NATIONAL INSTITUTE
OF GEOGRAPHIC
AND FOREST
INFORMATION

A DIGITAL TECH LEADER
SERVING THE FRENCH
TERRITORIES
IGN is the official reference for geographic and forest information in France, certified to be neutral and interoperable. The institute is constantly developing new reference databases, products and geoservices, to meet the country’s growing and changing needs for map data and geographic information.

A LEADING OPERATOR SERVING PUBLIC POLICY

As a powerful public institute providing digital technology to describe the French territory, IGN helps define, evaluate and implement public policies in various fields and has particular expertise on forest issues.

MAIN ACTIVITIES

- **Risk prevention**
  Numerical modelling, development of monitoring tools (floods, earthquake zones, landslides), etc.

- **Forest, environment and agriculture**
  National forest inventory, publication of sustainable forest management indicators, development of the nature and landscape information system, studies on forest availability, monitoring and evaluation of sea levels and changes in the coastline, etc.

- **Land-use planning, urban planning and urban management**
  Development of analysis services, monitoring of consumption of natural, forest and agricultural areas, city asset and infrastructure mapping, development of data and service infrastructure for managing road travel, etc.

- **Defence, security and space**
  Programming and processing of satellite and aerial images, annual coverage of the entire French territory (SPOT 6 and 7 satellites), stereoscopic observation of key areas, etc.

GÉOPORTAIL - THE PEOPLE’S PORTAL TO FRANCE

Built with openness and data sharing in mind, Géoportail facilitates access to official geographic information. The portal is constantly enhanced with data and provides access to numerous themes and information layers of interest to the general public.

géoportail.gouv.fr

1L’IGN is a public administrative establishment placed under the joint authority of the Ministers in charge of the environment, energy and the sea, and agriculture, agribusiness and forestry.
IGN’s five inter-regional agencies work in collaboration with the local authorities. Through regional programming committees, the goal is to build an annual programme that meets local needs by identifying synergies and pooling production efforts, while ensuring national consistency with the Institute’s strategy.

THE PARTNERSHIP APPROACH IN THE FRENCH TERRITORIES

The production of certain products or services is funded through partnerships that allocate contributions between IGN and local authorities. These take various forms: co-production, grants and technical assistance from IGN.

EXAMPLES OF LOCAL PARTNERSHIPS AND USES

High-resolution orthoimages to readjust networks
In partnership with local authorities and state services, IGN produces orthophotographic coverage with a ground pixel resolution of 15 to 20 cm. This makes it possible to readjust networks and develop planning documents, track consumption and protection of spaces and assess light pollution.

Large scale land use (OCS GE) for monitoring urbanization and other land development
Produced in partnership with state and local authorities, the OCS GE database provides consistent information on land use to track urbanization and consumption of spaces, control development and preserve biodiversity, etc.

FOCUS ON

National Address Database: a successful collaboration
The National Address Database is the result of a unique partnership between IGN, the Groupe La Poste, local authorities, municipalities, the fire and rescue services, the association OpenStreetMap France and the Etalab mission. This database, whose purpose is to reference the location of all 25 million addresses in France, can be added to by citizens, institutions and businesses. It is based on an open system that is continually updated and accessible.
GEOSERVICES FOR ANALYSING AND UNDERSTANDING CHANGES IN FRENCH TERRITORIES

Some examples of Geoservices developed by IGN to facilitate the use of spatial data.

- **Géoportail for urban planning**
  National platform co-produced by IGN and the Ministry of Housing and Sustainable Habitat, which aims to facilitate access to urban planning documents and utility easements, both for professionals and the general public.

- **MesAdresses.ign.fr**
  In just a few clicks, users can geocode a list of mailing addresses, display them on a map and share the results with others.

- **MaCarte.ign.fr**
  Easily make a personalized online interactive map.

- **MonGéoportail.ign.fr**
  Host and distribute localized information with a high level of performance.

- **Guichet-adresse.ign.fr**
  Online management tool that allows municipalities and public agencies to help improve the National Address Database.

- **RemonterLeTemps.ign.fr**
  A portal to delve into the past and compare the development of French territories over time.

PROJECTS TO MODERNIZE PUBLIC ACTION

Several IGN projects were selected under the Investments for the Future Programme. The objective of these mapping tools is to simplify the online administrative procedures set up by the government.

A GEODATABASE ON ESTABLISHMENTS OPEN TO THE PUBLIC

With this project, IGN provides tools and web services that people can use collaboratively to list all establishments open to the public in France and add relevant data (hours, reports, disabled accessibility, etc.).

**erp.ign.fr**

API CARTO: FOR SIMPLIFIED ONLINE ADMINISTRATIVE PROCEDURES

This software component offers processing and calculation web services that can be used by public agencies to easily retrieve geolocatable information requested in administrative procedures. The aim is threefold: make the procedures more reliable, simpler and faster.

**apicarto.ign.fr**

FOCUS ON

**Vitiplantation:**
An illustration of how API Carto simplifies things

API Carto is used to develop and create Vitiplantation, an administrative e-service that allows wine growers to file their vine planting and replanting applications. With the capabilities of the API Carto, wine growers now just have to trace the outlines of their field as part of the process. The system automatically calculates the size and retrieves the reference data required in the application, in particular the protected designation of origin. Vitiplantation was created in partnership with France Agrimer.
AN INNOVATION LEADER FOR THE DIGITAL ECONOMY

Innovation is a core strategy of IGN through its five research laboratories, its school, its project accelerator, its forestry experts and the services provided by IGN Conseil, IGN Espace and the specialized geodetic levelling work.

THREE RESEARCH RESULTS

The IGN Lightweight Camera for risk prevention

Designed by IGN’s optical and micro-computer laboratory LOEMI, the IGN Lightweight Camera is very high resolution and allows 3D modelling from images. On board drones, aircraft, vehicles or other vectors, this camera offers the ability to acquire images for erecting structures (dams, bridges, levees), surveying geophysical objects (landslides, cliffs) and 3D modelling of underground spaces that are difficult to access (tunnels, sewers). Delair-Tech, winner of Season 2 of IGNfab, is going to industrialise and include IGN Lightweight Cameras in their drones.

iTowns

Navigate the city in 3D

iTowns is an immersive and fluid way of navigating around the city. The data collected by IGN vehicles equipped with cameras - that travel and digitize the public space - offer many practical applications for towns.

ign.fr/institut/innovation/itowns

The Géocube

Measure and monitor ground movements

Géocube is a standalone, ultra-compact, high precision GPS receiver that can detect the slightest ground movement. Installed alone or as part of a network, it can monitor seismic zones, coastal landslides and glacier melt. The Géocube is being industrialized by the company Kylia.

A SCHOOL FOR GEOMATICS ENGINEERING

IGN has a school of excellence in the field of geomatics: ENSG, the National School of Geographical Sciences, which trains future talents involved in the production and use of geographic information.

ensg.eu

A SUPPORT SYSTEM FOR START-UPS

IGNfab helps SMEs develop innovative products and services using the description of the territory and geolocation in different sectors. IGNfab supports selected projects by providing its expertise, free preferential access to its data and a dedicated 200-sqm workspace.

ignfab.ign.fr

OpenForêt

This web platform facilitates contacts between forest industry operators and the millions of small inactive forest owners. IGNfab supported this project by developing a feature that identifies forest resources and accesses.

InSunWeTrust

This website helps connect individuals and professionals to promote access to photovoltaics. IGNfab supported this project by developing a feature that gives website users an instant, accurate assessment of the solar potential of their rooftops based on the data and algorithms of the institute.
IGN CONSTANTLY ADAPTS TO NEW SOCIETAL DEMANDS

IGN PROMOTES OPEN DATA

For several years now, IGN has been engaged in a process of opening up data and providing free software. To maintain the quality of its data, IGN has set up a special price policy. Today, the institute supports the French government’s policy on Open Data and digital technology.

IGN has migrated all of its historical collaboration tools into a single interface: the Collaborative Space. This platform provides an opportunity for IGN partners to:

- report changes or anomalies (street name change, new building) in the Institute’s databases through an information reporting system,
- extract IGN reference vectors (land use, address) based on geographical criteria (region, department) and/or semantic criteria,
- host and manage their data using dedicated tools as part of a commercial service.

DEVELOPING COLLABORATIVE WORK

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Key dates for open data

- 2009: all IGN public data were made free for schools and research labs
- 2011: the large-scale reference database (RGE®) was made free for non-industrial and non-commercial public service missions
- From 2011 to present: IGN regularly makes new data sets under Etalab open license accessible to everyone on www.data.gouv.fr (Contours...Iris®, GEOFLA®, BD ALTI®, maps, scanned aerial images, raw forest inventory data, territorial coherence schemes, etc.)