

Smart Cities

Serata evento





Smart City

- > Capire cos'è una smart city
- > Lasciamoci ispirare
- > Facciamo domande critiche e costruttive
- > ...

Cos'è una Smart City?

La città intelligente è un insieme di strategie di pianificazione tese all'ottimizzazione e all'innovazione dei servizi. Questo per mettere in relazione le infrastrutture materiali delle città «con il capitale umano, intellettuale e sociale di chi le abita» grazie all'impiego diffuso delle nuove tecnologie al fine di migliorare la qualità della vita e soddisfare le esigenze di cittadini, imprese e istituzioni.

Obiettivi generali delle Smart City

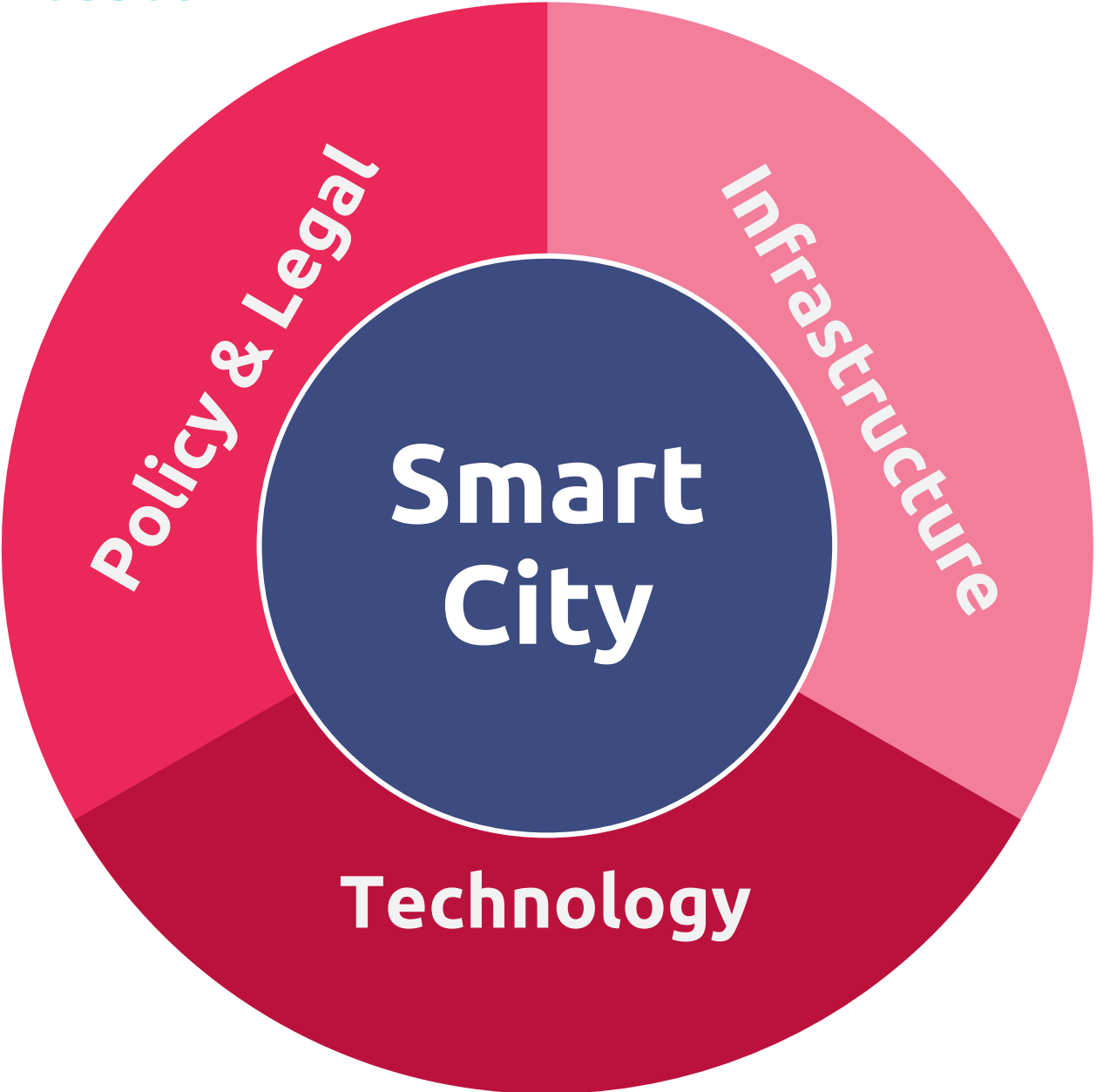
- > Miglior qualità di vita
- > Migliore sostenibilità
- > Meno emissioni
- > Meno rifiuti
- > Un migliore bilancio energetico
- > Migliore ed efficiente accessibilità a servizi (pubblici e privati)
- > Meno burocrazia
- > Migliore accessibilità (mobilità)
- > Più spazio disponibile
- > Spazi verdi e comuni

Smart City: come arrivarci?

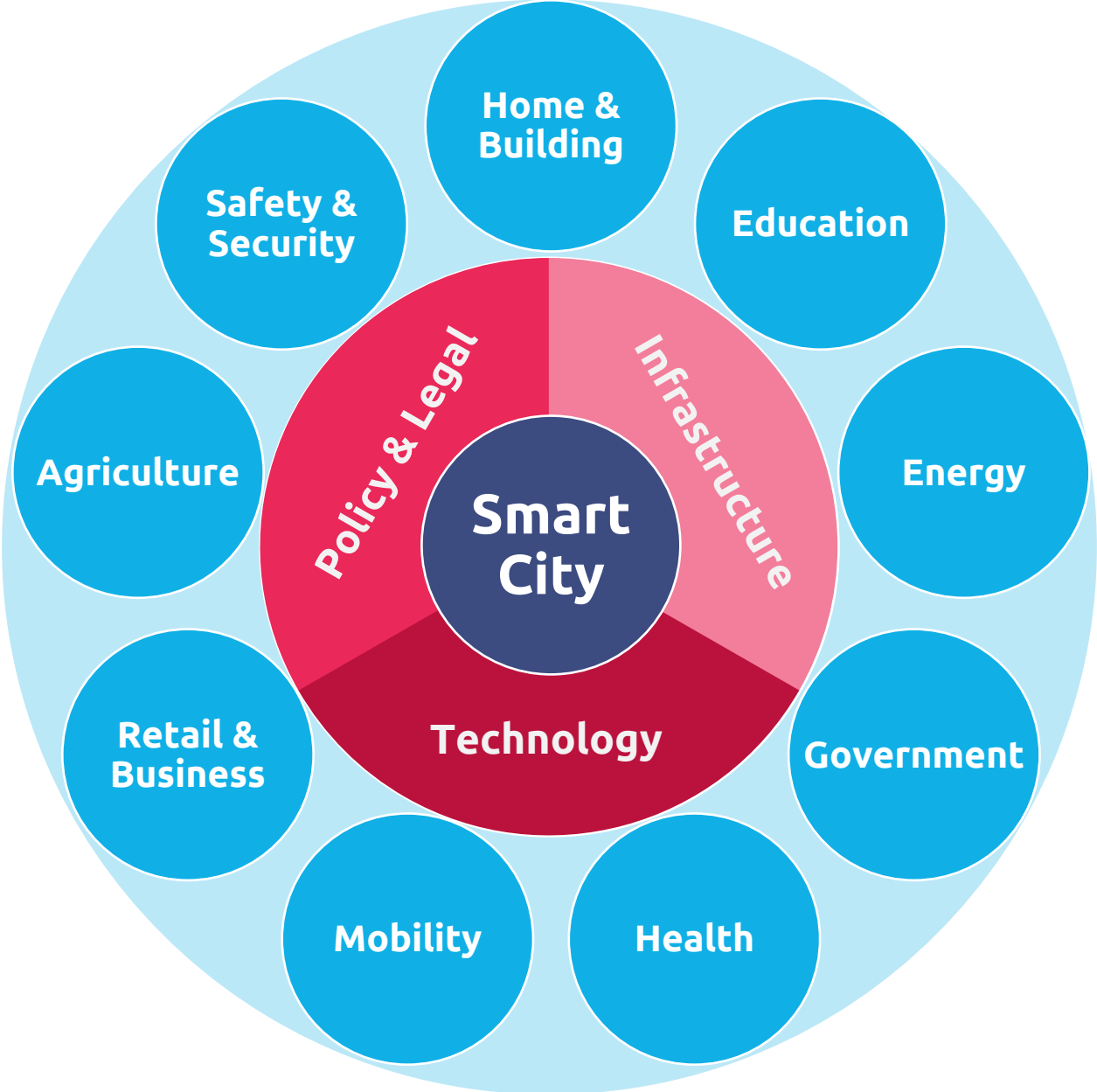
**\$ Sono necessari
grandi
investimenti \$**



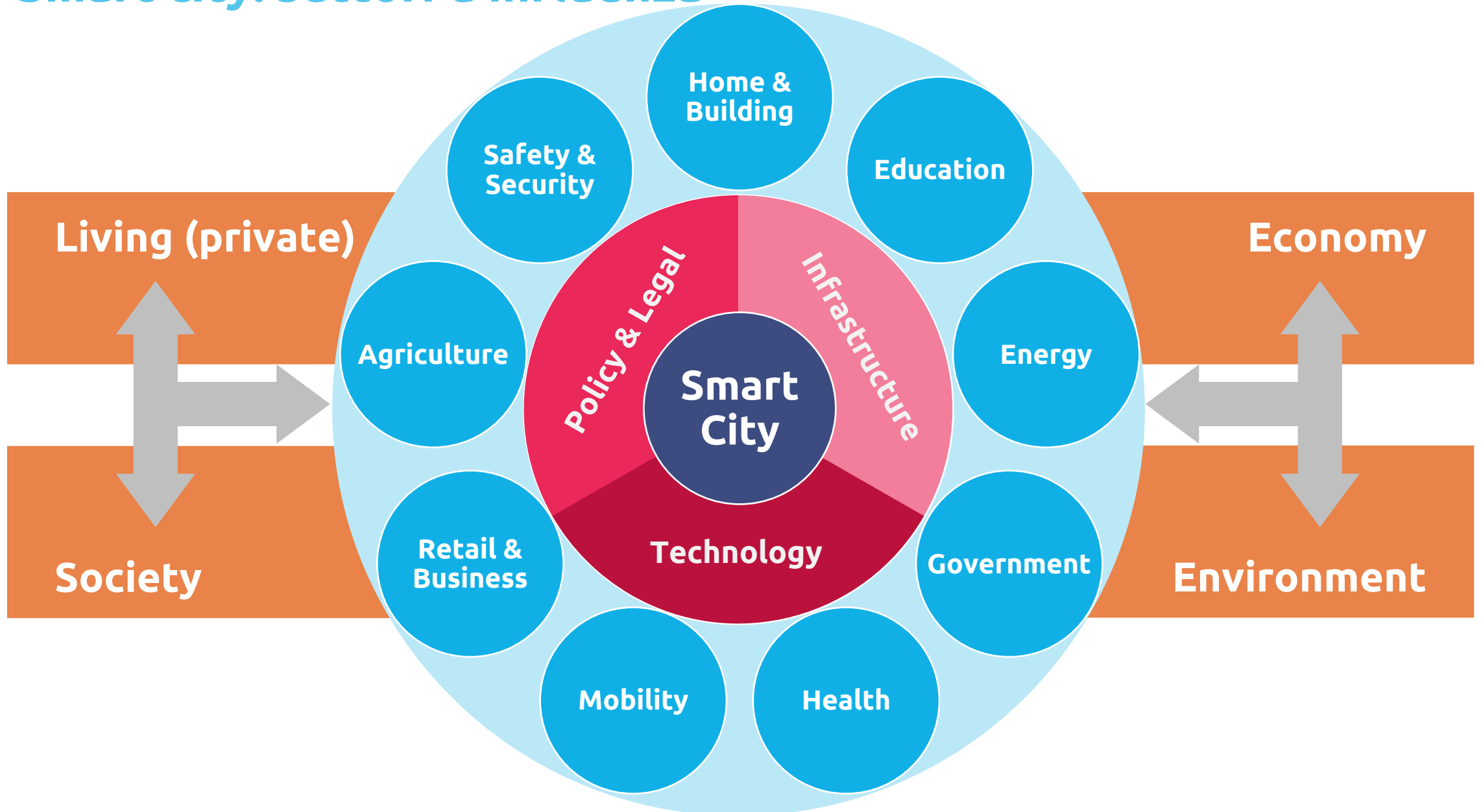
Smart city: contesto



Smart city: elementi



Smart city: settori d'influenza



Smart home & building

Topics & applications

Heating, ventilation and air conditioning (HVAC)

Air quality control

Lighting control system

Safety & security

Occupancy-aware control system.

Indoor positioning systems (IPS)

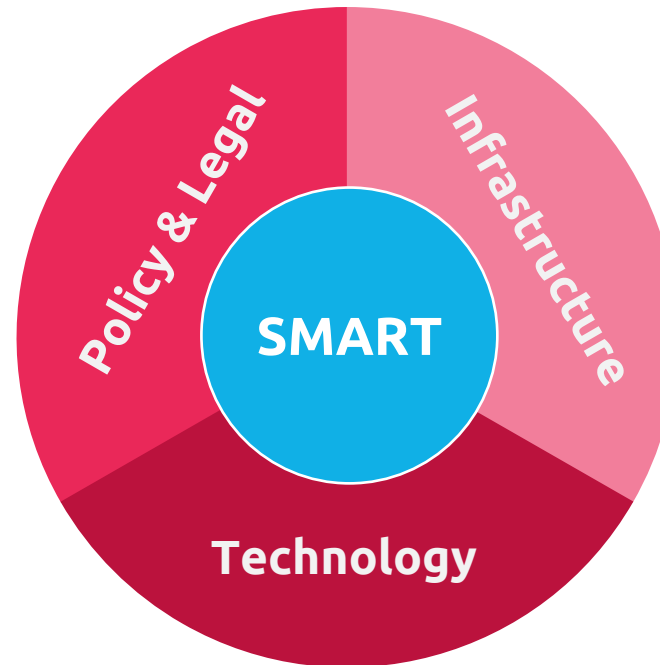
Appliance control and integration

Home robots

Home automation for the elderly and disabled

Pet and Baby Care

Smart Kitchen and Connected Cooking



Topics & applications

Crowd flow management

Elevator & escalator adaptive system

Fresh water collecting system

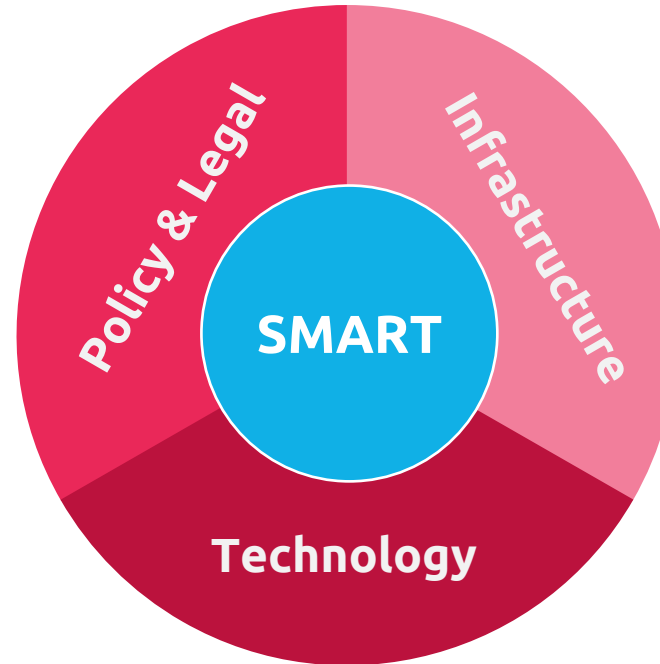
Structure monitoring system

Energy management system

Smart Education

Topics & applications

- Connected devices
- Digital learning system
- Social media
- Smart assessment
- Collaboration, participation
- Learning Platform
- Paperless (almost)
- Self-directed programs, personalized
- Adaptive scheduling



Smart Energy

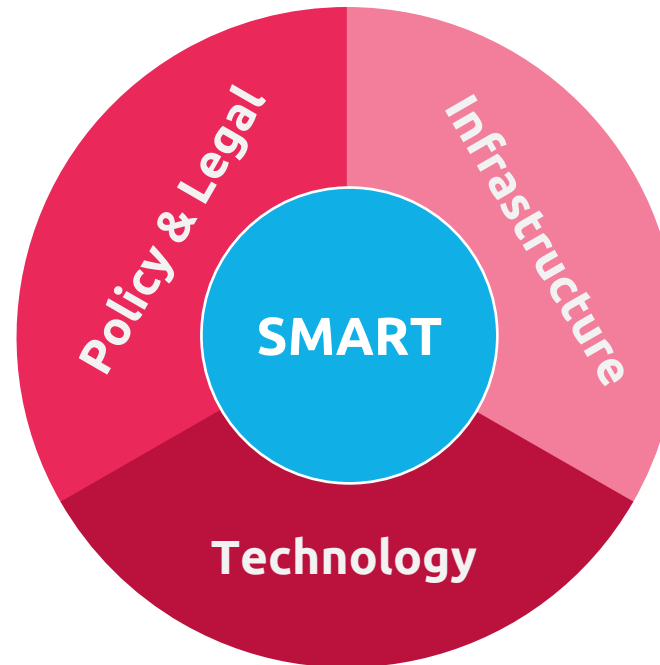
Topics & applications

- Smart grids
- Energy storage
- Batteries
- Smart metering
- Local renewable energy
- Photovoltaic
- Autonomous solar-power walls
- Thermal energy networks & Management
- Energy networks
- Energy production & demand
- Water management & leak detection
- Water recycling
- Waste management & recycling

Smart Government

Topics & applications

Citizen-centric approach
Decentralized & connected services
eID, ePass
Digital personal files
Electronic votes
Adaptation to the Tax System
Automated services such as: change of residence, appointments, ...
Data accessibility thru the different level of provider (Municipalities, Canton, Federal)
Integrated planning system
...



Smart Health

Topics & applications

Personal digital data with history
Home monitoring
Fitness monitoring
Predictive systems
Telemedicine
Emergency management
...

Smart Mobility

Topics & applications

Adaptive Traffic Management System

Zero Emission vehicles

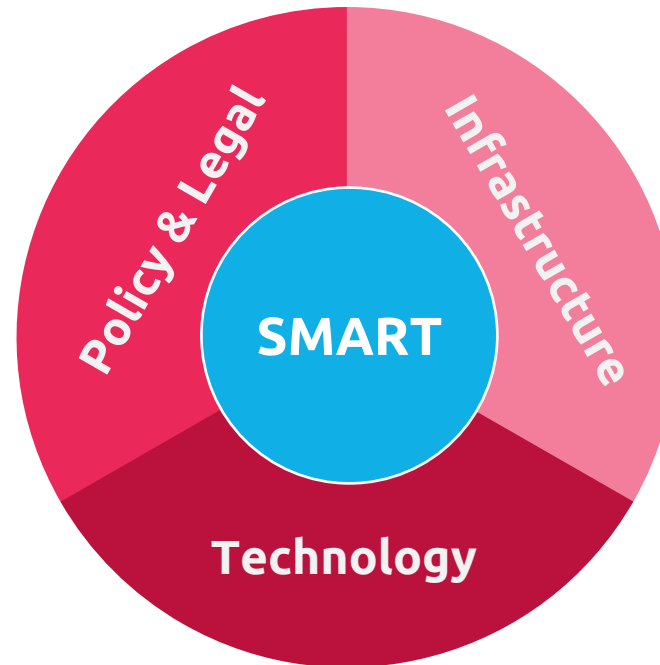
**Connected vehicles and humans
Integrated mobility**

Accessibility vs. ownership

Public Transportation for all

Air Urban Mobility

...



Smart Business

Topics & applications

Presence detection

Electronic Shelf Label

Dynamic pricing

Digital signage

Surveillance

Digital scanning

Digital passport

...

Connected with vehicles and roads

SAFETY

By linking connected and automated driving technology, Toyota hopes for a society where everyone can move safely, efficiently and freely, based on the ultimate goal "zero traffic fatalities".

FOT for Automated Driving



TRI's trial Automated Vehicle



- Chauffeur** Vehicles are able to safely change lanes and navigate around obstacles without a human driver.
- Guardian** Automated driving system operating in parallel to a human driver to support driving and protect passengers.

Connected with society and the community

ECO & CONVENIENCE

Create new appeal/value for vehicles that benefit people's lives, and contribute to a mobility society that is friendly to the environment and where everyone can move freely and comfortably.

e-Palette Concept



Create new exclusive services for the car by providing MaaS vehicles and releasing software functions to service business operators.

Connected with People

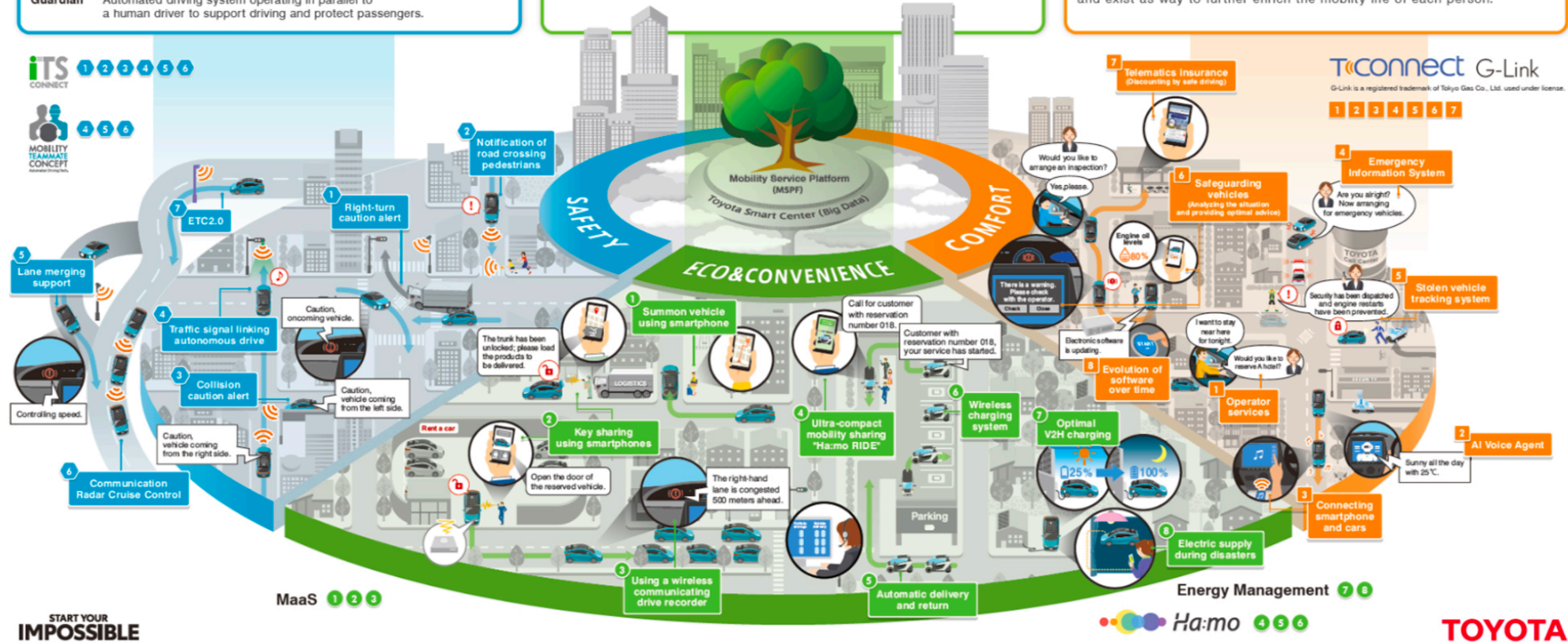
COMFORT

By advancing The Agent, the car will become an irreplaceable partner as it grows in concert with the driver.

Toyota MyAgent

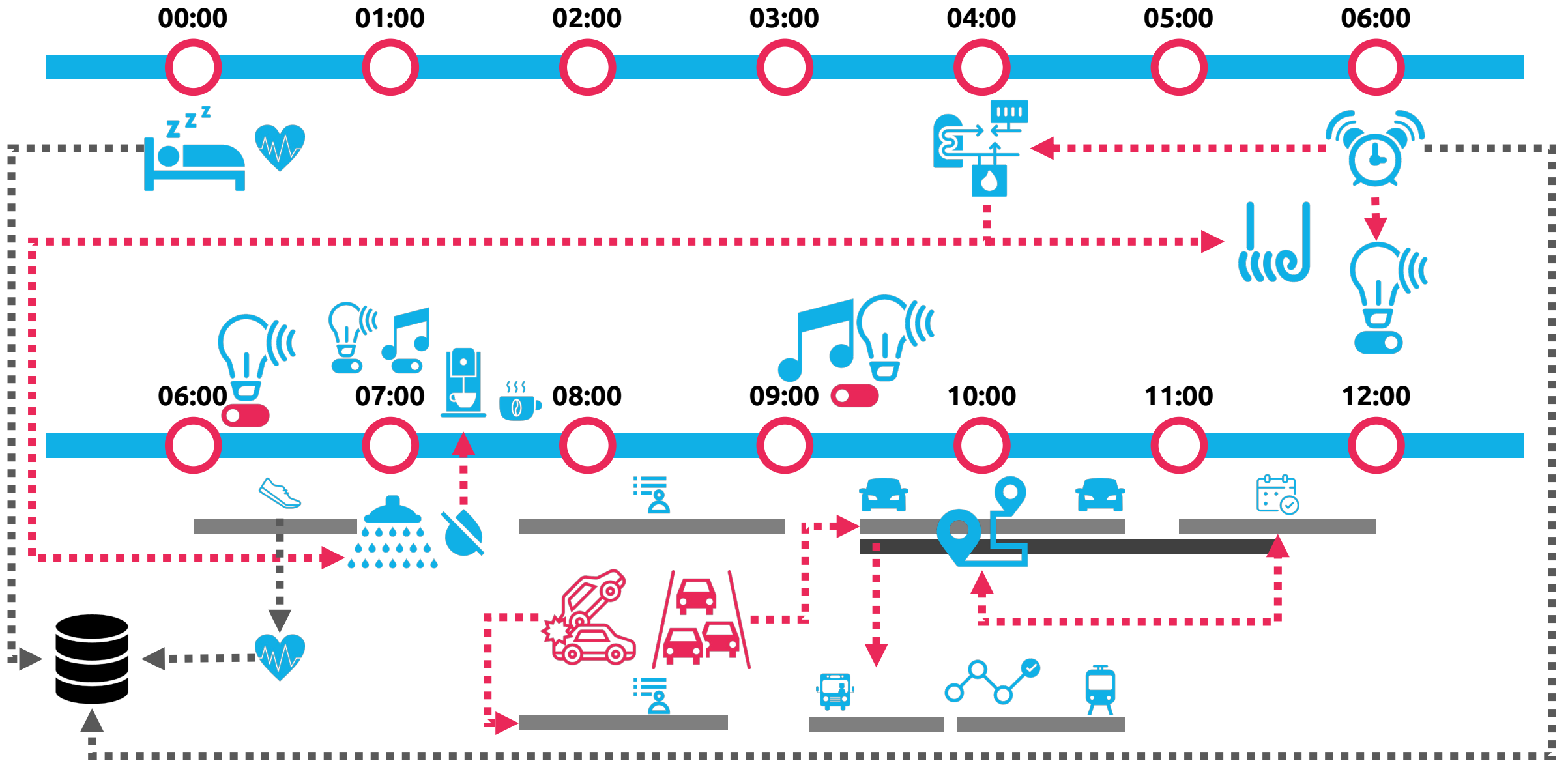


Through daily communication, The Agent will come to understand the feelings and preferences of the driver and exist as way to further enrich the mobility life of each person.

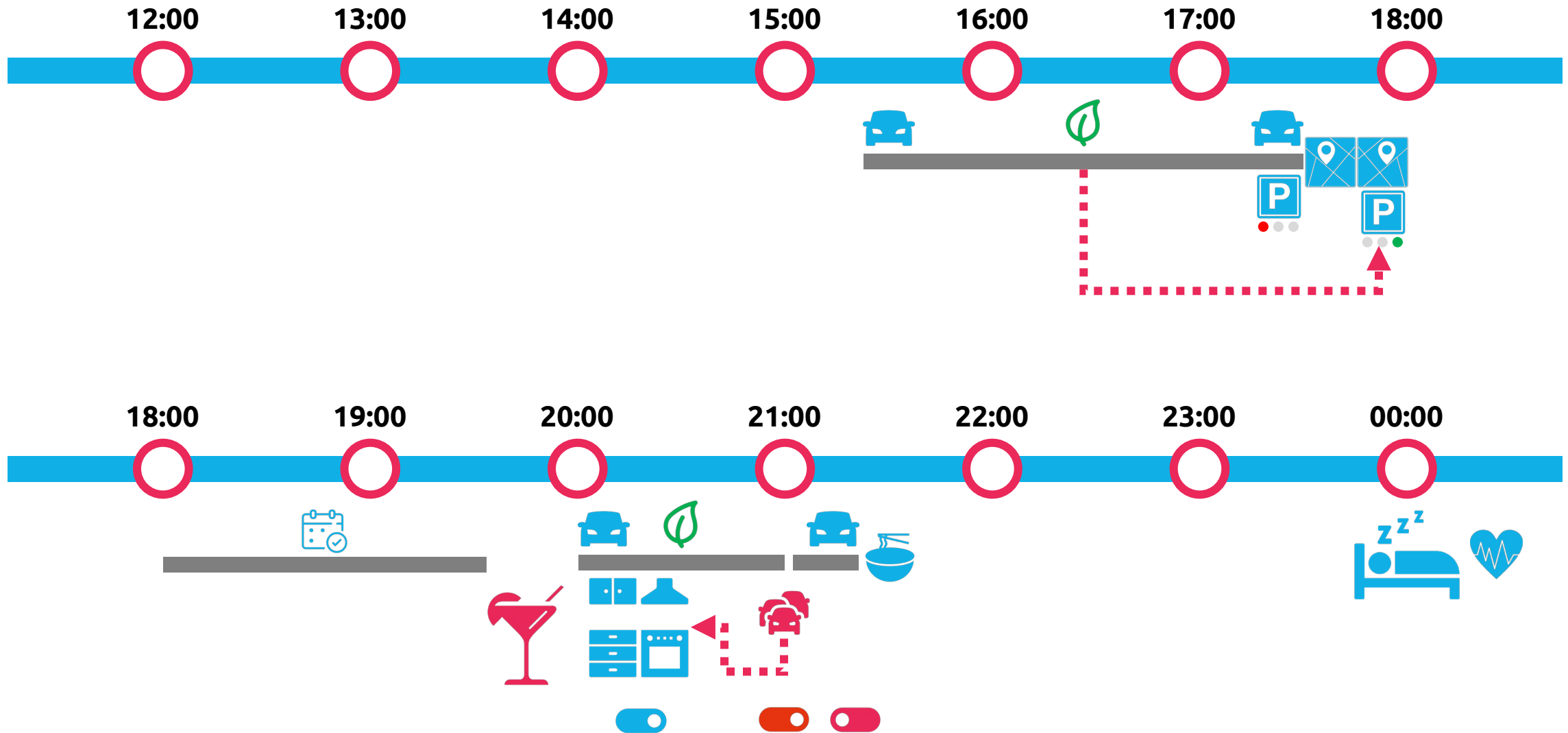


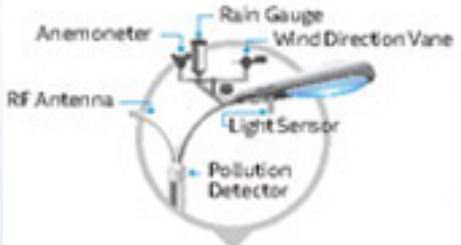
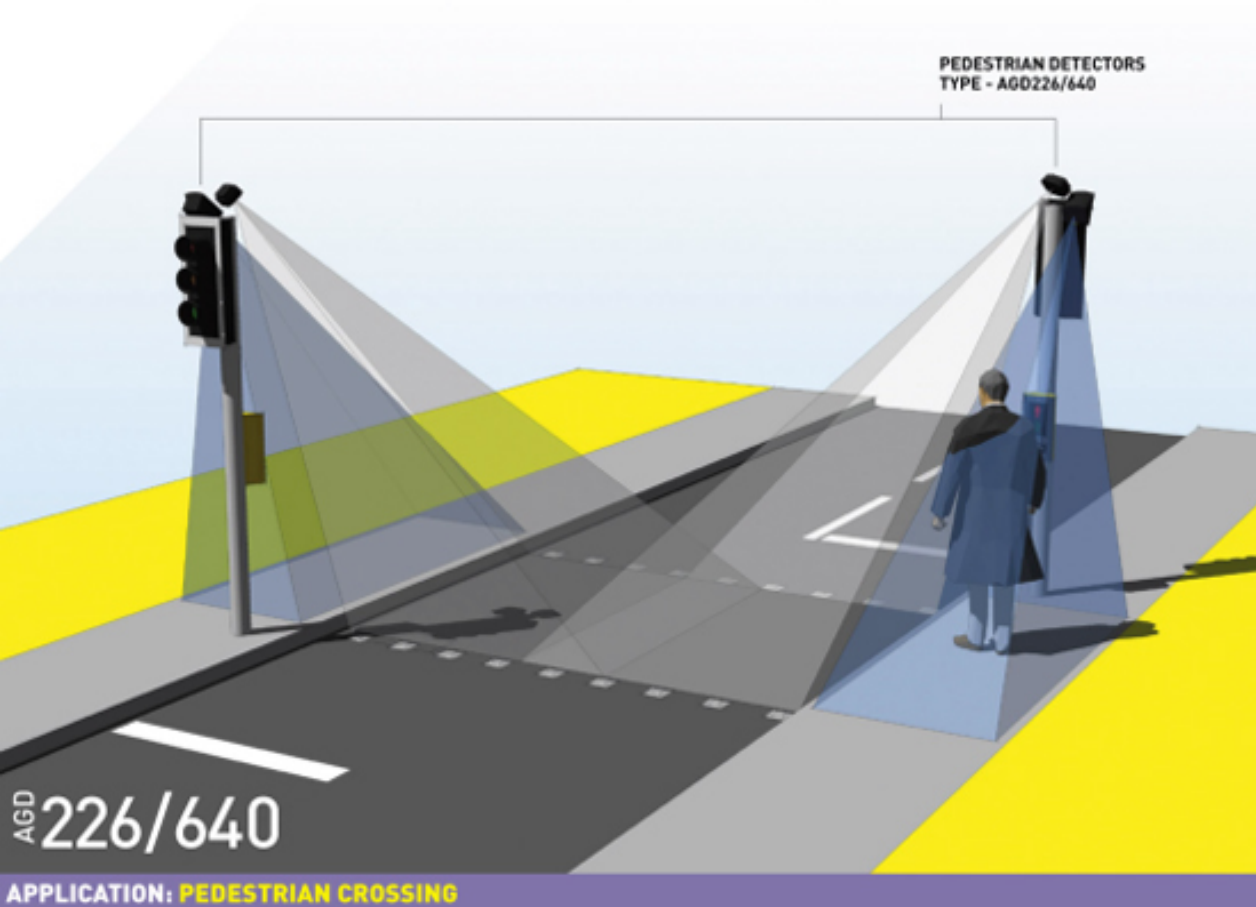
Source: <https://global.toyota/en/mobility/>

Una mattina a casa...



Un pomeriggio al lavoro...





One unified network connects PLC street lights and LoRa RF IoT devices seamlessly.



Smart City: come arrivarci?

Sensor

Data

Analysis

Connect