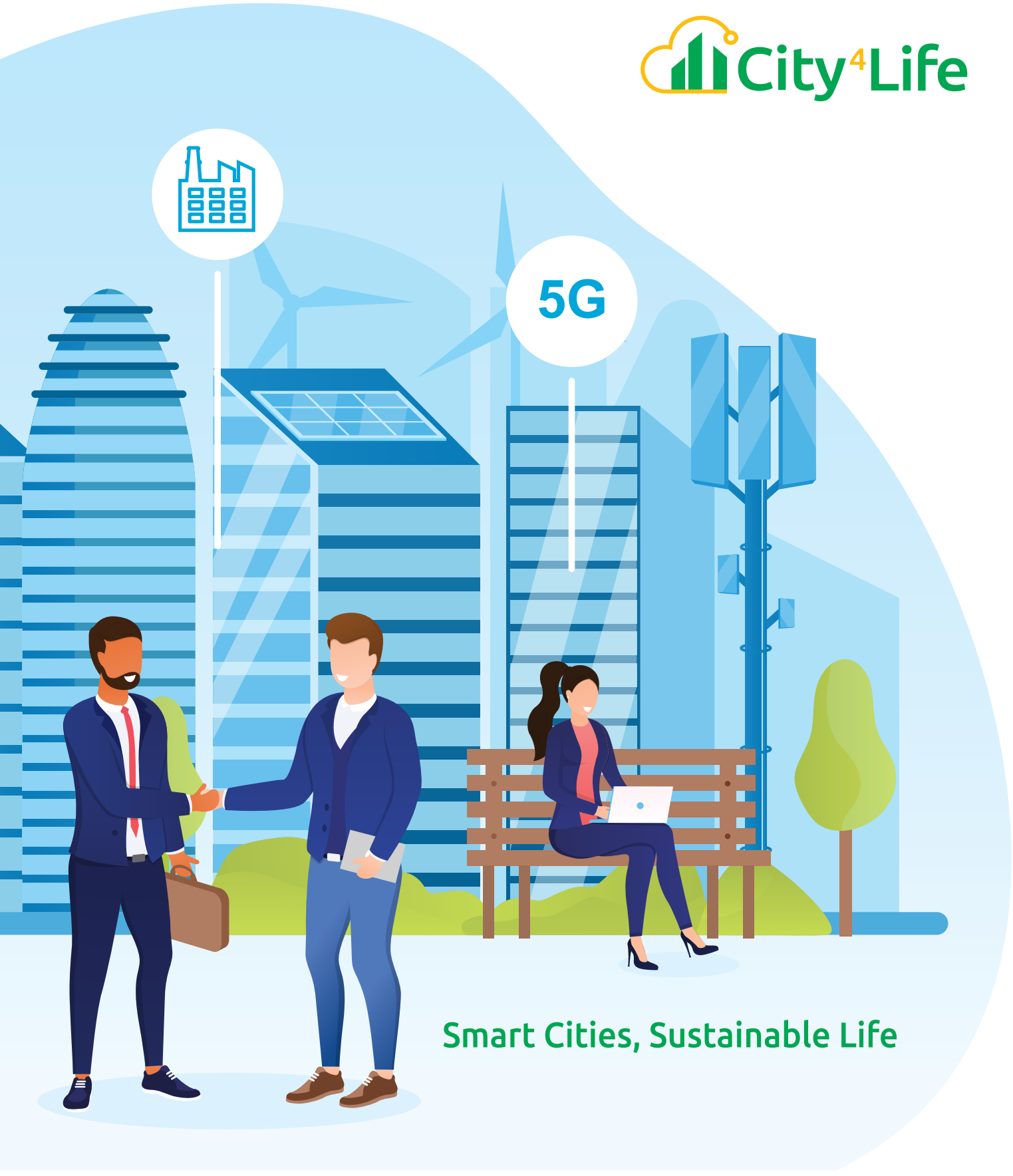
City4Life



Smart Cities, Sustainable Life

Transforming cities and municipalities into smarter, safer and more efficient, citizen-centered environments.
At Uni Systems, we create integrated, ready-to-use solutions that are leading the present and changing the future of urban areas. We focus on the design and implementation of integrated, IoT-based, Smart City solutions that will create an upgraded, modern city of the future, while including all required components and functionalities; from hardware devices equipped with efficient sensors, mechanisms and communication interfaces, to cloud-based core functionalities, web and mobile client applications.

The Power of Ecosystems

Our solutions are built and supported by our Pleiades IoT Innovation Cluster; an ecosystem of interconnected partners, contributing their specified expertise on hardware components, cloud platforms and domain-specific data analytics, deployment and configuration.

Easily Customizable Solutions

Through our partnership with the FIWARE Open Source Platform, we are leveraging the building blocks of the City4Life Urban Platform to ensure the rapid development and short time to market, for our solutions.

City4Life Urban Platform

An open platform for restructuring and transforming smart city services

As most cities are welcoming technology, they are embracing a new era of smart ecosystems and becoming more efficient and open to their citizens. With the use of vertical solutions, some of which are IoT-based, they are starting their transformation journey, publishing historical and static data as open data and bringing efficiency.

Our City4Life solutions are based upon the most mature Open Source framework dealing with requirements for Smart Cities. The platform takes on FIWARE principles of openness and pushes them further. Following these standards, Uni Systems offers models that can lead to free flow of data and information.

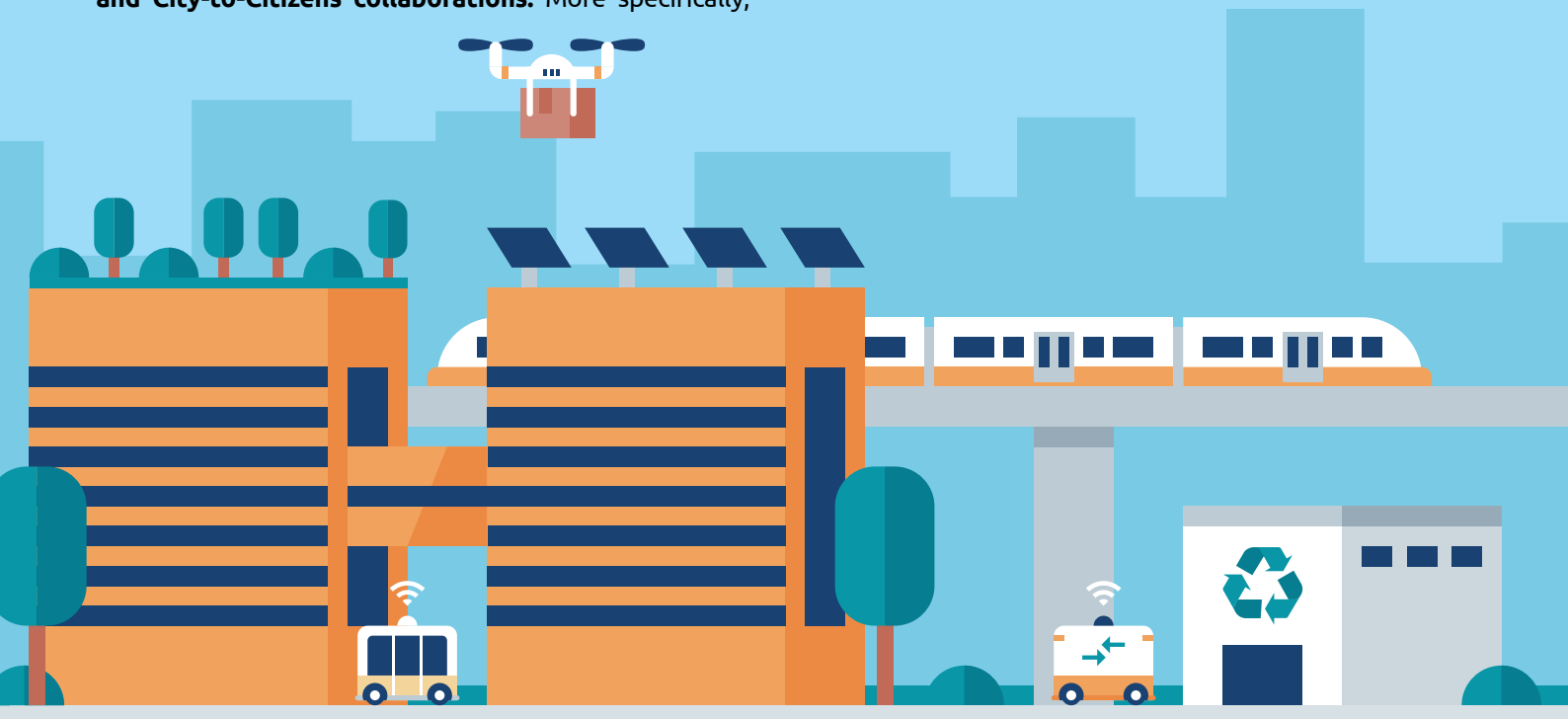
We are using a modern approach to managing urban areas and, with the creation of the Context Info Management layer, we provide a complete representation of the city status, enhancing the governance systems and making the city data public. The costs of adaptation among different systems in the city are eliminated due to "de-facto" standard information models, and city systems become fully interoperable across sectors and municipalities.

Uni Systems' City4Life Urban Platform embraces and extends the above principles in order to enable **City-to-City and City-to-Citizens collaborations.** More specifically, it aims at building a collaborative space for shaping a sustainable and inclusive future for our cities, where:

- **Citizens can share data through their devices with other citizens or the city administration bodies.**
- **Businesses can easily build services on APIs, shared across different cities.**
- **Cities can benefit from data published by other cities to create analysis, comparisons and forecasts.**

Platform Benefits

- **Converting data silos to a unified space, offering an integrated view of the city.**
- **Sharing services and information among cities, with full control over their own data.**
- **Offering customized and flexible services to citizens, based on specific needs.**
- **Reducing costs as a result of the Platforms' ability to be shared among different cities.**
- **Being part of a global community, with the use of Open Standards and Open Source code.**
- **Co-creating processes and city services with the participation of citizens and businesses.**



City4Life|Eco

Low-cost environmental monitoring, for indoor and outdoor deployment.

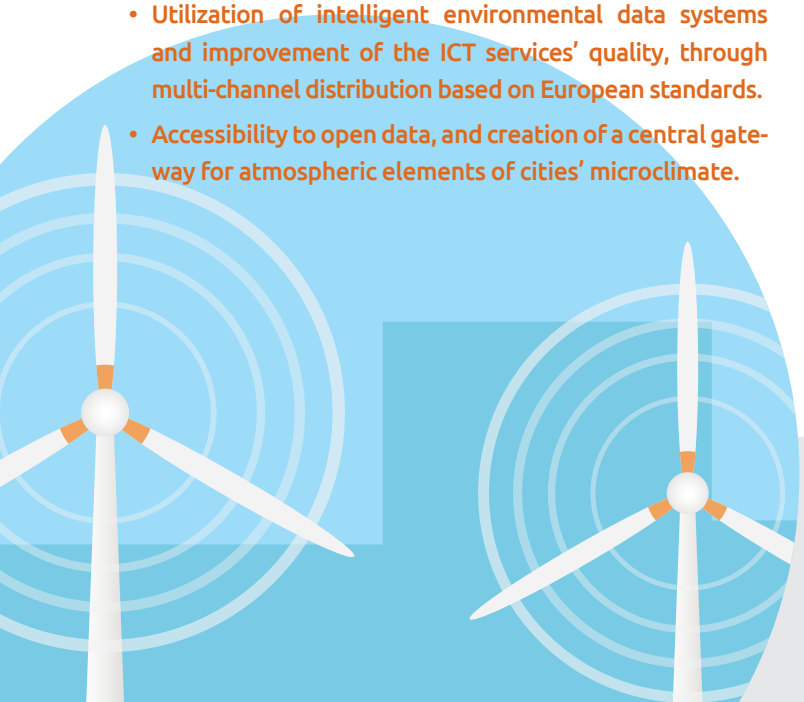
City4Life|Eco is a turnkey solution designed for continuous monitoring of significant environmental parameters, like air quality and noise. The solution is suitable for indoor and outdoor environments, fixed and mobile installations, enabling a detailed observation and recording of the environmental parameters in both cities and enterprises.

City4Life|Eco service components:

- **Devices** equipped with one or more of the following sensors: temperature, humidity, CO, CO2, PM2.5, PM10, NO, NO2, SO2, NH3, VOCs, O3.
- **Cloud-based infrastructure** that enables data collection, storage, analytics, retrieval and visualization.
- **Web and mobile applications** that visualize data, enable system configuration and generate reports.

Benefits:

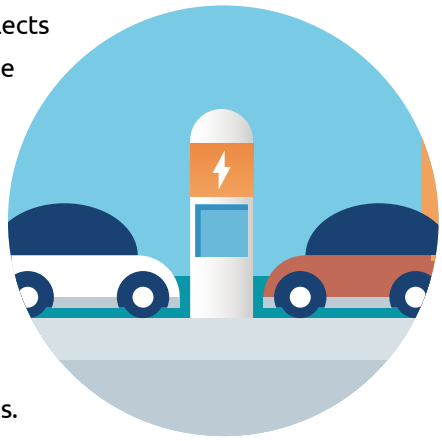
- Quality measurements of environmental parameters.
- Granular view of the air quality and noise pollution status across wide areas.
- Air Quality Index (AQI) calculation for the city or area.
- Evaluation support for municipalities in compliance with legislation.
- Recording and control of environmental parameters through IoT technologies and determination of existing and projected percentages / indicators.
- Utilization of intelligent environmental data systems and improvement of the ICT services' quality, through multi-channel distribution based on European standards.
- Accessibility to open data, and creation of a central gateway for atmospheric elements of cities' microclimate.



City4Life|Fleet

Optimized fleet utilization, improved work processes and compliance.

City4Life|Fleet enables organizations to improve efficiency of processes, monitor compliance with task assignments and legislations, optimize workforce allocation and prevent misuse of assets. The solution collects a range of data from the vehicles by monitoring their whereabouts and interactions with other enterprise systems to provide an integrated assessment, improving decision making and supporting efficient operations.



City4Life|Fleet service components:

- **Device** for satellite vehicle tracking, using GPS, to locate the vehicle.
- **GSM network channel,** used to upload data to the Cloud-based platform infrastructure enabling data collection, storage, analytics, retrieval visualization.
- **Web application,** providing simple fleet monitoring.

Benefits:

- Users can see the exact location of vehicles and how they are used at any time.
- Reduced fuel consumption.
- Less vehicle misuse and servicing costs.
- Improved employee safety and customer service.
- Powerful reporting and advanced analytics.

City4Life|Mobility

Managing city roads and reducing traffic around urban areas.

City4Life|Mobility is created to reduce traffic congestion and pollution in cities and urban areas. Using intelligent, adaptable technologies, it contributes to the elimination of the overwhelming crowding of the roads. The application is working through street sensors in roads, crossings and several junctions in the city, monitoring traffic and providing control over it to the authorized bodies with the use of wireless technologies.

Traffic lights, auto trackers, smart parking systems, and interconnected devices are all interacting in one platform, providing direct information to optimize traffic control. Gathered data are instantly translated to information and sent to citizens in the form of mobile phone alerts, in order to avoid routes with traffic for their destinations.

City4Life|Mobility service central system:

- **Gathers and analyses data** from the sensors to identify traffic.
- **Creates the ideal route** for vehicles, according to real-time data, to avoid congestions.
- **Sends push notifications and alerts** to mobile applications and public websites.
- **Controls the vertical road signaling** privileging the traffic flow in critical areas.
- **Provides alternative routes** in emergency situations or accidents, via civil protection systems.

Benefits:

- Less time spent in traffic.
- Users can choose among real-time options to reach their destinations faster.
- Fewer accidents caused by traffic jams.

City4Life|Parking

Less time driving around, less pollution, better-utilized parking.

City4Life|Parking enables drivers to significantly reduce the time required to find an available parking space, and consequently contributes to the reduction of traffic jams and gas emissions, while improving utilization of parking spaces.

City4Life|Parking service components:

- **Battery powered sensors** built into individual parking lots and used to monitor occupancy.
- **Cloud-based infrastructure** enabling data collection, storage and specified analytics.
- **Web and mobile applications** providing directions to available parking places in selected areas, generating reports and enabling system configuration.

Benefits:

- Reduced time in search for available parking spots.
- Less traffic jams, noise and air pollution.
- Improvement of parking utilization.

City4Life|Waste

Collect only when full, reduce costs and increase citizen satisfaction.

City4Life|Waste monitors the fill level of the underground waste containers and notifies the pertinent service provider upon waste collection. Through the application, and based on the received information from the containers, the collection route is optimized to reduce operational costs and increase efficiency.

City4Life|Waste service components:

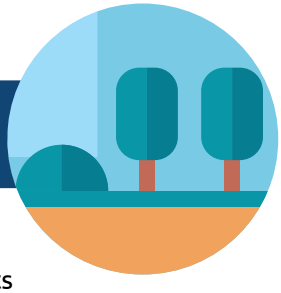
- **Battery powered sensors** installed in the underground waste containers.
- **Cloud-based infrastructure** enabling data collection, storage and analytics.
- **Web and mobile applications** providing information on collection routes, compliance monitoring, reports generation and system configuration.

Benefits:

- Increased time saving and cost efficiency.
- Reduced operational costs.
- Optimal waste management processes.

City4Life|Water

Efficient control of water resources.



City4Life|Water is designed to optimize water operations and to create new opportunities for innovation and business value by delivering integrated insights into a utility's infrastructure, assets and operations. Through the application, users can get real-time information and responses, while Information Technology and collaborative innovation play a vital role in helping them deal with complex water issues.

City4Life|Water service components:

- **Smart meters** and various other sources (assets, systems and stakeholders) provide water resources operational data.
- **Advanced data management**, visualization, and correlation and collaboration technologies are used to transform the vast amounts of distinct data into actionable information that can guide executive and operational decisions.

Benefits:

- Holistic operational data control, providing insights and improved water management.
- Anticipation of delivery disruptions and precise forecasting of long-term water demand.
- Coordinated resources to protect water supply and drive conservation and sustainability.

City4Life|Data

Ingest and integrate data from information systems and platforms.

City4Life|Data enables the ingestion and integration of data from various existing or new external sources, such as Information Systems and Platforms. This way, municipal authorities can have an integrated view of what exactly is taking place in their city.

City4Life|Data provides integration with:

- **Municipality ERP Systems,** offering important KPIs of the municipality operations.
- **Other IoT Platforms** that have already been installed.
- **External sources,** e.g. weather data, financial transaction data.

Benefits:

- Removal of existing data silos.
- Improvement of Municipality's decision support procedures.
- Reduction of operational costs.

Other IoT Solutions

- Supply chain & logistics
- Manufacturing
- Utilities & Energy
- Retail

Drone Solutions

- Development and promotion of solutions with the use of artificial intelligence, robotic automation and drone technologies.
- Autonomous and intelligent robotic flight for orchestrated work.
- Surveillance and monitoring solutions for city patrolling and access control.

Identifying Business Needs	From vague ideas to clearly defined needs, we are co-creating with the involved cities.
Fast design and creation of prototypes and pilot applications	Smart City Solutions designed by utilizing the large ecosystem of our internal and external partners, their expertise on Smart Cities and IoT projects and technologies, our experience in data analysis and our business operation knowledge on solution design.
Design, implement and develop turnkey IoT solutions	With the utilization of our ecosystem, reuse of structural elements and our specialization in project management, we are building reliable, integrated smart city solutions, that can be rapidly implemented.

Why Uni Systems for the Public Sector

More than 30 year of solid experience in providing solutions for public administration and local authorities.

More than 200+ business experts, software and system engineers, providing consulting and implementation services.

A comprehensive solution portfolio, from infrastructure solutions to critical business applications.

Customers in more than 20 countries and all types of public entities: central and regional government, local authorities, international institutions.

Custom made solutions for municipalities on finance, taxation, customs, interior, justice, health care, social insurance, education, libraries, museums and local authority areas.

Your ideal ICT and digital transformation partner.

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