



API OVERVIEW

# Overview, use cases and case studies on the Population Density Data API

Telefónica Open Gateway

April 23, 2024



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**Description**

01


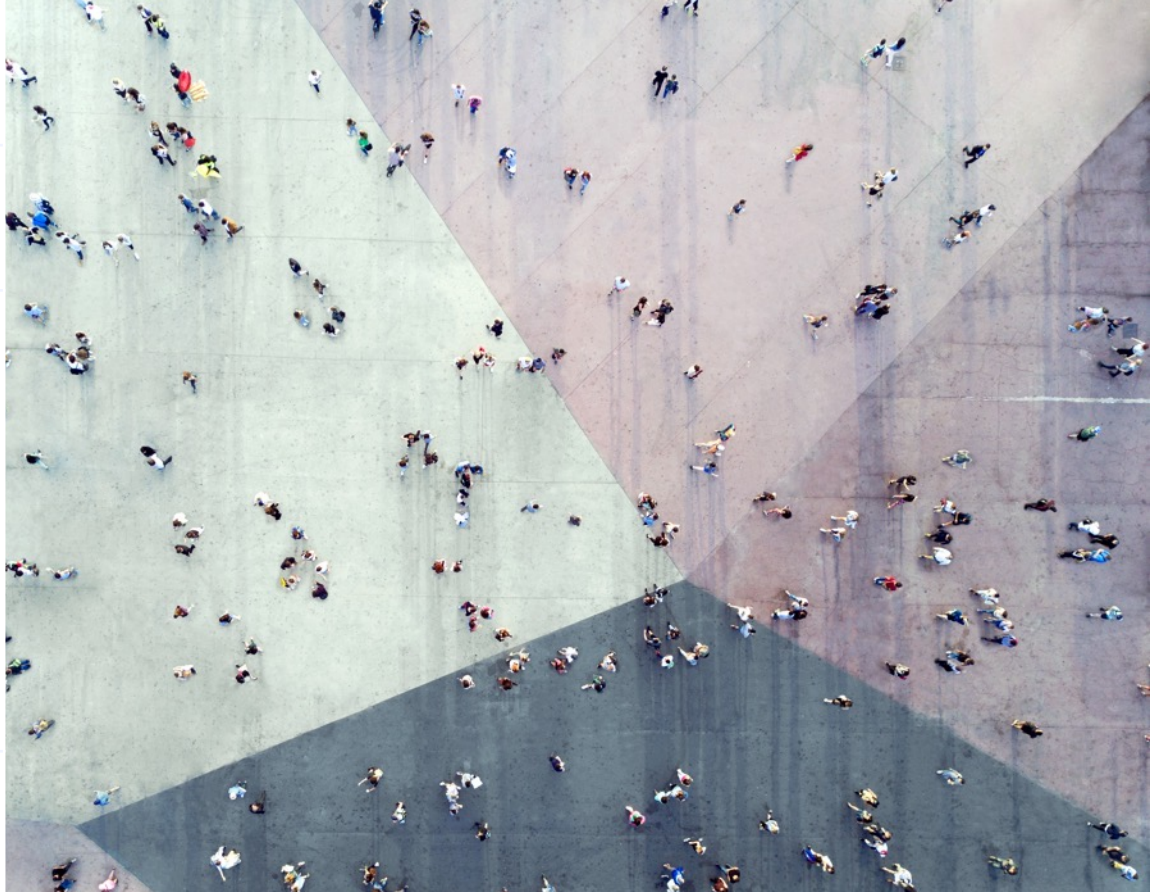

## The Population Density Data API provides the capability to get dynamic population density information in a specific area, for a future date and time.

Drone Ecosystem will have now information to perform ground risk assessments based on dynamic data to identify the number of people at risk for a given drone route path.

Drone operators will now be empowered with the ability to select the safest routes, prioritizing areas with the lowest population density to minimize potential risks. This enhanced capability ensures that operators can navigate their drones, optimizing safety measures and avoiding densely populated regions.

UTMs (UAS Traffic Management) will be able to detect, near real-time, unexpected concentrations of people to inform UAS operators of increased ground risk. This advanced functionality enables drone ecosystem to stay informed and proactive, ensuring enhanced safety measures are implemented to mitigate any potential risks effectively.

# Features and Categorization

CAMARA		
COUNTRIES		
SECTORS	<p data-bbox="659 715 1100 768">TRANSPORT &amp; LOGISTICS</p> <p data-bbox="705 815 1054 868">ICT SERVICES</p>	
SERVICIOS	LOCATION	

# Characteristics of Population Density Data

02



# Overview

## Characteristics of Population Density Data API



### Ground Risk Evaluation

Our cutting-edge API empowers drone operators by providing insights into the number of individuals at risk along their drone routes. Through dynamic population density predictions, tailored specifically to the scheduled date and time of the flight, drone operators can make informed decisions to ensure the safety and efficiency of their operations.

### Route Planning

Select the safest drone routes by minimizing the level of population at risk will be now possible by:

- Having a precise identification of areas to avoid due to their potential risk.
- Providing a comprehensive analysis to determine the optimal time for flying between points A and B ensuring minimal exposure to risks and maximizing safety.

### Alerts During Flight Operations

UTMs (UAS Traffic Management) can now have advanced capabilities to swiftly detect unexpected gatherings of people and allowing UAS operators to receive timely alerts regarding ground risk fluctuations to enable them to select alternative routes and steer clear of potential risks.

# Overview

## Characteristics of Population Density Data API



### Simplified Integration

With a standardized API, developers can seamlessly integrate Population Density 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.



**Use Cases**

03

# Overview / Use Cases

## Drone-based delivery systems

Drones are revolutionizing the delivery industry by offering an efficient and innovative solution for transporting goods. With the implementation of the Population Density Data API, unmanned aerial vehicles can navigate through various terrains and urban areas, using the most adequate routes to deliver packages directly to clients' desired destination points. This delivery system significantly reduces delivery times, especially for urgent or time-sensitive deliveries. Furthermore, drones can reach remote or hard-to-access locations, making them ideal for delivering medical supplies, food, and other essentials in emergency situations or areas with limited infrastructure.



<p><b>OTHER RELATED APIs</b></p> <p><b>API Device Location Verification</b></p>	<p><b>SECTOR</b></p>	<p>TRANSPORTATION &amp; LOGISTICS</p>	<p><b>DEVELOPER NEEDS</b></p> <ul style="list-style-type: none"> <li>• Provide new services and alternatives for traditional delivery services.</li> <li>• Optimize and make the routes more accessible.</li> <li>• Prioritize less congested spaces to achieve the safest route.</li> </ul>
<p><b>SERVICE</b></p>	<p>LOCATION</p>		

# Overview / Use Cases

## Efficient emergency response

In times of crisis, the Population Density Data API emerges as a crucial tool for emergency management. Whether faced with natural disasters or mass gatherings, authorities can rely on this information to gauge population density in impacted regions. By leveraging the API's insights, they can swiftly assess the severity of the situation and allocate resources accordingly. From dispatching rescue teams to coordinating relief operations, the data empowers authorities to make well-informed decisions that prioritize public safety. This proactive approach enhances the efficiency and effectiveness of emergency response efforts, ultimately mitigating the impact of disasters.



<p><b>OTHER RELATED APIs</b></p> <p><b>API QoD Mobile</b></p>	<p><b>SECTOR</b></p> <p>TRANSPORTATION &amp; LOGISTICS</p>	<p><b>DEVELOPER NEEDS</b></p> <ul style="list-style-type: none"> <li>• Provide solutions for cities to improve their emergency management, and therefore enhance the effectiveness of response and mitigate impact</li> <li>• Making smart cities services more prepared and secure by making having reliable information on crucial moments</li> </ul>
	<p><b>SERVICE</b></p> <p>LOCATION</p>	

# Overview / Use Cases

## Marketing and customer segmentation

By leveraging data obtained with the Population Density Data API, businesses can pinpoint areas with dense populations, allowing for targeted marketing campaigns. In this way, companies can deploy resources more efficiently, ensuring that marketing initiatives resonate with the right audience at the right time. For instance, they can tailor promotions or services to suit the needs and preferences of urban dwellers, maximizing the effectiveness of their outreach efforts. This dynamic approach not only enhances customer engagement but also drives business growth in competitive markets.



<p><b>OTHER RELATED APIs</b></p> <p><b>API Device Location Verification</b></p>	<p><b>SECTOR</b></p>	<p>DATA DRIVEN MARKETING</p>	<p><b>DEVELOPER NEEDS</b></p> <ul style="list-style-type: none"> <li>• Provide companies with useful information to target their potential customers in the best way possible</li> <li>• Facilitate marketing solutions with the most effective outreach</li> </ul>
<p><b>SERVICE</b></p>	<p>COMMUNICATIONS XR</p>		

# Case Studies

COMING SOON

04



**Start Using  
Population Density  
Data API**

05

# Getting Started with Population Density 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.



**Documentation**

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# Official Population Density Data CAMARA API Documentation

## About CAMARA

CAMARA is an open-source project within Linux Foundation to define, develop and test the APIs. CAMARA works in close collaboration with the GSMA Operator Platform Group to align API requirements and publish API definitions and APIs. Harmonization of APIs is achieved through fast and agile created working code with developer-friendly documentation. API definitions and reference implementations are free to use (Apache2.0 license).

## Camara is supported by:



## Meetings

- Regular Virtual Meetings
- Bi-weekly on Wednesdays
- 14:00 to 15:00 CET



## CCB (Subproject)

- ✓ [CAMARA Population Density Data GitHub](#)

**FAQs**

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# API Population Density Data FAQs

## What is the CAMARA Population Density Data API?

The CAMARA Population Density Data API is a standardized API that enables developers with the capability to get dynamic population density data in a specific area for a future date and time.

## What is the Unified API Access feature of the CAMARA Population Density Data API?

Unified API Access provides a single, standardized API for accessing telco capabilities across different network operators, simplifying integration for developers.

## What are the potential use cases of the Population Density Data API?

The Population Density Data API has versatile applications, including supporting sustainable urban planning efforts or aiding the drone ecosystem in ground risk identification, risk assessments, and compliance with SORA regulations.

## What are the advantages of using the Population Density Data API?

The standardized Population Density Data API provides uniform access to telco capabilities, equipping businesses and organizations with a powerful tool to ensure drone regulatory conformity, enhancing their ability to navigate complex regulatory environments effectively.

## What benefits are obtained from using the Population Density Data API?

The API empowers users to carry out comprehensive risk evaluations and fulfill SORA standards with the required compliance level, rendering it an essential resource for maintaining regulatory conformity.

## How will the Population Density Data API help Drone Operators?

The Population Density Data API will help Drone Operators by providing data to identify if the ground risk class for a given drone flight is acceptable for the time of the flight, or an alternative time should be considered to lower the risk. The API will also provide BVLOS flight with the data to meet SORA 2.5 requirements in terms of intrinsic Ground Risk Class (iGRC).

# API Population Density Data FAQs

## What security measures does Population Density Data API employ to protect user data?

To guarantee the anonymity of data, if the information linked to the cell at the requested time frame does not meet the required level of anonymity, the API will not return any data. This measure safeguards the privacy and confidentiality of individuals by withholding potentially identifiable information, thereby upholding strict data protection standards.

## What are the requirements for using the API?

If you seek to retrieve population density 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.

## Does Population Density Data API comply with regulations?

On one side, the Population Density Data API not only conforms to regulations by safeguarding anonymity but also, on the other side, plays a crucial role in aiding drone operators to fulfill regulatory standards concerning ground risk assessment and compliance.

**Other relevant  
information**

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## 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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