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#Bucksdigital

# SMART CITIES & DIGITAL ECONOMY

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# Smart City

## Mega trends in a fast changing world

### Mobility



Parking space search is responsible for 30% of the traffic in cities.

Cities consume 75% of the produced energy, buildings have 40% energy efficiency.



### Resources

### Urbanization



Cities represent 2% of the globe and 50% of the population.

## Smart City

The ageing of Western countries' population implies new needs.



### Demography

### Connectivity



New ICT, data management and IoTs devices increase the need for governance rethinking.

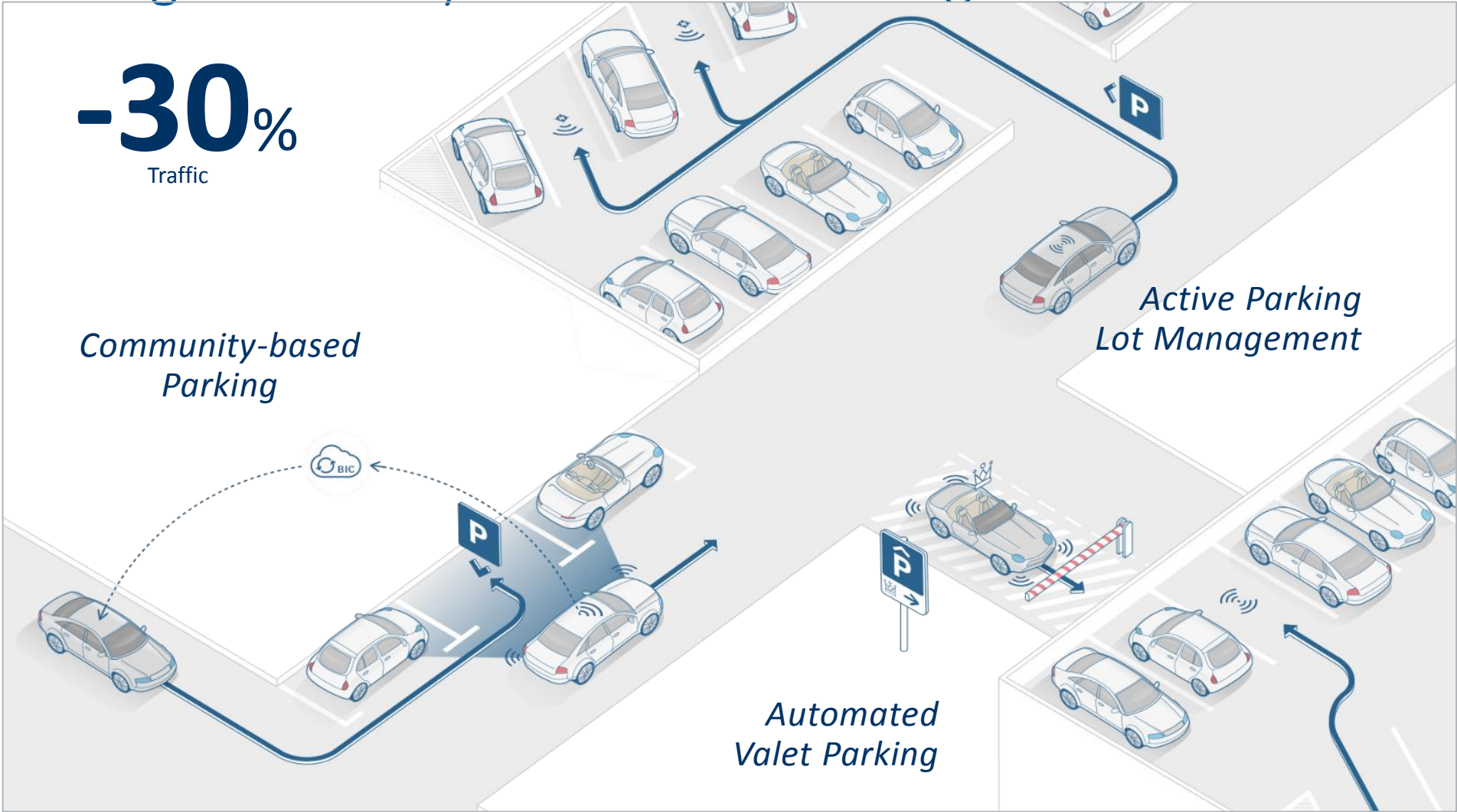
Quality of life is a key element for attractiveness in the city.



### Quality of Life

# Connected Mobility

## Parking made easy: Connected Parking



IoT Suite



Things



Ultrasonic Sensor



Connectivity Control Unit




Park sensor



# Connected Mobility

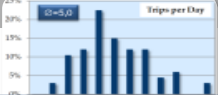
## Connected Bikes

### Vehicle's Logbook




- ▶ Vehicle usage report (time, dist., location)
- ▶ Private/Business Mode
- ▶ Portal access to edit data

### Journey Analysis




- ▶ Distance statistics (histogram, avg., dev.)
- ▶ Daily time usage, idle time report

### Bike Tracking




- ▶ Real-time Bike locator and tracking
- ▶ Used street profile (highway, city, ..)

### Geo Fencing




- ▶ Surveillance of defined usage area
- ▶ Alert in case of defined trigger

### Theft Tracking

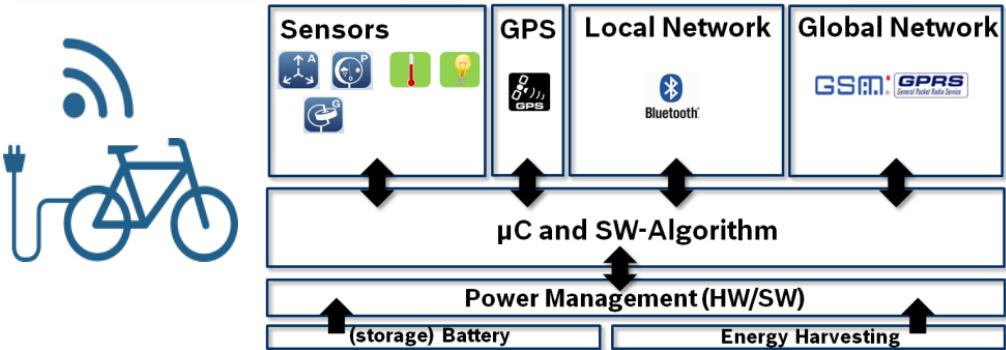


- ▶ Implausible motion patterns triggers an alert (e.g. motion with ignition off)

### Crash Detection



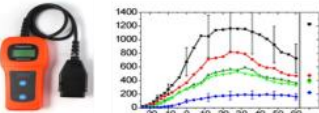
- ▶ Crash data recorder
- ▶ Early information on damage for active workshop steering



Emergency Detection



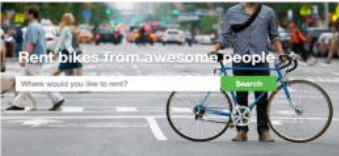
Theft Detection



Diagnostic / Maintenance



Activity Tracking



Bike sharing



Vandalism detection

## Advantages



Gather information on mobility flows



Always know the position and status of your bike



Support new business models



Enable quicker emergency response

# Industry 4.0: the next industrial revolution



Mechanization

Industry 1.0



Electrification

Industry 2.0



Digitalization

Industry 3.0



Connected Industry

Industry 4.0



1750

1800

1850

1900

1950

2000

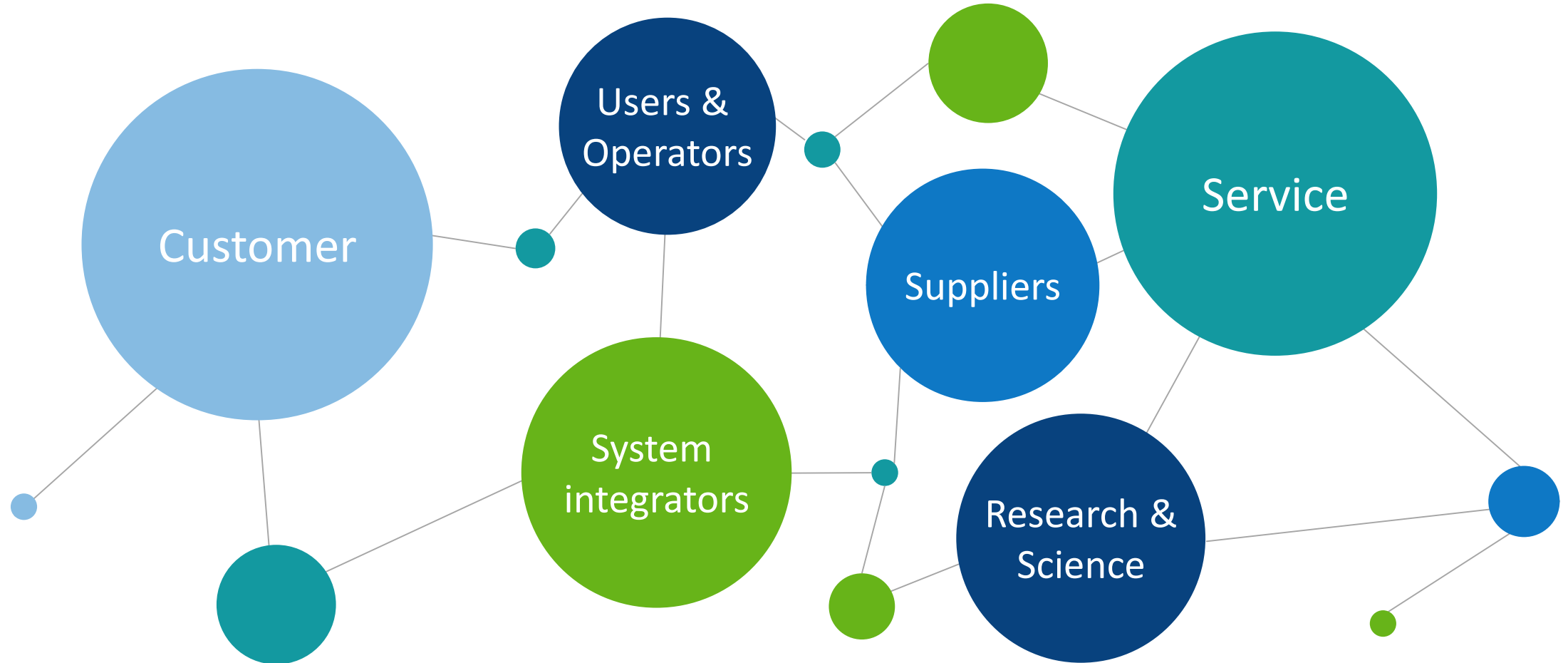
2050



**BOSCH**

# Industry 4.0 live at Bosch

Connected Industry: orchestrated involvement of all actors



**Let's connect and cooperate for new exciting business models!**

# Industry 4.0 live at Bosch

## Logistics with RFID



**30%**  
reduction of stock  
in processes

**10%**  
efficiency increase  
in processes





# Industry 4.0 live at Bosch

## Production quality: Smart tightening



# Implementation roadmap



IPN = International Production Network



Thank you for your  
attention!

