Smart City Open Mall

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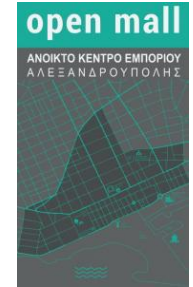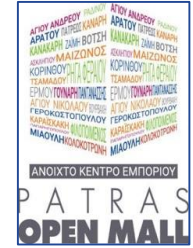INFOCOM MOBILE CONNECTED World

Mall services

- Parking-Bus

- Environment
- Cleanliness
- Lighting

- Information

- WiFi

Transform an Open Mall to Smart

Inform visitors where to park – Smart Parking
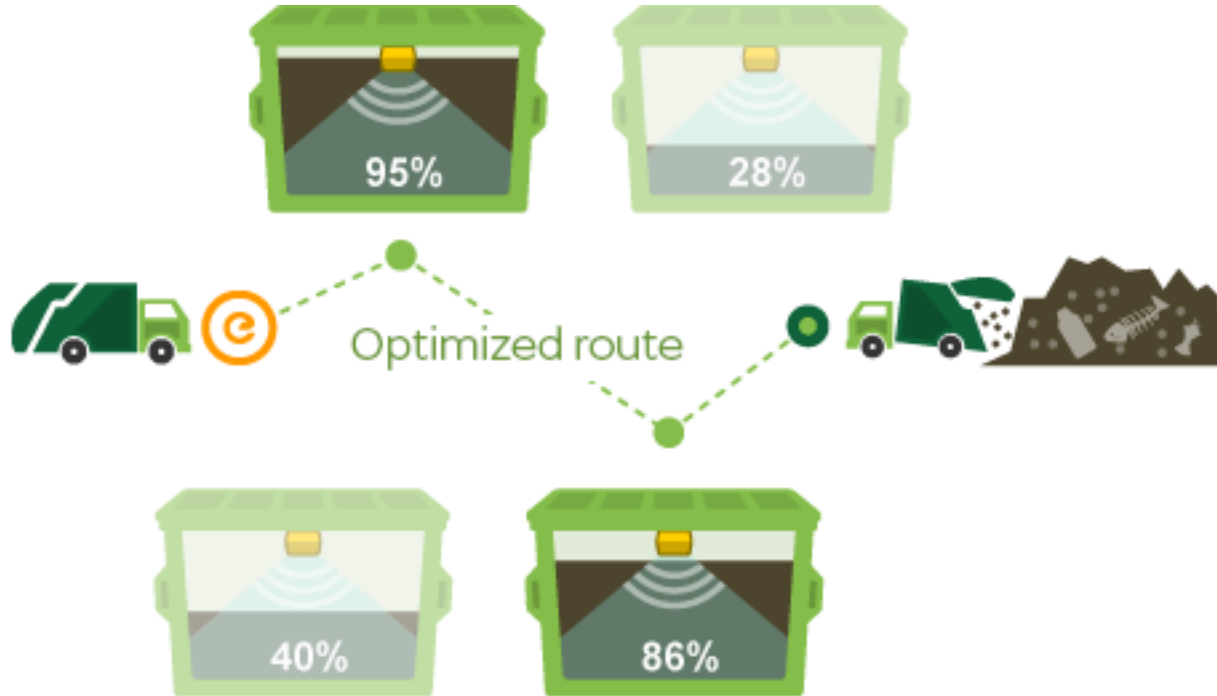
Smart Traffic & Transportation

Offer Light Quality with Smart Lighting

Cleanliness with Smart Waste Management

95%

28%

Optimized route

40%

86%

Information points – Remote agents

Multichannel approach - Enabling additional opportunities for citizen engagement

To Engage, Inform, Protect and Revitalize

Emergency Notifications
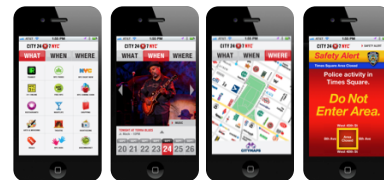
Smart Screens Localized and Personalized

Empowered Small Businesses

Real-time, Location-Aware Urban Apps

INTERACTIVE PLATFORM:
Integrates information from open government programs, local businesses, and citizens

Monitor Environmental conditions

Measure NO, NO2, SO2, O3, PM 1, PM 10, PM 25, C, Rh, Db

Sample Air Every 2 Minutes

Easy Installation using Existing Power Sources (5w)

95% accuracy against Air Quality Monitoring Stations

City WiFi

More on your bottom line

It's been proven time and time again, people will spend **more time and more money** in a venue that offers reliable, free WiFi.

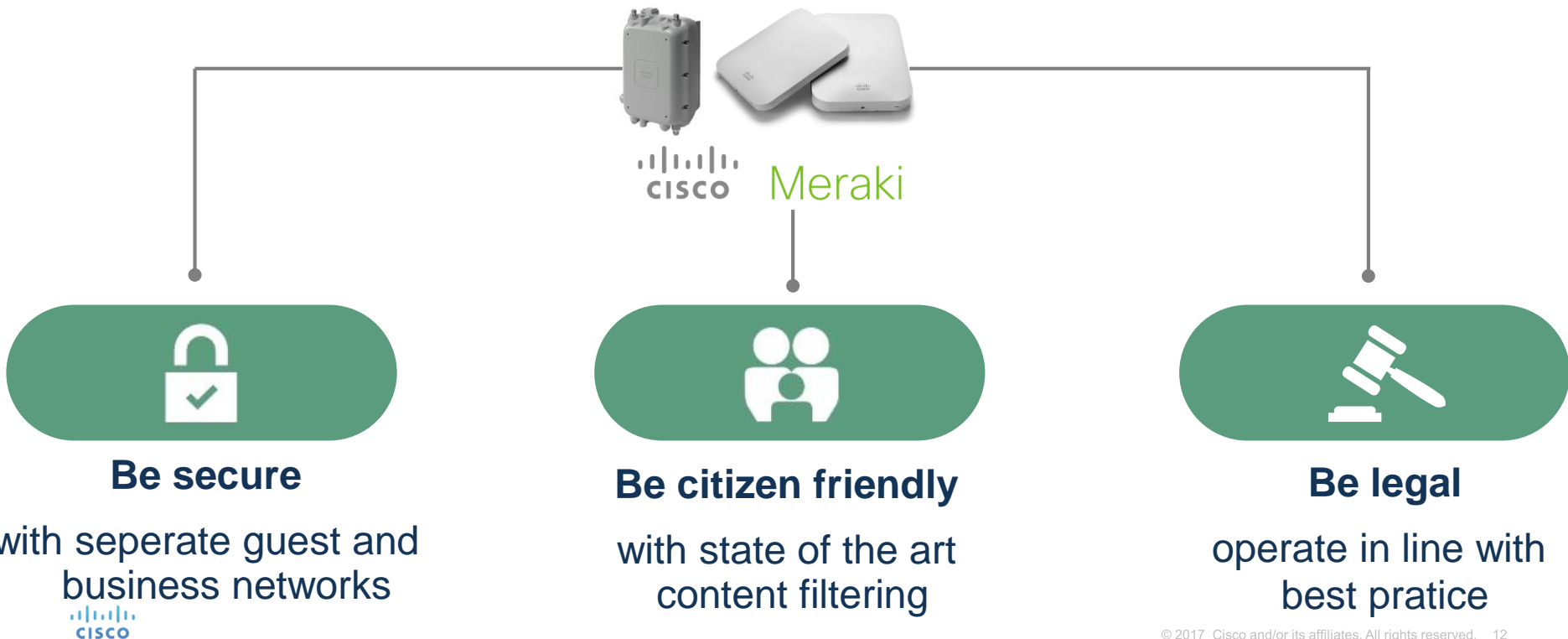**78%** preferred venues that offered free guest WiFi

77% would stay longer in a location that provided WiFi

63% said they are more likely to spend additional money there

Cisco WiFi solutions

Be secure

with seperate guest and
business networks

Be citizen friendly

with state of the art
content filtering

Be legal

operate in line with
best pratice

Data analytics - Visitor's profile and behavior

Activity visualized in a pedestrian zone
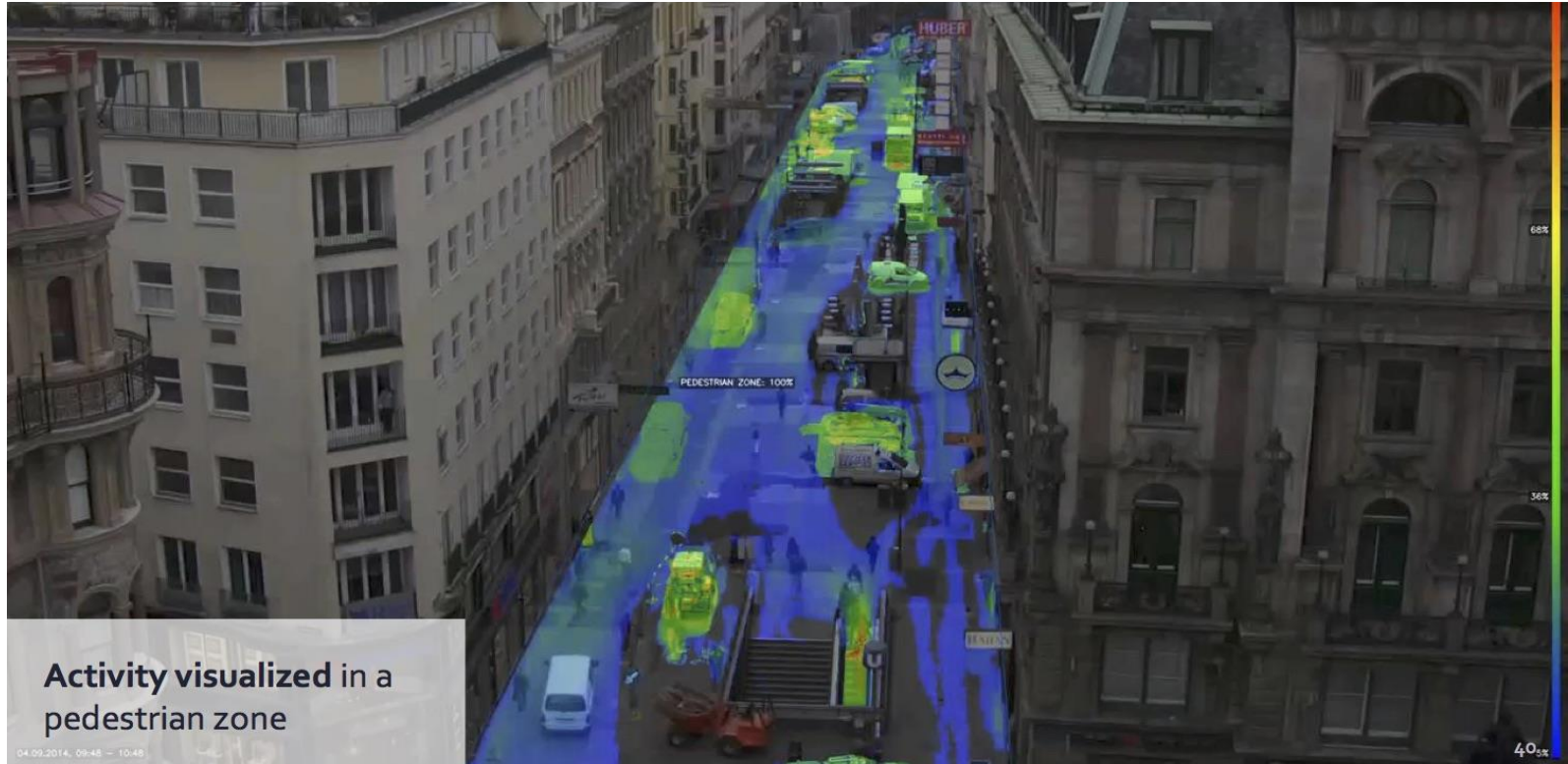
User login process

Customized splash screen

- Information about the **open mall**
- Advertising and promotions
- Local information
- Company/State/Local government/etc

Imagery
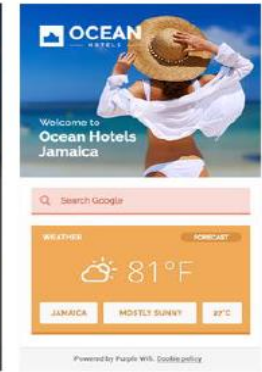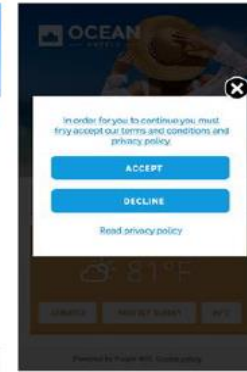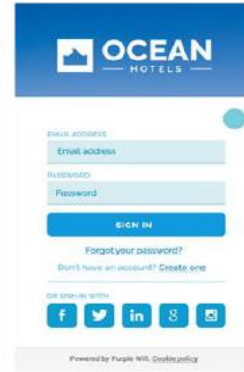
Login using Social Media account or
Other ways (email, registration etc)

Collect data

- From social profile

- Statistics

- Location data

- Device data

Analyze data

Profile your customers

Visit frequency & behavior

Actionable insights

Local companies activities based on City Data

- Visit Frequency & Behavior
- Buying Behavior
- Social Media Actions
- Surveys
- Reaction on marketing campaigns
- Newsletter
- Loyalty Program

cisco

Social Media Data analysis
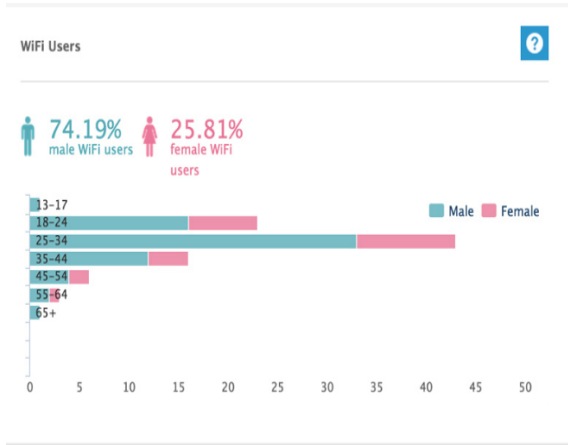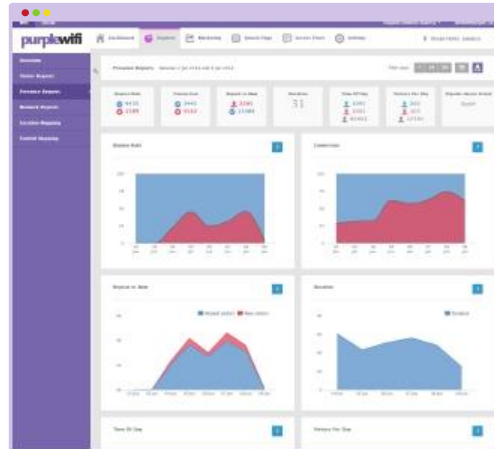

USE CASES

City Infrastructure   Safety Security   Urban Mobility   Citizen Enagagement

SAMPLE ANALYTICAL SCENARIOS

Crime rate
Find out the correlation of crime rate in an ally with the lighting condition at the time of crime.

Energy
Measure and monitor the consumption of energy in buildings to better manage the consumption.

Environment
Understand how atmospheric conditions like humidity, light etc. affect consumption of a resource.

Parking
Determine wait time to get a parking spot along with the peak and non-peak hours for overall parking lot.

ATLANTIS ANALYTICS

mtuity
A PARADIGM COMPANY

mail: info@mtuity.com

City Data sources and Applications

MOBILE APPS

APPLICATIONS AND URBAN SERVICES

- Transport Management
- Water Management
- Parking Management
- Lighting Management
- Waste Management
- Environment
- Safety and Security
- Traffic Management
- Monitoring/Command Control Centers

Smart+Connected Digital Platform

Wireless WAN (WiFi, 3G/4G/5G/LoRaWAN)

Public/Private WAN

Internet

Smart+Connected Wi-Fi and Multi Sensor Network

SOURCES

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VEHICLES
- Vehicles

BUILDINGS
- Residential
- Industrial
- Commercial

STREET
- Water
- Parking
- Street Lighting
- Waste
- Environment
- People
- Street Furniture
- Safety and Security
- Traffic

Platform for City Data

Parking & Traffic

Utilities

Safety and Security

Environment

Smart+Connected Digital Platform (CDP)
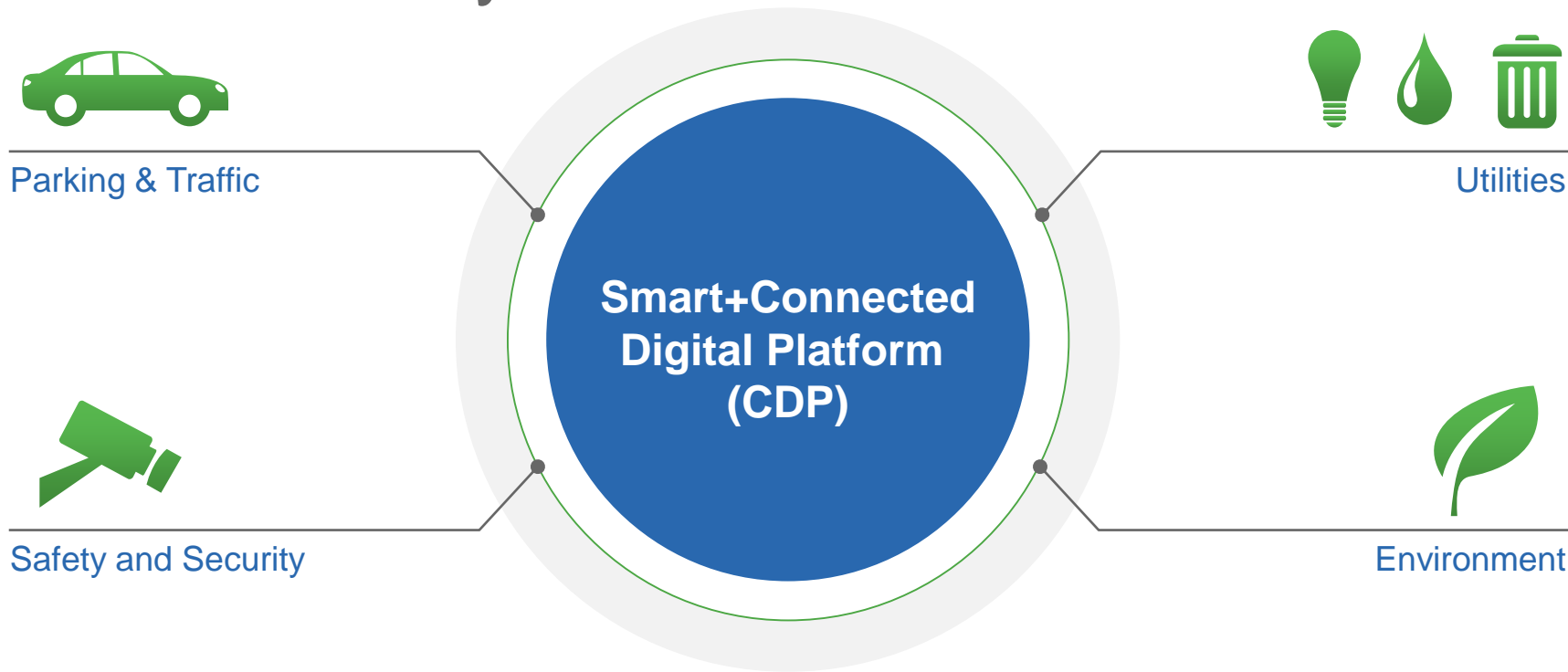
- **Collects and integrates sensor data** from multiple sensors and sensor types
- **Normalizes** the aggregated data
- Exposes **APIs** through which independent software vendors (ISVs) and city applications

03:13 PM
Tuesday, May 2

Place_de_la_Nation

CISCO

Nation
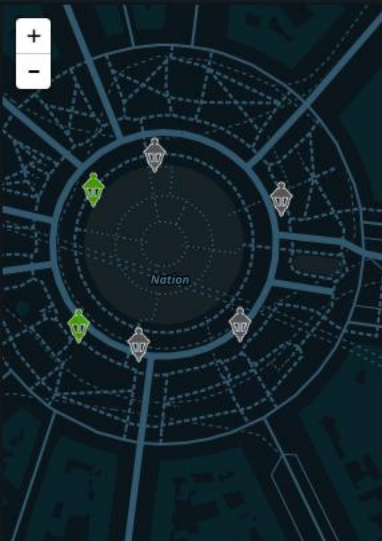
Lighting

Parking Occupancy

0%

OCCUPIED

Open Spots
10

Parking

CO_2 NO_2 PM_2P_5

PM_{10} SO_2 O_3

AQI Temperature

Noise Lux

Nitrogen Dioxide

≤ 80 ppm > 80 ppm

Environment

CROWD COUNT CROWD DIRECTION

VEHICLE COUNT VEHICLE DIRECTION

BICYCLE COUNT WIFI

AVERAGE DWELL TIME

Crowd

Waste Management

Health: 100% - Excellent
All systems running optimally

Lighting

Health: 100% - Excellent
All Lots Active

Parking

Health: 80% - Average
All systems running optimally

Environment

Health: 100% - Excellent
All systems running optimally

Crowd

Health: 100% - Excellent
All systems running optimally

Waste Management

CISCO

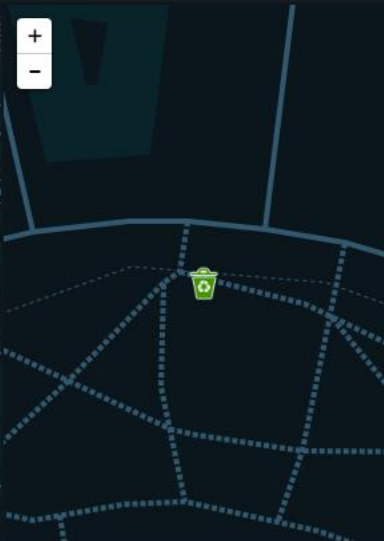# Why Trikala?

➤ A long "smart" story
- 2004: first Greek smart city
- > 15 smart projects (fiber-optic network, metro-wifi, intelligent transportation etc.)
- > 10 EU projects (CITY Mobil, Tele-care etc.)

➤ Emphasis on smart government (since 2015)
- Smart citizen service center 20.000 (call-center, web site, App)
- Internal information systems' deployment (protocol, citizen applications' flow, city council's board management etc.)

➤ Internal re-organization
- smart city unit, quality management, strategic management, open data policy definition etc.

Pilot at City of Trikala

Smart Open Mall services

➢ Smart Parking
  - 25 seats with sensors
  - 20 seats with optical sensor
  - Seats for people with disabilities
  - Mobile app, Payment and enforcement
➢ Smart Lighting
  - 24 LED with motion detector
➢ Smart Mobility
  - Vehicles counting
  - Direction control
➢ Smart Environment
  - Measure ambient quality indicators
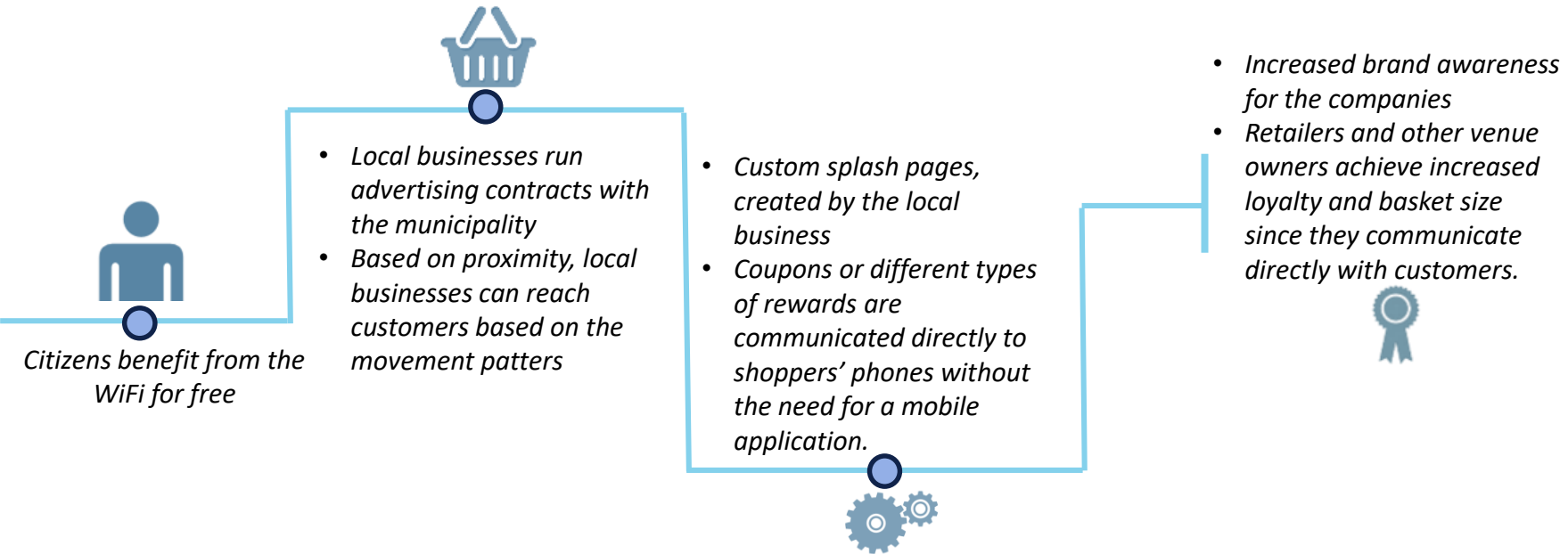
Smart Open Mall services

- ➢ Metro-WiFi
  - • Social Media login
  - • Open platform
- ➢ Open Mall visitors data analysis
  - • In partnership with the local commercial union
- ➢ Health services
- ➢ Triggered marketing

Future :
  - • Smart Waste Management
  - • Information points
  - • Smart Bus stations
  - • Smart bike sharing
  - • Online consultation etc.

Advertisement, Coupons & Rewards

Citizens benefit from the WiFi for free

- *Local businesses run advertising contracts with the municipality*
- *Based on proximity, local businesses can reach customers based on the movement patters*

- *Custom splash pages, created by the local business*
- *Coupons or different types of rewards are communicated directly to shoppers' phones without the need for a mobile application.*

- *Increased brand awareness for the companies*
- *Retailers and other venue owners achieve increased loyalty and basket size since they communicate directly with customers.*