

# CITY TOLLING AND URBAN TELEMATICS.

TODAY'S EXPERIENCES AND THE FUTURE OF ADVANCED  
MOBILITY CONCEPTS BASED ON SMART PRICING AND  
TELEMATICS SOLUTIONS.

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# Urban Mobility and Road Charging. Technical Implementations - Use Cases.

## Booking Systems

Manual booking plus enforcement

Characteristica:

- Manual booking through customer plus enforcement with means of video or mobile enforcement units



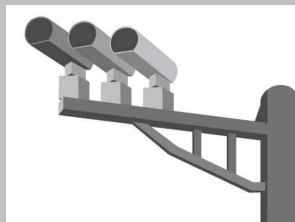
- Example: eBooking plus ANPR enforcement

Scenarios:

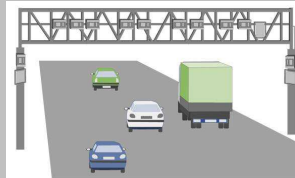
- either as pure toll-booth-, machine-based or POS-system
- also combinations with automatic collection systems

## Collection Systems

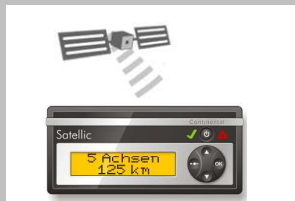
Fully automatic toll detection



- Video + ANPR



- DSRC

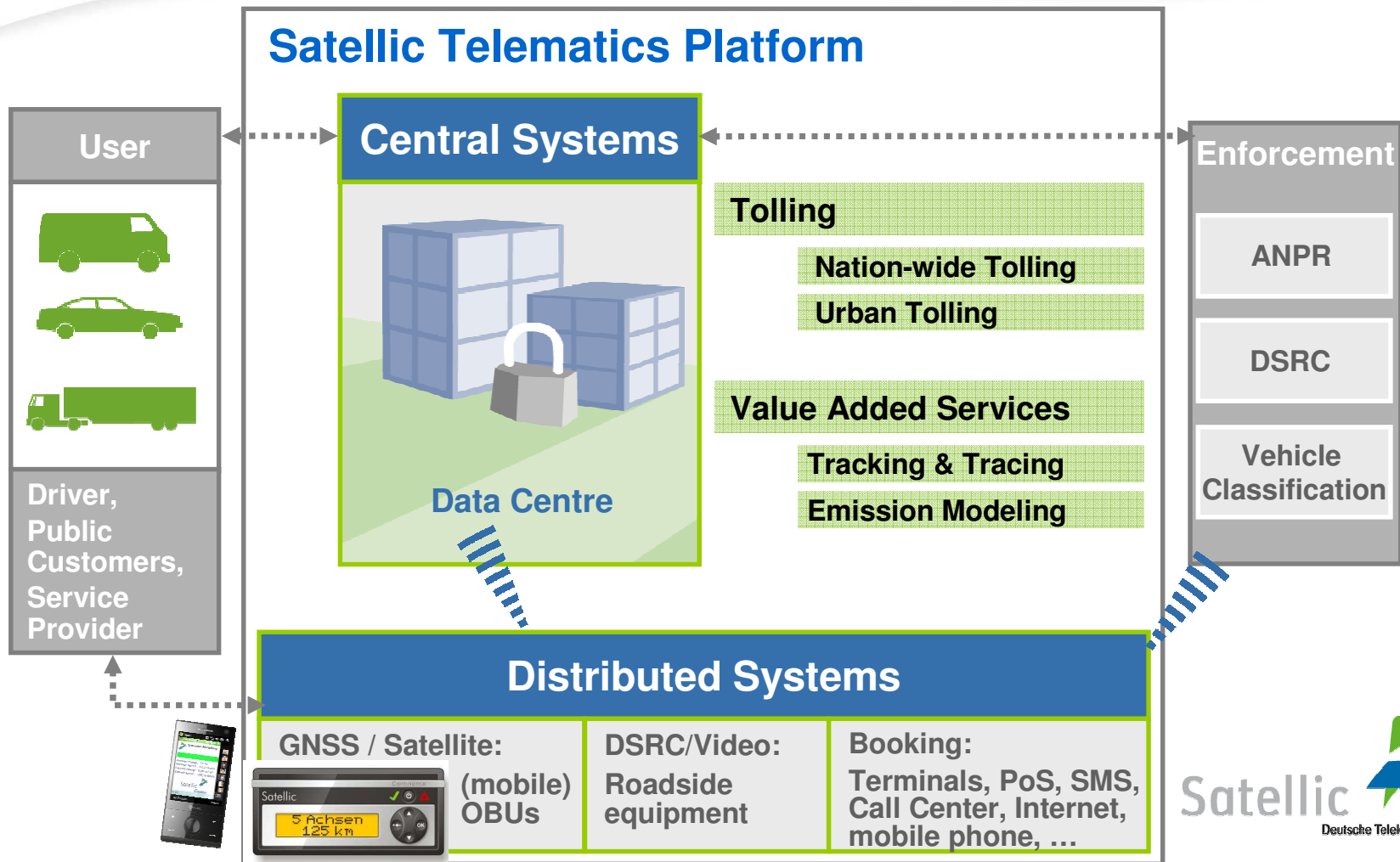


- GNSS



- RFID

# Urban Mobility and Road Charging. Smart Applications via ONE Platform.



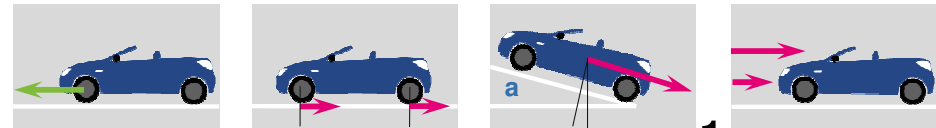
# Satellite Emission Modelling for smart pollution control.



Example for “Green Telematics”: the EMS Application

1) **Data collection** and calculation of the vehicles’ energy consumption through **GPS** data only by a **smart OBU**

2) **Calculation of the actual CO2 emission** by using pure physics.

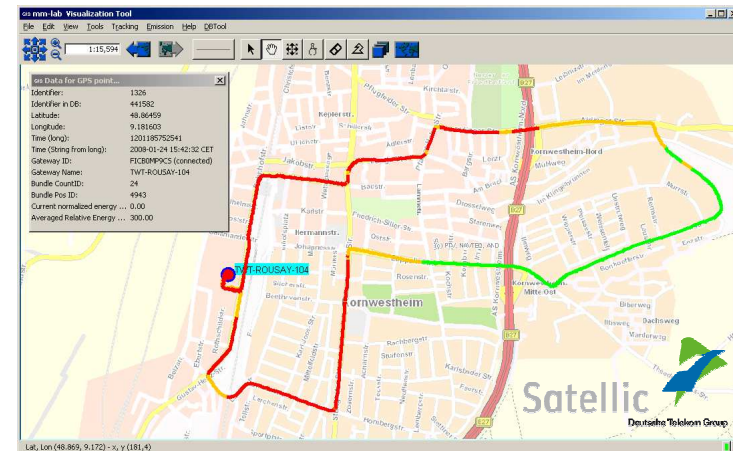


3) **Visualisation** of the values on maps as „**Emission Hot Spots**“

$$P = mv \cdot (a + g(\mu + \sin \alpha)) + \frac{1}{2} \rho \cdot A \cdot c_d \cdot v^3$$

4) **Deduction of pollution control measures:**

- Alternative routing for “Hot Spots”,
- Direct driver feedback for individual consumption control and driving behavior,
- Guidelines for entire fleets et al



Satellic – Because Mobility Matters.  
Thank you for your attention!

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