

# 'Geo-common' strategy supports major Lidar and land use projects in France

*"The fact that IGN's data are free of charge since 1 January 2021 reinforces IGN's mission of pooling public players in the field of sovereign data. The challenges for IGN are thus to produce data useful to public players, by bringing them together in joint projects, such as the national Lidar HD programme and large-scale land use. The code name 'Geo-common' refers to this strategic orientation of IGN as a common resource, pooling and working with communities according to a participatory logic."*

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**As part of its 'Geo-common' strategy, IGN France has launched major new land use and Lidar projects to support public policies. These include the national high-density Lidar coverage programme and the national soil artificialisation observatory.**

At the same time, to facilitate the use of LiDAR data and encourage the emergence of innovative projects, the institute offers a support system and launches the IGNfab project call "Give relief to your projects with LiDAR data", aimed at start-ups and SMEs. A "sandbox" open to all allows users to familiarize themselves, interact and download LiDAR data acquired as part of the national LiDAR HD program.





## National Lidar programme

In the framework of its brand new national Lidar programme, IGN France will acquire, compute, host and broadcast Lidar point clouds at high density (10 points per square metre). The French public bodies responsible for natural risks prevention, forest management and agriculture are providing the first case studies.

## National soil artificialisation observatory

The Ministry for Ecological Transition requested a project of large-scale land use and land cover for the measurement of soil artificialisation. This project aims to produce a reference framework for land occupation and use throughout the national territory, through automated processes based on automatic analysis of aerial and satellite images (using artificial intelligence or deep learning), reinforced by the cross-referencing of multi-source data and manual checks or retrievals. The objective is to disseminate open data on soil artificialisation.

The project will also extend the use of automatic processing technologies by artificial intelligence, technologies which have been adapted to the needs of environmental knowledge by the Institute's research laboratories. As such, an Artificial Intelligence roadmap has been published by the Institute, which will be rolled out over the period 2021-2024.



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## Benefits

- Enables fine, quasi-synchronous and homogeneous three-dimensional knowledge of the topographic soil, artificial topsoil and vegetation between 2021 and 2025. A true linchpin for the “digital twins” necessary for in-depth analysis of the territory and the simulation of phenomena.
- Generates classified Lidar point clouds and very precise Digital Terrain Models (DTMs) and Digital Surface Models (DSMs)
- Can be used for a wide range of applications in a variety of public policies, such as spatial planning, agriculture, forest, energy, biodiversity, and climate.

## Benefits

- Enables the State and the territories to combat urban sprawl, which reduces the capacity of agricultural land to feed us, increases the distances travelled by individuals, increases expenditure on networks (roads, electricity, sanitation, etc.), accelerates the loss of biodiversity by fragmenting spaces and, due to soil sealing in particular, increases the risk of flooding.
- Provides an essential brick in reaching the ‘Zero net artificialisation’ objective, recalled by the President of the Republic before the Citizens’ Convention for the Climate on 29 June 2020
- Delivers objective data to public (State, local authorities) and private (consultancy firms, urban planning agencies, etc.) players for combating soil artificialisation.
- Promotes a shared diagnosis of the process of soil artificialisation, for the preservation of biodiversity, food autonomy and the fight against global warming.