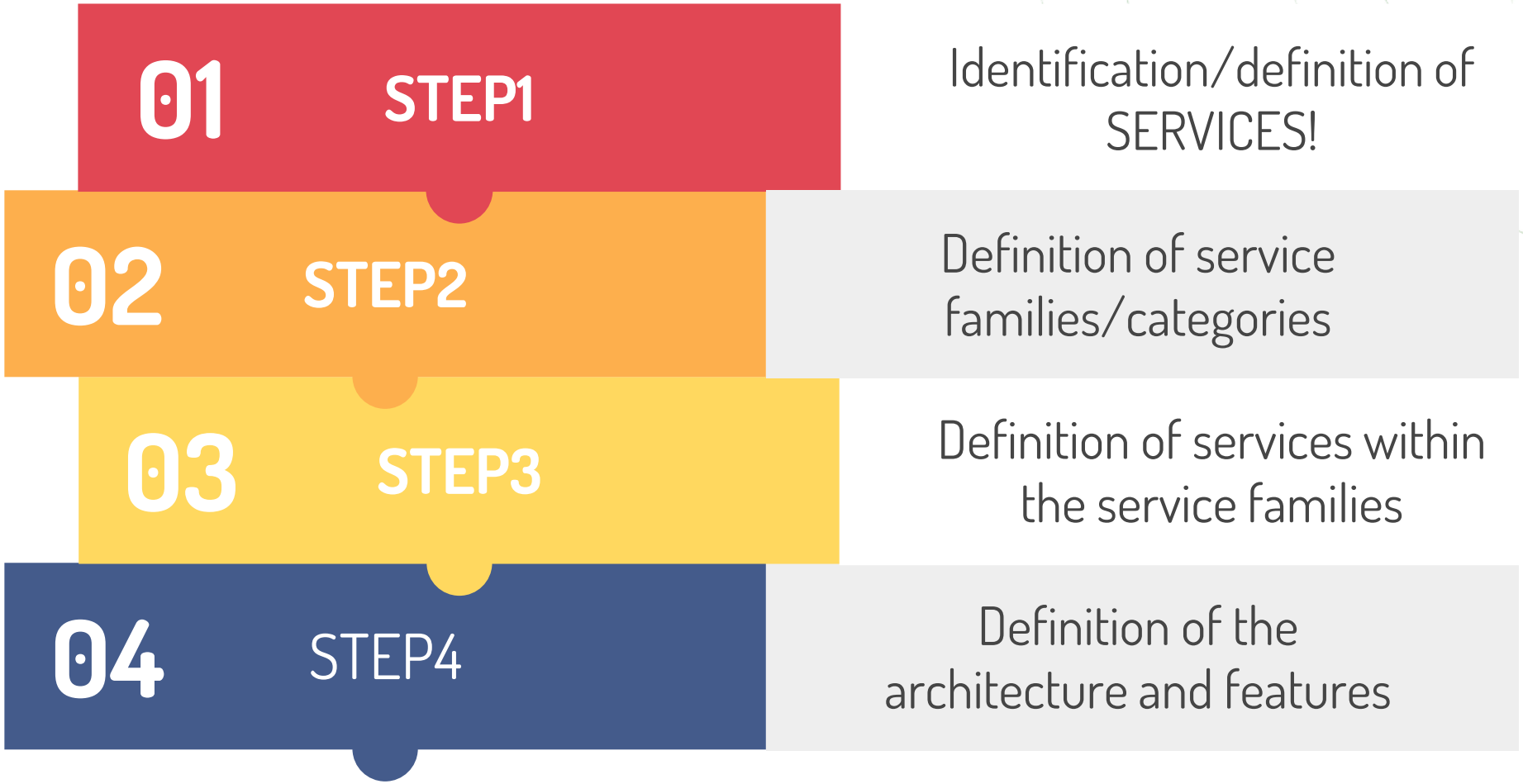


Training current RIs staff and user communities: “Access to

AnaEE Catalogue of services



What are the steps for developing a Catalogue?



Step 1 - Service ID

Basic information	a) Name of the service b) Summary description of each service c) Provider/s d) Location/s
Classification information	a) Research area/s (different levels) b) Geographical environment c) Type/s of service (different levels) d) Atmosphere type (ambient or controlled) e) Target users f) Keywords
Maturity information	Service status (beta, implementation, operational) Date of availability Provided since:
Access information:	Type of access Service provision procedure Estimated duration of the provision Possible fees (if any, and type of users who may be subject to fee)
Support information (at facility)	a) Available logistic and support services b) Training

Two examples

SERVICE 1 – Aerosol physico-chemical properties (ground and vertical)	
TYPE OF SERVICE	Data, research, technical, innovation, training service
SERVICE DESCRIPTION	Long-time observation of Physical and chemical properties of aerosols combining online and offline measurements. Ground-based measurements can be completed with vertical measurements (ceilometer, LIDAR, …). In addition, the specific flight-restricted area over the station offers the possibility for UAVs, drones, and tethered balloon flights. The research site Melpitz can be used for research projects, measurement campaigns, intercomparison, and test facility for new instruments. More information at: https://www.tropos.de/en/research/projects-infrastructures-technology/coordinated-observations-and-networks/tropos-research-site-melpitz
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical, remote
TARGET USERS	Academia, business/private sector, public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	Prof. Hartmut Herrmann (herrmann@tropos.de) Dr. Laurent Poulain (poulain@tropos.de)

SERVICE 2 – Calibration of ozone analyzers at CMN-PV	
LOCATION	Italy, Monte Cimone (Modena)
TYPE OF SERVICE	Technical service
SERVICE DESCRIPTION	Calibration of ozone analyzers with secondary ozone calibrator. Equipment: secondary ozone calibrator Thermo 49i-PS with WMO-GAW certification. Air-conditioning systems are available at the laboratories where instruments are located together with devices for protection by power surges and lightning. More information at http://actris-cimone.isac.cnr.it/measurement_sites/cimone This service includes: – Administrative support for helping the users with shipping of materials (before and after the campaign). – Administrative support for the fulfilment of the internal procedures related with the provision access (Mt. Cimone is located in a military area). – Storing of the equipment at the CNR-ISAC headquarters before and after the access. – Technical support at the infrastructure by senior technicians, including support during installation of equipment and execution of measurements. – Interaction with senior atmospheric scientists for data interpretation and optimal definition of experiment strategy. – Shipping to the infrastructure from Bologna (not dangerous goods) for equipment with total volume < 2 m3 (max: 350 kg) except than during snow season. The transport of dangerous good or larger/heavier materials which need special vehicles is NOT included in the offered services. – Daily transportation of max 2 people to the infrastructure (during the snow season this cannot be fully guaranteed).
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical, remote
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round, but accessibility cannot be fully guaranteed during the snow season
TIME CONSTRAINTS	Multi-day stay of external users at the “O. Vittori” observatory must be discussed and planned with CNR-ISAC. External users are allowed to access the “O. Vittori” observatory only under CNR-ISAC personnel supervision. Accessibility rules can change as a function of the evolution of the COVID-19 pandemic.
CONTACT	atmo-access@isac.cnr.it

HANDS-ON EXERCISE

DEFINITION OF SERVICES

Describe your own service → Instructions

Total time: 40 minutes

Background: In this exercise, you have to create a service description that follows a basic “Resource Profile” The description should provide answers to all three of the questions What? For whom? & Why use? – all contained in a text that should not exceed **1000 characters**.

Tips: Select a service to work with: ideally, this will be an operational service that your organisation is planning to onboard to the ITINERIS Catalogue. It is also fine to select a service that is still under development. What is important is that you are reasonably familiar with it.

Your task is to produce a concise text that describes a service in a way that potential end users can quickly judge whether they can benefit from using the service.

Step 1 – Keywords / Step 2 – Sentences

Define important keywords & bullet points for each question

Questions	Your keywords & bullet points
a) what the resource does, what functionality it provides and activities it enables to perform	
b) the primary benefits or value delivered by the service/resource to its users	
c) the primary users of the service/resource (e.g., researchers, students, industry professionals)? Communities or groups most likely to benefit from it.	

Formulate 2-3 sentences for each question

Questions	Your short sentences
a) what the resource does, what functionality it provides and activities it enables to perform	
b) the primary benefits or value delivered by the service/resource to its users	
c) the primary users of the service/resource (e.g., researchers, students, industry professionals)? Communities or groups most likely to benefit from it.	

Step 3 - Description

Name: Intercomparison of Lidar systems at CNR Atmospheric Observatory
URL: http://www.ciao.imaa.cnr.it/index.php?option=com_content&view=article&id=24&Itemid=157

This research/technical service consists in the direct intercomparison of lidar systems with the ACTRIS lidar reference system operating at the CNR Observatory, to ensure quality of measurements and data. At present it is able to provide aerosol backscatter at 1064, 532 and 355 nm, extinction at 532 and 355 nm, depolarization measurements at 532. In the future, the new reference lidar system will also be able to provide depolarization measurements at 1064 and 355 nm, and water vapor mixing ratio. The intercomparison checks the instrumental and technical performances of the lidar system in terms of range corrected signals, including several QA tests and correction procedures like trigger delay, first range bin, telecover, Rayleigh fit test, depolarization calibration, dead-time corrections.
Target users come from Academia, Private sector and public sector. They can have physical access to the service and the facility (also participating in the campaigns), or remotely, sending their instruments for calibration at the Observatory.

THANKS!

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