



CARTOGRAPHY / SDI

LAND PLANNING



IGN FI

As an indispensable tool for understanding territories, maps have been diversified to a great extent in the form of geographic databases, either vector or raster.

A country's mapping work is increasingly embedded in a spatial data infrastructure (SDI) approach, which in turn can be embedded in an even more global approach such as a national geomatic plan (NGP). The challenge at a national level is therefore to extend this reference geographic database using information from other public organisations - which can include controlled data from participatory mapping projects - in order to create comprehensive, consistent and coherent thematic databases from which numerous business applications can be developed as well as various cartographic products.

IGN FI provides support to its clients throughout all the phases of their SDI and mapping projects: assessing the currently available data, technical aspects (from the initial collection of data to updates) and organisational issues (transfer of technology, coordination, etc.).

OUR AREAS OF EXPERTISE

Advise, design, execute and support throughout all the stages of mapping projects:

- Implementation of SDI and NGP
- Creation of a national geodetic reference via a materialised network
- Aerial photographs, LiDAR acquisition, satellite image acquisition
- Creation of digital terrain models, digital elevation models, orthophotographs
- 3D stereoscopic plotting, 2D digitising on orthoimages
- Modelling and implementation of geographic databases, definition of the metadata as per international standards
- Design and production of web-based portals for disseminating geographic data
- Geometric and semantic quality controls of databases
- Topographic reference mapping to national standards
- Specific thematic mapping
- Theoretical and practical training
- Implementation of mapping production lines with technology transfer

OUR MEANS

IGN FI provides specialist teams to its clients:

- Experts to create geographic databases: specialists in geodesy, photogrammetry, spatial imagery, surveying, GIS, cartography, quality...
- Experts in the creation of map portals: systems engineers, analysts, developers, experts in European standards (INSPIRE)
- Sector experts to create thematic maps
- Experienced project directors and managers

IGN FI also makes tried and tested dedicated software available to its clients, including GeoView®, mapping data production tool from IGN France which integrates functions for image processing, photogrammetry and vector data digitisations.

SOME OF OUR REFERENCES

BENIN • Creation of a national digital map

Modernisation of baseline mapping and creation of national maps to scales of 1:50,000 and 1:200,000. Thanks to the production of orthophotos at a resolution of 50cm, a DTM accurate to one meter and a topographic database, the project provided the country with a detailed and consistent three-dimensional description of its entire land area. All the work was carried out locally by Beninese staff, and together with specific training sessions for users, this ensured the effective transfer of skills to the entire geomatics community.

IGN FI has also led similar projects to update national maps and build on the capacities of the Geographic Institutes in Senegal, Burkina Faso and Mali.

CHAD • Spatial data infrastructure

This project entails providing Chad with a multi-use spatial data infrastructure (SDI) for in and around the town of N'Djamena. It includes data acquisition, production of a reference system for geographic data, and technology transfer as well as technical support for future users.

SAUDI ARABIA • Quality assurance for a mapping production line

Within the framework of the production of approximately 12,000 topographical maps at a scale of 1:25,000, covering the entire Kingdom of Saudi Arabia (about 2 million square kilometers), the General Commission for Survey awarded IGN FI a contract to provide technical support in setting up the process of quality control and assurance for the various products created by this cartographic production line.

HAITI • Aerial photography and LiDAR data acquisition

Within the framework of a project for reconstruction and managing risks and disasters, the World Bank funded a project aimed at producing complete coverage of Haiti with aerial photos and Lidar acquisition. This baseline data was then used to produce an orthophoto with a resolution of 25cm for the whole territory and a high-resolution DTM as well as various derived products.

SENEGAL • Urban cartographic database

This project to create an urban cartographic database enabled relevant information to be provided for sustainable urban planning in seven cities considered to be priority areas. It was carried out entirely locally and involved a high level of skills transfer.

SERBIA • Technical assistance for the creation of a national spatial data infrastructure

A partnership between the Serbian Geodetic Institute (RGZ) and the Airbus Defence and Space-IGN FI consortium enabled the Serbian center for spatial data infrastructure to enter into its operational phase. The introduction of high-technology components along with the creation of data production workshops and a unique transfer of know-how and experiences enabled the production, updating, organisation and dissemination of geographic data to be carried out, notably by setting up a geographic portal.



For more projects, visit www.ignfi.com

IGN FI is one of the companies in the GEOFIT group and as international technical operator for IGN France, is a major player in the field of geomatics. It provides expertise in the fields of geodesy, metrology, cartography / infrastructure for national geographic data, databases, geographic information systems and portals.

100% devoted to export, IGN FI provides its know-how to many sectors of activity including agriculture, forests, the environment, civil security and borders.

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