SMART NICOSIA

Η πόλη γύρω από εσένα

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

Κυπριακή Δημοκρατία

Δήμος Λευκωσίας
Nicosia Municipality

Charalambos Papadopoulos

Metacities Hackathon

20/10/2025

«Nicosia, one city, one vision for smart and sustainable development»

Commenced in 2021 with a 10-year strategic plan, focusing on three key areas:

1. Infrastructure
2. IoT systems
3. Digital transformation

Smart Nicosia is continually integrating new technologies and embracing the digital future, with the aspiration of becoming the first fully developed Smart City in Cyprus, which will offer full digital access to its citizens with the press of a button.

LOT 1 – NT Infrastructure

LoRaWAN®

Fiber Optic Network
LoraWAN infrastructure
Free WiFi
CISCO Secure Network infrastructure
Data Centers
IoT Cloud based technology

LOT 1

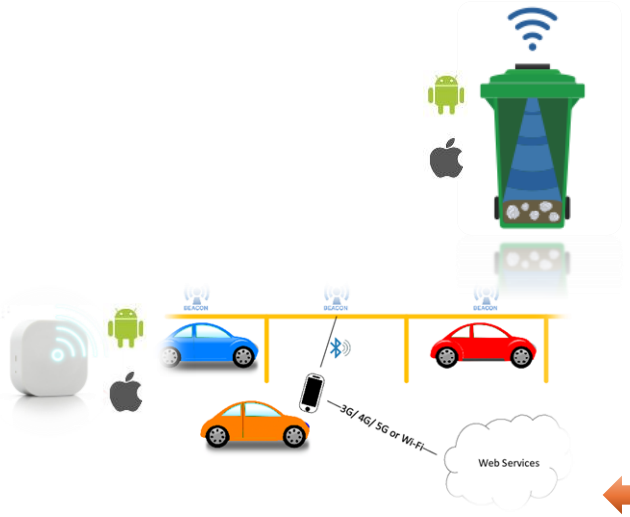
Design and implementation of the first municipal **fiber optic network (NFN)** in Cyprus, with length of 30Km, covering most of the Old Town and the modern Commercial Triangle.

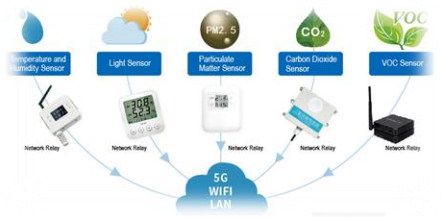
120 Access Points
Wireless broadband network operation (Wi-Fi) offering free wifi access to all.

Dedicated Data centers (2).

Complete Cisco NT infrastructure deployed including Firewalls, Gateways, Switches.

LOT 2– Smart Systems & Platforms





smartsound CLOUD

Smart Parking & BLE Tags
Smart Waste Management
Environmental Sensors
AI based web app for Clean Air Route
Smart Cameras & LPR
Infopoints
Smart Lights
Smart Water Metering
Smart Sound measurement
Big Data Analytics

LOT 2

Hardware

- Smart Lighting (250)
- Smart Waste (140)
- Smart Parking (305)
- Info-points (19)
- Environmental Stations (6)
- Drone equipped with 3D lazer scanning capabilities.
- Camera system that detects movement for people & vehicles.

Software

- Award winning NOKIA's Integrated Operating Center (IOC).
- Yodiwo Platform (middleware).
- Clean Air routing (available via Smart Nicosia's website)
- BI Analytics Platform.
- Waste mobile app.
- Parking mobile app.
- Novoville (Citizen Engagement).
- Digitalization of the irrigation network (under development)

Use Case 1

Project Proposal: **Wellness Route**

Problem Statement

Noise pollution in combination with air pollution can have severe consequences for citizens. In urban areas, constant exposure to traffic, construction, industrial noise and polluted air is unavoidable. There is a lack of accessible, data-driven tools that can provide citizens with a “best wellness route” option, that will allow citizens to choose the best route in order to avoid noise and air pollution.

Solution

Create an application that will utilize the data from the 6 environmental stations and create an AI driven wellness route (live map routing) that will allow the citizens to choose the best route with less noise and air pollution. Supplementary the application will provide live alerts to citizens, once the temperature or other pollutant factors exceed recommended values.

Data Sets

Open Data provided (API) - on an hourly basis - from the 6 environmental stations.

Use Case 2

Project Proposal: **Carbon footprint tracking**

Problem Statement

Carbon footprints are often abstract, difficult to calculate, and even harder to track over time. There are no valid/existing calculations for Nicosia or if there are some calculations these are often one-off, generic, and disconnected from actionable steps. We need a solution that makes tracking and reducing carbon footprint continuous and integrated into daily decision-making.

Solution

Create a real time tracking application, of the carbon footprint in the major areas of Nicosia. This will provide the citizens as well as the Nicosia's Municipality Management, the carbon footprint and provide a means in creating policies for low emission zones. Data can be provided through the utilization of the cameras that are placed in major locations of Nicosia in combination with the environmental stations. Supplementary, the application will be also able to identify the area with the highest carbon imprint in terms of the dates/times.

Use Case 3

Project Proposal: **Parking Insight**

Problem Statement

The Nicosia Municipality, needs to keep track of the occupancy percentage reflecting the utilization of its on-street parking spots. There are the following categories reflecting the available on street parking spots: 30 min, Chargeable, Disabled, Supply & EV.

Solution
Create an interface that will incorporate the data analysis as follows:
Occupancy Percentage of all Disabled, Supply, EV parking spots: identifying the spots with the highest occupancy rate and the ones with the longest occupancy duration. All 3 subcategories must be displayed separately.

Occupancy percentage of all 30 min (allowed parking timeframe) and identify the time limit violations per parking spot, reflecting the overdue time per case.
Occupancy percentage on chargeable parking spots. This will assist in cross-referencing the revenues acquired from these parking spots, in relation to the occupancy rate per spot per case.

Use Case 4

Project Proposal: **Traffic Flow**

Problem Statement

Nicosia is a city that suffers from traffic congestion, especially during pick hours: 07:00-09: 00hrs and 14:30 – 18:00hrs. As a means to ease the congestion issue, an alternative set of diversion routes could accommodate the smooth traffic flow across major areas of the city.

Solution

Create an application that will assist drivers in taking alternating routes, when the congestion rate is high. The calculation of the congestion rate factor will be set by the team as there are various calculations/measurements for road congestion methodologies.

APIs

Open APIs are provided via:

https://nokia.smartnicosia.eu/api-docs/

Related documentation &

Entities will be provided for: Parking, Waste, Environmental, Cameras

Thank You!

https://smartnicosia.eu/