Parking problems are more than just a “pain”

**$73 billion**
Annual cost of searching for parking by Americans

![Clock icon]

Americans spend an average of 17 hours a year searching for parking.

![Parking icon]

The lack of quality parking has a negative impact on businesses in the area, driving customers away.

![Percentage icon]

Sixty-three percent of Americans report avoiding driving to a destination due to parking challenges.

City planners must consider appropriate parking facilities for members of their communities with special needs.

Parking mismanagement can result in lost time and economic activity, worse traffic, air pollution and forced urban sprawl.


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Is there enough parking?

Over 30% of traffic congestion can be attributed to the aimless search for available parking.*


New car features

- Smart Parking is in the top 10.*
- Digital Citizens expect us to use technology to make life easier. More and more, parking challenges come up.

*https://www.cambridgeindependent.co.uk/business/5-technological-innovations-that-will-change-the-automotive-industry-9099453
How can we begin to solve this?

Collect data
- Gates and Loops
- Meters and Paystations
- In-Ground Sensors
- Plate Readers
- Video Camera
- Mobile Movement Data
- Manual Counts

Process data

Display data

Industry 4.0 – 4th Industrial Revolution

1st
- Mechanization, hydropower, steam power

2nd
- Mass production, assembly line, electricity

3rd
- Computer and automation

4th
- Cyber Physical Systems
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Cyber Physical Systems

• Robotics
• Artificial Intelligence
• Big Data ("Data Lake")
• Nanotechnology
• Internet of Things (IoT)
• Computer Vision
• 3D printing
• Autonomous Vehicles
• Drones
• 5G

Source: NLC - Trends in Smart City Development
A smart or light pole is a sensor hub.

Currently available Verizon solutions

Light Pole as a Sensor Hub

Parking

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