NICOSIA!

A SMART, SUSTAINABLE, ACCESSIBLE Capital City

Nassos Kolyvas
-
Transportation/ Engineer

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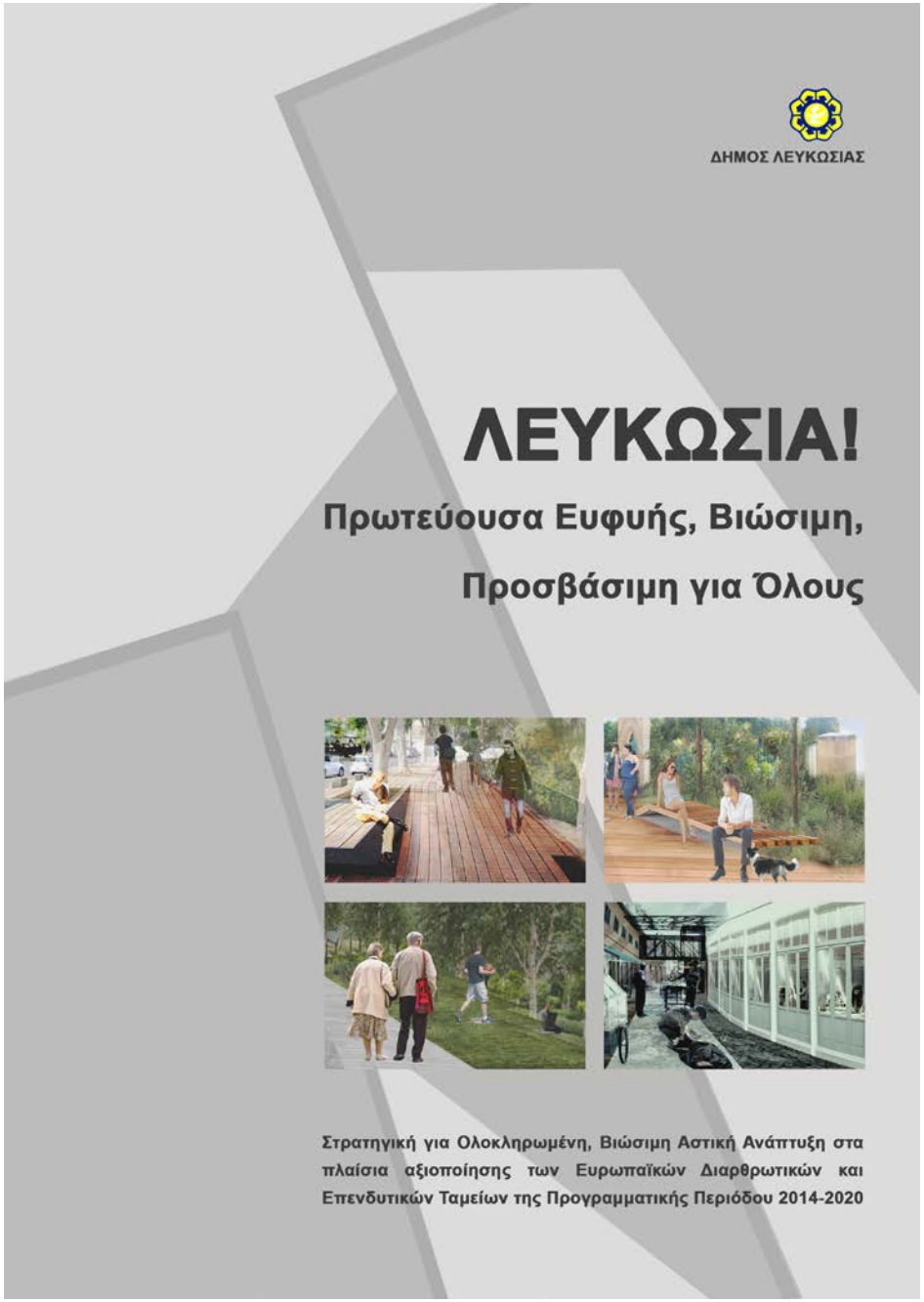

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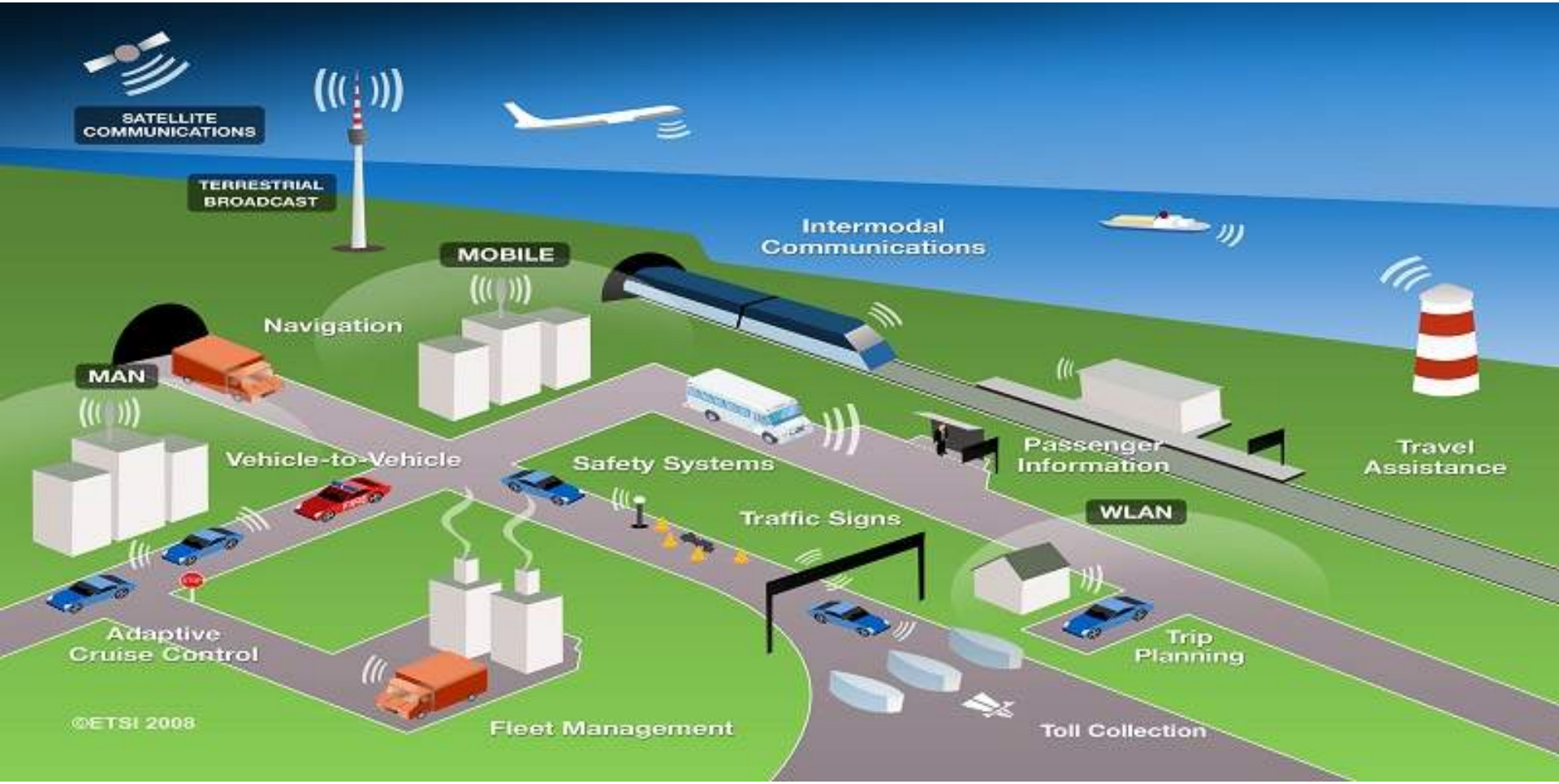
Smart City and Mobility Data

THALES


SATELLITE COMMUNICATIONS
TERRESTRIAL BROADCAST
MOBILE
Intermodal Communications
Navigation
MAN
Vehicle-to-Vehicle
Safety Systems
Passenger Information
Travel Assistance
Traffic Signs
WLAN
Adaptive Cruise Control
Trip Planning
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Fleet Management
Toll Collection

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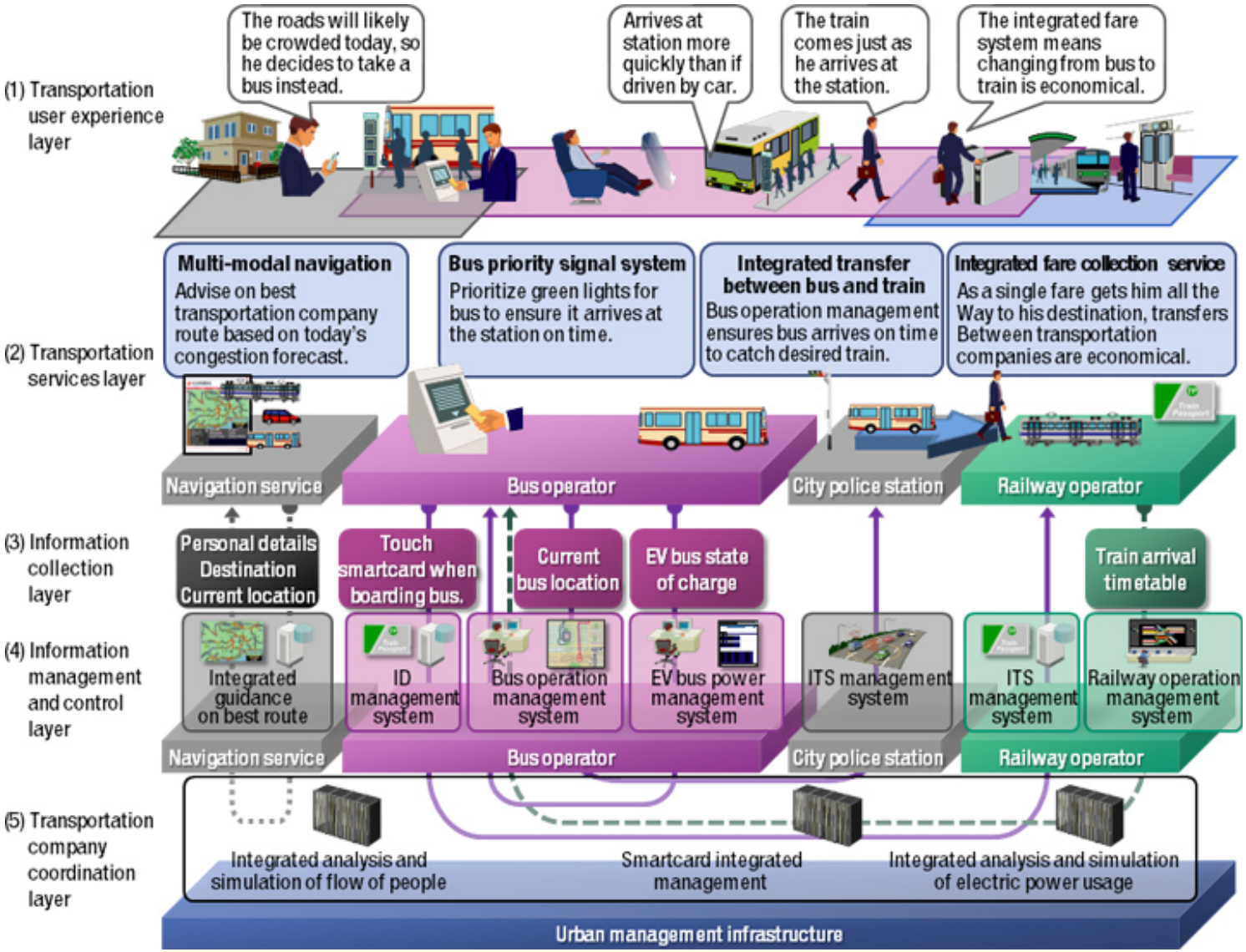
(1) Transportation user experience layer
The roads will likely be crowded today, so he decides to take a bus instead.
Arrives at station more quickly than if driven by car.
The train comes just as he arrives at the station.
The integrated fare system means changing from bus to train is economical.
(2) Transportation services layer
Multi-modal navigation
Advise on best transportation company route based on today's congestion forecast.
Bus priority signal system
Prioritize green lights for bus to ensure it arrives at the station on time.
Integrated transfer between bus and train
Bus operation management ensures bus arrives on time to catch desired train.
Integrated fare collection service
As a single fare gets him all the Way to his destination, transfers Between transportation companies are economical.
Navigation service
Bus operator
City police station
Railway operator
(3) Information collection layer
Personal details Destination Current location
Touch smartcard when boarding bus.
Current bus location
EV bus state of charge
Train arrival timetable
(4) Information management and control layer
Integrated guidance on best route
ID management system
Bus operation management system
EV bus power management system
ITS management system
ITS management system
Railway operation management system
Navigation service
Bus operator
City police station
Railway operator
(5) Transportation company coordination layer
Integrated analysis and simulation of flow of people
Smartcard integrated management
Integrated analysis and simulation of electric power usage
Urban management infrastructure

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Nicosia Smart City Challenges

- **How we addressing the challenges of TODAY and TOMORROW**
- **Transportation is not just about concrete and steel. It's about how people want to live and commute**
- **How we are Coordinating data collection and analysis**
- **Reducing inefficiency in parking systems and payment**
- **How are we optimizing traffic flow on congested arterial streets**
- **Limiting the impacts of climate change and reducing carbon emissions**


East Moat
Eleftherias
Bridge
West Moat
Parking 150 cars

Regeneration of the ringroad (Stasinou ave)

Budget: 15.6 mil €

Makarios Avenue – Commercial Triangle

Budget: 28.8 mil €

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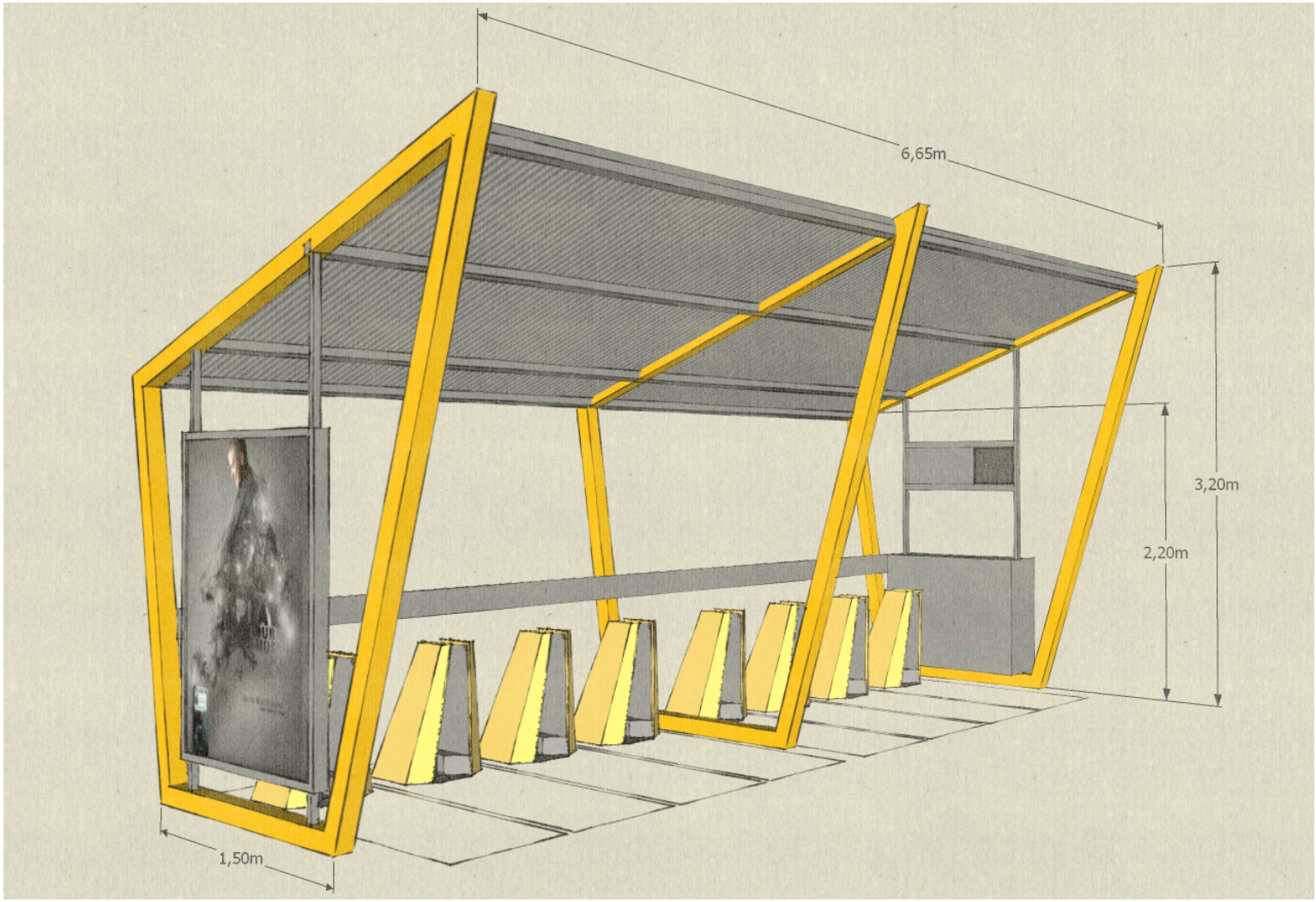
Smart Cycling HUBs



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Efficient Smart Bikes

Smart Digi Lock

- NFC technology
- Built-in GPS / GPRS
- Data information of geographic location of the bike
- Real time information of lock and bicycle status
- Built-in motion sensor

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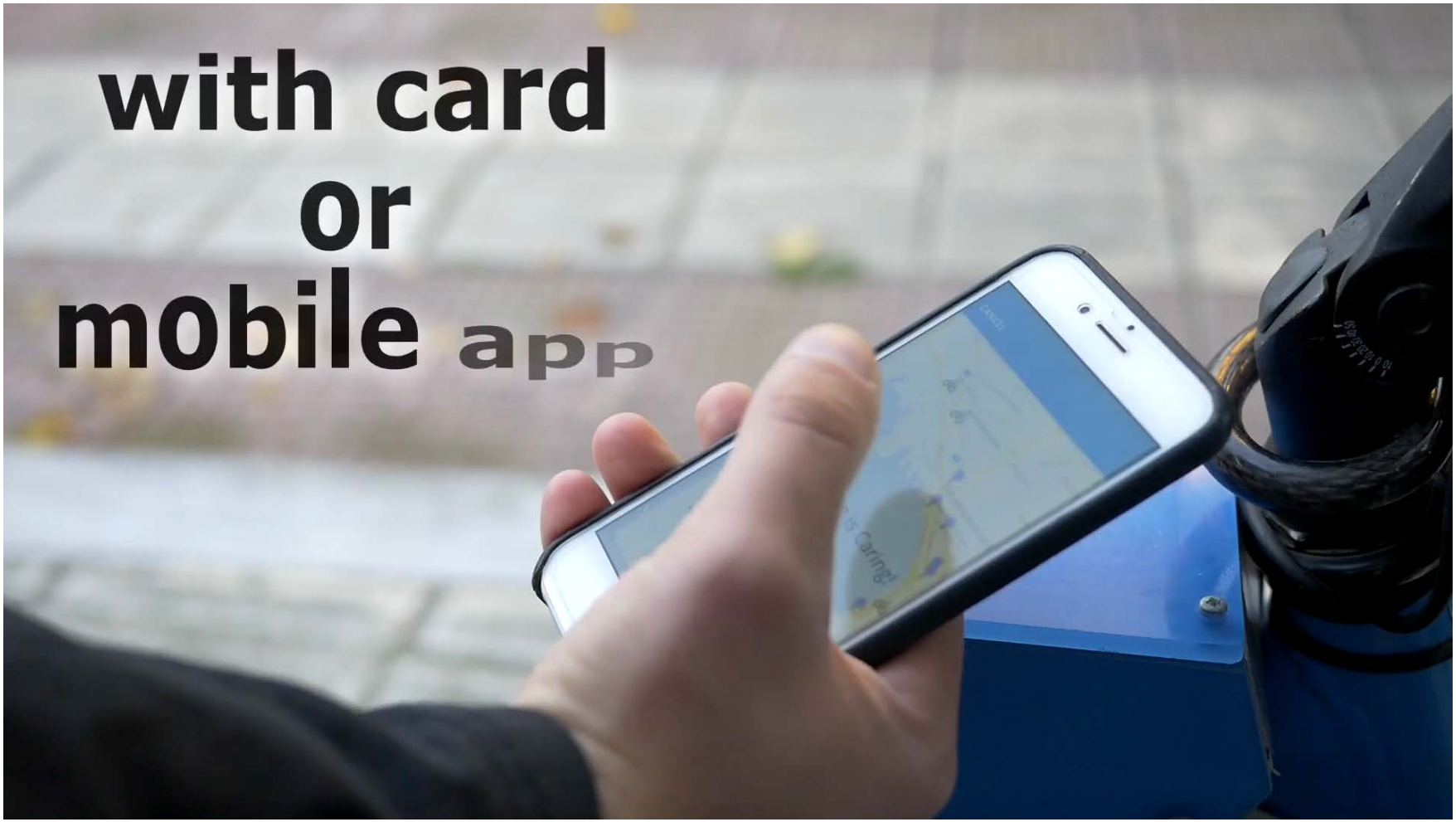

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Efficient Smart Bikes : Types of Bicycles

1. City Bicycles

- Suitable for use in the city
- Lightweight aluminum frame
- At least 3 gears built into the rear hub
- Dynamo Hub on the front wheel
- Front and rear mudguards
- Front and rear lights
- Lock to secure the bike between leases

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Efficient Smart Bikes

2. Electrical Bicycles

- Suitable for use in the city
- Built-in GPS / GPRS
- Built-in motion sensor
- Maximum number of recharges : ≥700
- Maximum recharge time: Up to 5 hours
- Maximum autonomy with fully charged battery: At least 50 km
- Maximum top speed: 25km/h
- Maximum motor power: 250Watt

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Efficient Smart Bikes

3. Disabled Bicycles

- Fun dual rider ability
- Equipped with crank and sprocket system
- Allows caregiver or parent to join in the fun
- The rear rider has full control of the bike

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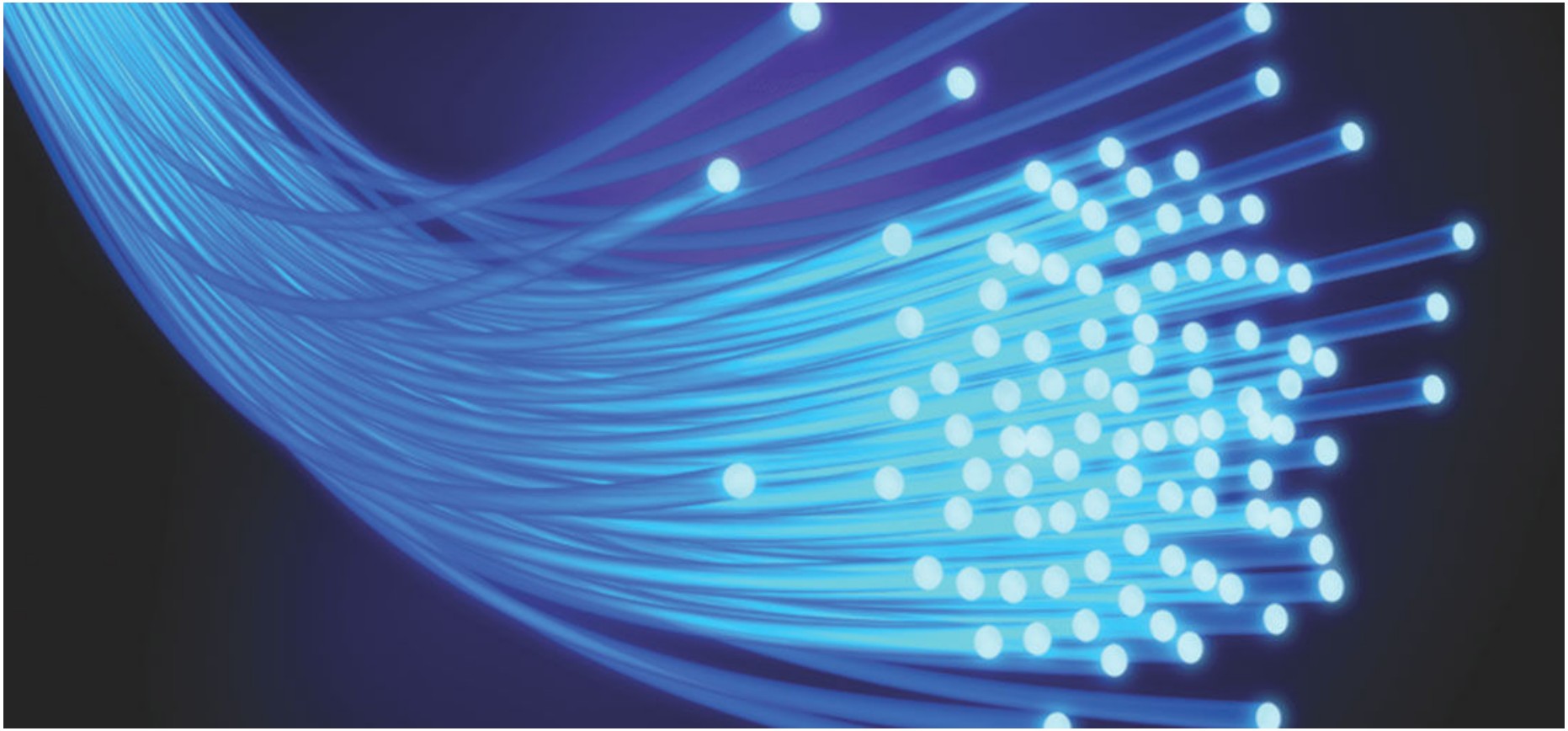

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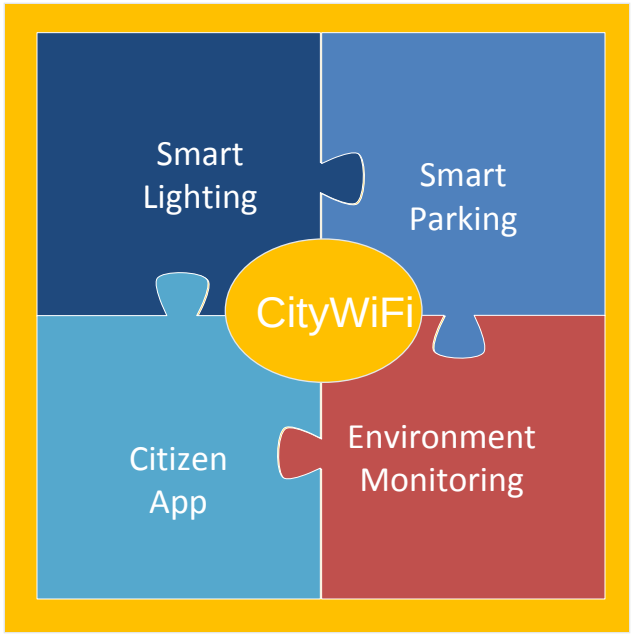
5 Concepts



Smart Lighting

Smart Parking

Citizen Smartphone App

- An App to share civic complaints and to allow City to listen and respond.

City WiFi

- Provide WiFi to bus-passengers, pedestrians, tourists and shop keepers.

Environment Monitoring

- Measure and Broadcast environmental conditions

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Citizen App

Smart Phone App

Scope: An App το Share Civic Complaints and to allow City to Listen and Respond , can also show Utility Places of Interest (eg, recycling), and has ability to broadcast announcements to subscribers

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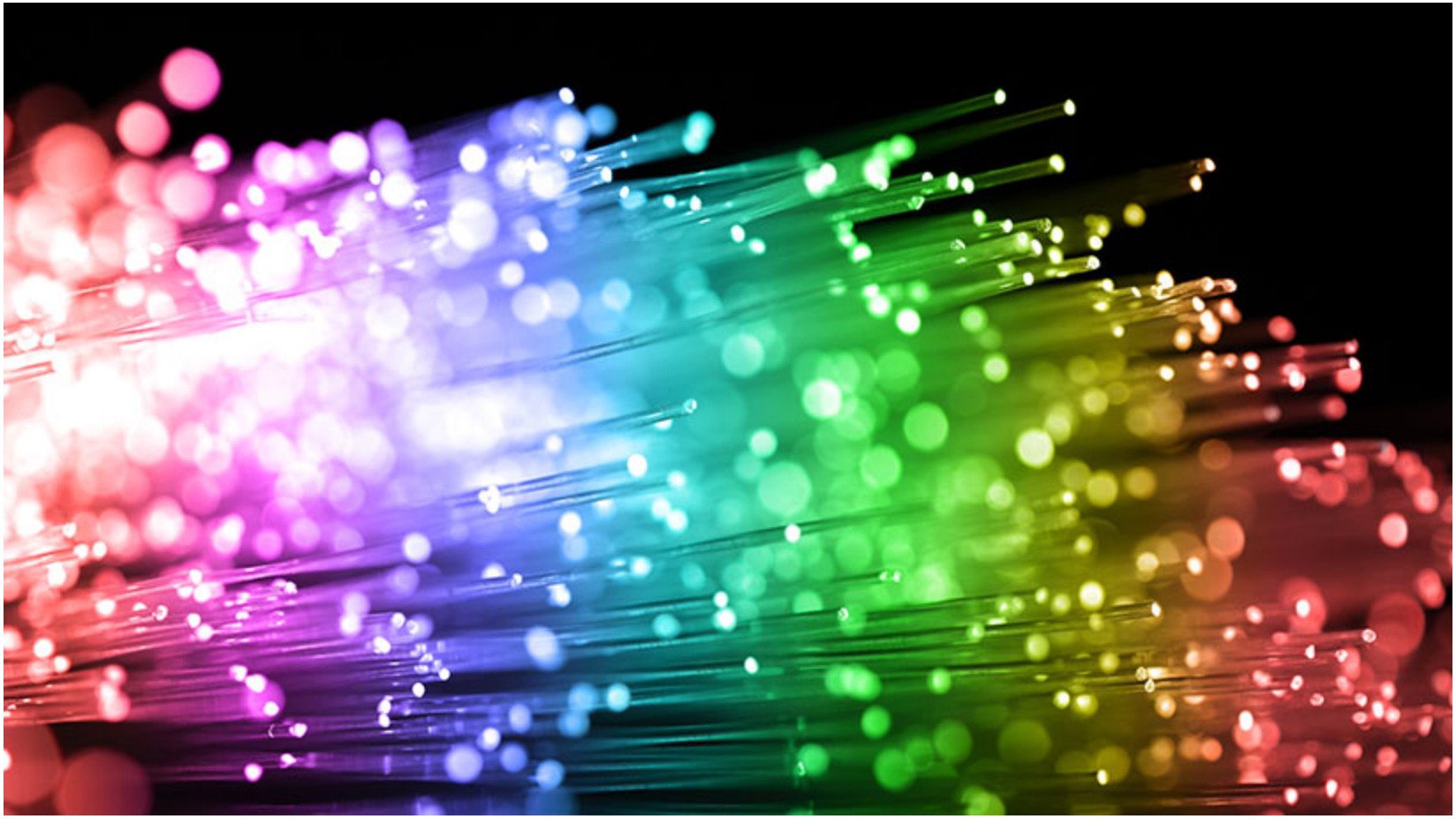

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Targets

- Increase use of digital information and controls technology to improve reliability, security, and efficiency.
- Dynamic optimization of grid operations and resources, including automatic generation control
- Development and incorporation of demand response, demand-side resources, and energy-efficiency resources
- Deployment of `smart' technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation
- FTTH/FTTB
- Integration of `smart' appliances and consumer devices

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The Internet of (Things) Everything

Turning Big Data into BIG Opportunity

INTERNET OF THINGS

=

connection of physical devices to the Internet

INTERNET OF EVERYTHING

=

connected devices that autonomously act based on real-time data

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Thank you / Σας ευχαριστώ.