Polish your skills
the smart future of IoT

"the Internet of Things"

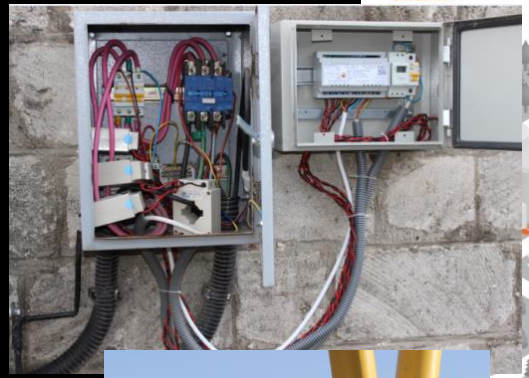
is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

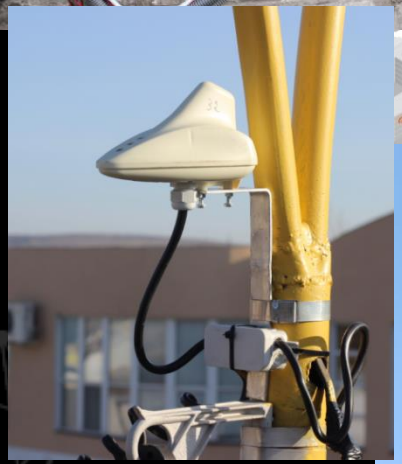
IoT Solutions

01 | Street Lighting Management Solution

Benefits:

- ✓**Reduce energy consumption:** reduce electricity costs by 40–60 % (on/off, dimming).
- ✓**Reduce maintenance cost**
- ✓**Make citizens feel safer**
- ✓**Monitor and analyze performance of lighting systems** detailed electrical parameters, advanced analytic report tools
- ✓**Maintenance scheduling**

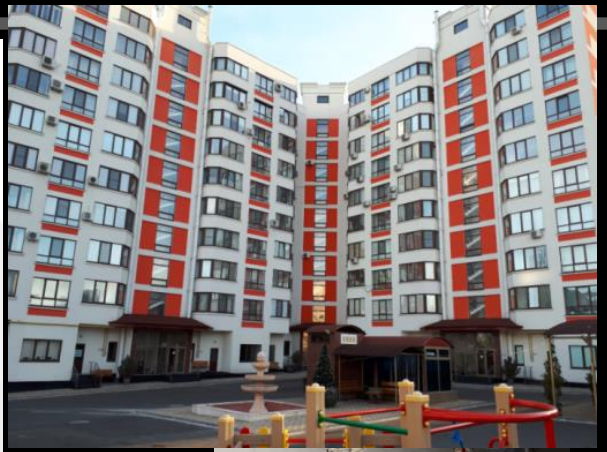


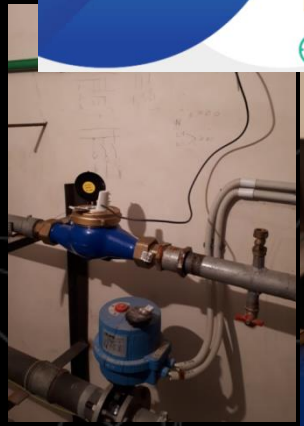


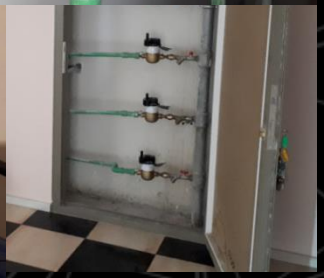
02 | Smart Metering solution

Benefits:

- ✓ **Reduce logistic costs** - remote reading of utility meters using LoRa technology
- ✓ **Reliable & Efficient** – battery life ~10Y
- ✓ Leak Detection
- ✓ Billing **integration**
- ✓ **Reduce** human **error** rate
- ✓ Reduced Estimated Bills (share quota)







Fast Track Change Program

greencitylab

environment monitoring solution

Temperature
Pressure
Humidity
PM1.0
PM2.5
PM10
VOC
Noise level
Ozone
Carbon Monoxide
Sulphur Dioxide
Nitrogen Dioxide

5 monitoring stations for the most 5 crowded **CHISINAU city** places

public online Dashboard with Quality Control KPIs …

04 | Smart Waste Management Solution

Inefficient collections

Overflowing bins

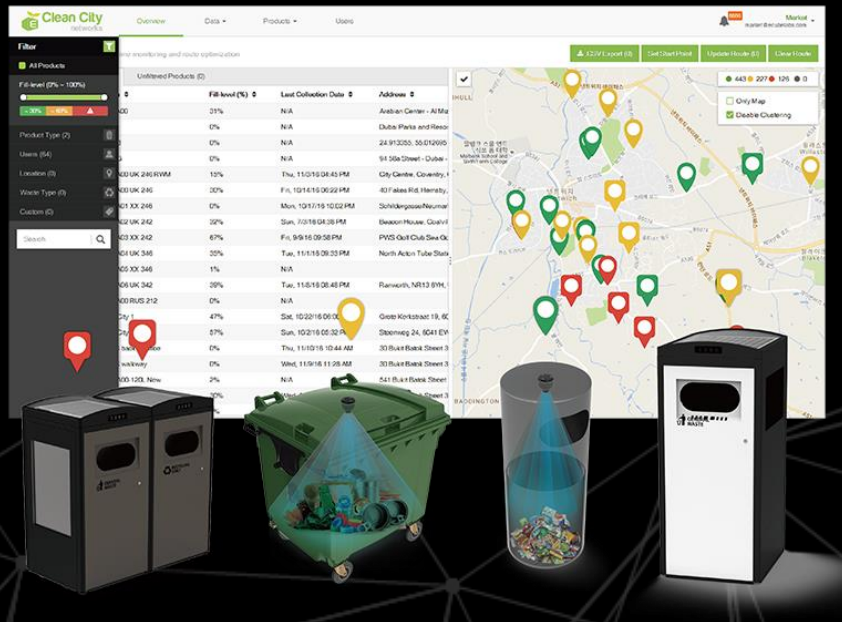
Lack of information

High emissions

Insects and vermin

Benefits:

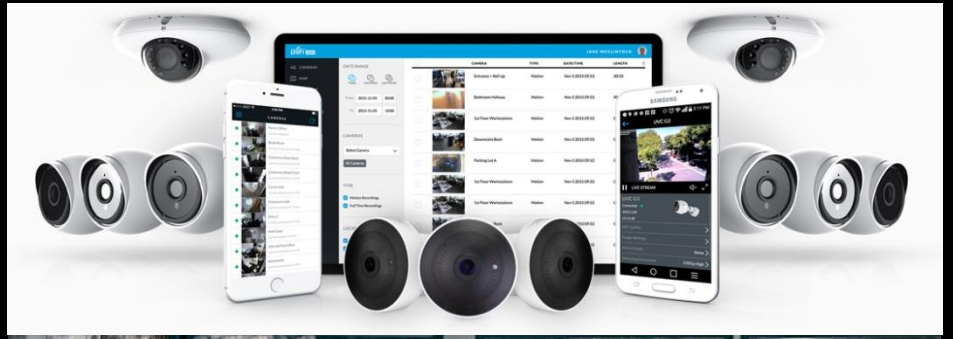
- ✓ **Reduce logistic costs:** (up to 40%) in fuel and overall waste collection costs.
- ✓ **Be easy to use:** the sensors are easy to mount in the bin and require minimum maintenance.
- ✓ **Be fully automated:** not affect the usual work processes.
- ✓ **Help environment protection:** preventing pollution of the environment.



05 | Videosurveillance solution

Benefits:

- ✓ Physical protection of data collected in specialized data-room
- ✓ Real-time monitoring and faulty alerting
- ✓ Instant/remote access to video recordings and equipment
- ✓ Monitoring platform with extended functionalities
- ✓ The possibility of integration, practically of any type of video monitoring cameras
- ✓ Reduced investments in the implementation of the video monitoring solution

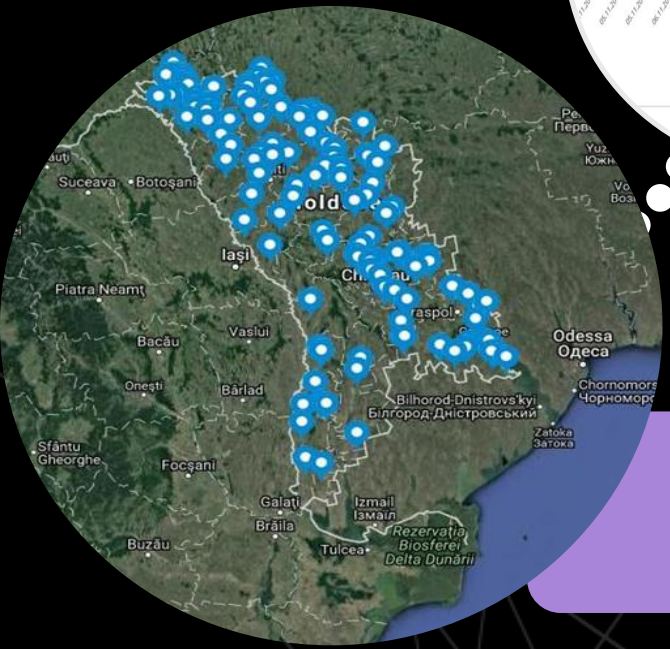


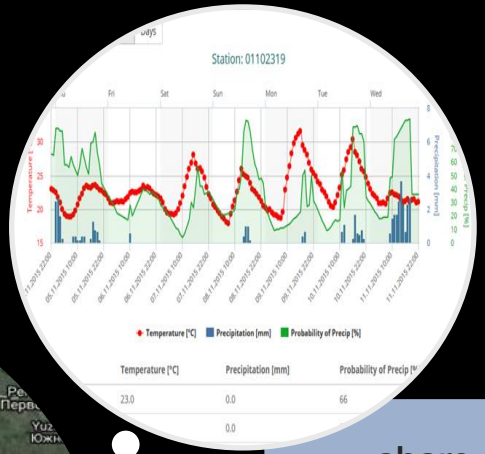
06 | Smart parking solution

Applications & benefits:

- ✓ Parking access control
- ✓ Access of authorized cars (tag, plate number, etc.)
- ✓ Parking place manager (free / occupied, # places available)
- ✓ Parking guide
- ✓ **Reduce pollution:** each search for a parking spot impact of 1.3 kilograms of CO^2 emissions.

07 | Smart Agro





share of data from existing stations infrastructure

national presence with 140 meteo stations

Live Objects Discovery

...build & test

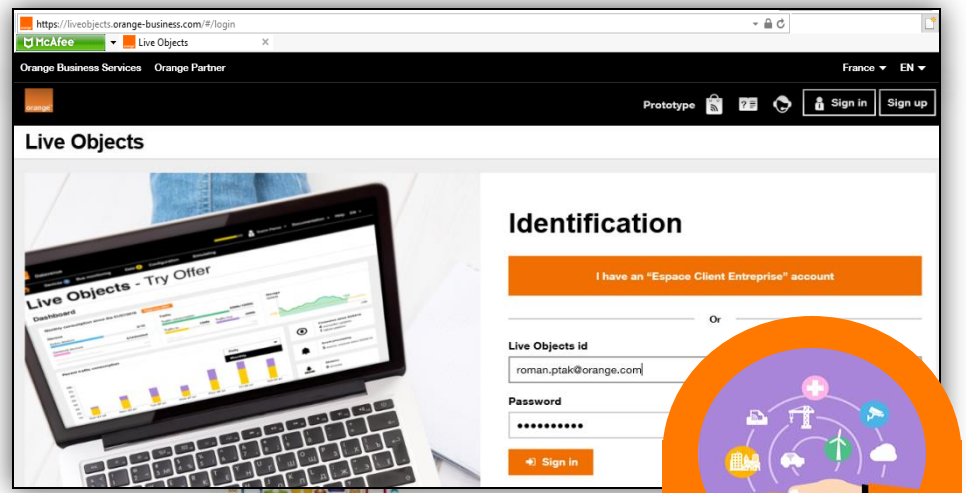
Application Developers

- Main drivers of value in new IoT world
- Key to building our ecosystem
- eg software developers, solutions providers

IoT Systems Integrators & Service Providers

- Integrators and Service Providers looking to add IoT platform and connectivity into their solutions

[Go to https://liveobjects.orange-business.com/](https://liveobjects.orange-business.com/)

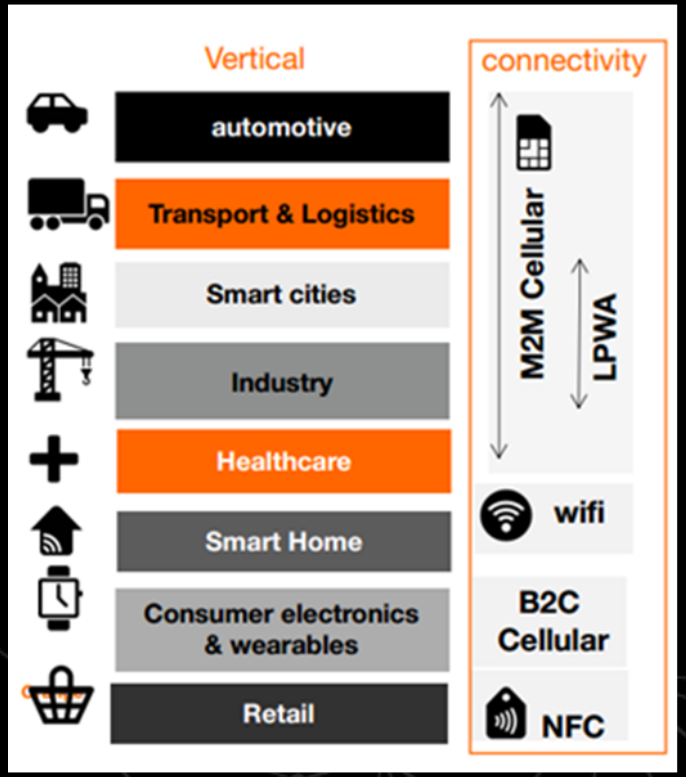


Live Objects

- Device connectivty
- Device management
- Data Management
- Application management
- Security
- Visualisation

Moldova IoT Community is...Orange

09 | Orange Moldova capabilities



4G	99.30% of territory 3G coverage 89.40% of territory with 4G
3G	98.40% of population 3G coverage 96.90% of population with 4G
FO & TV	Fixed network presence in all cities with fixed internet, voice & TV

5G | NB-IoT | LTE-M

IoT Expert profile

IoT Ecosystem

orange™

a complete range of customized IoT services*

1- Select & develop (objects)

- Smart objects (personal/ home, entertainment)
- Connectivity module and sensors
- Module and objects testing expertise

2 – Connect (relevant connectivity)

- Mobile (2G, 3G, 4G), Wi-Fi, FO
- LoRa, SigFox, NB IoT (LPWA)
- W-Mbus, ZigBee, Bluetooth
- Local Gateways

3- Manage (data mgt platform on premises or SaaS)

- data collection, storage
- Events and notifications processing
- telecontrol functions

4 - Control (Intégration)

- Mobile app
- Business app./Dashboards
- integration with ERP/CRMs/BI integration

11 | Skills development vs. IoT industry trends

A. is expected that by 2025 the number of smart devices will increase to 41.6 billion . For comparison, in 2016 there were only 6.4 billion

B. set up proper infrastructure for the next generation of IoT devices with a heavy load of 79.4 ZB data (1ZB=1bln. of TB) –> 5G/LTE-M

C. the world of IoT with a huge variety of sensors and data collectors integrated vs. the most bandwidth-heavy applications of IoT (video surveillance -> live feeds)

D. the infrastructure to be ready to save all this data

E. isn't only a huge improvement over the next six years – it's a very real force of nature that will redefine how we live our daily lives.

F. Market will looking for people to deploy and mange networks, integrate devices and soft, soft dev., IoT testers (device monitoring and soft/app. testing), to run cloud infrastructure, business and IoT solutions architects

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Thank you