

PACKAGE OF TECHNICAL PRESCRIPTIONS FOR THE PROCUREMENT OF THE SUPPLY, IMPLEMENTATION AND MAINTENANCE OF A PLATFORM FOR THE DIGITAL REGULATION AND CONTROL OF LIMITED-TIME PARKING ZONES FOR AUTHORIZED VEHICLES, BASED ON SENSORS AND MOBILE APPLICATIONS FOR DRIVERS AND CONTROL AGENTS

Clause 1. Object of the contract

The object of the contract is the supply, implementation and operation of a digital platform for the regulation, control, monitoring and analysis of parking in free zones, with limited time and for authorized vehicles in municipalities affiliated to the AMTU, based on sensors for each zone and mobile applications for drivers and control agents, as well as a BackOffice web application for municipal users, as well as its implementation on the public roads of the recipient entities.

The scope of application of the parking platform, other supplies and services must allow parking areas to be regulated and controlled solely with digital or telematic means, the following types of parking areas being the main ones:

- Loading and Unloading Zones (C/D) or Urban Distribution of Goods (DUM), for better planning in terms of urban logistics.
- Limited and free Red, Orange or Commercial parking zones, to facilitate access and encourage local commerce.
- High turnover areas only for retail or pharmacy customers, to guarantee high turnover priority places.
- Exclusive areas for vehicles of people using or working with public services, such as Primary Care Centers (CAP) or similar.
- Link car parks for users of the Public Transport network with a limited parking time.
- Parking areas with rotation with priority for elderly people or people with reduced mobility.
- Free Green Zone for residents' vehicle parking.
- Areas that require rotation of parking spaces.

The aim is the full digital transformation of the regulation and control of parking permits in any type of parking area, with limited time and/or for authorized vehicles, usually free of charge, with the aim of solving the problems of increase in demand, lack of available spaces, indiscipline (overtime, parking without permission, parking in double rows, ...), traffic congestion, lack of real data and low efficiency in control tasks based on solutions on time discs or similar.

The purpose of this set of technical specifications (hereinafter, PPT) is to define the technical characteristics required of the digital parking platform in this procurement, which will be mandatory, as well as the requirements relating to the supply process and of implementation, and to the operating services of the platform itself to the recipient entities.

Clause 2. Scope of the contract.

The scope of this contract includes the supply and implementation project of the parking platform in the

municipalities that adhere to it, as well as the operating services throughout the contract period, as described below :

- Platform implementation project for each municipality, with a minimum of 10 zones, and each zone with a maximum of 5 limited parking spaces each. Contracts based on more than 10 zones can be made, adapting them to the specific needs of each municipality.
- Supply, configuration and installation of Bluetooth proximity sensors or equivalent to be able to digitally identify each parking area.
- Supply of vertical signage and poles or supports for each parking area.
- Operating services including 24x7 platform operation service, maintenance service and technical support service during the contract. A progressive use of the exploitation service is estimated with a lag of one quarter between the implementation project and the start of the exploitation service in the municipality.

Clause 3. Characteristics of the supplies and services of the contract.

The supply and implementation, as well as the operation services of a digital parking platform that allows to regulate, control, monitor and analyze parking zones with rotation and limited time for authorized vehicles, based on sensors with Bluetooth technology or equivalent and mobile applications, includes the following components, applications and services:

- Supply, installation and configuration of proximity sensors with Bluetooth technology or equivalent for the signaling of each parking area, which is uniquely identified with a unique code.
- Supply, configuration, operation and maintenance of a mobile application for drivers, compatible and approved for smart mobile phones with Operating Systems Android, IOS and others existing in the market.
- Supply, configuration, operation and maintenance of a mobile application for control agents, compatible and approved for smartphones with Android Operating System, and others, including possible integration with portable thermal printers.
- Provision, configuration, operation and maintenance of a Backoffice web application for municipal users.
- Supply, operation and maintenance of the central services of the technological platform hosted in the cloud (Cloud), which includes applications, servers, databases and integrations with third parties.
- Supply of horizontal signage and supports for the different parking areas.
- Maintenance service of a Help Center that includes informative articles and the contact channels required to provide technical support to users of the platform.
- Management service of the implementation project in each municipality, including tasks of analysis, configuration and execution of the digitization project of limited parking zones, as well as the communication and training plan before, during and after the launch .

- Maintenance service and technical support, preventive, corrective and evolutionary maintenance tasks for all applications and components of the technological platform. Technical support for the operation and resolution of incidents throughout the contract according to the level of service indicated in the contract.

Clause 4. Technical characteristics of the object of the contract.

4.1. Sensors with Bluetooth technology or equivalent and signaling by parking area

As a principle of operation of the required solution, it is established that each limited parking area that is regulated and controlled by the technological platform must be identified with a unique code (for example "City Council-0001" or similar), made which will allow it to be located geographically and uniquely identified by drivers, control agents and the municipality's mobility planners.

Parking platform mobile applications for drivers and control agents are required to be able to automatically detect the nearest zone code based on power received from a Bluetooth proximity sensor or equivalent installed. In the signage that delimits the zone itself or in another suitable place, which will allow to obtain precisely and quickly the code, the type of zone and the regulation of the parking zone itself inside or outside the vehicle, and that greatly reduces the consumption, sources of error and inaccuracy of GPS-based or similar location services.

The technical specifications of the proximity sensor per parking zone are as follows:

- Proximity sensor with Bluetooth protocol or equivalent Low Energy (BLE) with iBeacon and Eddystone protocols.
- Environmental protection against rain and dust with IP67.
- Range of coverage up to 70 meters.
- Minimum operating temperature range between minus 18°C and plus 50°C.
- Battery life of up to 6 years depending on configuration.
- Adaptation of the sensor for installation in outdoor vertical signs and protection against vandalism.

The vertical sign for each zone must inform about the parking rules (type of zone, authorized vehicles, timetables, etc.), the unique zone code and instructions to be able to download and use the mobile application for drivers. During the implementation project, it will be necessary to customize the graphic design and the contents of the sign for each municipality, as well as coordinate the manufacturing and assembly process of the sensors with the manufacturer of the signage for each municipality, if it is feasible.

4.2 Mobile application for drivers

The mobile application for drivers of the digital parking platform must be simple, intuitive, secure, reliable and useful, with the aim of minimizing the possible technical, operational or administrative incidents arising from its implementation in a demanding environment and mandatory use for all vehicle drivers who park in this type of area.

a. Technical requirements.

The mobile application for drivers must be compatible with smartphone-type mobile devices with Android and iOS Operating Systems, and others that appear on the market and have mass penetration, and must be approved, at least in the Google Play and App Store markets.

The mobile application for drivers must meet the following technical requirements:

- The mobile application must be able to run on any smartphone with an operating system version equal to or higher than Android 5.1 or iOS12 or others available on the market.
- The mobile application must be published and approved, at least, in the official Google Play (Android) and App Store (iOS) markets.
- The mobile application must be free to download for all users and in all markets where it is available.
- The mobile application must not contain third-party advertisements.
- L'aplicació mòbil ha d'estar disponible com a mínim en quatre idiomes: català, castellà, francès i anglès.
- The mobile application must request the required permissions for its operation, including location.
- The mobile application must be able to communicate with Bluetooth or equivalent proximity sensors.
- The mobile application must communicate with the central services of the parking platform via the Internet, using a secure HTTPS SSL protocol and the corresponding user authentication.
- The mobile application must be able to detect and record technical incidents through its own or external services such as Google Firebase, Crashlytics or similar.
- The mobile application must be able to record usage statistics through its own or external services, such as Google Analytics or similar.
- The mobile application must be able to manage and notify users of the existence of new versions of the same in optional or mandatory mode, in order to guarantee, if necessary, that one can have the latest version.
- The mobile application must allow users to send queries or report technical incidents to the technical support service of the parking platform through a form within the application itself.
- The mobile application must allow access to the legal texts on the conditions of use and the privacy policy before and after user registration, from the application itself.

b. Functional requirements.

The mobile application for drivers must allow to detect, regulate and monitor the permit and allowed parking times in free and time-limited zones for authorized vehicles, which are identified by a unique code displayed on the signage vertical that delimits each parking area.

The mobile application must be able to automatically detect the zone code, zone type and parking conditions of the nearest zone based on information emitted by one or more Bluetooth proximity sensors or equivalent installed in the signage that delimits the area itself or in another suitable place.

As a working principle, the mobile application should allow to automatically detect the nearest zone, present the conditions of the zone, obtain a valid digital parking ticket upon arrival, display and notify the remaining parking time and end the ticket when the place is free. Additionally, the mobile application must also display employment data in nearby areas in real time, as well as select the area on the map or by entering the area code.

Alternatively, the technology platform must also allow the registration of a valid digital parking ticket for a certain zone through a web form or a phone call, in order to give options to users who do not have smartphones light when parking.

The functional features of the mobile application for driver users must be, at least, the following:

Register user:

- The mobile application must allow registration of a new user with credentials based on an email and password, or a phone number. In both cases it will be necessary to verify through a validation code or link that the user actually has access to the email or mobile phone indicated.
- If email and password are used, the mobile application must provide a password reset or reset procedure.
- User registration must be a simple, reliable and secure procedure, where only the minimum and strictly necessary personal data is requested to be able to identify and administer the user's access to the mobile application.
- The user registration procedure must guarantee access to the legal texts relating to the conditions of use and privacy policy of the digital parking platform, and the user must explicitly accept them to be able to execute the process of registration
- The registration procedure must also allow access to informational content or help articles related to the mobile application.
- The registration procedure must allow access to a contact form or an email address to request technical support.

Manage vehicles:

- The mobile application must allow the creation, modification, selection and deletion of the user's vehicles, identified by their license plate.
- The data requested for each vehicle will be, at a minimum, complete registration, vehicle type and environmental badge.
- To avoid errors in the registration of the license plate, the application must request it in duplicate and must also be able to detect and notify the user of possible errors before registering the vehicle.
- In the case of registration plates from the Spanish State, the platform must guarantee that the environmental badge of the vehicle corresponds to the value registered with the General Directorate of Traffic (DGT).
- The mobile application must allow the user to select the vehicle in a simple way and show very clearly the selected vehicle in each parking lot.
- Identify, if applicable, the professional sector.

Determine the parking zone:

- The mobile application must allow to detect automatically, accurately and quickly the parking zone in which the driver is based on the Bluetooth proximity sensor or equivalent of the closest signal. In addition, the application must also allow selecting the current zone on a map, centered on the user's location, or indicating or reading the zone code that is also printed on the vertical signage.
- The mobile application must display information about parking conditions in the current area, clearly indicating whether the selected vehicle can park and its time allowed.

Start Parking:

- The application must allow you to obtain a valid parking ticket for the selected vehicle in the selected parking type and zone for the maximum time allowed, according to the rules established by the municipality. The application will have to adapt in time and form to the possible modifications of zones, regulations and the instructions given by the municipalities.
- Once the ongoing parking is initiated, the application must clearly display the license plate, remaining time and time limit, as well as display and notify the expirations of the ongoing ticket in a simple, intuitive and effective way.

End parking:

- The mobile application must allow the parking ticket in progress to be terminated when the parking space becomes available. The mobile application must prevent the user from chaining consecutive tickets for the same zone with the same vehicle.

Parking tickets:

- The mobile application must be able to display the user's own parking ticket list and access a detailed view of each parking ticket with relevant vehicle data, parking zone and parking times .
- The user must be able to receive or download a PDF document with the data of the parking ticket, which will allow him to share the information in case of having to make claims or have a receipt.

Availability in nearby areas:

- The mobile application must be able to inform the user about the estimated occupancy status and the estimated available free spaces in nearby parking areas that are regulated with the platform.

Help information:

- The mobile application must allow the display of informative content or frequently asked questions about the operation of the application, so that the user can independently resolve doubts or issues relating to the use of the application. Questions and doubts will be grouped by context to facilitate the search for the user. This information will be maintained and updated periodically.
- **Technical support:**The application must allow contact with the support service and technical assistance of the platform through a form, both for registered and non-registered users.
- **Configuration:**The mobile application must allow the administration of the user's own configuration parameters.
- **Unsubscribe from the service:**The application must allow the user to unsubscribe from the service.

4.3 Mobile application for control agents

The mobile application for control agents must allow checking in real time and in a fast and efficient way, the permit and the remaining parking time of vehicles in regulated parking areas with the digital platform, for the purpose and effect of power also penalize improper parking. The mobile application for control agents must be safe and reliable with the aim of minimizing the possible technical, operational or administrative incidents arising from its implementation in a demanding environment with continuous daily use.

a. Technical requirements.

The mobile application for agents or guards must be compatible, at least, with smartphone-type mobile devices with the Android Operating System, and must be approved in the Google Play and other similar markets, in order to facilitate the download and update of the mobile application to this group.

The mobile application for control agents must comply with the following technical requirements:

- The mobile application must be able to run on any smartphone with an operating system version equal to or higher than Android 7.0, and other similar systems.
- The mobile application must be published and approved in the official Google Play (Android) markets, which will facilitate its distribution among control agents.
- The mobile application must be able to be downloaded for free and in the markets where it is available.
- Access to the mobile application must be restricted to users previously authorized through the municipality's Backoffice web application, as described later.
- The mobile application must not contain third-party advertisements.
- L'aplicació mòbil ha d'estar disponible com a mínim en dos idiomes: català i castellà.
- The mobile application must request the required permissions for its operation, including

location.

- The mobile application must be able to communicate with Bluetooth or equivalent proximity sensors.
- The mobile application must be able to communicate with the central services of the parking platform via the Internet, using a secure HTTPS SSL protocol and the corresponding user authentication.
- The mobile application must be able to register errors or possible technical incidents through its own or external services such as Google Firebase, Crashlytics or similar.
- The mobile application must be able to record usage statistics through its own or external services, such as Google Analytics or similar.
- The mobile application must be able to manage and notify users of the existence of new versions of the same in optional or mandatory mode, in order to guarantee, if necessary, that one can have the latest version.
- The mobile application must allow users to send queries or report technical incidents to the technical support service of the parking platform through a form within the application itself.
- The mobile application must allow access to the legal texts on the conditions of use and the privacy policy before and after user registration, from the application itself.

b. Functional requirements.

The mobile application for control agents must allow to control the permission and parking times of vehicles in limited and/or restricted parking areas identified with codes on the traffic signs that delimit the area and with proximity sensors Bluetooth or equivalent, which communicate with the mobile application to be able to digitally identify the parking area in which the guard is located quickly and automatically.

As a principle of operation, the mobile application must allow to automatically detect the nearest zone, present the list of current and recent parking tickets in the zone, check the current parking tickets and if applicable, record and optionally print the necessary documentation so that the relevant parking complaint can be processed. Additionally, the mobile application must also show the history of complaints by watcher, as well as select the area to be inspected on the map or by manually indicating the area code.

The functional features of the mobile application for control agents must be, at least, the following:

- **Registration of control agents:** to be able to access the mobile application of control agents, it will be necessary for a user administrator of the platform to register the user, indicating at least the agent code in the municipality and an email, where a password and which must be changed on first access.

Login user agent:

- The mobile application must restrict access to previously registered users who must be identified by email and password, or some other secure access method.
- The user login procedure must guarantee access to the legal texts relating to the conditions of use and privacy policy of the digital parking platform, and the user must explicitly accept them in order to log in
- The mobile application must allow you to remember the password by indicating the user's email, and it must also allow you to modify it once the session has started.
- The registration procedure must also allow access to help articles and also to a contact form or e-mail address to be able to request technical support.
- **Determine the parking zone:** The mobile application must allow automatic, accurate and rapid detection of the parking zone in which the control agent is located based on the Bluetooth proximity sensor or equivalent of the nearest signage. In addition, the application must also allow selecting the current zone on a map, centered on the user's location, or indicating or reading the zone code that is also printed on the vertical signage. The mobile application should also facilitate navigation between nearby areas.

Control parking lots:

- The mobile application must be able to display in real time the parking permit and the remaining time of the parked vehicles for each parking zone.
- The mobile application must display a list with the status of current or recently expired parking tickets: license plate, zone, start time and remaining time, among others.
- The mobile application must allow searching for the parking status and tickets of the day of a license plate in any area of the municipality indicated manually and also through an algorithm that allows the recognition of license plates from the camera of the smart mobile phone.
- **Parking ticket details:** the mobile application must allow viewing all the data associated with a certain parking ticket, including comprehensive information about the vehicle, the parking area and the parking times, in order to facilitate the control task for the agent
- **Situation map by area:** the mobile application must be able to show in real time the estimated occupancy status and the remaining time of occupied spaces in nearby parking areas.
- **Parking complaints:** the mobile application must allow complaints of improper parking to be recorded in regulated and controlled areas with the digital platform. The mobile application must clearly show the data of the complaint and generate the necessary documentation, if necessary, process the relevant complaint by the unit or agent concerned. The mobile application must allow cancellation of parking complaints.
- **Help information:** The mobile application must allow the display of informative content or frequently asked questions about the operation of the application, so that the control agent can

independently resolve doubts or issues relating to the use of the application. Questions and doubts will be grouped by context to facilitate the search for the user. This information will be maintained and updated periodically.

- **Technical support:**The mobile application must allow contact with the support and technical assistance service of the platform through a form for control agents.
- **Configuration:**The mobile application must allow the administration of the user's own configuration parameters.

4.4 BackOffice web application for the receiving entity or municipality

The technology platform to digitize free and time-limited parking zones for authorized vehicles must provide a BackOffice application, based on web technology, that allows managing parking rules and zones, checking parking tickets and complaints, and analyze statistical parking data in each area of the municipality.

a. Technical requirements.

The technical requirements of the BackOffice web application for the sending entity are as follows:

- The Backoffice application must be accessible from any conventional Internet browser compatible with HTML 5 or higher.
- L'aplicació web ha d'estar disponible com a mínim en dos idiomes: català i castellà.
- The Backoffice web application must allow access to be restricted to authorized users.
- The Backoffice web application must have a minimum of three municipal user profiles: municipal administrator, mobility user and technical support.
- The web application must be able to communicate with the central services of the parking platform via the Internet, using a secure HTTPS SSL protocol and the corresponding user authentication.

b. Functional requirements

The functional features of the Backoffice web application for the recipient entity must be, at least, the following:

Backoffice user registration:

- In order to access the Backoffice web application for the municipality, it will be necessary for an administrator user of the platform to register at least one municipal administrator user, indicating a name and an email, where a password will be sent and that it must be modified on the first access.

- The municipal administrator user must be able to register other municipal users with the user profile that corresponds to them.

Log in as a municipal user:

- The web application must restrict access to previously registered users who must be identified by email and password, or some other secure access method.
- The web application must allow resetting the password by indicating the user's email.
- The web application must allow a user to change their password.
- **Dashboard:** The web application must contain a dashboard that shows in real time the main parking indicators of the municipality, as well as a map with data on the state of parking in each area of the municipality.

Administer parking zones and regulations:

- The web application must allow you to manage the characteristics of each of the municipality's parking zones, including zone code, address, coordinates, type of zone and number of spaces, among others.
- The web application must allow the administration of different types of parking area in the subject of the contract.
- The web application must allow you to manage the parking rules for each zone, type of zone or group of zones, indicating the maximum time allowed, the types of authorized vehicles and the regulation schedule by day of the week, between d others
- The web application must allow you to manage or consult lists of authorized vehicles (white list) with a certain allowed parking time, for example vehicles belonging to residents of a certain area of the municipality.
- The web application must allow the permit and allowed parking time to be set according to the level of vehicle emissions.
- The web application must allow you to define holidays or vacation days for the limited parking areas of the municipality.
- **Parking tickets:** The web application must allow you to consult, filter and sort a list of the municipality's parking tickets, as well as being able to view the detail of a parking ticket, which must also be able to be exported to a format of PDF file to facilitate its distribution or printing.

Parking complaints:

- The web application must allow you to consult, filter and sort a list of parking complaints recorded by the municipality's control agents, as well as being able to view the details of a parking complaint.
- The web application must allow users with the appropriate permissions to cancel complaints,

indicating in any case the reason for cancellation.

- The web application must allow processing of those parking complaints that can be processed, to the entity that executes the tax management that corresponds to it for the processing of complaints.
- **Manage watchers:**The web application must allow users to create, modify and delete control agents, and other personnel attached to the service, identified with email and password, who will be able to access the mobile application for agents or watchmen in the municipality.
- **Statistics and periodic reports:**The web application must display and filter statistical data on the uses of parking areas in the municipality. The platform must be able to generate periodic statistical reports and send them automatically. The availability of real-time data and historical statistics will make it possible at the same time to know the state of supply and demand for spaces, with the aim of being able to adapt the areas and regulatory conditions to the current uses of regulated parking.

4.5 Central platform services and integration with third parties

The technological platform to digitize limited and/or restricted parking areas must be entirely in services hosted in the cloud (Cloud), without requiring servers, databases or communication channels specific to the recipient municipalities or entities.

a. Technical requirements of central services

- The central services of the platform must be hosted in a cloud service provider (Cloud), which makes it possible to have servers where the business logic of the platform is executed, databases where the information is recorded and access on the Internet with sufficient bandwidth to guarantee the correct operation of all the applications on the platform. This allows the platform to become independent of the municipality's hardware and software resources.
- The application and database servers of the platform must ensure that they have sufficient resources to offer an average response time of less than 1.5 seconds in more than 50% of requests originating from mobile or web applications, and in in any other case an increase in resources for application or database servers may be required.
- The platform's data servers must be hosted within the European Union, in accordance with current legislative requirements.
- The application and data servers of the platform will be replicated in two different physical locations, in order to have a contingency solution in case of damage to the main site.
- The application interfaces between the central services and the mobile or web applications of the platform must be carried out over the Internet using the HTTPS secure protocol and the corresponding user authentication.

b. Technical and functional requirements for integration with third parties

- The application interfaces (API) of the platform towards other third-party systems must be based on REST / JSON protocols, with protected access and Internet channels protected with HTTPS secure protocol.
- The parking platform must be able to be integrated with an application or data service that provides the relationship between the registration of a vehicle from the Spanish State and its environmental badge, such as the open data service from the General Directorate of Traffic (DGT) or equivalent.
- The parking platform must be able to be integrated with an application or data service of at least one tax management body in Catalonia, or those that are more common and majority, in order to be able to process complaints.
- The parking platform must be able to integrate with third-party parking control systems through an API application interface that allows information about the parking status of a vehicle to be known from its registration, as well as the list of current and recently expired parking tickets in a parking area.
- The parking platform must be able to integrate with an application, data or file service that contains a list of authorized vehicle registrations, for example residents of an area of the municipality.

4.6 Execution plans

The supply and implementation project, and the operation services of the platform for regulation and digital control in time-limited rotation parking areas and for authorized vehicles, must be carried out in accordance with the following requirements:

Supply and implementation project

The work plan foreseen for the project of supply and implementation of the platform in a typical municipality with 10 zones and a maximum of 50 places must comply with the following requirements in terms of schedule:

- First week:
 - Analysis and diagnosis of the parking areas, to be able to define the scope, location and definitive coding of the parking areas to be digitized.
 - Personalized design of the vertical signage that delimits each parking area.
- Second and third week:
 - Supply and configuration of Bluetooth or equivalent proximity sensors to identify each parking zone, including coordination with vertical signage manufacturer.
 - Manufacture and supply of vertical signage for each parking area.
 - Recording and configuration of all zones and parking regulations through the platform's

- web application. Registration of municipal users and control agents.
- Definition of the communication plan for the municipality.
 - Definition of the training plan for users and municipal agents.
 - Fourth week:
 - Supply or, if applicable, installation of the vertical signage that delimits each parking area.
 - Technical assistance and quality assurance in the process of installing signals and sensors by area in the municipality, performing operational tests in a real environment.
 - Configuration of mobile phones, communications and printers of control agents.
 - Assistance with the entity's managers regarding the communication plan prior to the launch of the platform for the municipality, including the supports that are chosen, whether leaflets, videos, social networks and press releases.
 - Execution of the training plan for users and municipal agents involved in the project.
 - Start of the first month:
 - Launch and start of operations of the limited parking platform for the municipality, with a minimum testing period of 15 days.
 - Execution of the communication plan by the recipient entity during and after the initial launch of the platform, including leaflets, videos, social networks and press releases.
 - Execution of the training plan with continuity.
 - Start of the technical support and customer service service.

The planned work plan must include project management and coordination tasks during the supply and implementation phase, with weekly meetings with the entire work team involved.

The implementation of the project must coexist with the normal operation of the municipality's regulated parking service. Therefore, it is necessary to take into account the limitations and conditions introduced by this problem: time availability, real testing environment, own and external staff, installers, etc.

The limited and/or restricted parking digital platform must be fully operational six weeks after the start date once the contract based on the receiving entity has been processed.

Training plan

Before starting the actual operation of the digital parking platform, it is necessary to carry out a training plan to ensure the correct preparation of all personnel involved in the administration, regulation or control of parking areas: agents control, mobility area staff, citizen service staff, etc. This action has been classified as a special condition of execution in the PCAP itself.

The digital parking platform is quite broad in scope and therefore efforts must be made to ensure that all

staff involved in administrative, technical or inspection procedures of the digital ticket have the necessary technical support and training to be able to execute properly his own role.

The training plan must include the methodology, resources and dedicated dedication to be able to instruct all users, managers, technicians and maintainers of the applications included in the scope of supply before starting operations, in accordance with the following requirements:

- Description of the methodology and initial training proposal for each of the existing user roles in the applications included in the scope of supply.
- The training plan must be carried out according to the work plan described above.
- The number of hours allocated to the initial training in person or remotely must be at least 4 hours.
- Description of the methodology and proposal for continuous training, which must be carried out throughout the duration of the contract, whenever necessary to ensure the correct training of personnel who are gradually or subsequently joined, especially at the level of control agents and Backoffice use.
- Proposal of documentation specifically aimed at training users, among others: user or operation manuals for all applications and incident management procedures manual.

Communication and dissemination plan.

During the implementation project, a communication and dissemination plan will have to be defined that allows citizens to be widely informed about the operation of the platform for the regulation and control of parking areas, which will be the responsibility of the receiving entity. Even so, the company's assistance must include, at least, the following tasks:

- Technical assistance and graphic resources for the personalized design of an informative leaflet with the corporate image of the AMTU and the municipality. The printing and supply of the information leaflets will not be the responsibility of the successful tenderer.
- Technical assistance and graphic resources to facilitate the editing and publication of an informative video on the operation of the mobile application for drivers of the platform.
- Publicació i manteniment d'articles d'ajuda i preguntes freqüents en llengua catalana i castellana.
- Technical assistance and content to facilitate the publication of articles, press releases or information intended for social networks or media.

Once the platform is implemented, specific communication campaigns will need to be carried out throughout the duration of the contract, especially when there are changes or circumstances that require it.

Technical support service and customer service

Throughout the term of the contract, the digital parking platform must be supported by a technical support service or customer service that allows solving possible incidents or malfunctions of any of its components or applications.

The successful tenderer must have a centralized incident management system that allows users to respond to possible inquiries or incidents through any application of the digital parking platform.

The platform must allow users to report incidents to the technical support and customer care service through a form available from the mobile or web applications, or alternatively through an email address or a contact phone number.

The level of service required for the provision of operation support services is determined by the type of incident and its severity according to the following classification:

- **Critical incidence:** any incident that disables completely or partially, or that involves the malfunctioning, of any key functionality (zone selection, ticket initiation, ticket validation) both at the level of the central services of the platform and in the mobile applications.
- **Serious incidence:** any other incident that completely disables any of the features available in the Mobile Application, the BackOffice Application or the core system services.
- **mild incidence:** any other incident that slightly or partially affects the functions available in the system's BackOffice application.

The hours of the technical support service will be from Monday to Saturday, from 9:00 am to 2:00 pm and from 4:00 pm to 7:00 pm.

The successful bidder is the first responsible for diagnosing the fault regardless of its origin: hardware, software or communications. In this same sense, the successful tenderer must monitor the entire life cycle of incidents until they are resolved.

The successful tenderer must be able to comply with the following incident resolution times, from the notification of the incident until its resolution:

- **Critical incidence:** maximum 4 hours during technical support service hours.
- **Serious incidence:** maximum 8 hours during technical support service hours.
- **Mild incidence:** maximum 2 weeks within the hours of the technical support service.

The resolution of an incident must be accepted by the corresponding person in charge within the organizational structure.

The successful tenderer will submit a half-yearly report with a summary of the provision of technical support, showing the number of open and closed breakdowns and the average resolution times for

incidents.

The costs of executing the technical support service and customer assistance will be borne by the Awardee, including materials, labor, travel and any other expenses or machinery to be able to carry out the maintenance of the digital platform, which also includes electronic devices installed in the street.

Any breach of the technical support plan or the incident resolution time may give rise to the penalties established in the contract between the AMTU or the receiving entity and the successful tenderer, as provided for in clause 43 PCAP.

Platform maintenance service.

Throughout the term of the contract, the digital parking platform must be supported by a maintenance service that ensures the correct operation and evolution of all the applications and components of the platform itself:

- **Corrective maintenance:** it is necessary to be able to guarantee corrective maintenance actions with the previously indicated response times to be able to deal with possible incidents in the components and applications included in the scope of supply. It explicitly includes the supply of spare electronic devices in the event of an incident within a maximum period of one week.
- **Preventive maintenance.** It will be necessary to carry out semiannual preventive maintenance tasks to guarantee the correct operation of the platform and all its components. A six-monthly report must be made by the person in charge of the contract in which it is recorded that this maintenance is being carried out correctly.
- **Evolutionary maintenance.-** The platform must update the versions of the mobile applications of drivers and watchmen to the extent that the technical and functional features thereof evolve.
- **Adaptive maintenance.-** The platform must guarantee the full adaptability of mobile applications for drivers and control agents to the launch of new versions of operating systems of smart mobile phones for Android and iOS, or other systems with massive penetration.

The cost of all these types of maintenance will be fully borne by the successful bidder and will be included in the price for the platform's operating service.