INNOVATION MUNICIPAL A THROUGH FROM OPEN DATA DATA: SOLUTIONS FOR MAKE MORE ACCESSIBLE THE SERVICES MUNICIPAL SERVICES

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CONTENTS

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INTRODUCTION

As is the case in almost every industry and in almost every area of our lives, innovation is **innovation digital innovation is redefining also the landscape of the services services**. And open data either underpins or fuels part of these innovations, especially those based on artificial intelligence. This digital revolution puts at our disposal powerful tools to reimagine and **improve the services offered the community** the new services, opening up a range of possibilities to improve the quality of life of citizens, who are also increasingly demanding of their institutions.

This report, centered on case studies of success stories, focuses on the **analysis of analysis of applications, platforms y services from companies that some municipalities are using for provide better services a its citizens**. This is intended not only to highlight the value of value of open data in the generation of innovative municipal services the project is intended not only to be a source of inspiration for other municipal decision-makers, but also for businesses, citizens and developers. In this way, by adopting these cases or creating new ones, it will be possible to free up some more of the **vast potential still to be untapped potential of the Open data data y the technologies** and significant improvements in people's well-being can be achieved.

Through **examples** ranging from improving transport and urban mobility or optimizing basic public services to contributing to environmental sustainability, the report illustrates the transformative potential of new applications using open data. Each selected success story demonstrates **how is possible use new approaches to overcome the challenges** the aim is to contribute to building smarter, more resilient cities that are, above all, focused on the needs and wellbeing of their inhabitants.

All use cases will be presented following this outline:

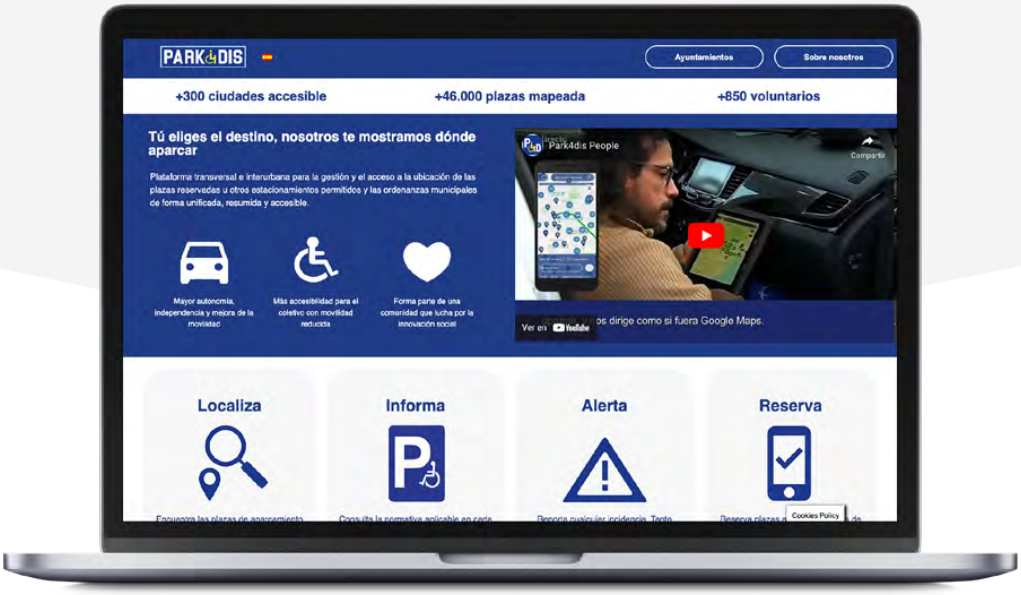
Description	Information on the characteristics and the challenge sought.
Open data	The role of open data and how it contributes to solving the challenge.
Model from exploitation	Exploration of the business model behind the application or solution. exploitation. Discussion of the economic and operational sustainability of the project.
Impact	Analysis of the impact generated: benefits for the community, the environment, the local economy, etc.
Potential of replication	Discussion on the adaptability and replicability of the solution in other municipal contexts: how to adhere to the project, how to license it, how to contribute to its improvement, etc.

1. TRANSPORT AND MOBILITY

Transport and mobility management in urban environments presents enormous challenges such as reducing traffic congestion and emissions, improving parking accessibility or managing public transport routes. In this section, we present success stories in the implementation of **solutions that integrate Open data data and/or technologies from intelligence technologies** to improve the efficiency, accessibility and sustainability of transport and mobility in cities.

Park4Dis

https://www.park4dis.org/main



Description

Park4Dis was launched in April 2019 to **address the challenge that exists for find the location of the squares of parking places reserved for people with mobility reduced mobility** (PRM). This application is designed to manage and access the location of these parking spaces, as well as other permitted parking spaces and the different municipal regulations in a unified, summarized and accessible way.

Park4Dis currently maps more than **45.000 squares of parking reserved for PRM at more of 300 municipalities** thanks to collaborations and agreements with town councils and public administrations throughout Spain. The platform also benefits from the contribution of more than 850 volunteers and partnerships with socially responsible companies.

The application allows users to **search y select places from parking accessible** near your destination, consult other parking options if the PRM space is occupied and report incidents such as illegal occupation of spaces. In addition, it provides summarized and unified information on the municipal regulations applicable to these places.

Open data

The data sets on the location of **places of parking spaces for people with mobility** reduced mobility are common in the open data portals of many cities. In Spain, as in other parts of the world, there are numerous examples such as the cities of Madrid, Santander, Vitoria o Zaragoza which publish these datasets so that they can be freely reused.

This information, which is also used by other applications that address similar challenges, is complemented by the data from the **data provided by the network of volunteers** the quality of the information provided by the application is improved and updated. Similarly, the application aggregates and sorts municipal regulations that are also publicly available, although they cannot strictly be considered open data.

Model of exploitation

The application is **free of charge** for users and only requires a simple registration process to be able to use it. It currently has more than 5,000 downloads on Google Play and does not display advertising to users.

Park4Dis has received funding from the ONCE Foundation, several European projects and the Barcelona Economic Development Agency.

Impact

The app has the potential to facilitate travel for the more than 15 million European Disability Card users in Europe, giving them more freedom and autonomy and helping them to find a parking space near their destination.

In Europe there are currently more than **5 million of drivers with mobility reduced mobility, 450.000 only at Spain alone** who can benefit from greater autonomy by being able to move around without additional barriers.

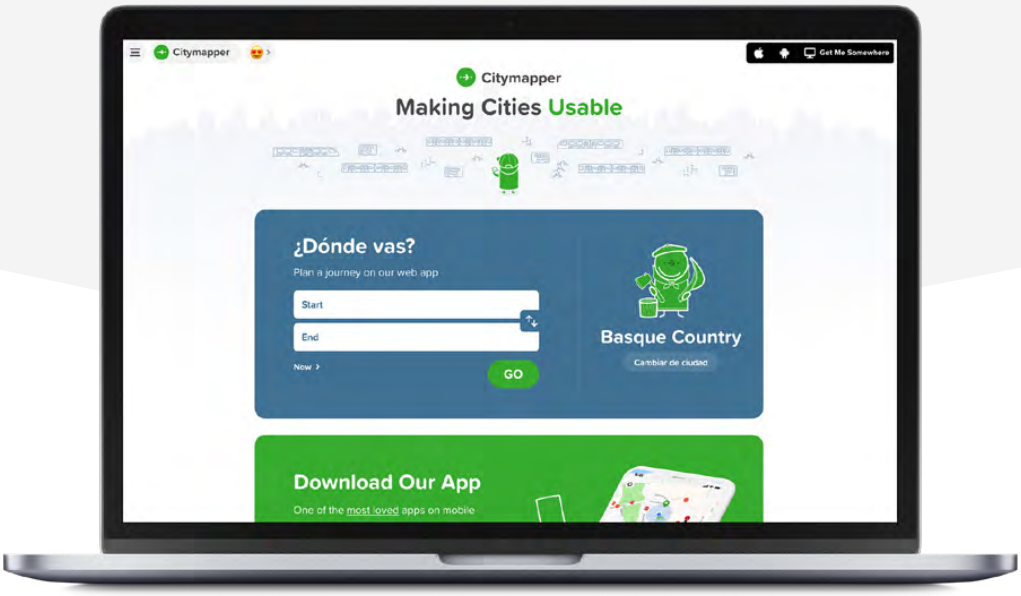
In addition, Park4dis contributes to the Sustainable Development Goals: Goal 10 by reducing inequalities affecting people with disabilities, Goal 11 by promoting inclusive cities and accessible transport, and Goal 17 by forming partnerships and collaborating with local, regional and national public and private entities.

Potential of replication

Any municipality can join the platform by providing data on the location of parking spaces reserved for people with reduced mobility. Moreover, this initiative can be replicated by other applications offering equivalent services at municipal, regional or provincial level or integrating this information together with others in wider mobility applications.

CityMapper

https://citymapper.com/?lang=es



Description

CityMapper is an urban transport application that was launched in 2011 to facilitate mobility in cities. The platform offers **information at time real-time information on routes of transport routes, including buses, trains, underground o bicycles shared**. It also adds options for walking, cycling and ridesharing. It is designed to provide the most efficient and fastest route to a destination by integrating data from different modes of transport into a single interface.

CityMapper started offering service in London but is now available in more than 100 cities around the world, including 10 Spanish cities (Madrid, Barcelona, Valencia, Seville, Zaragoza, Malaga, Granada, Palma de Mallorca, Bilbao and San Sebastian).

Open data

CityMapper was initiated precisely on the **basis of the movement of data movement** that is, on the idea that if information is accessible, someone will put it to good use and citizens will benefit. When the London Transport Authority (*Transport for London*) opened their data, they began to design and develop a comprehensive transport application, which then extended its coverage to New York and other cities that were opening up their transport data..

The application mainly uses open data provided by local transport authorities, usually using the standard GTFS STANDARD *(General Transit Feed Specification)*. In Spain we have examples such as the cities of Madrid o Barcelona which provide this type of dataset through the open data portals of their transport authorities.

However, when these data are not sufficient or not accurate enough *CityMapper* combines it with **sets from data sets generated by the own users of the application** who collaborate on a voluntary basis. It also uses data enhanced and managed by the work of the company's own local employees. All of these data are combined with **intelligence algorithms developed to optimize the routes** and provide recommendations tailored to users' needs.

Model of exploitation

CityMapper has used various operating models throughout its history. At present, the application is **free** for all users, with no restrictions on functionality. In return, users see advertisements, which are the source of revenue that allows the application to be distributed in the form of free of charge. However, there is the possibility to remove the display of advertisements in exchange for a monthly subscription.

The apps of *CityMapper* apps on the different platforms have had more than 50 million downloads in the past year worldwide and its success has led it after several rounds of financing to be taken over by the acquired by the transportation software services company Via Transportation, Inc.

Impact

CityMapper contributes to improving the way people move around cities by improving the efficiency of urban transport, also in cities where reliable data sets do not exist. The application has been recognized for its innovation and usefulness, gaining a wide user base around the world. Its main impacts include:

- **Facilitates the mobility:** helps millions of users plan their daily journeys more efficiently.
- **Promotes the use of transport:** provides detailed and up-to-date information, encourages more people to use public transport instead of private vehicles.
- **Contribute a the sustainability:** optimizes routes and encourages the use of public transport, helps to reduce the carbon footprint of users.

Potential of replication

CityMapper has the potential to be adopted in any city in the world that has an existing **transport system public transport system y Open data data accessible**. Even if the data is not accessible or of insufficient quality, *CityMapper* offers collaboration with authorities and users, and tools to build or refine the necessary data. Its focus on the integration of multiple transport modes and its ability to provide real-time information make it a versatile and replicable tool in different urban contexts.

Telpark

https://www.telpark.com/es/

Description

Telpark is a mobile application that facilitates the management and payment of on-street parking and private car parks in more than 80 municipalities in Spain and Portugal. It seeks to solve the challenge of **finding y pay parking at efficiently y without need from money at cash**.

The traditional system of parking meters and cash payment has several disadvantages for users: the need to return to the vehicle to extend parking time, the risk of fines for expiry of parking time, the obligation to have cash change, etc.

The application allows users to **pay for their parking at way quickly y simple way** you can remotely extend parking time, receive notifications before paid time expires, as well as manage parking history and payment receipts. It also allows you to find more than 400 electric charging points and to book and pay in more than 200 *car parks*.

Open data

Telpark incorporates the use of **Open data data provided by the authorities** using datasets containing the location of regulated parking places.

For example, in cities such as Madrid several sets are published with information on areas and number of places. In some cases, cities also provide datasets such as the availability of municipal public car parks in Malaga occupancy of municipal public car parks in Malaga which allows the application to provide real-time information on available spaces, facilitating the search for parking and optimizing the occupation of spaces.

Model of operating model

The application ensures its **sustainability** through revenue diversification and continuous expansion to new municipalities that broaden its user base.

Telpark operates under a freemium model. The **download y use basic of the application are free** for all users, but offers additional paid services, such as parking reservations in private car parks and other premium services premium services for businesses.

Economic sustainability is completed through the commissions it receives for transactions carried out by users in both regulated and private car parks. To this end, Telpark signs agreements with both municipalities and private car park operators.

Impact

The app has over one million downloads on Google Play alone and manages parking in more than 80 cities as well as numerous private car parks. Its main impacts include:

- It reduces the time associated with finding and paying for parking, improving urban mobility experience.
- By optimizing the occupancy of parking spaces and reducing unnecessary traffic in search of parking spaces, it contributes to the reduction of CO_2 emissions.
- It encourages the use of commercial areas by facilitating access to parking, thus boosting the local economy.

Potential of replication

Telpark has a **high potential of replicability** in other municipal and regional contexts. Any interested municipality can join the project by providing the necessary data on regulated parking spaces and collaborating in the integration of the system.

Municipal authorities and private car park operators can contact Telpark to establish partnership agreements. The platform is designed to integrate easily with existing parking management systems.

Cities and companies wishing to contribute to the development and improvement of Telpark can collaborate by providing updated data and participating in testing and feedback programs.

2. ENVIRONMENT AND SUSTAINABILITY

Citizens are increasingly aware of the importance of sustainable resource management and the impact of human actions on the environment. In this section, success stories are presented on the implementation of **solutions innovative solutions that integrate Open data data y technologies from intelligence technologies** to improve environmental sustainability and promote sustainable practices in urban environments.

CleanSpot

https://cleanspotapp.com/

Description

CleanSpot is a mobile application designed to improve waste management and urban cleanliness. It allows users to **locate points at recycling points y bins specialized, report problems from cleaning** and receive information on the correct segregation of waste.

CleanSpot was developed to address the issues of ineffective waste management and lack of community participation in the maintenance of urban cleanliness. The application seeks to encourage individual and community responsibility in the management of waste such as electrical appliances, used oil, clothes, toys, furniture and furnishings, toys, scrap metal, medicines, radiographs, pruning, rubbish, industrial waste, etc.

To achieve these objectives, the application shows the location of recycling bins, waste collection points and public rubbish bins. Users can also report cleanliness problems such as full bins, litter accumulation and other related incidents. It also provides information on recycling and waste management practices, helping to educate the community on the importance of sustainability, and sends alerts about rubbish collection days and community clean-up events and community clean-up events.

Open data

CleanSpot uses **Open data data provided by the authorities y regional authorities** to provide accurate and up-to-date information on the location of recycling bins and recycling points clean. Some examples of these datasets are the ones offered by Open Data Euskadi on the location of containers, or the city of Malaga for containers for packaging and plastics. From the same the application benefits from the publication of the locations of the clean points such as the one that offers the city of Zaragoza.

Model of exploitation

CleanSpot is an **application free of charge** for users, financed through agreements with municipalities and waste management companies. It also explores revenue models through advertising related to sustainability and recycling, and through partnerships with brands that promote green practices.

CleanSpot's economic sustainability is ensured through strategic partnerships and collaborative agreements with local governments and private organizations.

Impact

The application currently offers more than 70.000 geolocated points mainly in Spain in cities such as Barcelona, Madrid, Malaga, Pamplona, Salamanca, Seville, Valladolid, Valencia, Zaragoza, etc. And in regions such as Andalusia, Asturias, Canary Islands, Cantabria, Catalonia, Castile-La Mancha, Extremadura, Galicia, Murcia, etc. They are currently expanding to other countries in Europe and America.

CleanSpot has built a community of thousands of users who use it to report cleaning problems and find recycling points. Hundreds of clean-up reports have been handled, contributing to improved efficiency in responding to and resolving urban waste issues.

The CleanSpot application contributes to **increase the participation at the management of waste management y the clean-up cleaning** promoting a cleaner and healthier environment. By promoting re-cycling practices and sustainable waste management, it reduces the ecological footprint and environmental impact. It also helps municipalities to optimize the resources dedicated to waste management, reducing operational costs and thus improving efficiency.

Potential of replication

Any **municipality interested can join to project** by providing data on the location of recycling points and bins, and by collaborating in the promotion of the application among its citizens.

CleanSpot can be contacted by municipal authorities and waste management companies to establish partnerships. The platform is designed to integrate with existing waste management systems and can be adapted to the specific needs of different communities.

Liight

https://www.liight.es/

Description

Liight is a mobile application that promotes sustainable behaviors through gamification. Liight **reward the users with points y prizes for doing activities such as recycling, using transport public transport, walking or use the cycling**.

Liight was created to solve the challenge of encouraging sustainable habits in modern society, where many people lack tangible incentives to adopt eco-friendly practices. To **gamifying the actions** Liight aims to motivate more people to contribute to environmental sustainability.

The application uses game mechanics to motivate users to adopt greener habits, including challenges and *rankings*. Accumulated points can be redeemed for discounts and rewards at partner shops and services. Users can see the positive impact of their actions through the app, visualizing metrics such as CO_2 saved, and kilometers travelled.

Open data

Liight uses a variety of public open data sets, as well as partnerships with private entities such as EcoEmbes and even home-grown data sources collected by the Liight community itself to **verify y validate the veracity of the action's sustainable actions of the users (the use of bus, the bike, the train, etc.)**. For example, it uses data on timetables and public transport routes such as those provided by the Madrid Transport Consortium, location of recycling points, and other community-maintained resources help the application provide accurate and relevant information to users.

Regarding the use of artificial intelligence, for example, to confirm the reduction of CO_2 emissions, the algorithm developed by Liight crosses different parameters obtained through the user's mobile phone sensors with public data, such as different means of transport (metro or bus, for example) according to their routes, timetables, etc.

Model of exploitation

Liight operates under a freemium model, where the download and basic use of the application are free, but it offers premium services. Financial sustainability is intended to be achieved through a combination of sponsorship, commercial partnerships and corporate subscriptions.

Advertising and sponsorship revenue comes from companies that are interested in promoting sustainability and can sponsor challenges or advertisements within the app. Commercial partnerships with shops and services allow for discounts and rewards to be offered to users in exchange for points earned through sustainable actions.

The application also has additional, customized features available to companies through corporate subscriptions that companies can purchase to deliver benefits to their employees and foster a more sustainable corporate culture that adds value to the work environment and corporate social responsibility. In this way, they contribute to generating sustainable habits among workers in their daily commute, inside and outside the office through the "Eco Office", "Eco Cities" y "Eco Homes".

Impact

The application has a community of tens of thousands of active users on Google Play and the Apple and Apple Store who participate in daily challenges and collect points for sustainable actions through public transport, walking and recycling. The application's ability to increase the number of these actions performed by users contributes significantly to the reduction of CO_2 emissions.

The use of the application fosters a culture of sustainability and environmental responsibility among users that has a significant impact on the environment. In addition, the app supports local businesses and sustainable services through promotions and rewards, thus driving a more sustainable economy.

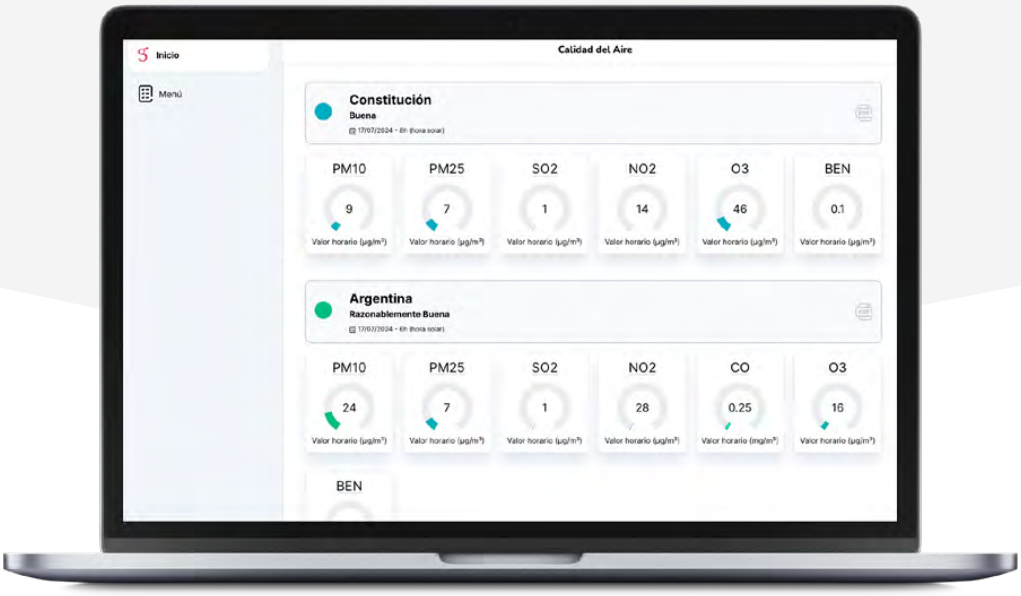
Potential of replication

Liight has a high potential for replicability in different municipal and international contexts. The application can be adapted to new cities and regions by integrating local data and collaborating with local entities and companies.

Municipalities interested in making themselves available on the application can release the necessary data and companies interested in promoting it to their employees can establish partnership agreements and contract the use of the application for their specific programs.

Air Quality

https://www.gijon.es/app/aire



Description

Gijón's Air Quality application provides **information at time real time information on the quality of the air quality at different areas of the city**. The app was developed to address the problem of a lack of accessible and up-to-date information on air quality, helping citizens make informed decisions to protect their health, especially those with pre-existing health conditions that make them more vulnerable to pollution.

This tool allows citizens to access up-to-date data on the levels of air pollutants such as particulate matter (PM10 and PM2.5), nitrogen dioxide (NO2) and ozone (O3).

The application also sends alerts to users when pollution levels exceed the established limits, allows for air quality history, facilitating trend analysis over time, and provides health recommendations based on current pollution levels.

Open data

The Air Quality application uses open, real-time air quality data provided by the provided by the environmental monitoring stations in the city of Gijón and other official sources. These data are essential to provide accurate and up-to-date information to users, allowing constant and reliable monitoring of air quality in different areas of the city.

Model of operating model

The application is free for all users and is financed through public funds. The economic sustainability of the application is maintained through the continuous support of the Gijón City Council, which allows the application to be maintained and updated on an ongoing basis.

Impact

Today, thousands of citizens use the app regularly to monitor air quality in their city.

The application contributes to improving public awareness of air quality and its impact on health, encouraging more informed behavior. It also contributes to making environmental policies more sensitive to the reduction of pollution sources.

Finally, the application has an impact on improving public health by helping to prevent pollution-related health problems, potentially reducing some medical costs.

Potential of replication

The Air Quality application has a high potential for replicability in other municipal contexts and is in fact a type of application, which with equivalent functionalities is available in numerous cities. Any city with air quality monitoring stations or any developer with access to open data from these stations could implement a similar version of the application.

3. OPTIMISATION OF SERVICES PUBLIC SERVICES BASIC

Gestdropper

https://www.estudiosgis.com/proyectos/gestdropper-plataforma-de-gestion-y-telegestion-de-activos-y-servicios-urbanos/

Description

Gestdropper is a platform for the management and remote management of urban assets and services, developed by the company *Estudios GIS*. The application is designed to **optimize the management of infrastructures y services at environments urban environments, providing tools for the monitoring y control at time real-time monitoring and control**.

The tool aims to improve operational efficiency, reduce costs and increase responsiveness to incidents and maintenance needs of urban infrastructures.

Gestdropper enables the supervision and control of various urban assets, including public lighting, street furniture, water networks, etc. It offers real-time monitoring capabilities for the remote management of services and infrastructures and includes analysis and reporting tools for decision-making.

Based on a geo-referenced inventory of urban assets such as street furniture, parks and gardens, traffic signs, street lighting, automatic watering systems, etc., it enables the management and maintenance (CMMS or computer-assisted maintenance management) of these urban assets through work orders and work reports, facilitating the visualization and comprehensive management of the assets located on public roads.

Open data

Gestdropper uses open data from a variety of sources including information on the location of infrastructure, services and other urban assets.

Some examples of local authorities publishing data on, for example, the location of locations of public lighting are city councils such as the City Council of Santa Cruz de Tenerife or entities such as the pprovince. The use of open data helps to ensure efficient management of the tool and to reduce maintenance costs.

Model of operating model

Gestdropper is marketed under a B2B model (*business-to-business*) model, as the company that manufactures the platform offers its implementation to municipalities and entities that wish to optimize the management of urban infrastructures.

The economic sustainability of Gestdropper is ensured through contracts or subscriptions with customers that may include technical support and regular updates. The platform is continuously maintained and improved by reinvesting a portion of the manufacturer's profits in the development of new functionalities and the optimization of existing ones.

Impact

The main impact of the platform lies in its potential to reduce municipalities' operational costs associated with infrastructure and service management. The potential increase in the efficiency of urban asset management and maintenance is complemented by a faster response to incidents, which also results in a better final service.

Improving the quality of public services and urban infrastructure provides a safer and more efficient environment for citizens. In addition, optimizing resources and reducing unnecessary journeys for maintenance services contributes to a smaller carbon footprint. Cost reduction also helps to ensure that savings can be reinvested in other projects with a higher impact.

Potential of replication

The tool has a high potential for replicability in municipal contexts where infrastructure management is a significant activity.

Interested cities and entities could contact the manufacturing company for information on the implementation and licensing of the platform, and potentially to customize it to their specific requirements.

QuoteME

https://virtualdesk.es/productos/CitaME/

Description

CitaME is an application developed by the company Virtual Desk that is designed to **manage appointments previous y optimize the attention to citizen at services y private services**. CitaME was developed to address the challenge of reducing waiting times and improving efficiency in appointment management, which often leads to long waits and low attendance rates. The platform aims to centralize and simplify appointment management, improving the experience for both users and organizations.

The platform allows users to request, manage and cancel appointments efficiently, facilitating the organization of agendas for both users and service providers. The application sends alerts and reminders to users about upcoming appointments, reducing no-show rates, and integrates easily with existing appointment management systems.

Open data

The application integrates open data provided by the authorities and entities that deploy the platform. This data includes the maps of public services of the type provided by the city of Barcelona services offered in the type of the catalogue of hospitals offered by the Junta de Castilla y León and other geographical locations. The use of open data enables the application to provide accurate and up-to-date information, improving efficiency and transparency in appointment management.

Model of exploitation

CitaME is marketed under a B2B model *(business-to-business)*, for municipalities, hospitals, clinics and other entities that manage appointments. The platform is licensed through contracts or subscriptions that can include

technical support and regular updates. The application is continuously improved by reinvesting part of the profits in the development of new functionalities and optimization of the system.

Impact

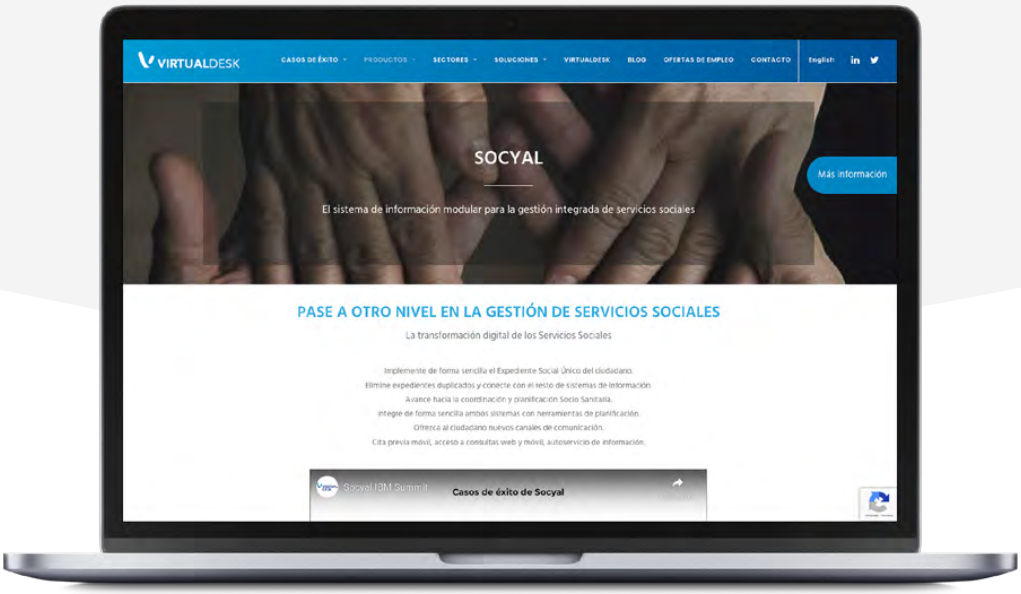
The reduction of waiting times is one of the significant impacts that citizens who use the tool both via web and mobile application benefit from. The application also has an impact on reducing unnecessary travel to manage appointments, contributing to a smaller carbon footprint.

Potential of replication

CitaME has a high potential for replicability in various other municipal contexts as any entity that manages appointments can benefit from the deployment of this platform. Interested entities could contact the manufacturer to receive advice on the implementation, licensing and customization of the platform according to their specific requirements.

Socyal

https://virtualdesk.es/productos/socyal/



Description

SOCYAL is an application developed by the company Virtual Desk that is designed to **optimize the management of services social services at the municipalities**. The platform enables citizens to access various social services more efficiently and local administrations to manage these services more effectively. The application aims to centralize and simplify access to and management of social services, improving the experience for both beneficiaries and municipal administrators.

Citizens can access information on available social services, apply for assistance and make appointments with social services. It also provides tools for case management and follow-up by social workers, including service history and follow-up notes. It facilitates communication between citizens and social workers through an integrated messaging system and provides analysis and reporting tools to improve decision-making and service planning.

Open data

The integration of open data provided by various municipal or regional sources helps to improve the accuracy of some functionalities. This data would include published information on assistance programs, community resources, social service statistics, or even from social service registers registers of social services such as the one published by Castilla-La Mancha.

Model of operating model

SOCYAL is marketed under a B2B model *(business-to-business)*, for municipalities and regional governments that manage social services. The platform is licensed through contracts that may include implementation, customization, technical support and ongoing upgrades.

The application is continuously maintained and improved by reinvesting a portion of the manufacturer's profits in the development of new functionalities and optimization of the system.

Impact

Thousands of citizens use the app to access social services in more than 1,000 municipalities where cases are managed by social service employees.

Improving accessibility to social services, making life easier for citizens in need of assistance can be considered one of its main impacts. Moreover, reducing the need for physical travel to manage social services contributes to a smaller carbon footprint.

Potential of replication

The platform has a high potential for replicability which has been demonstrated in the implementation in numerous municipalities of various sizes and in some regional governments. Its flexibility and ability to integrate with various social service management systems makes it adaptable to different needs and environments.

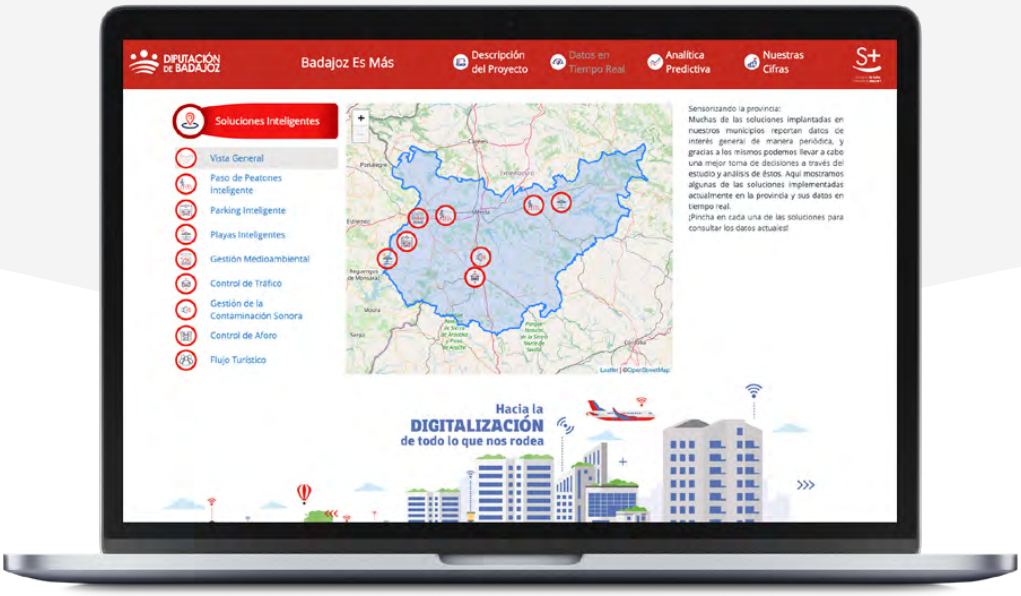
Interested entities can contact the manufacturing company for information on implementation, customization possibilities and licensing of the platform.

4. CITIZENS SERVICES AGGREGATORS

Citizen service aggregators are applications and platforms that centralize and simplify access to public information and services, improving communication between administrations and citizens. These tools allow users to access real-time information on public transport, cultural events, tourism, road incidents and other municipal services. This section presents success stories in the implementation of innovative solutions that integrate open data and artificial intelligence technologies to improve the accessibility and efficiency of municipal services.

Badajoz Es Mas

https://provinciadigital.badajoz.es:8443/pentaho/api/repos/%3Apublic%3ACdM%20Publico%3AActual%3ACdM_Publico%3ACdM_Publico.wcdf/generatedContent



Description

Badajoz Es Más is an application developed by the Badajoz Provincial Council with the aim of **provide the citizens y visitors information detailed information on services, events y venues of interest at the province of Badajoz**.

The application seeks to solve the challenge of centralizing relevant information for the community in an accessible and user-friendly platform, promoting tourism, citizen participation and access to public services, and providing citizens and tourists with access to services, events and places of interest, thus improving the user experience and promoting local development.

Badajoz Es Más offers information on historical sites, tourist routes, cultural events and re-creative activities in the province. It also provides information on available public services, including opening hours,

locations and contact details, and keeps users informed with local news and important updates. It uses geolocation to help users find nearby points of interest and recommended routes.

Open data

Badajoz Es Más uses more than 60 data sources provided by more than 165 local authorities in the region province and 40 companies. This data includes information on visitor numbers to sites of visitors to sites of interest, noise pollution management or establishments in *parking*. The use of open data allows the application to provide accurate information, ensuring that users have access to the latest and most relevant resources.

Model of exploitation

The application is free for all users and is financed through public funds provided or managed by the *Diputación de Badajoz*.

Economic sustainability is achieved through continued support from local government to ensure that it remains a useful and relevant tool for users.

Impact

It is a web application accessible to any visitor with an internet connection who wishes to use it to obtain information about the province of Badajoz.

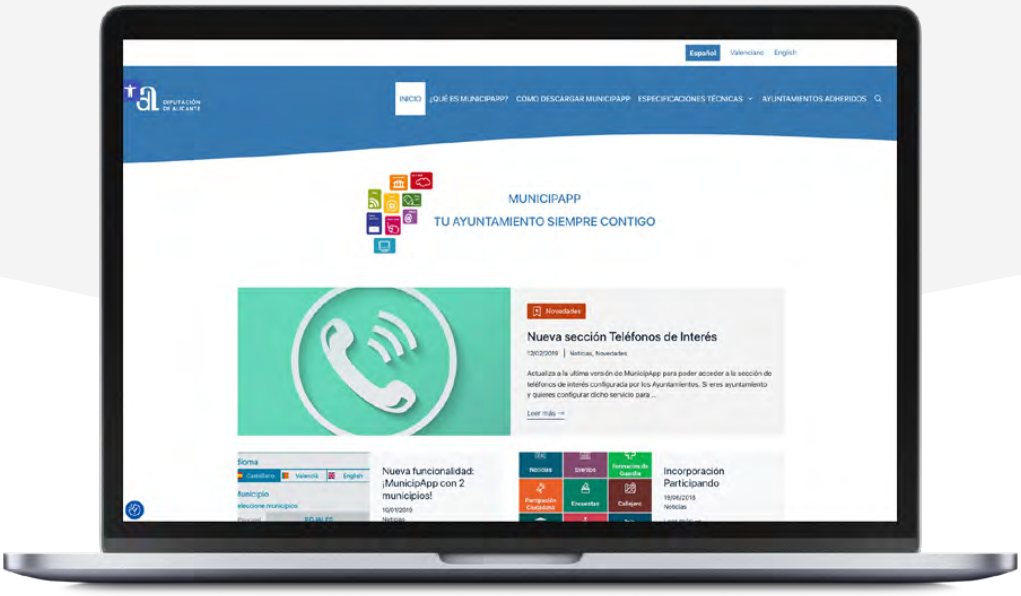
The platform has an impact on improving the quality of life of residents and visitors. It also contributes to the digital transformation of the territory, to improving the management of its public services and to reducing the depopulation currently suffered by many municipalities in the province, facilitating the creation of local employment.

Potential of replication

Badajoz Es Más has a high potential for replicability in other municipal, provincial or regional contexts. Any interested city or region can develop a similar application using open data and establishing the necessary collaboration with local entities and private companies in the territory.

MunicipAPP

https://municipapp.diputacionalicante.es/



Description

MunicipApp is a mobile application developed by the *Diputación de Alicante* to **improve the communication y the accessibility of the services at the municipalities at the province**. It was developed to solve the problem of information dispersion and lack of accessibility to public services. The application seeks to centralize and simplify access to municipal information, improving communication between local councils and citizens in the province of Alicante.

MunicipApp provides a unified platform where users can find information on events, news, municipal services, tourism, cultural heritage and administrative procedures. It offers information such as the complete street map of each town, points of interest, news, events, chemists, gastronomy, tourism, etc.

The application provides users with access to news, events and official communiqués from the province's municipalities, detailed information on municipal services such as opening hours, locations and contact details, and guides and direct access to online administrative procedures.

Open data

MunicipApp benefits from the use of open data provided by more than 85 local authorities in more than 85 local authorities in the province of Alicante. This data includes information on events, services, locations of interest, etc. By using open data, the application can provide accurate and up-to-date information, allowing citizens to access resources efficiently and effectively.

Model of operating model

The application is free for all users and is financed through public funds provided by the *Diputación de Alicante*, which guarantees the operational management and integration of new data and services.

Impact

More than 85 municipalities in the province of Alicante are participating, offering their data and services through the platform, and several thousand users have downloaded the application to obtain information and carry out the application has an impact on improving accessibility and efficiency in the communication of municipal services, improving the quality of life of citizens. It also reduces the need for unnecessary travel by allowing for online processing and supports local economies by promoting events, boosting tourism and local commerce.

Potential of replication

MunicipApp has a high potential for replicability in other municipal contexts. Any interested region or municipality can adapt this model to make its own application using open data and collaborating with local authorities and businesses.

AppValència

https://www.valencia.es/val/appvalencia

Description

AppValència is a mobile application developed by the Valencia City Council that **centralizes multiple services y resources for the citizens y visitors**. It was developed to solve the problem of information dispersion and lack of accessibility to public services in the city. The application seeks to centralize information in a user-friendly platform, improving the interaction between the City Council and citizens.

AppValència allows users to access real-time information on public transport, cultural events, tourism, incidents on public roads and other municipal services.

The application provides real-time information on bus, metro and public bicycle routes and schedules. It also includes a calendar of cultural events, activities and local festivals, a guide to points of interest, tourist routes and other services for visitors. The tool allows you to report incidents on public roads such as potholes, broken streetlights and other problems. It also provides access to information and administrative procedures.

Open data

AppValència uses open data provided by various municipal sources. This data includes information on public transport timetables, cultural events, tourist services and more. The use of open data enables the application to provide accurate and up-to-date information, making life easier for citizens and improving transparency.

Model of operating model

AppValència is free for users and is financed through public funds managed by Valencia City Council. The application contains no advertising and focuses on providing a quality service to citizens.

The economic sustainability of AppValència is ensured through the continuous support of the local government which ensures that the application is regularly updated to guarantee its relevance and usefulness for citizens.

Impact

The application has over 100,000 downloads on the Android platform, alone users use the app to access municipal services and report incidents.

The impact focuses on improving accessibility to public services and information, making life easier for citizens and visitors. Also, in promoting the use of public transport and other sustainable modes of transport, reducing the carbon footprint.

Potential of replication

AppValència has a high potential for replicability in other municipal contexts. Any interested city or region can develop a similar application using open data from their environment.

CONCLUSIONS

The **innovation of the use of open data** presents a significant opportunity to improve the accessibility and efficiency of municipal services. Throughout this paper, several applications have been examined that illustrate how open data can be used to create technological solutions that benefit both citizens and public administrations.

All the applications analyzed in this paper show a **high potential of replicability** in other municipal contexts. The flexibility and adaptability of these solutions means that they can be implemented in different entities and adjusted to the specific needs of each one of them. Local administrations can benefit enormously from these tools, adopting and customizing these platforms to improve their own services and processes.

The use of **open data for the innovation** not only improves the efficiency and accessibility of public services, but also promotes transparency and citizen participation. The applications described in this document are concrete examples of how open data can positively transform municipal management and citizens' lives to build smarter, more inclusive and sustainable cities.

However, municipal innovation based on open data also implies a number of challenges and requirements that need to be considered and addressed. These include the need to ensure the quality, updating and standardization of data published by local authorities, as well as interoperability between different platforms and systems.

It is also essential to foster an open data culture among the actors involved, both within public administrations and among citizens, developers, companies and civil society organizations. This is the only way to maximize the potential of open data for municipal innovation.

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