

# SV Communities

A *community* is a collaboration which consists of a set of **roles** agreeing their **objective** to achieve a stated scientific purpose by means of a set of **SV Community Behaviours**.

The ENVRI RM distinguishes five groups of **SV Community Behaviours** and **roles**, seen as communities which by design align with the five phases of the **Model Overview**.

ODP defines **objective** as the abstraction of a system's purpose. An objective can be decomposed into **sub-objectives** which can be associated to different SV objects, for instance each community object can have a specific objective.

The ENVRI RM adheres to the following definition of Research Infrastructure:

"Facilities, resources and related services that are used by the scientific community to conduct top-level research in their respective fields and covers major scientific equipment or sets of instruments; knowledge-based resources such as collections, archives or structures for scientific information; enabling Information and Communications Technology-based infrastructures such as Grid, computing, software and communication, or any other entity of a unique nature essential to achieve excellence in research. Such infrastructures may be "single-sited" or "distributed" (an organised network of resources)" [41]

In the ENVRI RM, an environmental research infrastructure is itself an **SV Object Actor**, a special type of **SV Object Classification**.

The purpose of the ENVRI RM is to provide a model of the IT infrastructure which is explicitly designed to fulfill the objectives of an ideal environmental research infrastructure.

The five communities are, *data acquisition*, *data curation*, *data publication*, *data service provision*, and *data use*. The definitions of the communities are based on their **objectives**.

- **Data Acquisition Community**, collect raw data and bring (streams of) measurements into a system.
- **Data Curation Community**, curate the scientific data, maintain and archive them, and produce various data products with metadata.
- **Data Publishing Community**, assist data publication, discovery and access.
- **Data Processing Community**, provide various services, applications and software/tools to link and recombine data and metadata in order to derive knowledge.
- **Data Use Community**, make use of data and service products, and transfer knowledge into understanding.

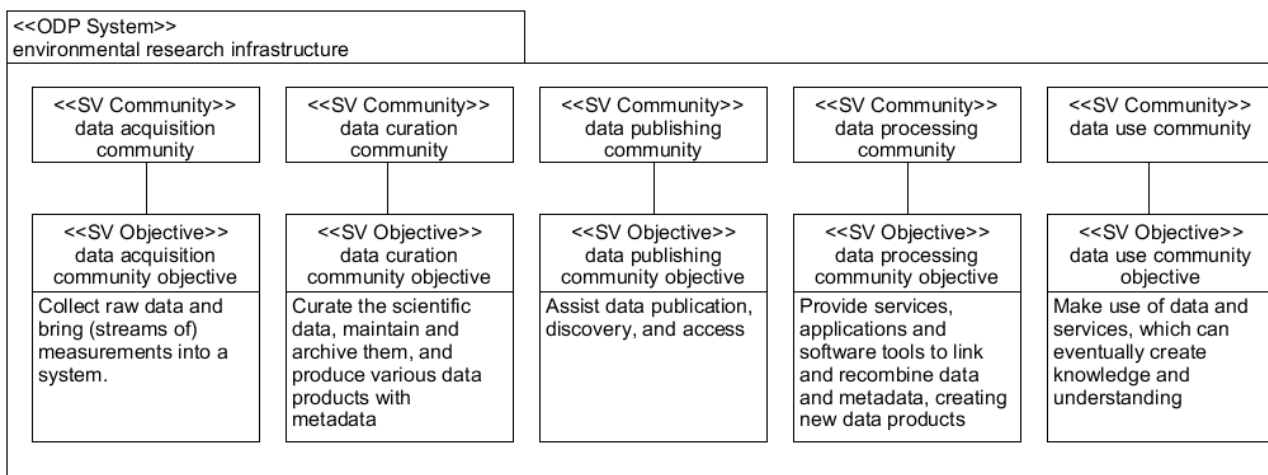
In addition to the textual description, RI Communities can be in a diagram such as the one shown below. In the diagram the package represents an Environmental research infrastructure. The infrastructure consists of five communities and each community is linked to a community objective. The relationship between objective and sub-objectives is composition. Consequently, the objective of the RI is the composition of the objectives of its communities.



## Note

The ENVRI RM defines five objectives which constitute the generic objective of an ideal RI. However, when modelling RIs may define additional objectives as needed.

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Notation

The community roles and behaviours are described at the following pages:

- **SV Community Roles**
- **SV Community Behaviours**

