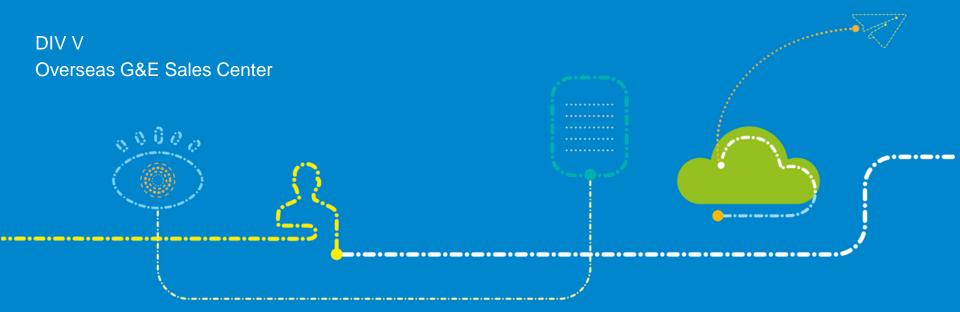
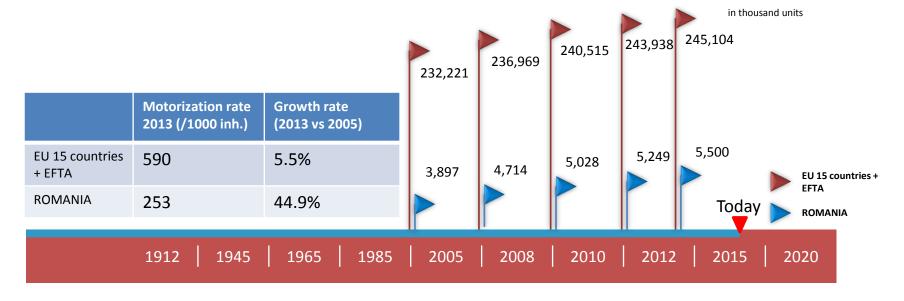
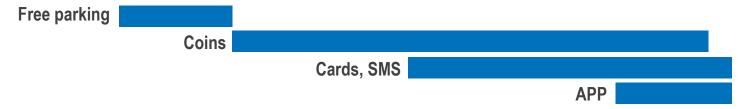


## **Smart Roadside Parking Solution**



## Statistics in Europe

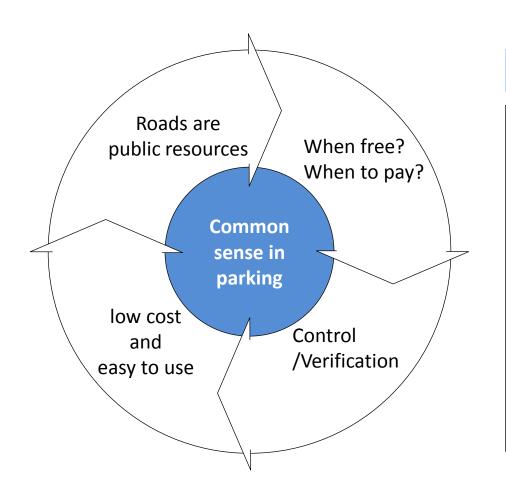




- ✓ More and more cars, limited parking spaces in downtown
- ✓ Payparking since 1950s
- ✓ Means of payment has been steadily progressing



## Parking facts



#### **Key requirements in Parking**

engineering & maintenance work
Control/Verification
Payment methods
Tariff
Realtime
Traffic & CO2
Online Actions
efficient staff
parking data



## Status quo: Coin-operated ticket machines







Coins

#### Key characters:

- Pay by coins then tickets printed
- For new style, supports both coins and credit cards
- ●Installed at every corner or about every 60 meters



#### Stauts quo: Coin-card-SMS-operated ticket machines



Coins, credit cards, and SMS







Coins and SMS

#### Key characters:

- Pay by coins or cards then tickets printed
- Send SMS then get payment confirmation
- Payment exceed the maxium time limit is not accepted
- ●Installed at every corner or about every 60 to 70 meters



#### Analysis of status quo

Key requirements	Coin-operated ticket machines	Coin-card-SMS- operated ticket machines	SMS	Final trend
engineering work	High	High	Medium	Low
<b>Control/Verification</b>	Manual check	Semiautomatic	Semiautomatic	Automatic & Realtime
Payment methods	Coin	Coin, Card, SMS	SMS	Coin, Card, SMS, APP
Tariff	٧	٧	٧	√ flexible
Traffic & CO2	×	×	×	٧
Online Actions (payment & renew)	×	partial	٧	V
efficient staff	×	×	×	٧
Realtime statistics	×	partial	partial	V

A final solution needed to meet all the key requirements: ZTE Smart Roadside Parking Solution



#### Introduction of solution

In congested cities more than 30% of the traffic is generated by people looking for a parking slot.

In addition, statistics show that ranging from 30% up to 70% of the public roadside parking slots are occupied without pay.





ZTE smart roadside parking solution aims to resolve such problems:

- 1. reducing traffic congestion
- 2. increasing revenues
- 3. Deliver higher customer experience to drivers



## An Estimation of Annual parking fee of 10k parking slots

Here is the calculation model, which has been proved in some European cities where currently the number is about €3 million per year.

Number of pay parking slots	Occupancy Ratio of pay parking slots	Average parking hours per pay parking slot	Average parking fee per hour	Pay days per year	Annual revenue(ml n Euro)
10,000 parking slots	Suppose the occupancy ratio is 50%;		average 1.4 euro per hour	free parking on weekends(104 days) and holidays(suppose 11 days), so pay days are 250 days	
10000	50%	6	1.4	250	10.5

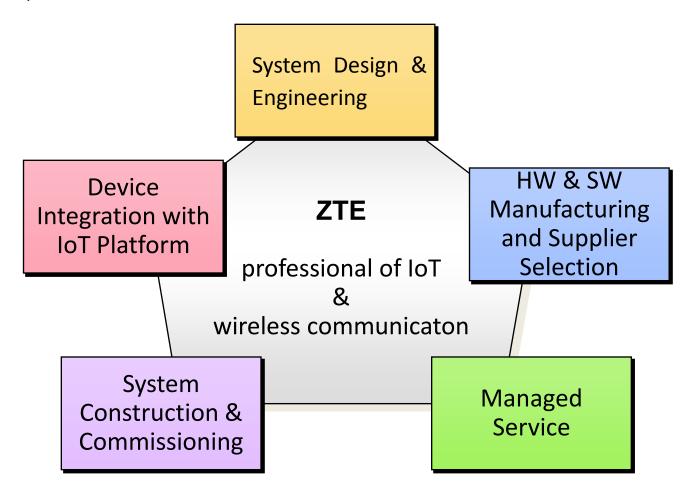


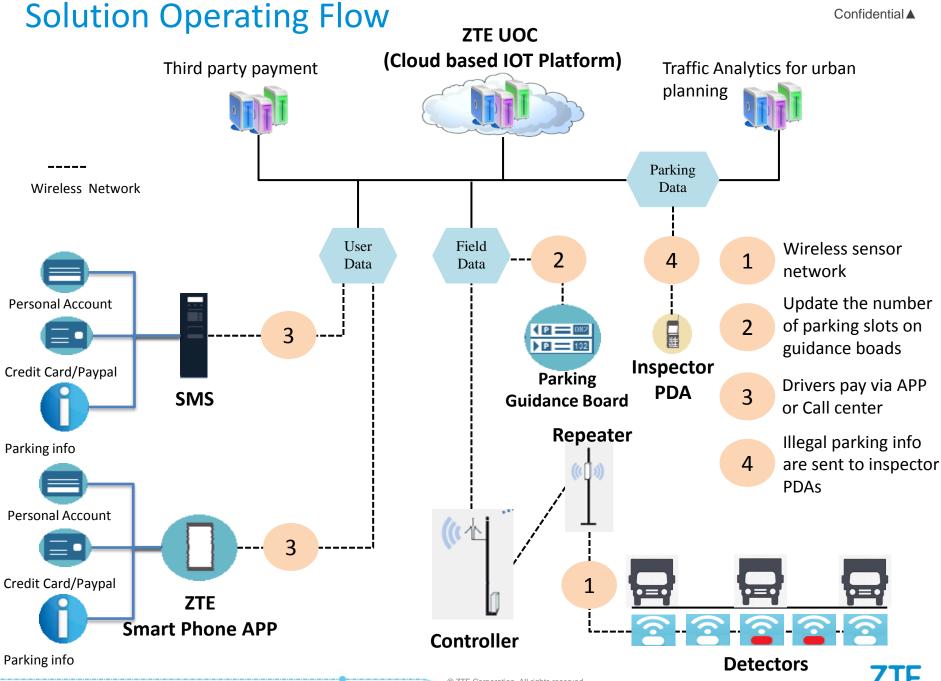
- √ 1 parking slot could contribute €1050 per year
- $\checkmark$  GAP = €10.5 million €3 million = €7.5 million per 10k slots per year



## Wireless sensor network and the professional

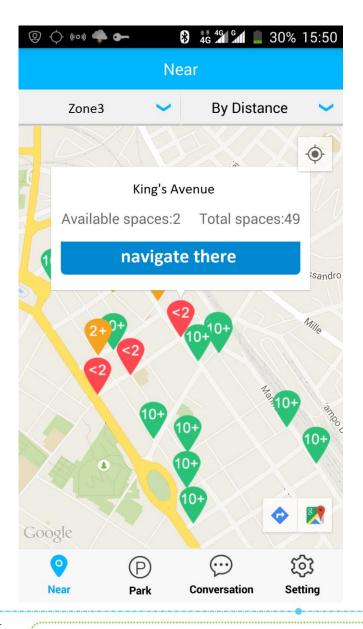
ZTE smart roadside parking solution is based on a Wireless sensor network, a form of IoT.





10

## Find a parking slot quickly via APP



- □ realtime updated
- navigation
- less traffic

And

- online renew
- paperless
- Versatile payment methods



#### Benefits of the Smart Roadside Parking Solution



#### Government

- Reduce traffic congestion up to 30% (via APP)
- Increase the fiscal revenue
- Fast deployment
- Green and low carbon
- Provide accurate Data for city traffic planning
- Smooth expansion to other smart city applications (Based on Big Data Analysis)
- Share of Information and Collaboration
- Conform to EIP-SCC



#### **Ticket's Inspectors**

- Improve efficiency of inspectors: Via APP, illegal parking such as unpaid violation and overstay is shown precisely on the map.
- Improve parking management: Working routes of inspectors are recorded; the working area of each inspector can be adjusted automatically

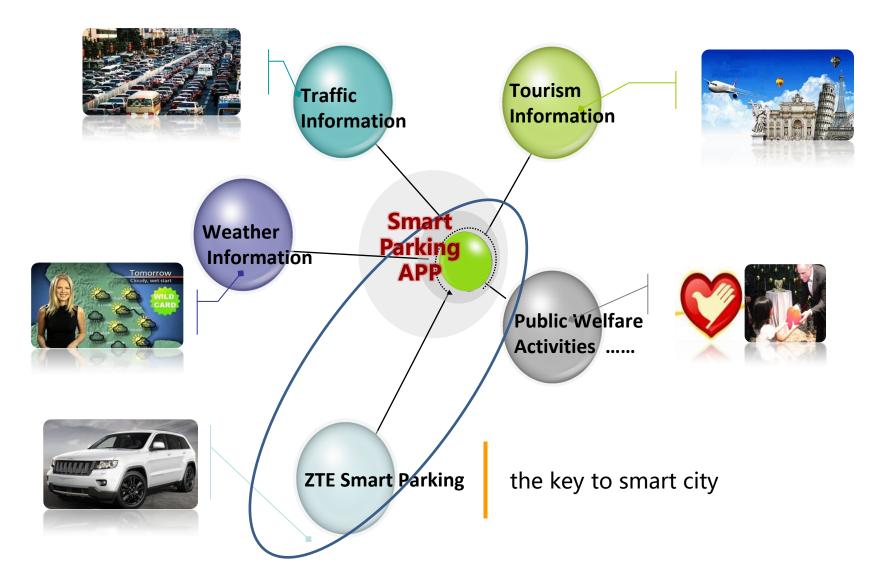


#### **Drivers**

- Easier to park: via APP, available slots are shown in real time on the map.
   Drivers can be navigated to the nearest available parking slot.
- Convenient to local residents: the system can recognize local residents
- Easier to pay: drivers can pay the parking fee via app or just make a phone call



## **Expand to Cross-Domain Services conforming to EIP-SCC**





## ZTE Smart Roadside Parking Applications in the World



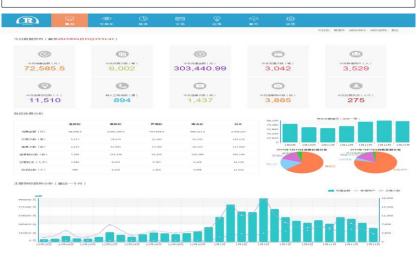
The ZTE smart roadside parking solution (indoor and roadside) has been deployed in more than 20 cities in different countries.



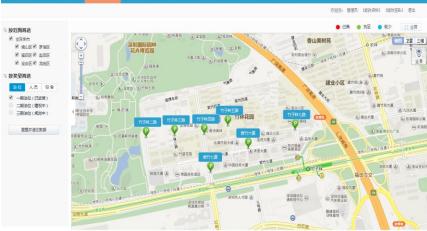
Success Story in Shenzhen

#### **Solution Highlights**

- ➤ The largest-scale smart parking system in the world(totally about 32K slots, 12K done, the rest is under construction)
- Large-size LCD for monitoring
- Payment methods include APP and virtual accounts

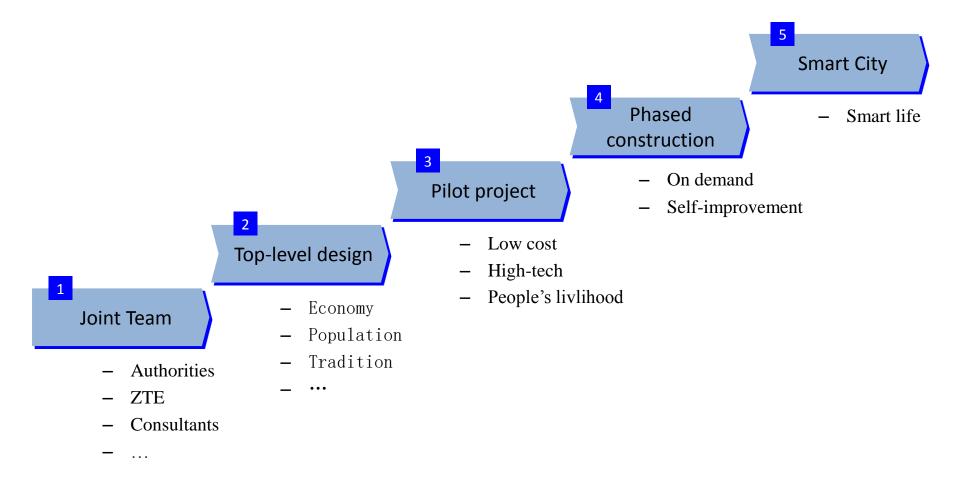








## **Next Steps**





# Thank you

