**Maps**

* Google Map API
* URLS
  + Map SDKs for Android : Android Studio

<https://developers.google.com/maps/documentation/android-sdk/intro>

* Map Javascript API \*\* JS

<https://developers.google.com/maps/documentation/javascript/tutorial>

* + Map Embed API

<https://developers.google.com/maps/documentation/embed/start>

* + Map URLs

<https://developers.google.com/maps/documentation/urls/guide>

* Places Search
* Distance Matrix
* Billing

MAPS, ROUTES, AND PLACES

Pricing for our core products is pay as you go and you only pay for what you use. You also get a recurring $200 credit on your billing account each month to offset your usage costs, and you can set usage limits to protect against unexpected cost increases. For more information on pricing changes by API, browse the [Guide for Existing Users](https://cloud.google.com/maps-platform/user-guide/) and the [guide to understanding billing](https://developers.google.com/maps/billing/understanding-cost-of-use). You can also understand your current API usage in the [Google Cloud Platform console](https://cloud.google.com/console/google/maps-apis/overview), and estimate your monthly bill with the [pricing calculator](https://mapsplatformtransition.withgoogle.com/calculator).

APIs in Maps include: [Maps SDK for Android](https://developers.google.com/maps/documentation/android-sdk/); [Maps SDK for iOS](https://developers.google.com/maps/documentation/ios-sdk/); [Maps JavaScript API](https://developers.google.com/maps/documentation/javascript/); [Maps Static API](https://developers.google.com/maps/documentation/maps-static/); [Street View API](https://developers.google.com/maps/documentation/streetview/); [Maps Embed API](https://developers.google.com/maps/documentation/embed/); and [Maps URLs](https://developers.google.com/maps/documentation/urls/).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SKU | $200 MONTHLY CREDIT  EQUIVALENT FREE USAGE | MONTHLY VOLUME RANGE  (PRICE PER THOUSAND) | | |
|  |  | 0—100,000 | 100,001-500,000 | 500,001+ |
| [Mobile Native Static Maps](https://developers.google.com/maps/billing/understanding-cost-of-use#mobile-static) | Unlimited loads | $0.00 | $0.00 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Mobile Native Dynamic Maps](https://developers.google.com/maps/billing/understanding-cost-of-use#mobile-dynamic) | Unlimited loads | $0.00 | $0.00 |
| [Embed](https://developers.google.com/maps/billing/understanding-cost-of-use#embed) | Unlimited loads | $0.00 | $0.00 |
| [Embed Advanced](https://developers.google.com/maps/billing/understanding-cost-of-use#embed-advanced) | Up to 14,000 loads | $14.00 | $11.20 |
| [Static Maps](https://developers.google.com/maps/billing/understanding-cost-of-use#static-maps) | Up to 100,000 loads | $2.00 | $1.60 |
| [Dynamic Maps](https://developers.google.com/maps/billing/understanding-cost-of-use#dynamic-maps) | Up to 28,000 loads | $7.00 | $5.60 |
| [Static Street View](https://developers.google.com/maps/billing/understanding-cost-of-use#static-street-view) | Up to 28,000 panos | $7.00 | $5.60 |
| [Dynamic Street View](https://developers.google.com/maps/billing/understanding-cost-of-use#dynamic-street-view) | Up to 14,000 panos | $14.00 | $11.20 |

Routes

APIs in Routes include: [Directions API](https://developers.google.com/maps/documentation/directions/); [Distance Matrix API](https://developers.google.com/maps/documentation/distance-matrix/); and [Roads API](https://developers.google.com/maps/documentation/roads/).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SKU | $200 MONTHLY CREDIT  EQUIVALENT | MONTHLY VOLUME RANGE  (PRICE PER THOUSAND)  per 1,000 calls | | |
|  |  | 0—100,000 | 100,001-500,000 | 500,001+ |
| [Directions](https://developers.google.com/maps/billing/understanding-cost-of-use#directions) | Up to 40,000 calls | $5.00 | $4.00 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Directions Advanced](https://developers.google.com/maps/billing/understanding-cost-of-use#directions-advanced) | Up to 20,000 calls | $10.00 | $8.00 |
| [Distance Matrix](https://developers.google.com/maps/billing/understanding-cost-of-use#distance-matrix) | Up to 40,000 elements | $5.00 | $4.00 |
| [Distance Matrix Advanced](https://developers.google.com/maps/billing/understanding-cost-of-use#distance-matrix-advanced) | Up to 20,000 elements | $10.00 | $8.00 |
| [Roads - Route Traveled](https://developers.google.com/maps/billing/understanding-cost-of-use#roads-route) | Up to 20,000 calls | $10.00 | $8.00 |
| [Roads - Nearest Road](https://developers.google.com/maps/billing/understanding-cost-of-use#roads-nearest) | Up to 20,000 calls | $10.00 | $8.00 |
| [Roads - Speed Limits](https://developers.google.com/maps/billing/understanding-cost-of-use#roads-speed-limits) | Up to 2,000 elements | $20.00 | $16.00 |  |

Definitions: Call: Request to the service. Distance matrix element: Single origin-destination pair. Speed limit element: Single returned speedLimit element.

* Places
* [Places API](https://developers.google.com/places/web-service/), [Places SDK for Android](https://developers.google.com/places/android-sdk/); [Places SDK for iOS](https://developers.google.com/places/ios-sdk/); [Places Library, Maps JavaScript API](https://developers.google.com/maps/documentation/javascript/places); [Geocoding API](https://developers.google.com/maps/documentation/geocoding/); [Geolocation API](https://developers.google.com/maps/documentation/geolocation/); [Time Zone API](https://developers.google.com/maps/documentation/timezone/); and [Elevation API](https://developers.google.com/maps/documentation/elevation/).

**Note:** Many Places requests also return [Places data](https://developers.google.com/maps/billing/understanding-cost-of-use#data-skus), which is charged in addition to the cost of the Places request. Review the various Places SKUs in the table below for more details.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SKU | $200 MONTHLY CREDIT  EQUIVALENT FREE USAGE | MONTHLY VOLUME RANGE  (PRICE PER THOUSAND) | | |
|  |  | 0—100,000 | 100,001-500,000 | 500,001+ |
| Autocomplete requests | | | | |
| [Autocomplete - Per Request](https://developers.google.com/maps/billing/understanding-cost-of-use#ac-per-character) | ~70,000 requests | $2.83 | $2.27 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| Places Autocomplete - Per Request are typically followed by a [Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details) call. See below for pricing. | | | |
| [Query Autocomplete - Per Request](https://developers.google.com/maps/billing/understanding-cost-of-use#query-ac-per-character) | ~70,000 requests | $2.83 | $2.27 |
| Query Autocomplete - Per Request are typically followed by a [Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details) call (if user selects a place result), or by a [Places Text Search](https://developers.google.com/maps/billing/understanding-cost-of-use#text-search) (if user selects a query, not a result). See below for pricing. | | | |
| Autocomplete requests, per session – Cost based on Autocomplete request + [Places Details request](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details) + [Places data](https://developers.google.com/maps/billing/understanding-cost-of-use#data-skus) | | | | |
| [Autocomplete (included with Places Details) - Per Session](https://developers.google.com/maps/billing/understanding-cost-of-use#ac-with-details-session)  [+ Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)    Total cost: | ~11,000 sessions | $0.00  $17.00  $0.00  -------------  $17.00 | $0.00  $13.60  $0.00  -------------  $13.60 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Autocomplete (included with Places Details) - Per Session](https://developers.google.com/maps/billing/understanding-cost-of-use#ac-with-details-session)  [+ Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)    Total cost: | ~10,000 sessions | $0.00  $17.00  $0.00  $3.00  -------------  $20.00 | $0.00  $13.60  $0.00  $2.40  -------------  $16.00 |
| [Autocomplete (included with Places Details) - Per Session](https://developers.google.com/maps/billing/understanding-cost-of-use#ac-with-details-session)  [+ Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~9,000 sessions | $0.00  $17.00  $0.00  $5.00  -------------  $22.00 | $0.00  $13.60  $0.00  $4.00  -------------  $17.60 |
| [Autocomplete (included with Places Details) - Per Session](https://developers.google.com/maps/billing/understanding-cost-of-use#ac-with-details-session)  [+ Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~8,000 sessions | $0.00  $17.00  $0.00  $3.00  $5.00  -------------  $25.00 | $0.00  $13.60  $0.00  $2.40  $4.00  -------------  $22.00 |
| Autocomplete requests, per session – when request does not also include a Places Details request | | | | |
| [Autocomplete without Places Details - Per Session](https://developers.google.com/maps/billing/understanding-cost-of-use#ac-no-details-session) | ~11,000 sessions | $17.00 | $13.60 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| Places Details requests – Cost based on [request + data](https://developers.google.com/maps/billing/understanding-cost-of-use#data-skus) | | | | |
| [Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)    Total cost: | ~11,000 calls | $17.00  $0.00  -------------  $17.00 | $13.60  $0.00  -------------  $13.60 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)    Total cost: | ~10,000 calls | $17.00  $0.00  $3.00  -------------  $20.00 | $13.60  $0.00  $2.40  -------------  $16.00 |
| [Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~9,000 calls | $17.00  $0.00  $5.00  -------------  $22.00 | $13.60  $0.00  $4.00  -------------  $17.60 |
| [Places Details](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~8,000 calls | $17.00  $0.00  $3.00  $5.00  -------------  $25.00 | $13.60  $0.00  $2.40  $4.00  -------------  $20.00 |
| [Places Details – ID Refresh](https://developers.google.com/maps/billing/understanding-cost-of-use#places-details-id-refresh) | Unlimited | $0.00 | $0.00 |
| Find Place requests – Cost based on [request + data](https://developers.google.com/maps/billing/understanding-cost-of-use#data-skus) | | | | |
| [Find Place](https://developers.google.com/maps/billing/understanding-cost-of-use#find-place)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)    Total cost: | ~11,000 calls | $17.00  $0.00  -------------  $17.00 | $13.60  $0.00  -------------  $13.60 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Find Place](https://developers.google.com/maps/billing/understanding-cost-of-use#find-place)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)    Total cost: | ~10,000 calls | $17.00  $0.00  $3.00  -------------  $20.00 | $13.60  $0.00  $2.40  -------------  $16.00 |
| [Find Place](https://developers.google.com/maps/billing/understanding-cost-of-use#find-place)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~9,000 calls | $17.00  $0.00  $5.00  -------------  $22.00 | $13.60  $0.00  $4.00  -------------  $17.60 |
| [Find Place](https://developers.google.com/maps/billing/understanding-cost-of-use#find-place)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~8,000 calls | $17.00  $0.00  $3.00  $5.00  -------------  $25.00 | $13.60  $0.00  $2.40  $4.00  -------------  $20.00 |
| [Find Place – ID only](https://developers.google.com/maps/billing/understanding-cost-of-use#find-place-id-only) | Unlimited | $0.00 | $0.00 |
| Find Current Place calls – Cost based on [call + data](https://developers.google.com/maps/billing/understanding-cost-of-use#data-skus) | | | | |
| [Find Current Place](https://developers.google.com/maps/billing/understanding-cost-of-use#find-current-place)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)    Total cost: | ~6,500 calls | $30.00  $0.00  -------------  $30.00 | $24.00  $0.00  -------------  $24.00 |  |
| [Find Current Place](https://developers.google.com/maps/billing/understanding-cost-of-use#find-current-place)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~5,000 calls | $30.00  $0.00  $3.00  $5.00  -------------  $38.00 | $24.00  $0.00  $2.40  $4.00  -------------  $30.40 |  |
| Other Places requests (Note: Nearby and Text Search requests return all data types by default, triggering all [data SKUs](https://developers.google.com/maps/billing/understanding-cost-of-use#data-skus).) | | | | |
| [Places Photo](https://developers.google.com/maps/billing/understanding-cost-of-use#places-photo) | ~28,000 calls | $7.00 | $5.60 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Places - Nearby Search](https://developers.google.com/maps/billing/understanding-cost-of-use#nearby-search)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~5,000 calls | $32.00  $0.00  $3.00  $5.00  -------------  $40.00 | $25.60  $0.00  $2.40  $4.00  -------------  $32.00 |
| [Places - Text Search](https://developers.google.com/maps/billing/understanding-cost-of-use#text-search)  [+ Basic Data](https://developers.google.com/maps/billing/understanding-cost-of-use#basic-data)  [+ Contact Data](https://developers.google.com/maps/billing/understanding-cost-of-use#contact-data)  [+ Atmosphere Data](https://developers.google.com/maps/billing/understanding-cost-of-use#atmosphere-data)    Total cost: | ~ 5,000 calls | $32.00  $0.00  $3.00  $5.00  -------------  $40.00 | $25.60  $0.00  $2.40  $4.00  -------------  $32.00 |
| Other types of requests related to places | | | | |
| [Geocoding](https://developers.google.com/maps/billing/understanding-cost-of-use#geocoding) | ~40,000 calls | $5.00 | $4.00 | [CONTACT SALES](https://enterprise.google.com/maps/contact-form/index.html)  for volume discounts. |
| [Geolocation](https://developers.google.com/maps/billing/understanding-cost-of-use#geolocation) | ~ 40,000 calls | $5.00 | $4.00 |
| [Time Zone](https://developers.google.com/maps/billing/understanding-cost-of-use#time-zone) | ~40,000 calls | $5.00 | $4.00 |
| [Elevation](https://developers.google.com/maps/billing/understanding-cost-of-use#elevation) | ~40,000 calls | $5.00 | $4.00 |

* OpenStreetMap API

Provides raw data.

Examples with google map:

<https://wiki.openstreetmap.org/wiki/Google_Maps_Example>

<https://wiki.openstreetmap.org/wiki/API>

<https://wiki.openstreetmap.org/wiki/Developer_FAQ#Do_you_have_an_API.3F>

<https://planet.openstreetmap.org/> source data of open street map (75GB)

Have Javascript & REST APIs

Interactive maps: IOs android js

Map image: REST <https://developer.here.com/lp/mapAPIs?cid=Other-Google-MM-T3-Dev-Generic-E&utm_source=Google&utm_medium=ppc&utm_campaign=Dev_PaidSearch_DevPortal_AlwaysOn>

API v0.6 Document: <https://wiki.openstreetmap.org/wiki/API_v0.6>

For maps api, OSM is better than Google maps, considering the cost. They provide basically same functions. Google Maps APIs provide the direction function which gives back the routing. OSM APIs return map data with bounding box which includes:

* All nodes that are inside a given bounding box and any relations that reference them.
* All ways that reference at least one node that is inside a given bounding box, any relations that reference them [the ways], and any nodes outside the bounding box that the ways may reference.
* All relations that reference one of the nodes, ways or relations included due to the above rules. (Does **not** apply recursively, see explanation below.)

**Air Pollution:**

* AirVisual: Air quality (AQI) and pollution API

The most trusted historical, real-time and forecast air quality data for cities around the world

Benefit

* Largest network of air sensors

AirVisual collects data from the largest network of ground-based sensors worldwide, providing the most accurate and reliable air quality information

* AI-driven data validation

Only air quality data you can rely on. All data points are validated using artificial intelligence and machine learning, to ensure data your users can trust.

* Premier customer support

Our dedicated API support team is on hand to help you quickly and seamlessly integrate air quality data to your applications.

<https://www.airvisual.com/air-pollution-data-api>

Note: Community Free (10, 000) calls / month community-based support

1. City name and coordinates
2. Real-time Air Quality Index (AQI)
3. Real-time weather data

* OpenAQ: Open Data and Community

Fighting Air Inequality With Open Data and Community

Homepage: <https://openaq.org/#/?_k=noenjb>

APIs: <https://docs.openaq.org/>

The Data: Our community has collected 358,042,682 air quality measurements from 10,267 locations in 68 countries. Data are aggregated 115 government level and research-grade source

Try this command: $ curl -X GET [https://api.openaq.org/v1/cities\?country\=IE](https://api.openaq.org/v1/cities%5C?country%5C=IE)

* Feed: Real-time Air Quality data feed 1.2.0

<https://aqicn.org/json-api/doc/>

The JSON API can be used for advanced programmatic integration:

Access to more than 9000 station level and 600 city level data

Geo-location query (based on latitude/longitude or IP address)

Individual AQI for all pollutants (PM2.5, PM10, NO2, CO, SO2, Ozone)

Station name and coordinates

**Weather:**

* Yahoo(<https://developer.yahoo.com/weather/?guccounter=1>)
  + Billing : open source, free for non-commercial use, need sign-up
  + Return data type: JSON/XML (sample: <https://gist.githubusercontent.com/VerizonMediaOwner/a4f27c0c04358b343f4a2308ea903cb8/raw/917ca865813d504796ccae1d1643584d526473de/weather_ydn_js.json> )
  + Can search by coordinate, city name
* OpenWeatherMap

<https://openweathermap.org/price>

Free package: 60calls/min

[Current weather API](https://openweathermap.org/current)

[5 days/3 hour forecast API](https://openweathermap.org/forecast5)

[Weather maps 1.0](https://openweathermap.org/api/weathermaps)

[UV index](https://openweathermap.org/api/uvi)

[Weather alerts](https://openweathermap.org/triggers)

Can search by coordinate

(e.g.:[api.openweathermap.org/data/2.5/weather?lat=35&lon=139 )](http://samples.openweathermap.org/data/2.5/weather?lat=35&lon=139&appid=b6907d289e10d714a6e88b30761fae22)

[Can search by zip code](http://samples.openweathermap.org/data/2.5/weather?lat=35&lon=139&appid=b6907d289e10d714a6e88b30761fae22)

(e.g.:[api.openweathermap.org/data/2.5/weather?zip=94040,us](http://samples.openweathermap.org/data/2.5/weather?zip=94040,us&appid=b6907d289e10d714a6e88b30761fae22))

Multilingual support

**Dublin Real-time environment**

<http://www.dublindashboard.ie/pages/DublinEnvironment>

Air quality: <http://www.epa.ie/air/quality/data/#.U_tPn_ldXh7>

Car Parking space:<http://www.dublindashboard.ie/CarParks/nowParking>

Dublin River Level:<http://www.dublindashboard.ie/CarParks/dublinWaterLevels/1>

Wind speed/direction: <http://www.dublindashboard.ie/CarParks/nraWeather/1>

Ambient Sound Level: <http://www.dublindashboard.ie/CarParks/ambientSound/14>

**Traffic:**

* Dublin Bus RTPI

Homepage: <http://www.dublinbus.ie/rtpi/>

<https://journeyplanner.transportforireland.ie/nta/XSLT_DM_REQUEST?itdLPxx_template=odvbox&language=en#> :not sure if we can inspect data from here

Found full timetable of every bus stop on TFI website, accuracy and formatting could be problem. Currently 120 bus lines in dublin,

Third party api for dublin bus stops

<https://github.com/carlo-colombo/dublin-bus-api> : service not available

<https://dublinked.ie/dataset/real-time-passenger-information-rtpi-for-dublin-bus-bus-eireann-luas-and-irish-rail> : service down

* Dublin Bikes

JCDecaux Developer:

<https://developer.jcdecaux.com/#/opendata/vls?page=dynamic>

Dynamic data(whether the station is close or not, available bikes)

Need to get an API key to use

Bike stops list:

<https://dublinked.ie/dataset/dcc_public_cycle_parking_stands>

Get station lists

* Irish Rails (Dart)

<http://api.irishrail.ie/realtime/>

Return XML

Get running train info: <http://api.irishrail.ie/realtime/realtime.asmx/getCurrentTrainsXML>

* Dublin Taxi fare api

<https://www.taxifarefinder.com/developers.php>

Need to apply for an API key to use

* Car park site

<https://data.smartdublin.ie/dataset/multi-story-car-parking-space-availability>

**Note: no official APIs for dublin bus, mytaxi.**