

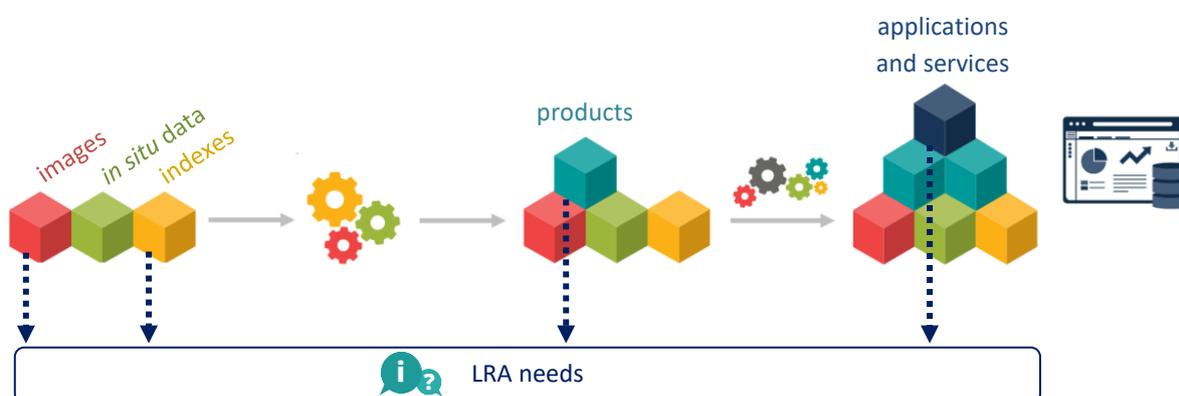
Submission for Communication on Regional Copernicus

Marie Jagaille (GIS BreTel) marie.jagaille@imt-atlantique.fr

Nicolas Bellec (GIS BreTel) nicolas.bellec@imt-atlantique.fr

Regions are one of the main potential user groups of satellite-based services and products. Indeed, to be fully informed about their territory and to efficiently manage its planning, regional and local authorities need data, knowledge and tools. These needs could be met by Earth Observation and Copernicus-based solutions. In this context, one of the challenges of the Copernicus program is to address diversity of local issues working with local and regional authorities (LRA).

In the “Copernicus end users uptake” framework, along a theoretical and perfect added value chain, data are made available through Copernicus Program and are used to design new added value products. End users assimilate these data (images, products) to build their own application or services (be they developed internally or by providers). It can be illustrated by the value chain below.

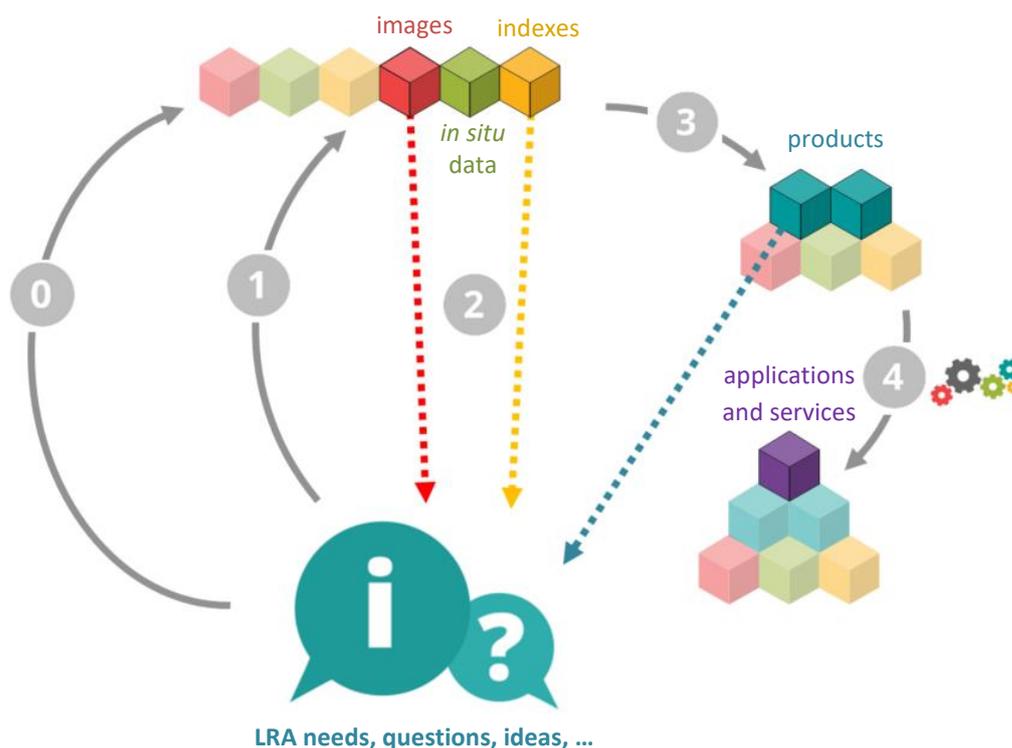


However, in reality, despite mechanisms to provide images and products, despite efforts to raise awareness, this appropriation by end users is not spontaneous. The proposed Regional Copernicus approach is to move up the value chain from downstream.

Regional level is relevant because it remains close to local issues, be they specific or common to other regions (coastal region, mountainous region, specific forms of urbanization); while allowing resources to be pooled. Moreover, policy guidelines and measures on environment and land-use planning are decided at a regional level. This is a crucial level to initiate political will and support.

To this end, Copernicus must adapt to regional governance and local organization of geospatial data, in order to integrate Copernicus data in the commonly used dataset while also taking in account the INSPIRE directive requirements (make geospatial information easily searchable, accessible and interoperable). The Regional Copernicus approach aims at leading to a better uptake of Copernicus images, Copernicus products and added-value services by end users by involving them more in the design of new Copernicus based applications relying on regional geoportals, GéoBretagne in Brittany.

As a first simple example we can point an on-going project to illustrate this “Regional Copernicus Approach”.



	General objective	Actions	Example of output
0	Make aware and inform end users of Copernicus Program, Copernicus data, Copernicus products and of opportunities for their practices.	To raise awareness it is necessary to get out from the usual spatial context and discuss with the geomatic community, being involved in events related to earth observation but also non-earth observation-oriented local thematic working groups	<i>Creation of a working group of volunteers within the geomatic community involved in the ten-years GeoBretagne partnership.</i>
1	To draw out, identify and analyse needs.	Insure the continuity of the dialogue (informal discussions with key partners, meeting between LRA and companies...).	<i>Identification of an actor from a local authority expressing a specific need (landcover in winter in an agricultural context) and ready to undertake a voluntary approach using Copernicus data.</i>
2	Provide a support for LRA to use or build Copernicus and Earth Observation-based products.	Identify indexes and parameters providing relevant information for a specific user needs. Mobilize funds to ensure their production and their availability at temporal and spatial relevant scale. Make companies (products and services providers) aware of LRA expectations and practices.	<i>Normalized Difference Vegetation Index (NDVI) time series (Sentinel 2) and maps of coherence (Sentinel 1) can provide useful information on soil cover during winter. These indexes will be available on the regional Geoportal (GeoBretagne).</i>

3	Add a value to these products and make them available.	Co-design suitable added value products (choice of typology, scale, vocabulary) and make it available for all through a regional demonstrator. The products are the transformation of the indexes into “qualitative” values.	<i>ex. The “NDVI” and coherence map will be turned into a qualitative product “bare soil/covered soil”. These products will be available on GéoBretagne.</i>
4	Integrate these products in regional and local applications.	Provide a support to end users for the design of applications combining earth observation products and common used datasets (statistical data, GIS data, etc.). This service can be developed directly by local authority or by a provider (private company).	<i>ex. Combine the qualitative product “Bare soil/covered soil” and local datasets “type of crop” to develop an application which identify erosion risk areas. This application will remain “internal”.</i>

The originality of the Regional Copernicus is its bottom-up approach : this is not only about explaining benefits of Copernicus data, products and added-value services to end users but also to involve them in all the stages of the value chain, starting from end users’ needs, thematic practices issues and work habits.

The more broad and expected results are:

- production and availability of new products meeting regional and local needs ;
- emergence of new Copernicus-based services and applications ;
- boost LRA trust into EO-based solution and foster innovation in and through the public sector.

So far this approach has not benefited from own fund. But BreTel is actually responding to calls to implement some relevant demonstrators on the GéoBretagne platform. First demonstrators are expected for 2019.

In the future, we would like to involve students and Universities more in this approach. Relevant connection should be done with our local and other FabSpaces 2.0, with MOOC and other “user uptake” initiatives.