Vision Smart City

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Vision Smart City
Complete integrated VISION for smart cities

Smart Environment
Monitor pollution levels to implement better measures to make the air quality healthier for citizens and also for tourists, obtaining environmentally friendly destination certifications.

Smart Government
Using technology to improve the citizens' interaction and to facilitate and support better planning and decision making

Smart Mobility
Brings people and goods to their destination quickly, safely & sustainably

Smart Lighting
Monitor, intelligently control and remotely control the city lighting equipment's optimizing the energy consumption while providing proper streets lighting
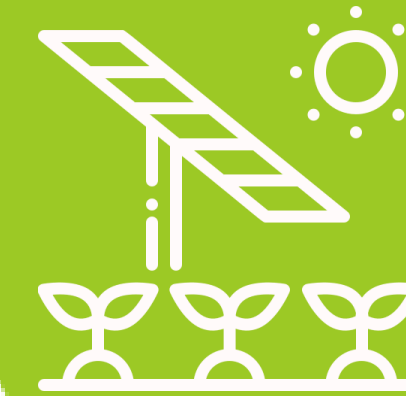
Smart Health
Allow healthcare providers to cure afflictions more effectively, to care for patients more efficiently, and to prevent illnesses

Smart Energy
Focus on powerful, sustainable renewable energy sources while using devices for energy-efficiency

Smart City

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Vision Smart City Portal

Online and interactive platform that collects various information produced in the process of promoting smart city policy in one place.

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Vision Smart City Portal
Overview

- Real-time data presentation (inlcuding functional parameters of various systems)

- Interaction point with citizens

- Agregates all available smart city data in a coherent view

- Present relevant information regarding city inteligent systems

- Represent on visual maps (GIS) information of intererest

- Allow citizens to interact with smart systems

- Allow 3° parties to integrate and automate various services

- Open data layer

Vision Smart City Portal component aggregates in a coherent view all data and interactions provided by intelligent, IoT compatible implemented platforms, enabling citizens with real time dashboards ant tools.

The portal was developed in a such way to be compatible and able to integrate with any smart platform providing open data.

Smart Lighting

Monitor, intelligently control and remotely control the city lighting equipment's optimizing the energy consumption while providing proper streets lighting.

Vision Smart Lighting
Architecture

The role of the smart lighting system is to monitor, intelligently control and remotely control the lighting equipment's, based on the processing by complex algorithms of data from different sources as well as the acquisition of feedback information, in an easy way to allow prompt interventions in case of failure, but also to reduce the costs of electricity consumption and lighting maintenance.

Logical Architecture:
- Communication between all system components is based on cable and \ or LoRaWan and \ or internet \ GSM
- The system is fully controlled from a single command and control center
- If the communication between the various components of the system no longer works due to failures there are fail-over mechanisms that allow the minimum functionality of the system
- The smart lighting system control is executed based on some parameters that result from the processing and approval of the following types of input data:
    - static parameters, entered by the system administrator
    - dynamic parameters, purchased through the feedback module

Physically Architecture:
- Each lighting equipment is independently controlled (on / off, dimming)
- In addition to the lighting unit, the system also allows the installation of modules that capture feedback (infrared barrier, infrared camera, pollution station, light sensors, etc.)
- The lighting fixtures are grouped and managed at a logical level, from the command and control component of the remote management system
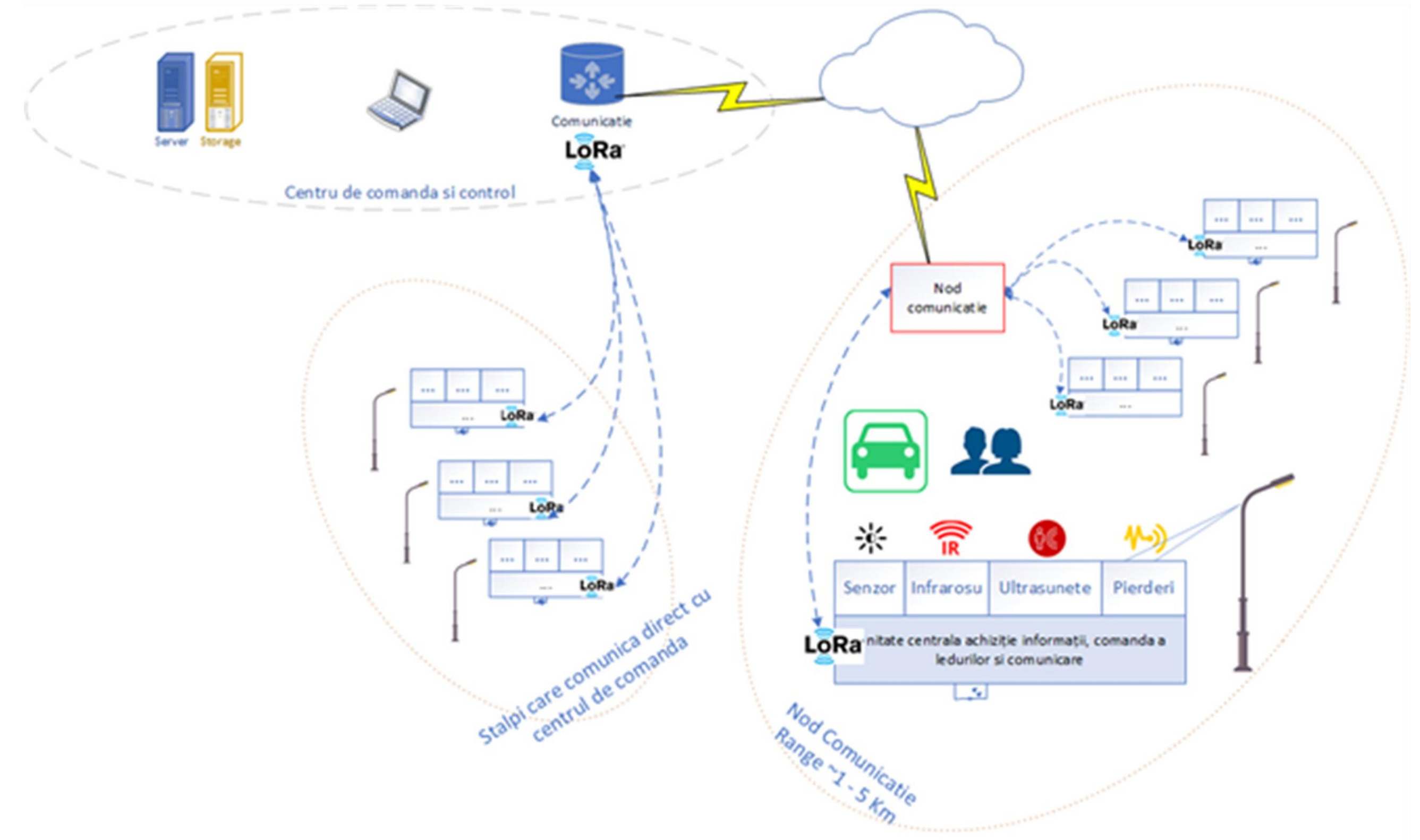
Smart Environment
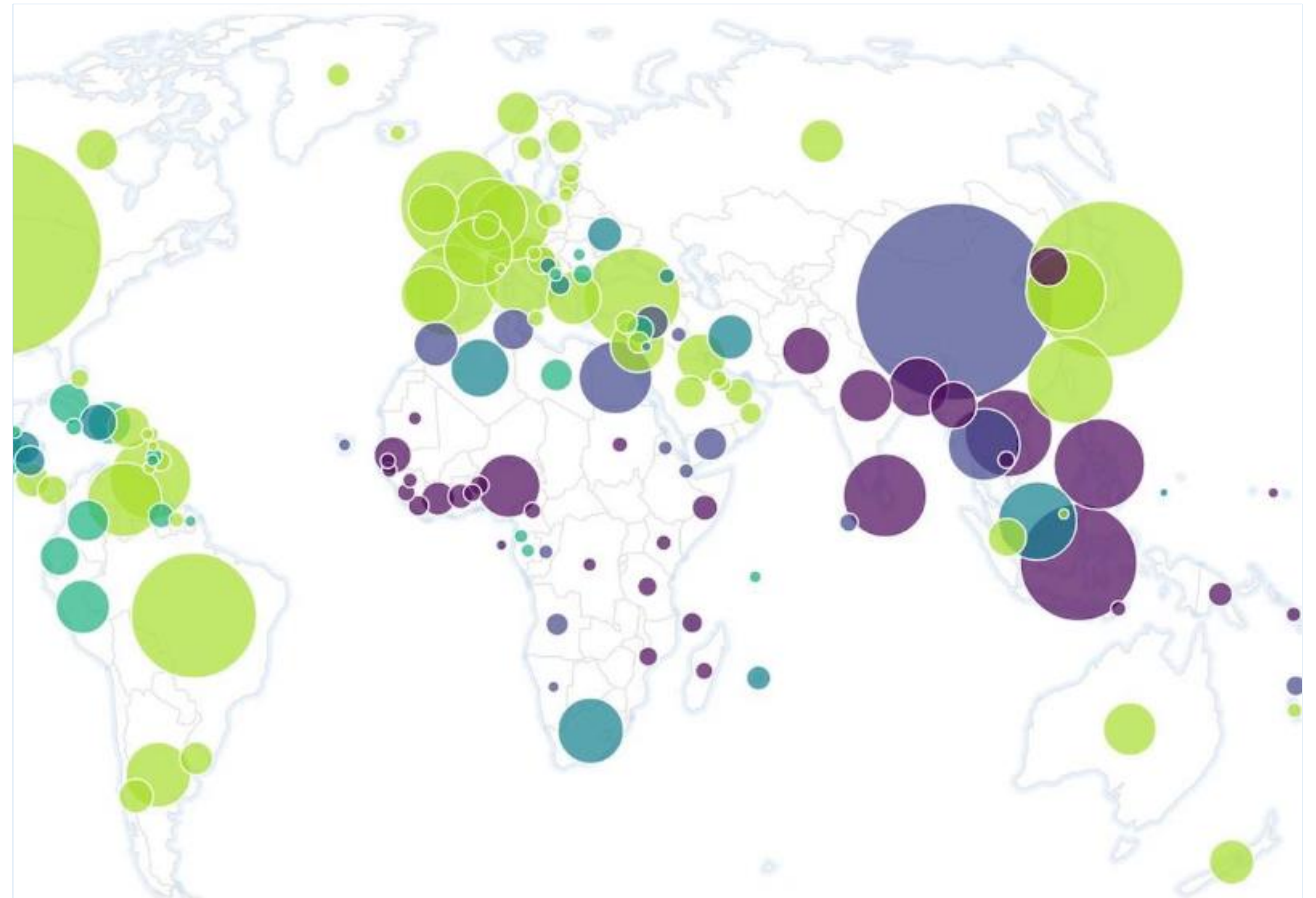
Monitor pollution levels to implement better measures to make the air quality healthier for citizens and also for tourists, obtaining environmentally friendly destination certifications.

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SMART Environment
Overview

The maintenance of parks is very expensive and requires continuous care by public administrations. For this reason, implementing an adequate water, soil and environment monitoring system would save costs and resources.
The goal of this solution is to monitor, measure and manage the conditions and needs of green areas in real time.
Vision Smart Environment is a fully integrated solution that covers different areas: water quality, air quality, soil quality, water flow measurement, irrigation system control and security.
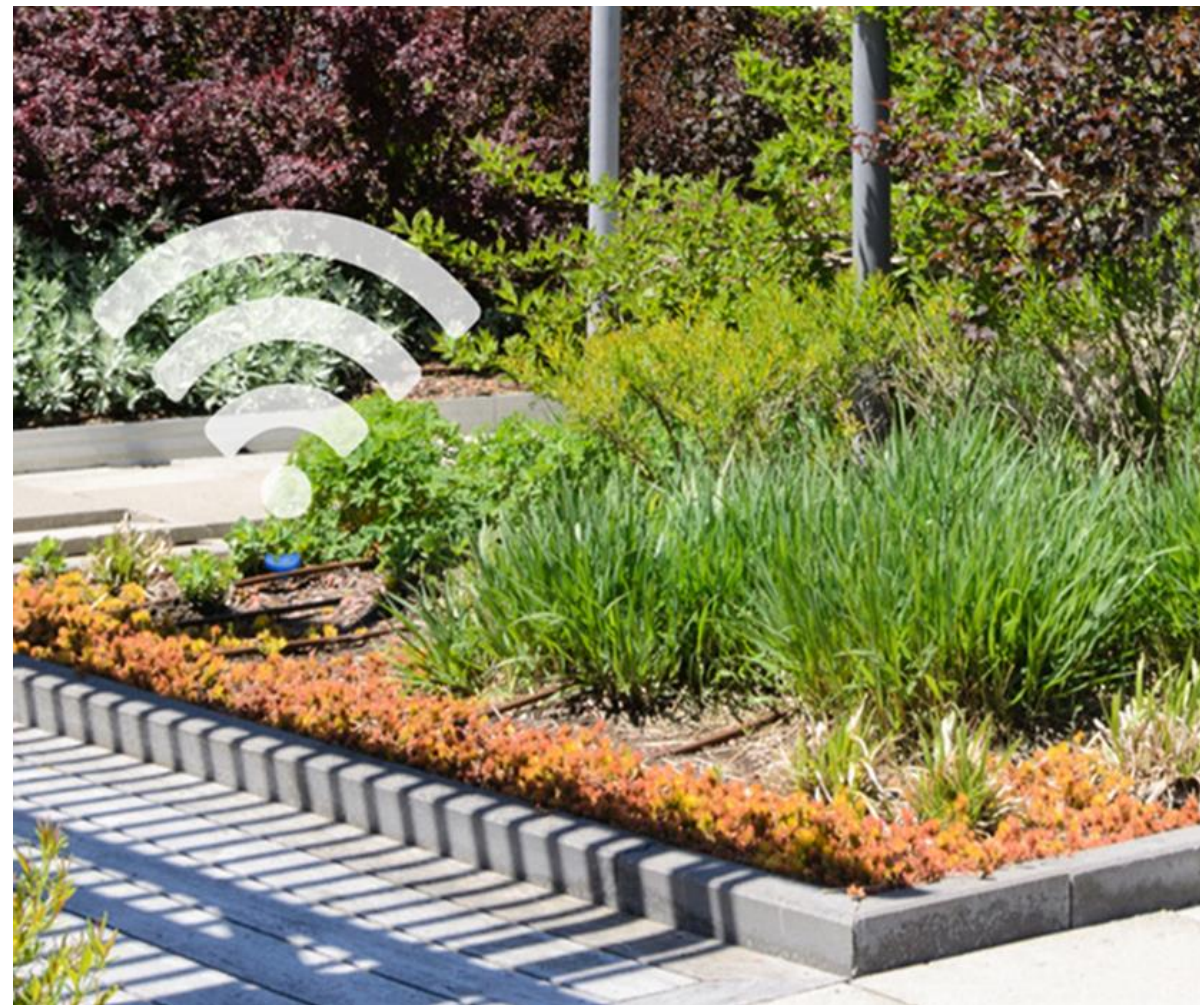
"Vision Smart Environment" is a fully integrated solution that covers different areas:
- Management of functions at organizational level:
- Water quality: Monitoring water not only for irrigation but also for wells will help keep gardens in the best condition.
- Air quality: monitoring air in parks can help to understand how pollutants behave in these areas and also know the air quality that is inspired there.
- Soil quality: indicates how healthy our plants are and whether their environmental conditions are optimal for their growth cycle.
- Water flow measurement: This information indicates the level of consumption and efficiency of the irrigation network and the presence of any leaks in the system.
- Irrigation system control: An intelligent irrigation and control system will help save water through irrigation areas according to their needs and conditions.
- Security: In order to avoid any kind of theft (water, tools, fertilizers ...), the entrances and exits of the garden are monitored.

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Technology and Integration

Create complex applications in visual designer, with no code and high flexibility for further changes and customizations with Vision App Maker Platform.

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Vision App Maker Suite
Build complex applications in visual designer, without code.

- Easy build new application from scratch
- Integrate existing platforms and legacy systems into unified application
- Digitalize your business workflows through business processes re-engineering
- Enhance Business-Integration Speed & Agility
- Optimize operations with processes prepared for rapid evolution
- Drive innovation by quickly creating innovative digital products and services
- Accelerates Transformation
- Simulate working software much earlier in the cycle enabling project team to iterative prototyping and agile development
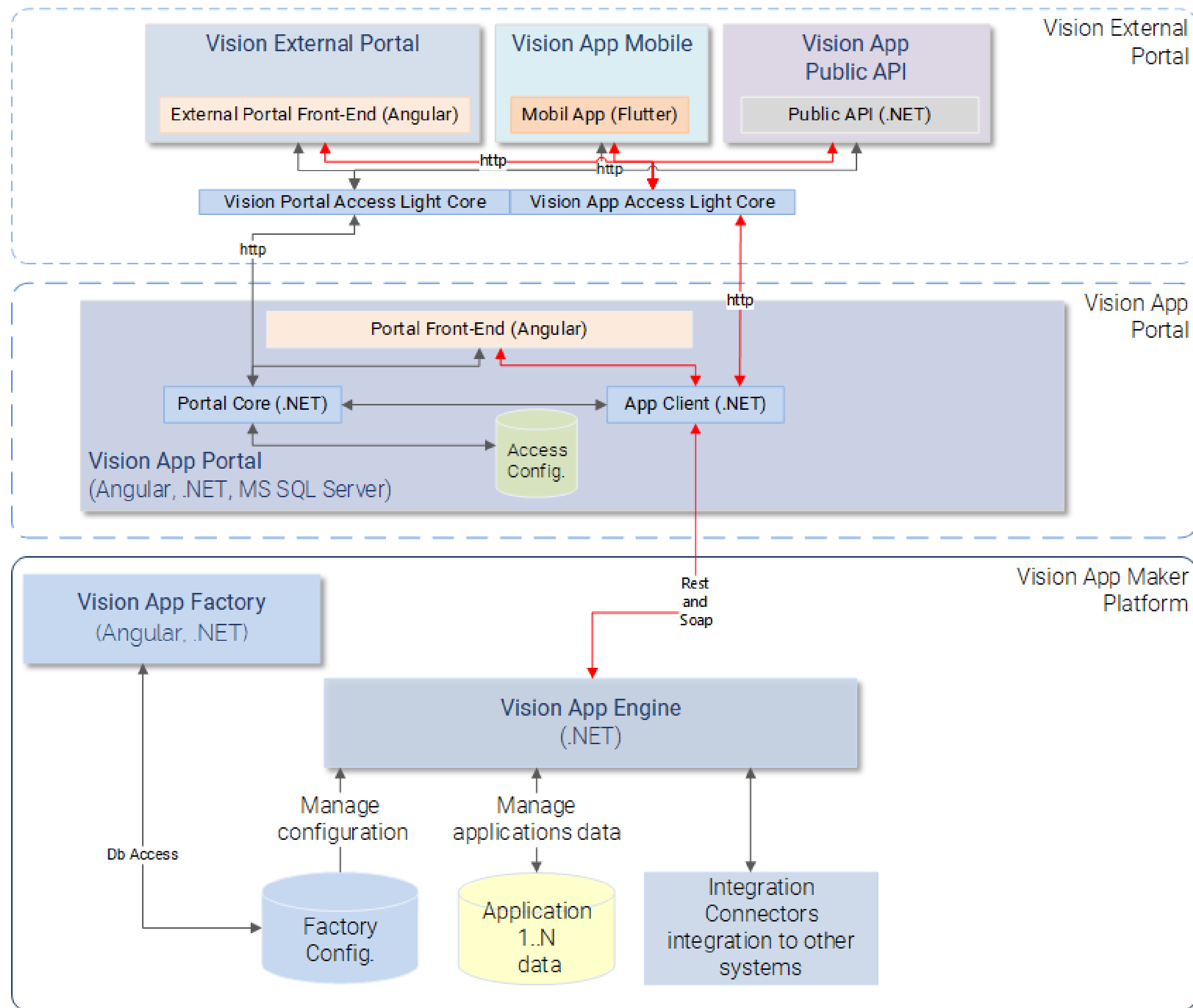
Our customers are successfully rollout their daily operation on applications powered by Vision App Maker:

Vision App Maker is a mature platform with 100+ implementations for various industries: Banking, Insurance, Automotive, Pharma, Services, Government, Distribution, Travel, Field Services.

Vision App Maker Suite
Technology stack

Vision External Portal

- **Vision External Portal** — External Portal Front-End (Angular)
- **Vision App Mobile** — Mobil App (Flutter)
- **Vision App Public API** — Public API (.NET)

http

Vision Portal Access Light Core | Vision App Access Light Core

http

Vision App Portal

Portal Front-End (Angular)

http

Portal Core (.NET) ← → App Client (.NET)

Access Config.

Vision App Portal
(Angular, .NET, MS SQL Server)

Vision App Maker Platform

Vision App Factory
(Angular, .NET)

Db Access

Rest and Soap

Vision App Engine
(.NET)

- Manage configuration
- Manage applications data

Factory Config.

Application 1..N data

Integration Connectors integration to other systems

Vision App Maker components were developed with modern and appropriate technologies for each layer purpose: reliable back-end developed in Microsoft .NET, PLC and WSO2 and flexible, responsive and rich front-end based on Java Script, Angular and Flutter.

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