

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.

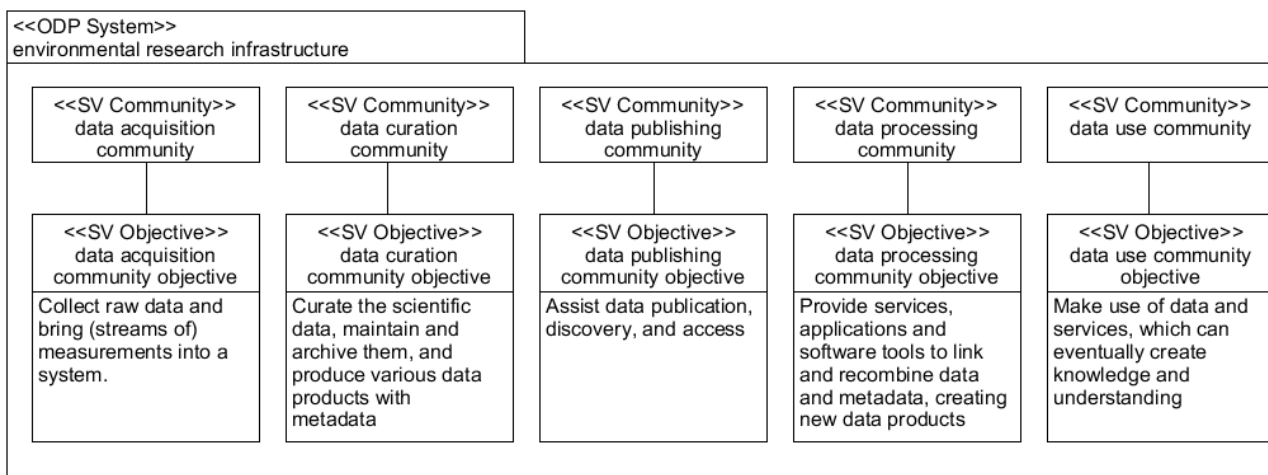
In addition to the textual description, RI Communities can be in a diagram such as the one shown below. In the diagram the package represents an Environmental research infrastructure. The infrastructure consists of five communities and each community is linked to a community objective. The relationship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

