



# PARKING MANAGEMENT FROM THE TOP

Highly efficient systems for the Smart Cities of the future



Parking Sensors



Apps and Frontends



Parking Management



# The **Big Search**

## The Big Search



**30%**

are searching ...



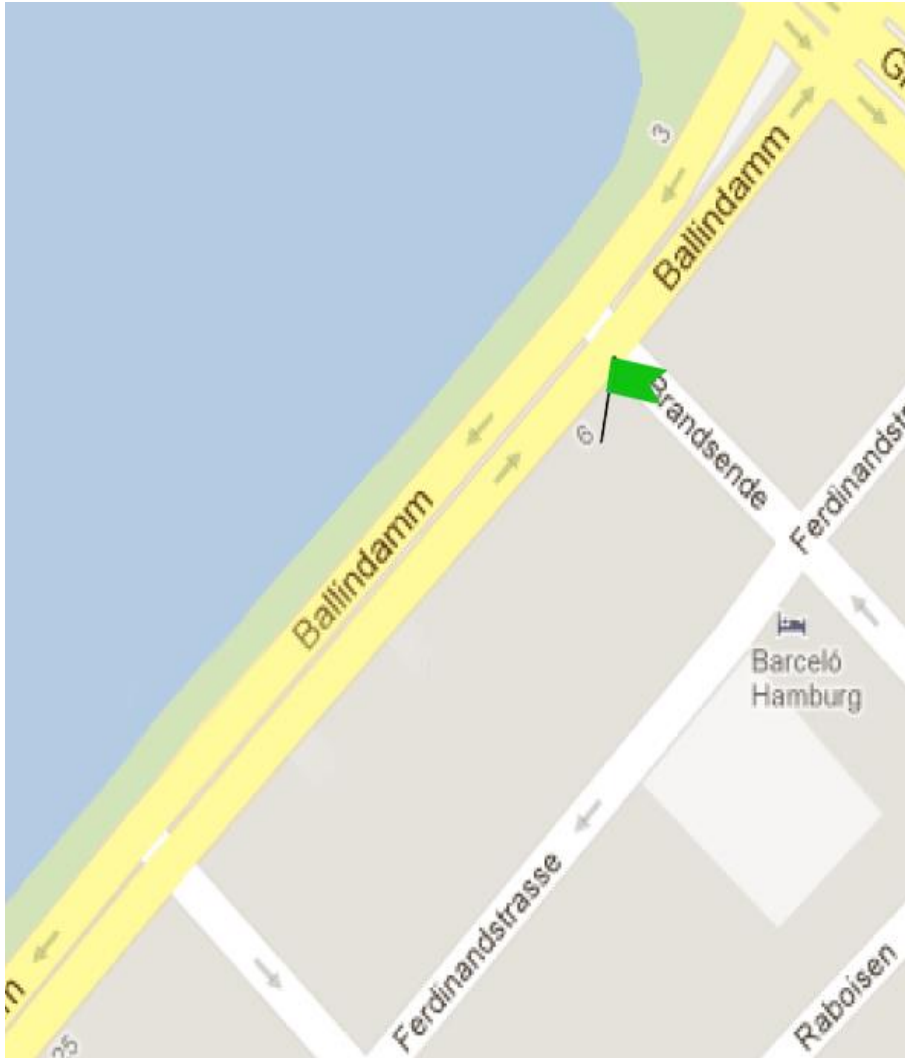
**20 min.**  
average search  
time to find a  
parking space

Drivers in Europe loose Billions each year



Paris:  
**3 years of your life**  
to find a parking space

Drivers in Europe loose Billions each year



Each year

drivers in Europe could save

**1 Billion hours**

or

**33 Billion Euros**

**if Live Parking Data**

would be available

Source: Forschungsvereinigung Automobiltechnik e.V. (FAT) 2015

## Cleverciti Lamppost



Cities worldwide recognize the strategic value of the lamppost for the smart cities of the future

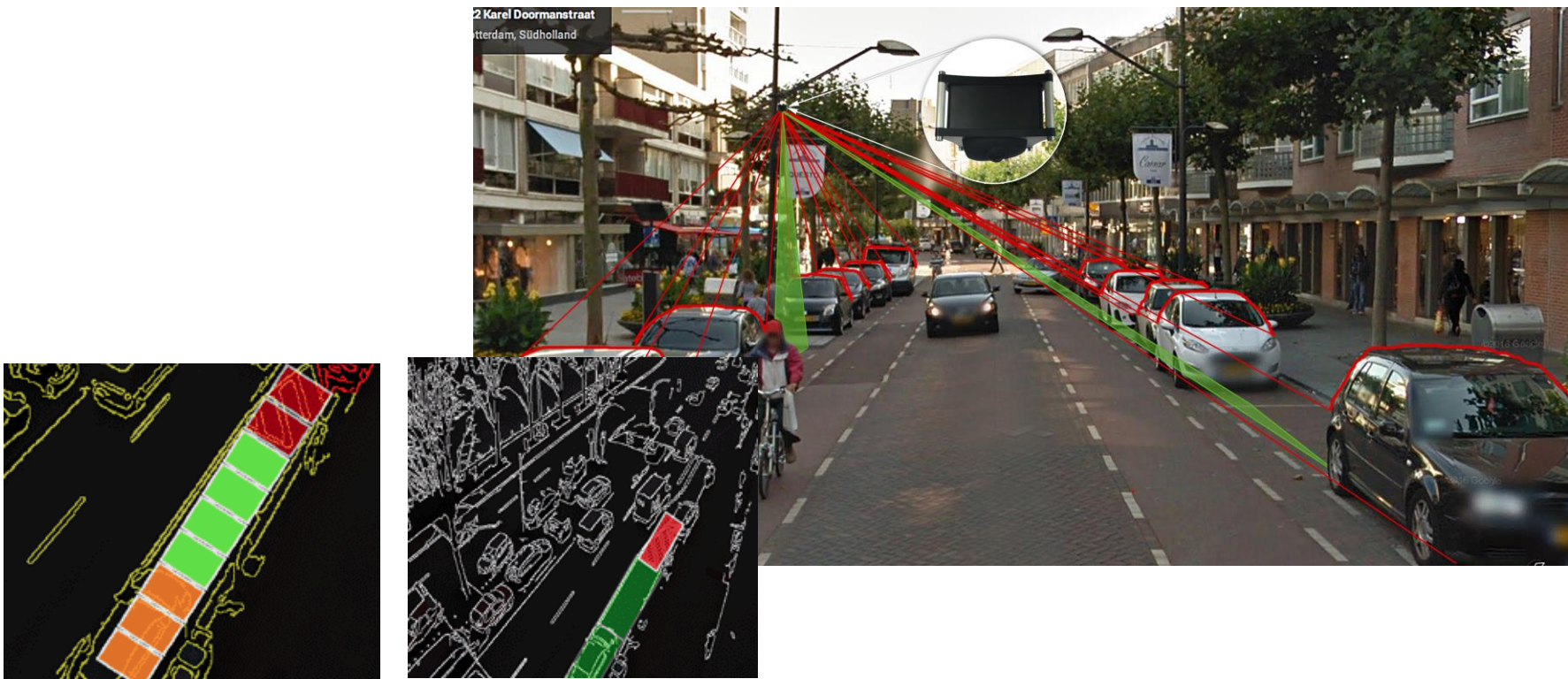
Cleverciti turns the Lamppost into a **modern data-hub**

Cleverciti Lamppost = **generate, distribute and display data**



## Cleverciti Sensors

-  Sensors analyse **free and occupied** parking spaces every 3 seconds
-  Detecting cars in all spaces - incl. loading zones, taxi ranks, pedestrian crossing etc.





## Cleverciti Sensoren

 Cleverciti Sensor **measures the size** of the available space

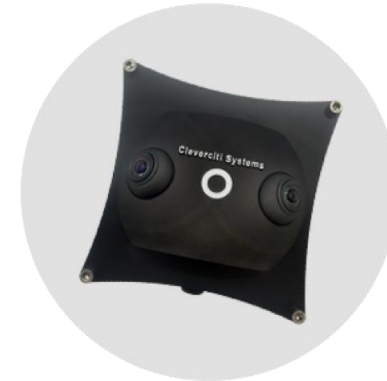
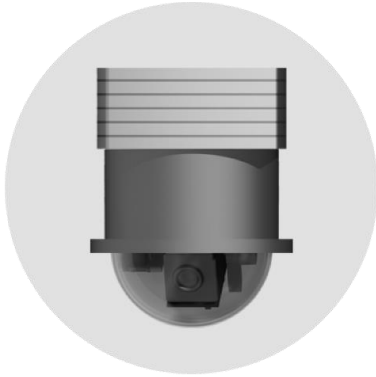


## Cleverciti Sensors





- 🚗 Complete data analysis and data processing inside the sensor
- 🚗 Embedded octagore processing
- 🚗 Fast and easy installation on buildings or lampposts
- 🚗 Night time mode
- 🚗 Compensation of wind and vibration







## Cleverciti Sensors



### Cleverciti Parking Sensor CCP-300LR

-  For large on-street parking areas and surface parking lots
-  **30 to 300+** parking spaces per sensor
-  Reach: 15 to 400 meters
-  Scan precision = 0,005°

### Cleverciti Parking Sensor CCP-120TR

-  For smart lampposts
-  **16 to 50+** parking spaces per sensor
-  Reach: 6 to 100 meters
-  Update every 3 seconds

## Cleverciti Sensors in Smart Lighting



**Cleverciti Sensors**  
integrated into modern LED luminaires  
**30+ spaces per sensor**  
**invisible parking management**





Cleverciti - SMART URBAN PARKING SOLUTIONS

## Cleverciti LR Sensor at Bad Hersfeld, Germany

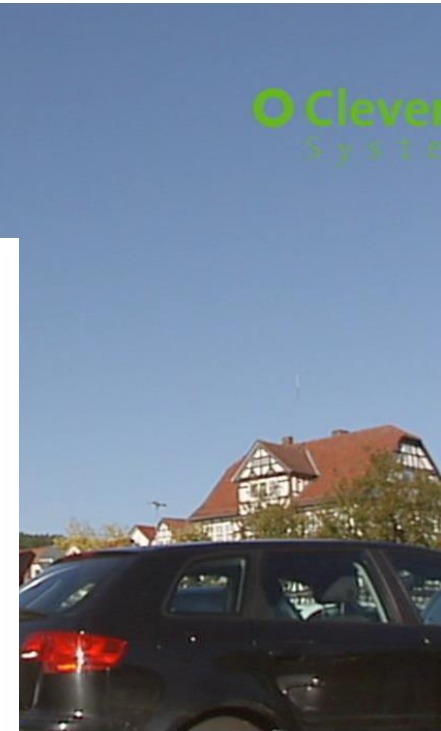
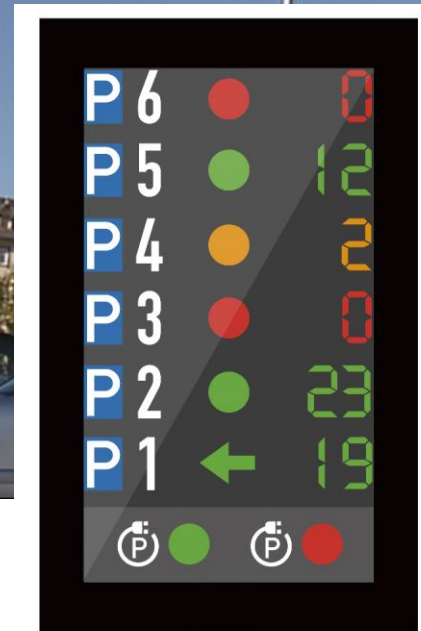
### Bad Hersfeld City Center

One of the busiest parking spaces in Germany

- 🚗 Up to 3000 parking events/day
- 🚗 6 Cleverciti Sensors for the entire marketplace
- 🚗 Highest reliability and accuracy



Cleverciti Local Parking Guidance System at Bad Hersfeld, Germany



OVERVIEW Cleverciti Web Interface **BAD HERSFELD**

6 SENSORS INSTALLED | 6 SENSORS ACTIVE

285

NUMBER PARKING SPACES

32

NUMBER OF FREE SPACES

11.2%

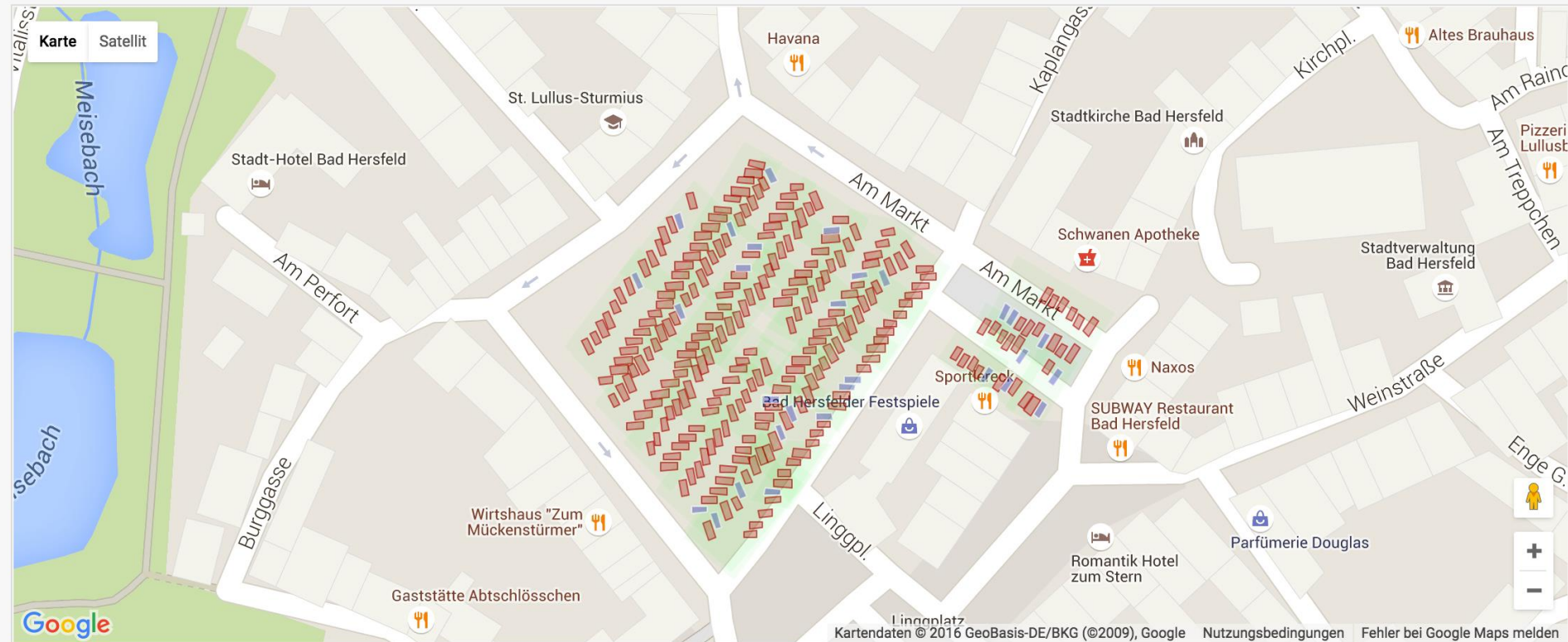
PERCENTAGE OF FREE

253

NUMBER OF SPACES OCCUPIED

88.8%

PERCENTAGE OF OCCUPIED







City of Westminster

**Winner Public Tender  
City of London Westminster  
30 Cleverciti Sensors for Taxi Ranks**





City of Westminster

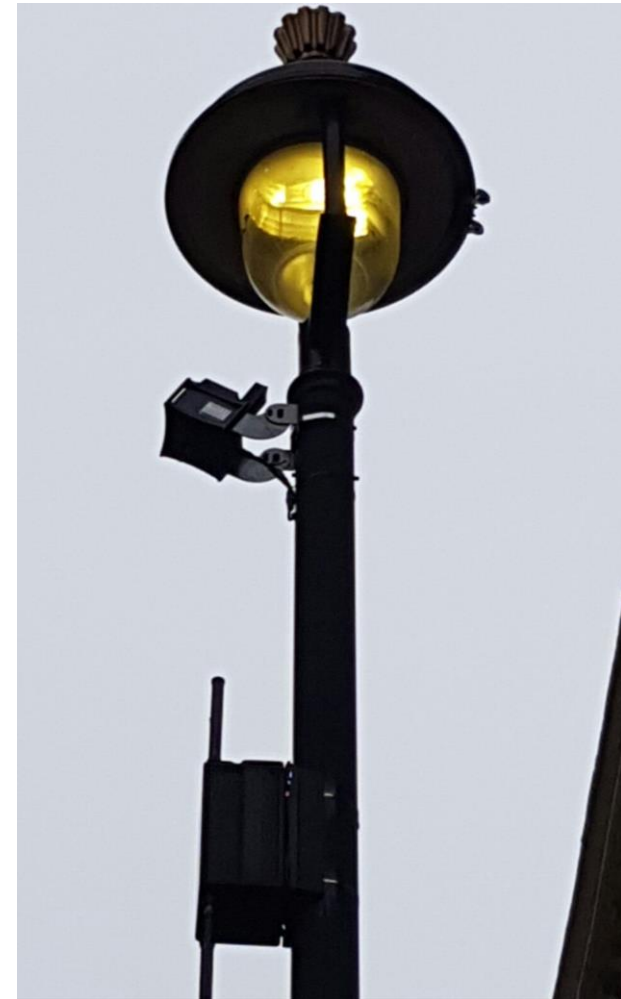
## City of Westminster, London, UK

First Phase completed January  
2017:

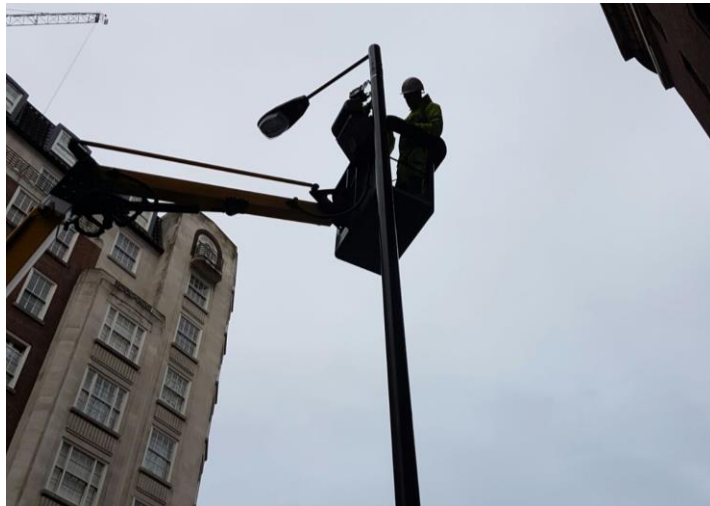
Cleverciti Lamppost Sensor  
CCP110TR and 120TR

32 lamppost installations  
Taxi Rank occupancy monitoring  
City, Taxi and Customer Services

Cleverciti integration into  
Westminster Parkright App and  
Parkopedia



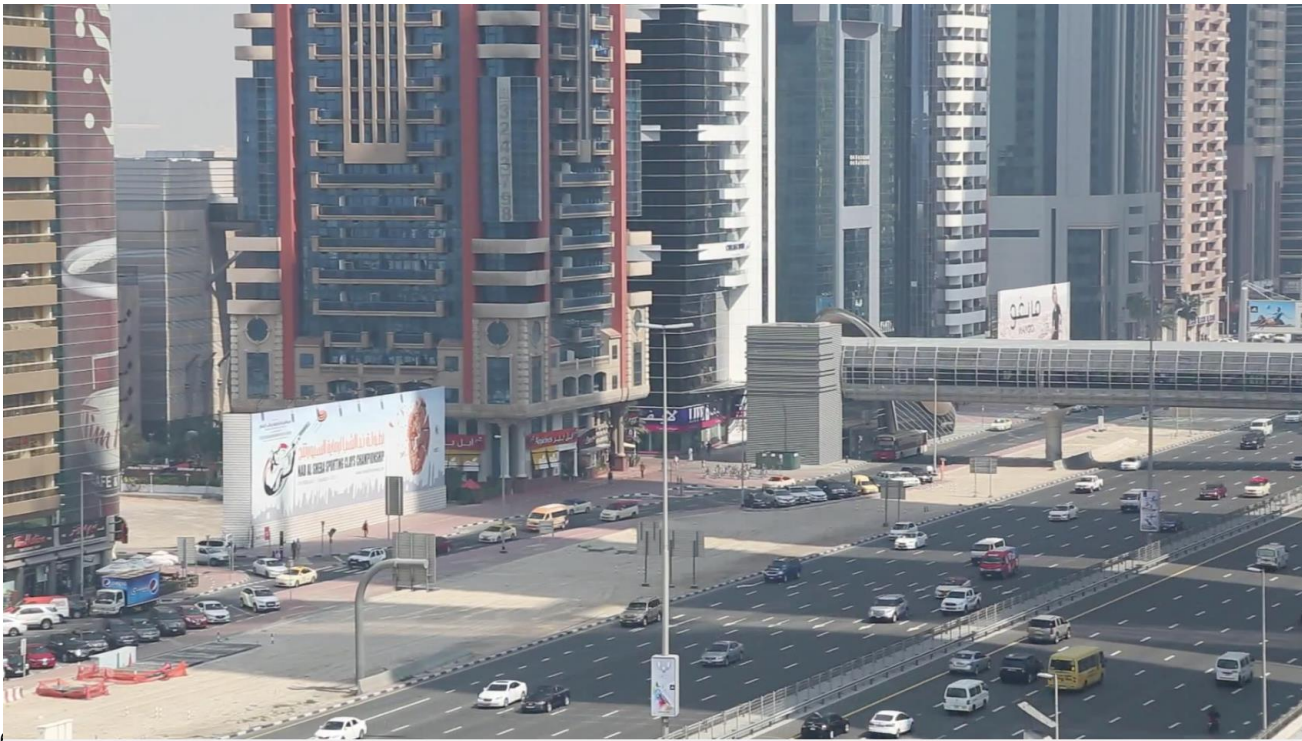
## Cleverciti Sensors in Westminster



هيئة الطرق والمواصلات  
ROADS & TRANSPORT AUTHORITY



**Winner Public Tender Ministry of Road and Transport  
Dubai, Sheik Zayed Road/World Trade Center  
1st Phase: 1100 Spaces covered by 70 Cleverciti Sensors**

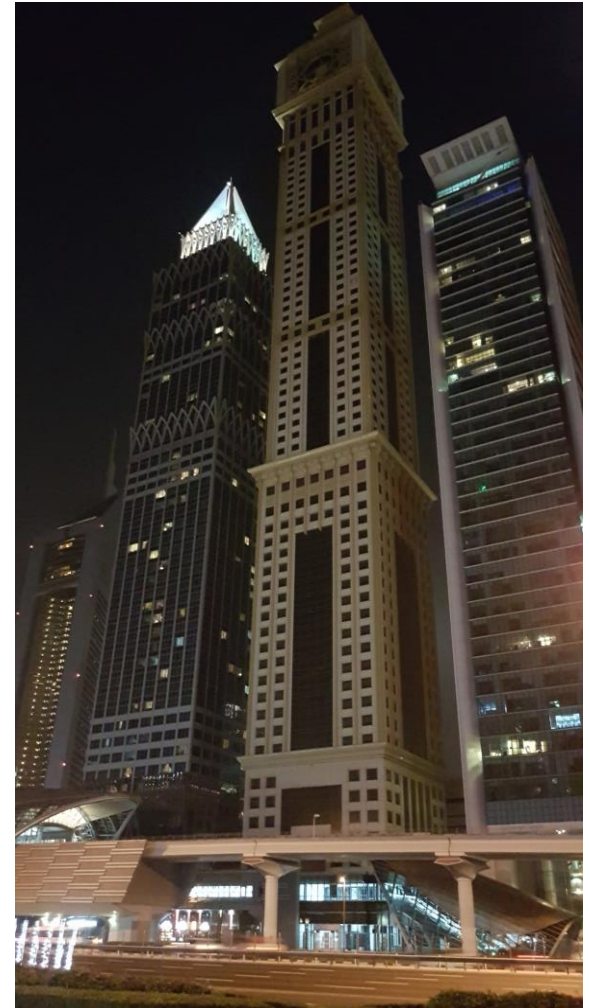
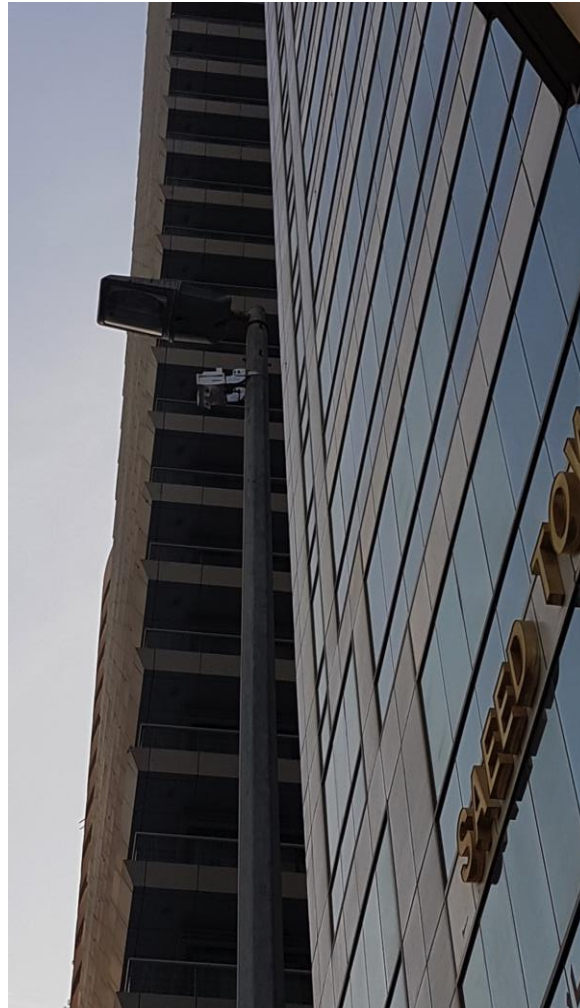


## Smart City Dubai, UAE

RTA, Road and Traffic Authority  
On- and off-street Parking Spaces

First Phase completed February  
2017

- **1100 on-street and off street parking spaces and areas**
- Cleverciti CCP 120TR Lamppost Sensors
- World Trade Center Region and along main Sheik Zayed Road
- Next phases 10.000 - 30.000 spaces, total 110.000 parking spaces



# Cleverciti Sensor Installation in Dubai





## Smart City Cologne

**Cleverciti Sensors installed  
at  
Streetlighting in „Klima-  
strasse“ and shopping  
malls**

**– in cooperation with  
RheinEnergie AG**



**Rotterdam, Netherlands**  
**Cleverciti sensors on the**  
**streetlamps in the city**  
**center**



Installation Time:  
**20 minutes per sensor**  
without disturbing the  
traffic





## Caloundra, Bulcock Beach - Cleverciti embedded sensors





**Cooperation with  
UI Urban Institute  
Smight Smart Pole  
Invisible  
integration into the  
luminaires**

**35 parking spaces**

**incl. light management by  
Cleverciti Sensors**

Chicago, Shopping Mall

**Chicago, USA**  
**Shopping Center**  
**5500 spaces**

**Boston Shopping Mall**  
**1100 spaces**

**Offer seamless**  
**shopping experience**

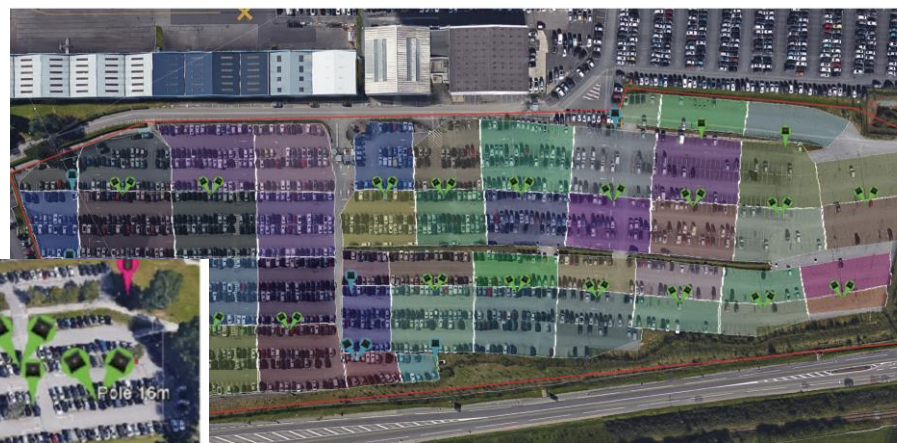
**Cleverciti Shopping**  
**Mall App**



## Cleverciti for Airports



**Airports want to offer  
better service and shorter  
parking time**








Cleverciti – footprint Q1 2017 (short list)

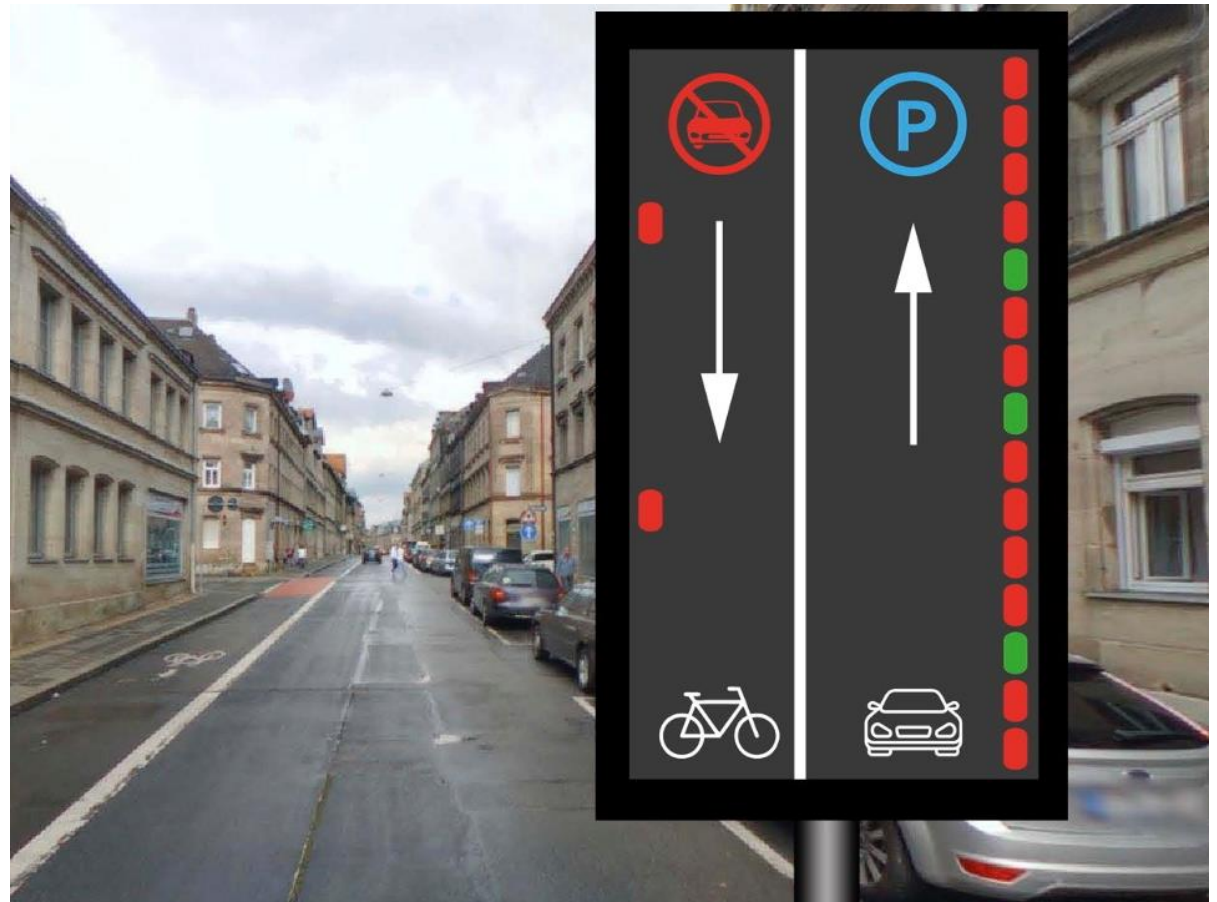


- Bad Hersfeld**
- London Westminster
- Dubai
- Dublin
- Cologne
- Munich Fair
- Weiden
- Metz
- Rotterdam
- Helmond
- Ljubljana
- Vancouver
- Caloundra, Australia
- Chicago
- Vienna Airport
- Fredericksberg
- ...
- Fürth
- Moscow
- Florence
- Boston
- Gent
- Geneva
- ....

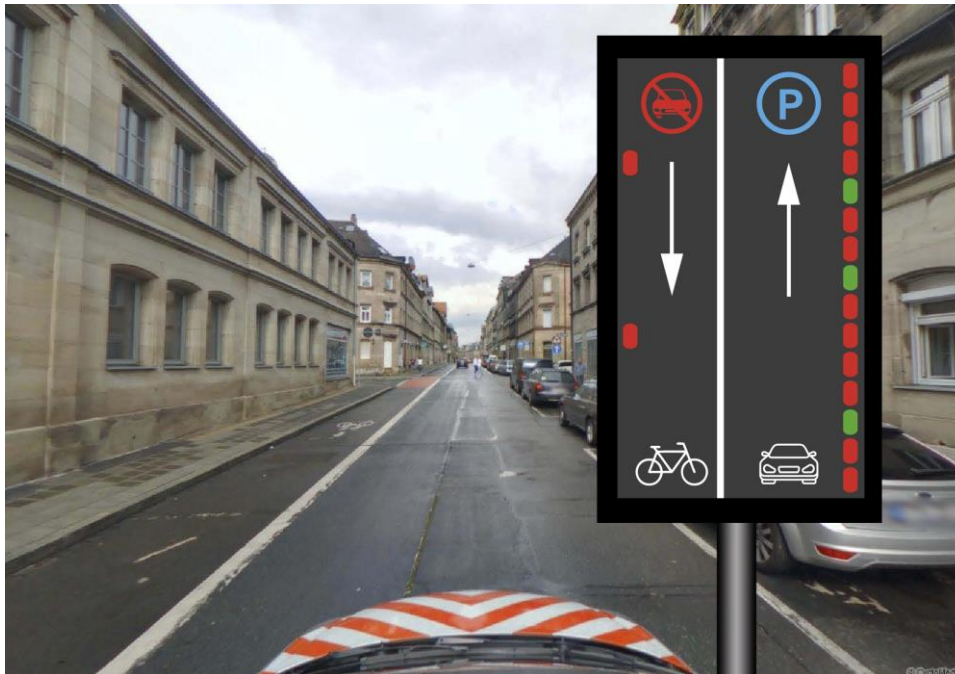
## Cleverciti SMART SERVICES



Immediate display of  
illegal parking in:

-  no parking zones
-  loading zones
-  bicycle lanes
-  tramway lanes
-  etc.



## Enforcement Services – Fürth, Germany



-  Monitor parking spaces and simultaneous the bikelane for illegally parked cars
-  Monitoring of loading zones and no- parking zones

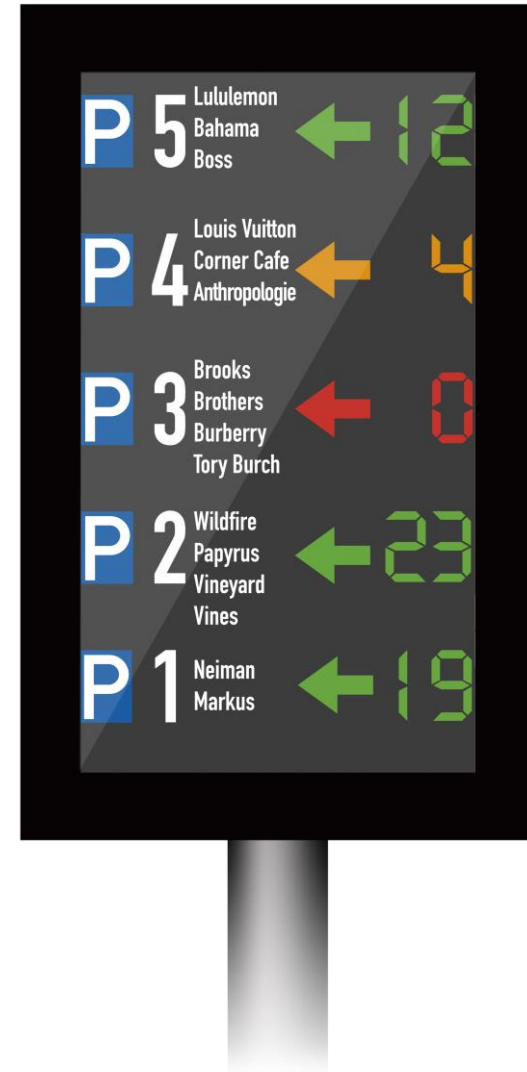


# Cleverciti Parking Guidance

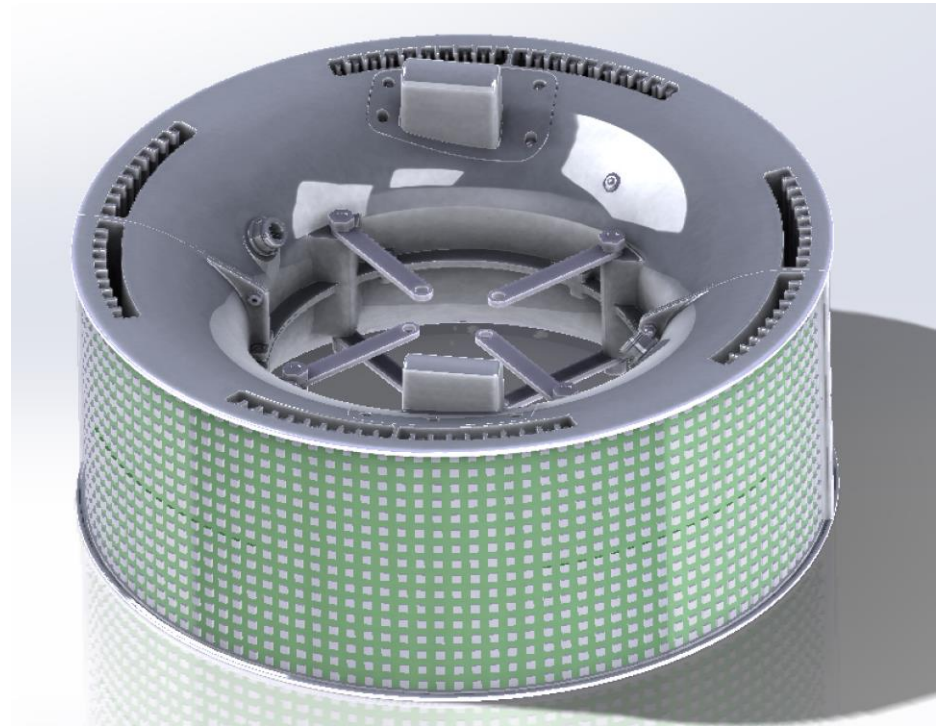


**High Performance Dynamique  
Messaging Signs  
at strategic entrances**

**LED or LCD**



# Circ CMS 360°





## Ceverciti Circ CMS 360° Smart Lampost Parking Guidance System



- Revolutionary new Parking Guidance System for outdoor parking areas  
International Patents Pending
- Fast Orientation in large parking areas
- Displays information about available parking spaces directly **under and near the lampost**
- 360 degree visibility
- Individual information for each direction

## 360° Outdoor Parking Guidance



## Parking Guidance II – Circ CMS 360° Example



-  Instant overview of the parking status from any position at large parking areas
-  Floating 360° outdoor Parking Guidance

Cleverciti – Circ CMS 360°



Cleverciti Circ CMS 360 Guidance

The map displays a route through Southend-on-Sea, UK, marked with green circles and directional arrows. The route starts on the A127 and A129, heading south towards the A13 and A127, ending near the A13 and A127. The route is annotated with several text boxes and icons:

- Top Left:** A large icon showing a road with lanes labeled '3', 'P1', 'P2', and '1'.
- Top Center:** A green circle icon.
- Top Right:** Cleverciti Circ CMS 360 logo and the text "This map is for explaining the system; it does not mirror real names and circumstances".
- Second Circle:** Text: "CIRC CMS 360: P2 is full, alternatively drive right to use P1".
- Third Circle:** Text: "CIRC CMS 360: Drive straight ahead to use P1".
- Fourth Circle:** Text: "CIRC CMS 360: Drive right to use P1".
- Fifth Circle:** Text: "CIRC CMS 360: Drive straight ahead to use P1".
- Sixth Circle:** Text: "CIRC CMS 360: Drive left to use P1".
- Seventh Circle:** Text: "CIRC CMS 360: Drive straight ahead to use P1".
- Bottom Right:** A large icon showing a road with lanes labeled 'P1', 'P2', and '1'.

Other map features include a satellite view in the bottom left, a "BUS TO CITY BEACH 3 mins" icon, and various street names like A127, A129, A13, A127, A1159, and A13. Landmarks such as London Southend Airport, Purdeys Industrial Estate, and Castle Point Golf Course are also labeled.

# Cleverciti Dynamique Parking Guidance

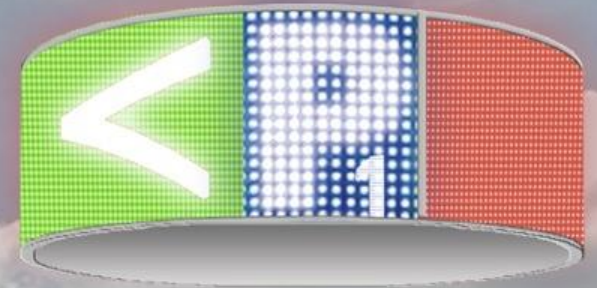
**Western Esplanade**  
Southend-on-Sea, England  
Street View - Sep. 2016





# Cleverciti Dynamique Parking Guidance

Western Esplanade  
Southend-on-Sea, England  
Street View - Juni 2014



Google

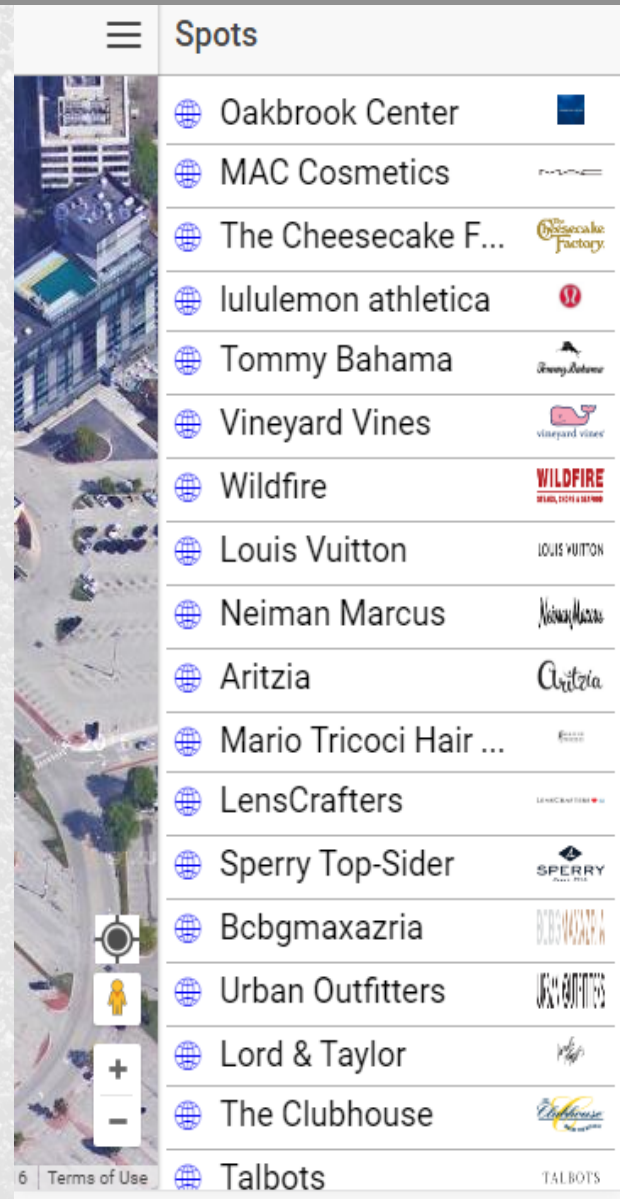
Zoom



# Cleverciti Dynamique Parking Guidance



# Cleverciti App Features





**Reduce driver's stress, cost and time loss**

**Reduce search traffic**



**Reduce NOx, CO2 and particle emission**

**Improve Parking Management**



## Cleverciti – Prices and Awards in 2016/2017



- **Winner Digital Innovation Award**  
DIGICON – Digital World Conference
- **Winner Fast Mobility Category - Bits&Pretzels**
- **Winner Innovation Award 'Deloitte Fast 50'**
- **Finalist Energy Awards 2016**
- **Finalist Best New Parking Product**  
Smart Mobility Gulf Traffic Award, Dubai
- **Best Munich Start-Up 2016**
- **EcoAward 2017, bronze**



**Deloitte.**

Winner  
Technology Fast 50 Award 2016  
Powerful Connections



50 | Technology Fast 50  
2016



Winner German Accelerator  
Silicon Valley  
ADVANCING GERMAN STARTUPS AND  
EMERGING COMPANIES TO GLOBAL  
SUCCESS

**Cleverciti**  
Systems



JOY  
OF PARKING

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**Cleverciti Sensor Technology and  
Systems, Cleverciti App Features and  
Cleverciti Circ CMS 360° are  
Patent Pending**