



GWFF

GEOSPATIAL WORLD FORUM

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IGN - Foundation Data in Support to Public Policies.

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IGN – French National Mapping Agency**

1. Identity and missions

Pointe à Colombier, Saint-Barthélemy – IGN

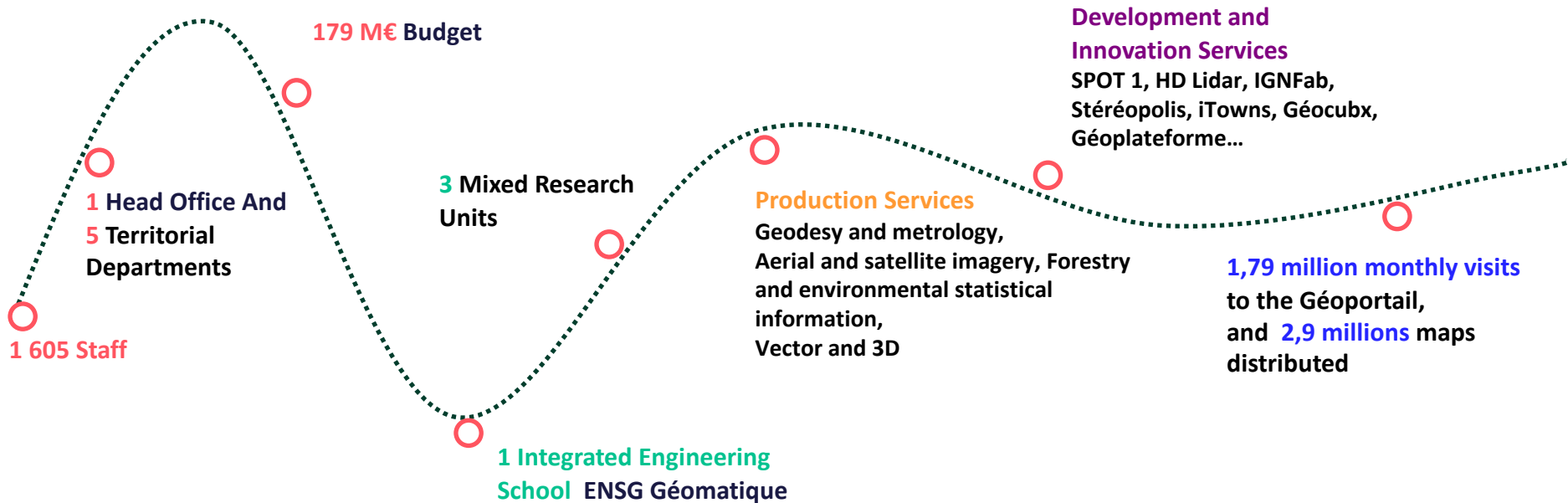
Who we are

OBSERVE – MEASURE – DESCRIBE

IGN is a public administrative institution responsible for :

- **describing the surface of the French national territory**
- the permanent **inventory of forest resources**,
- for the production of **all appropriate representations** of the data as well as their **archiving** and **distribution**.

Our Resources



What we do



Ensure the availability of geolocalized data of the French territory



Foster the appropriation and use of geographic data



Maintain a high level of competence in the field of geographic information

A support action focused on the definition, execution and evaluation of public policies



The IGN puts its skills at the disposal of public policy makers and end users of geographic and forestry data.

The IGN supports numerous ministries, government operators, and local or regional authorities.

Main services to facilitate public decision-making :

- Production of **data describing the national territory** and the **phenomena occurring in it**
- **Cutting edge tools** for querying the data



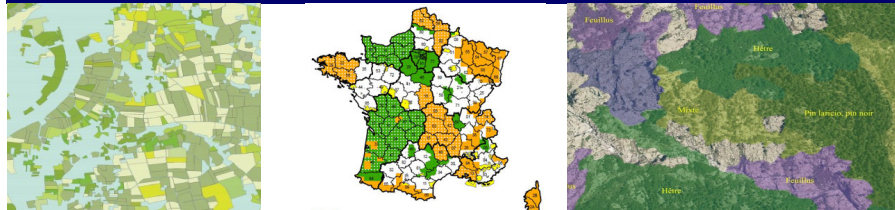
The IGN, a trusted partner of public decision-makers

... within various domains

Environment and biodiversity management



Agriculture and forestry



Land use planning, urbanism, transport



Defense, risk prevention and space



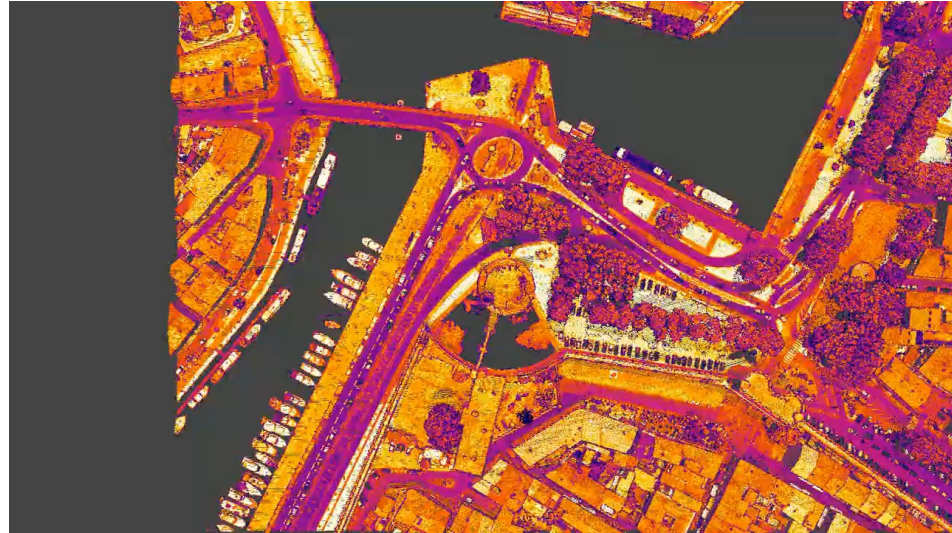
And also : Coastal management | Security | Environment and pollution management | Crisis management | Energy transition | Leisure | Infrastructures | Education

2- Focus on today's topic

Vieux-Port, Marseille, LIDAR HD – IGN

National Mapping Agencies foundation data for image intelligence and services.

- An **authoritative, accurate and reliable description** of the territory is necessary to :
 - Drive public policies **with sovereignty issues** at stakes
 - Benefit from datasets that can be considered as **“ground-truth”**
 - Bring together various datasets on a **common framework** :
 - Build relevant analysis & intelligence
 - Build reliable downstream services



National Mapping Agencies foundation data for image intelligence and services.

- Working abroad at global scale **without foundation data or ground truth** is challenging

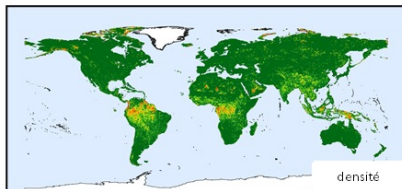


Need to build accurate foundation



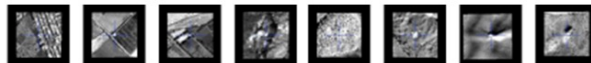
Production of the SRP (Space Reference Points) : A 3D points global reference layer.

Worldwide coverage



High performance

- ✓ High density : 1 point every 2km²
- ✓ Homogeneous Accuracy : 3m CE90
- ✓ 3D Points
- ✓ Images chips on each point with 3D coordinates

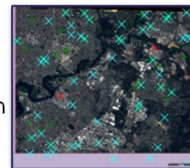


IGN – Airbus coproduction

- ✓ Combination of IGN expertise and Airbus cloud capabilities and SPOT6/7 images database
- ✓ Improvement of a concept initially developed for MoD use

Allowing images registration

- ✓ Every optical sensors
- ✓ On demand
- ✓ Automatically
- ✓ Individual / massive registration where no ground-truthing possible

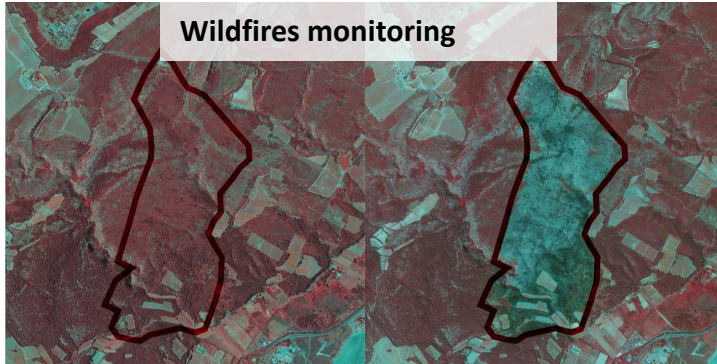


Integration of EO data within foundation data

- IGN is currently initiating this very multi-source approach
- A growing use of satellite EO data on the national territory → what for ?
 - Monitor the impact of climate change on the territory
 - Monitor the impact of human activity on environment
 - Manage the measures to be taken to limits those impacts

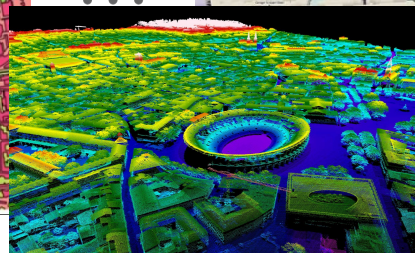
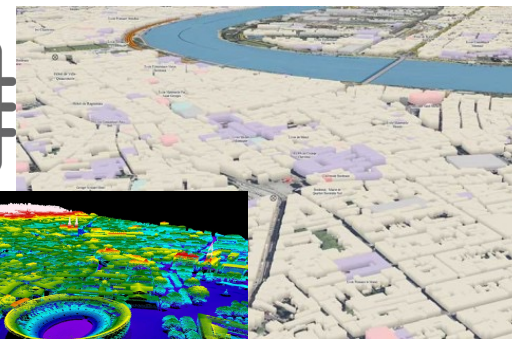
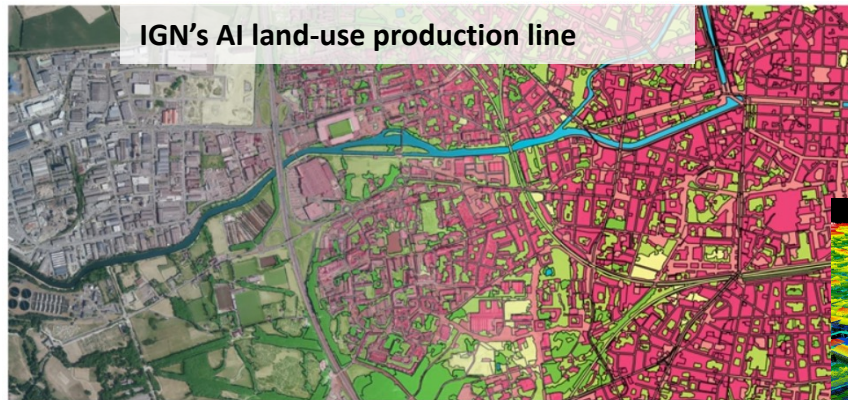


EO satellite data is allowing :
→ frequently updated data
→ a dynamic description of the territory.



Integration of EO data with foundation geospatial data

- **A multi-source approach implies :**
 - **Automating** data processing, information extraction, change detection
 - Setting up **innovative methods** (AI/DL, ...) and **calculation resources**
- **A dynamic description of the territory implies :**
 - Simulation and geovisualization improvement toward digital twins





**RÉPUBLIQUE
FRANÇAISE**

*Liberté
Égalité
Fraternité*

IGN

INSTITUT NATIONAL
DE L'INFORMATION
GÉOGRAPHIQUE
ET FORESTIÈRE

THANK YOU FOR YOUR ATTENTION