

Low Emission Zone (LEZ) management system



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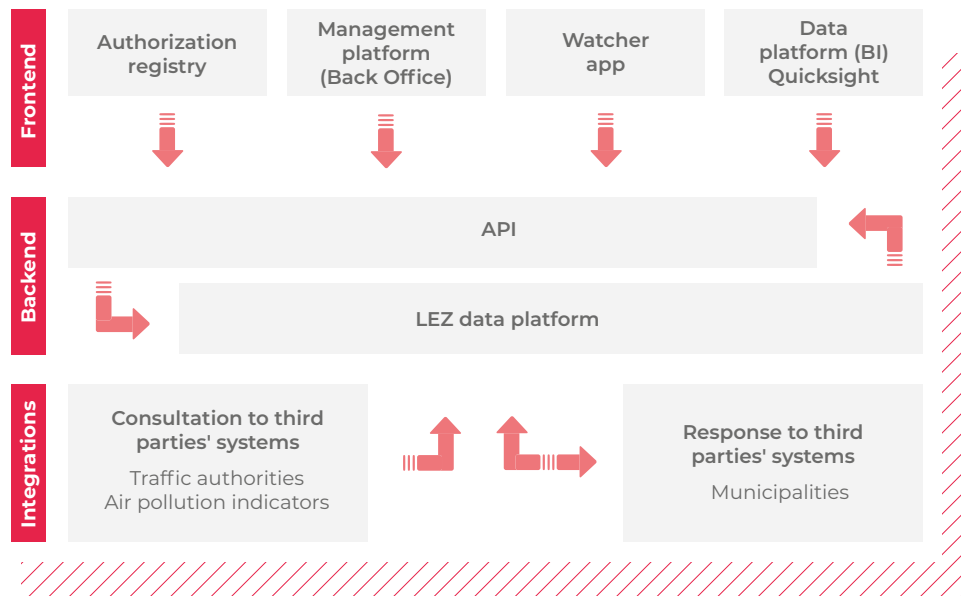
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LOW EMISSION ZONE (LEZ) MANAGEMENT SYSTEM

An increasing number of countries in the world, especially in the European Union, are imposing restrictions on polluting vehicles' access. Traffic is one of the main sources of pollution in cities. Low Emission Zones are one of the most effective ways cities can **reduce emissions and improve the citizens' quality of life.**

Opentrends makes available its experience in the area of LEZs for the construction of the **cloud management platform** for the city's LEZ, the management system that performs all the communication logic with the capture systems, the information systems and the sanctions system.



Cloud-native platform



Serverless services on AWS to achieve maximum efficiency



Availability, scalability and performance



Business logic architecture



Front end and back end layer separation



Ease of application maintenance

COMPONENTS OF OUR MANAGEMENT SYSTEM

The platform leverages **AWS cloud services** and includes:

- **Authorization Registry.** Frontend for citizens (app or web) where the users can ask or daily circulation authorizations for polluting vehicles, as well as other exceptions and authorizations.
- **Management platform (back office).** Web application for the management of the system. It allows configuring the logic parameters for those vehicles likely to be penalized, consulting stored records, registering and maintaining capture systems, as well as checking the alerts that may have been generated.
- **Data platform (BI).** Web application for the exploitation of the different indicators.
- **Watcher app.** Private responsive web or app so that authorized users can check if a specific vehicle is authorized to circulate through the LEZ.
- **API.** It is the first layer of interaction with the back end of the platform.
- **Back end.** Logic and processes to record and maintain data from information systems, as well as carry out the logic of sanctionable vehicles.
- **Integrations.** LEZ platform integrates with different data sources, including City Hall platforms, collecting the necessary information to provide the service.



BARCELONA, SPAIN CASE STUDY

We help AMB, Barcelona Metropolitan Area, to implement our cloud platform to manage the Low Emissions Zone of Barcelona, the largest in southern Europe.

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