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API OVERVIEW

Overview, use cases and case studies on the Dynamic Airspace Connectivity Data API

Telefónica Open Gateway

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Table of Contents

Description

01

The Dynamic Airspace Connectivity Data API provides the capability to get information about the connectivity delivered by 4/5G networks in the airspace along an airspace volume for a future date and time.

Drone ecosystem will have now information about connectivity conditions for a certain service level in the airspace to check if it is sufficient for the mission planned.

Drone operators will now have the capability to choose the safest routes by prioritizing areas with sufficient connectivity, reducing potential risks. This enhanced feature allows operators to navigate their drones more efficiently, optimizing routes and ensuring continuous communication with the drone.

Drone authorities will receive connectivity information from the operator, who can include it in the flight plan to streamline the authorization process. By demonstrating that potential connectivity issues have been considered, the operator will help expedite the flight authorization approval.

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Features and Categorization

CAMARA	⊗
COUNTRIES	🇪🇸
SECTORS	TRANSPORTATION & LOGISTICS / ICT SERVICES
SERVICES	LOCATION, SERVICIOS TIC

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Characteristics of Dynamic Airspace Connectivity Data API

02

Overview

Characteristics of Dynamic Airspace Connectivity Data

Mobile Coverage Check

Our advanced API equips drone operators with comprehensive analysis by providing data about mobile network coverage in specific geographic areas. Users can query based on coordinates (latitude/longitude) and the API returns data on the level of availability of different network technologies, including 4G, and 5G.

Route Planning

Now, drone operators can select the safest routes by:

- Identifying which are the "black volumes" to avoid the risk of losing control of the drone due to connectivity shortage.

- Knowing if the network latency is sufficient for the mission planned.

Flight Plan Authorization

Providing drone operators with the information needed to generate a flight plan that incorporates mobile coverage data demonstrating that the operator has accounted for potential connectivity issues, certifying continuous communication with the drone, in order to ensure compliance with aviation laws and obtain the required flight authorization.

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Overview

Characteristics of one standard Dynamic Airspace Connectivity Data API

Simplified Integration

With a standardized API, developers can seamlessly integrate Dynamic Airspace Connectivity Data into their applications without the need for custom implementations for each telco operator.

This simplifies the development process and reduces the time-to-market.

Uniform Access to Telco Capabilities

The standardized API provides uniform access to various telco capabilities to ensure consistency and versatility across different operators and markets and fosters a consistent and reliable experience for users regardless of the telco operator involved.

Anonymized information

Our robust anonymization process guarantees the complete protection of individual privacy, making it impossible to track specific mobile phones or individuals through our network data.

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Use cases

03

Overview / Use Cases

Drone-based delivery systems

Drones offer a new range of possibilities for the delivery sector, providing new, more efficient and innovative ways of transporting goods. Unmanned aerial vehicles make it possible to reach remote or hard-to-reach locations, thus facilitating the arrival of goods. This is especially useful in emergency situations, for the delivery of medicines, food or other essentials. The Dynamic Airspace Connectivity Data API makes it easier for drones to use more suitable routes to deliver packages directly to the indicated location. In addition, their integration optimises delivery times, speeding up the arrival of urgent shipments.

OTHER RELATED APIs		
	SECTOR	TRANSPORTATION & LOGISTICS
Population Density Data		
	SERVICE	LOGISTICS

DEVELOPER NEEDS

- Select the best route routes by the level of connectivity at air.
- Make informed decisions to ensure the safety and efficiency of their operations.
- Provide solutions for asses a Ground Risk Evaluation and complying with regulations.

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Overview / Use Cases

More effective emergency responses

In times of crisis, accessing information on population density can become a crucial tool. From dispatching rescue teams to coordinating relief operations, this type of data allows authorities to make better informed decisions. The Dynamic Airspace Connectivity Data API allows you to obtain dynamic data about mobile network coverage in a specific area and time, identifying "black volumes" to avoid the risk of losing control of the drone due to connectivity shortage. Authorities can then rely on this information to quickly assess the severity of the situation and allocate resources accordingly. This improves the efficiency of emergency response and mitigates the impact of disasters.

OTHER RELATED APIs		
Population Density Data	**SECTOR**	TRANSPORTATION & LOGISTICS
	SERVICE	LOGISTICS

DEVELOPER NEEDS

- Select the best route routes by the level of connectivity at air.
- Make informed decisions to ensure the safety and efficiency of their operations.
- Provide solutions for asses a Ground Risk Evaluation and complying with regulations.

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Case Studies

COMING SOON

04

Start using Dynamic Airspace Connectivity API!

05

Getting Started with Dynamic Airspace Connectivity Data

Harness the power of Open Gateway and seamlessly integrate our API services into your app

Follow these initial steps for seamless API services to Developers within Channel Partners' environments, including Operators API Services integration for a cohesive product experience and efficient collaboration among stakeholders.

1
CHOOSE A CHANNEL PARTNER

Select a suitable channel partner or payment aggregator that offers integration with the Open Gateway API to meet your needs and business goals. Contact an expert to get more information about the channel partners availability or to become a new Open Gateway Partner

2
PRODUCT DISCOVERY

You can access the Open Gateway Population Density Data Service through the Channel Partner's developer portal.

3
DEVELOPER REGISTRATION

To use Open Gateway Products, you must undergo a registration process that includes signing up on both the Channel Partner and Operator platforms.

4
DYNAMIC AIRSPACE API CONSUMPTION

After subscribing and sharing credentials, You can access the Open Gateway Product on registered Operators, making API calls through the Channel Partner's gateway.

5
PRIVACY MANAGEMENT

Some Open Gateway Products require end user consent for Developers to access Operator's network capabilities on their behalf.

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FAQs

06

API Dynamic Airspace Connectivity Data / FAQs

What is the Dynamic Airspace Connectivity Data API?

The Dynamic Airspace Connectivity Dara API enables developers with the capabilityy to get information about the connectivity delivered by the network in the airspace along an airspace volume for a future date and time.

What benefits are obtained from using the Dynamic Airspace Connectivity Data API?

The API empowers users to identify level of connectivity in a specific zone, so you will know how is the network coverage in the area of interest.

What are the potential use cases of the Dynamic Airspace Connectivity Data API?

The Dynamic Airspace Connectivity Data API has versatile applications, including Drone Route Planning, Drone-based delivery systems or optimizing the drone flight authorization process.

How will the Dynamic Airspace Connectivity Data API help Drone Operators?

The Dynamic Airspace Connectivity Data API will help Drone Operators to carry out comprehensive analysis to select the best route that guarantees the mission can be accomplished with no connectivity shortage and with optimal connectivity levels.

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API Dynamic Airspace Connectivity Data / FAQs

What security measures does Dynamic Airspace Connectivity Data API employ to protect user data?

It is important to remark that no information related to personal data is provided, as the information exposed by the API is 100% related to the network and its coverage. So, privacy and confidentiality is guaranteed.

What are the requirements for using the API?

If you seek to retrieve Dynamic Airspace Connectivity Data for a future timeframe, simply provide two essential parameters when using the API: the area, depicted as a polygon shape delineating the geographical area of interest, and the desired time interval for the population density data. If you want to know the connectivity for a specific technology (4G/5G) can be also specified.

Does Dynamic Airspace Connectivity Data API comply with regulations?

On one side, the Dynamic Airspace Connectivity Data API not only conforms to regulations by safeguarding anonymity as the information provided is not related to personal data, but also, on the other side, plays a crucial role in aiding drone operators to fulfill and get the flight authorization.

Is the Dynamic Airspace Connectivity Data API standardized in CAMARA?

The CAMARA Dynamic Airspace Connectivity Data API is in the process of standardization to provide a single, standardized API for accessing telco capabilities across different network operators, simplifying integration for developers.

Other relevant information

07

Further information

Join our Developer Hub

Join the **Telefónica Open Gateway Developer Hub** to test our APIs, develop use cases with the power of the network and improve user experiences.

Enroll our Partner Program

If you are interested in the potential of Telefónica Open Gateway and you are willing to collaborate with us, you can **enroll our exclusive Partner Program**.

Subscribe our newsletter

Find out all about the latest of Telefónica Open Gateway in our **newsletter**.

Contact our experts

If you have any questions about the initiative, don't hesitate to **contact our experts**.

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