

# Portugal

## Increasing the use of spatial data in Portugal with user-friendly portal

State-of-the-art technology has been used to develop a more user-friendly geoportal to help increase the use of Portuguese spatial datasets.

Strategic and technological restructuring of SNIG, the Portuguese national spatial data infrastructure (SDI) which is coordinated at operational level by the Directorate-General for the Territory, (DGT), started in 2015. As well as offering a more dynamic and user-friendly interface, the new SNIG GeoPortal also formalises the creation of the National Register for Geographic Data (RNDG).

The creation of the RNDG, which is intrinsically related with SNIG development, improved and consolidated the metadata catalogue content, allowing more efficient searches and more effective results. New functionalities were developed for the RNDG to improve searching and visualisation of spatial datasets.

The new SNIG platform is built on Open Source technology and was developed using several modules from different open source packages (Table 1). The integration of these components was made through their APIs.

The SNIG GeoPortal interface has been customised to optimise search and access to geographic information, and plug-ins have been created to extend GeoNetwork capabilities. Several changes have been made in the GeoNetwork Core to allow searches only in datasets, however support for other types of records, such as services, was kept. A schema plugin for the Portuguese Metadata Profile was created to apply its specific rules and structure in the catalogue metadata.

As a result, INSPIRE implementation in Portugal, supported by the new SNIG, can now use a more intuitive and well-organised platform. It is also expected that more public organisations will register their spatial datasets in this platform and the number of users will consequently increase.

In addition to development of the SNIG, DGT has delivered full coverage of Portugal's mainland with orthophotos at a 25 cm spatial resolution and a new Land Use Land Cover map (COS2018). Both follow an open data policy. New technical specifications for the Portuguese reference cartography were adopted and are already in use, and a decree-law about cartography was revised and published. Three GNSS stations in the Portuguese Continuously Operating Reference Stations Network (ReNEP) were also updated to receive Galileo data.

Software	Description
Operating System	Ubuntu Server
PostgreSQL/PostGIS	Object-relational database management system for GeoPortal and RNDG. PostGIS adds support for geographic objects to the PostgreSQL database.
Drupal	Content Management System for the SNIG GeoPortal.
GeoNetwork	Catalog application to manage spatially referenced resources. Supports the National Register for Geographic Data (RNDG). Provides powerful metadata editing and search functions as well as an interactive web map viewer.
OpenLayers ReactJS	Javascript library for implementing map features in the Map Viewer.

Table 1 SNIG software



Figure 1 SNIG GeoPortal

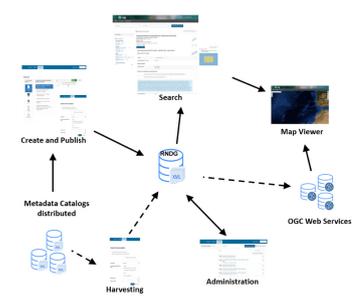


Figure 2 SNIG components