

A futuristic cityscape at night, featuring a dense skyline of illuminated skyscrapers. Overlaid on the scene are large, glowing blue wireframe structures that resemble digital networks or data flows. Streaks of light in various colors (blue, green, orange, red) sweep across the sky and foreground, creating a sense of rapid movement and connectivity. The foreground shows a road with light trails from vehicles, suggesting a high-speed environment.

**Dynamic Predictive
Connectivity Data**

CAMARA Kick Off

Dynamic Predictive Connectivity Data

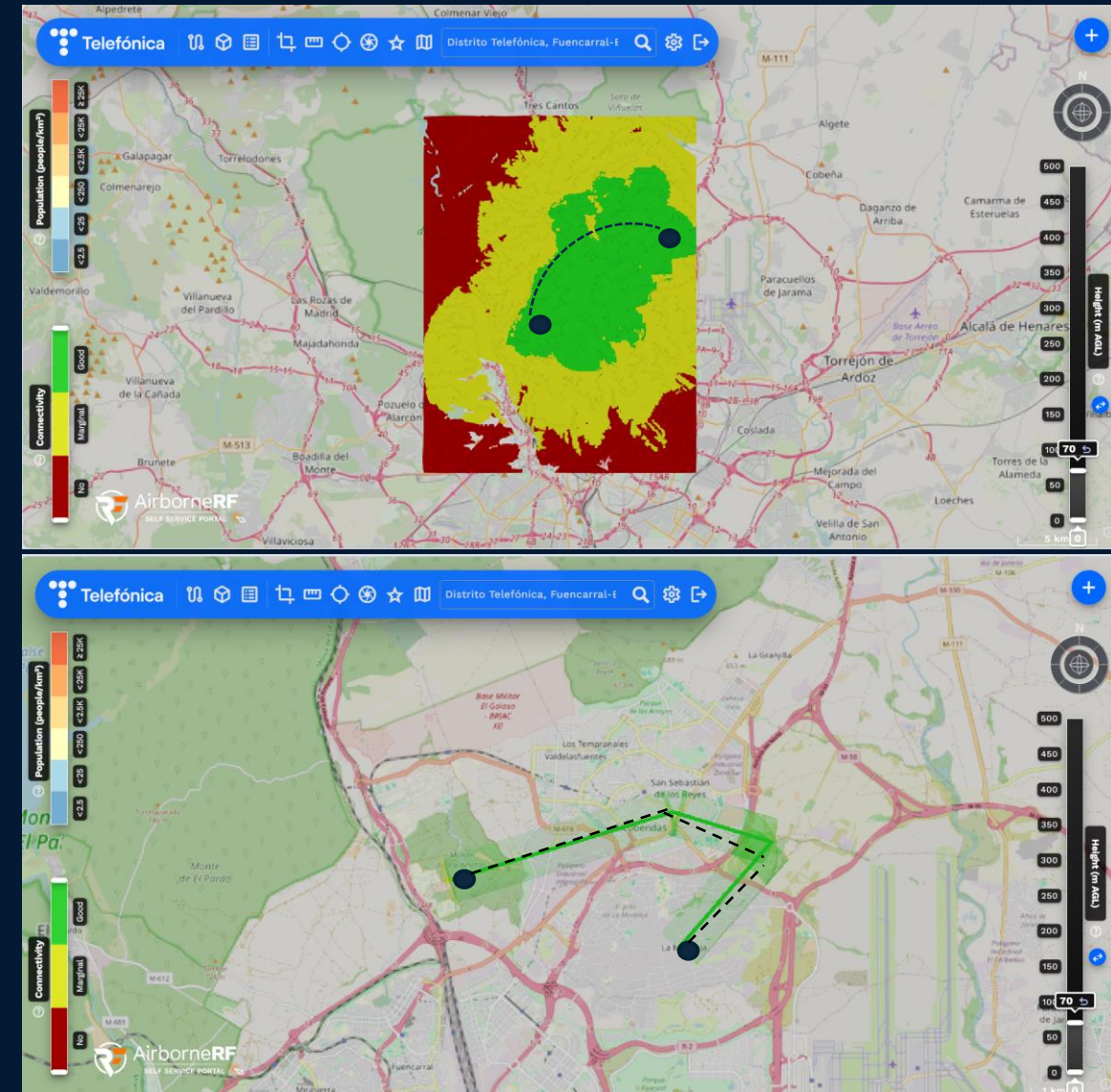
The API provides the capability to get the estimation of connectivity delivered by 4/5G networks along a volume/area for a future date, time and height.

✓ Use Case 1 - Network Airspace Connectivity Information (forecast) for Flight Planning by:

- Delivering comprehensive analysis with data about mobile network coverage in specific geographic areas.
- Identifying which are the “black volumes” to avoid the risk of losing control of the drone due to connectivity shortage.

✓ Use Case 2 - Autonomous Car:

- Delivering comprehensive analysis with data about mobile network coverage for the route of the car.



API Inputs & Outputs

Inputs:

The definition of the area/space for route planning will be specified by:

- 1) Requested Area: polygonal area defined by a collection of coordinates forming a closed loop. Required.
- 2) Start Time: & End Time: future controlled time of departure and arrival. Required.
- 3) Service Level: the category of service needed for the mission (C2-Coms, Streaming, etc.). Required.
- 4) Technology: to indicate the type of connectivity (4G/5G) for which to retrieve data. Optional.

Outputs:

The response will be as follows:

- 1) An array with:
 - Identification of a cell represented using the Geohash system, encoding a geographic location.
 - Values of Connectivity data of a cell in time intervals of one hour based on three values: (1) GC (Good Connectivity), (2) MC (Marginal Connectivity) and (3) NC (No Connectivity).*
- 2) Thickness in meters of each layer in AGL.

*In case the property “Technology” is not included, the quality of connectivity will be returned considering both 4G and 5G networks.



API Inputs

```
1 {
2   "serviceLevel": "STREAM_4K",
3   "networkType": "4G",
4   "area":
5     {
6       "boundary":
7         [
8           {"latitude": 40.54027418379101, "longitude": -3.694803502656015},
9           {"latitude": 40.537885203454636, "longitude": -3.694803502656015},
10          {"latitude": 40.537885203454636, "longitude": -3.691112783050869},
11          {"latitude": 40.54027418379101, "longitude": -3.694803502656015}
12        ]
13      },
14   "startDate": "2025-04-19T10:00:00Z",
15   "endDate": "2025-04-19T11:00:00Z"
16 }
```

API Output

```
1 {
2   "layerThickness": 30,
3   "connectivityData": [
4     {
5       "geohash": "ezjqegg",
6       "timeConnectivityData": [
7         {
8           "startTime": "2024-06-19T10:00:00Z",
9           "endTime": "2024-06-19T11:00:00Z",
10          "layerConnectivities": [
11            "MC",
12            "GC",
13            "GC",
14            "GC",
15            "MC",
16            "MC",
17            "MC",
18            "NC"
19          ]
20        },

```

