Gemeente Rotterdam

Bastiaan Pigge

Mobility department

City of Rotterdam

2020
CIVITAS
Cleaner and better transport in cities
PARK4SUMP

Smart Enforcement

Technological Parking Innovations

15-10-2020

Inhoud

- **Smart Enforcement**

  - Work Proces

  - Data

  - Innovations

- **Parking Innovations**

  - Parking Sensors

Parking in numbers in Rotterdam

- **On-street parking**

  - Payed parking since 1965

  - 96.000 regulated parking spaces

  - 650 Parkingmachines (no cash payment since 2001)

  - 100.000+ Parkingpermits

  - 16.000.000 Parking transactions/year

- **Off-street parking**

  - 17 public garages, 5000 parking spaces

  - 32 resident garages, 2100 parking spaces

  - 5 P+R Facilities, 4000 parking spaces

  - 5.000 subscriptions, 1.600.000 Parking transactions/year

Smart Enforcement, work proces

- **Geographical data**

- **Positioning of the scan vehicle**

- **Scanning the number plates**

- **Checking for a parking right**

- **Follow-up**

- **Impose additional tax**

Smart Enforcement, work proces

- **Geographical data**

  - Basic registration of topographical data in place

  - Additional information added before introduction

  - Keeping data up-to-date by mutation notifications

  - → Geo Parking Database

Smart Enforcement, work proces

- **Positioning of the scan vehicle**

  - GPS

  - INS

- **Scanning the number plates**

  - Turn-key solution Scanbox

  - Several camera's

  - Even cars as close as 10 cm's will be scanned

Smart Enforcement, work proces

- **Checking for parking right**

    - National Parking Register (NPR)

    - Parksaver (administration system of the city of Rotterdam)

- **Follow-up**

    - Done behind a computer (rarely to location)
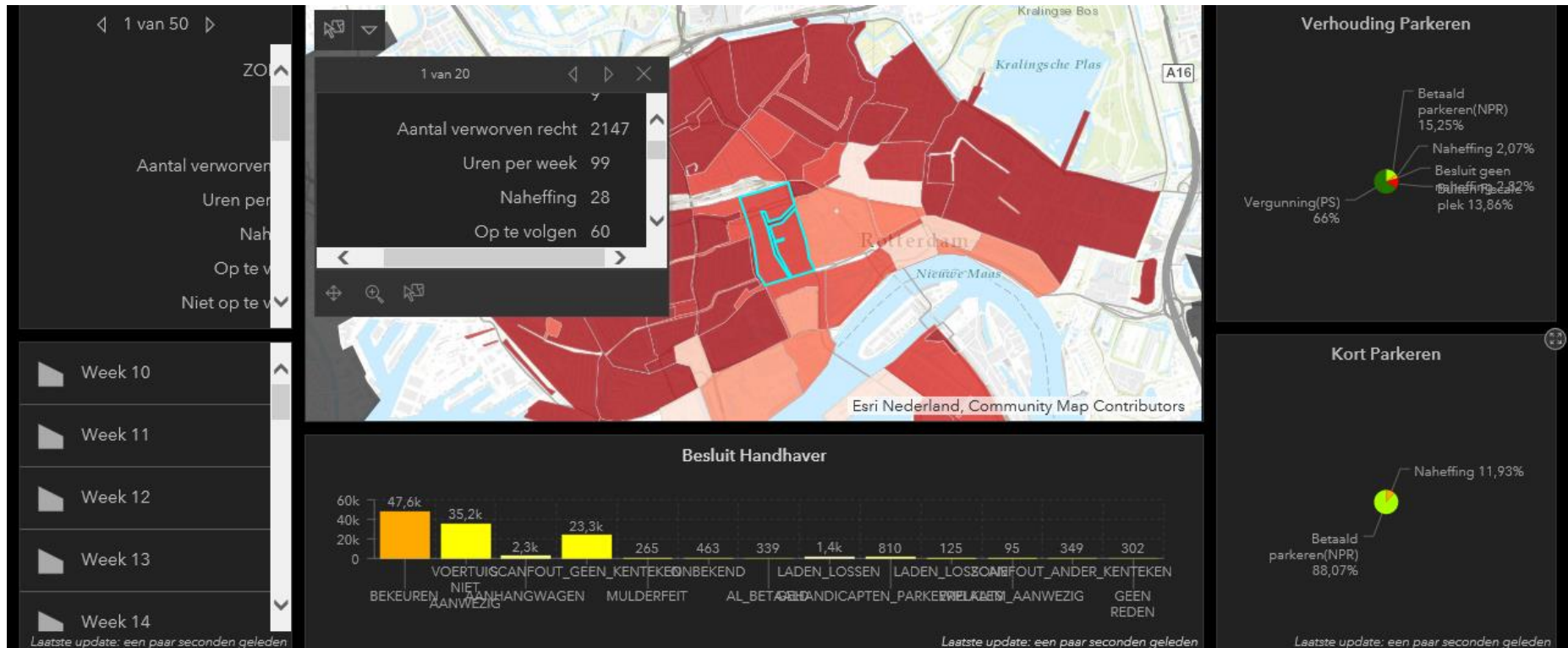
- **Imposing additional tax**

    - Done by municipal tax office

Smart Enforcement, Data

- **Parking capacity**

- **Occupancy rates**

- **Payment rates**

- **Number of parking tickets issued**

- **Counting cars (is still in progress)**

Smart Enforcement, data

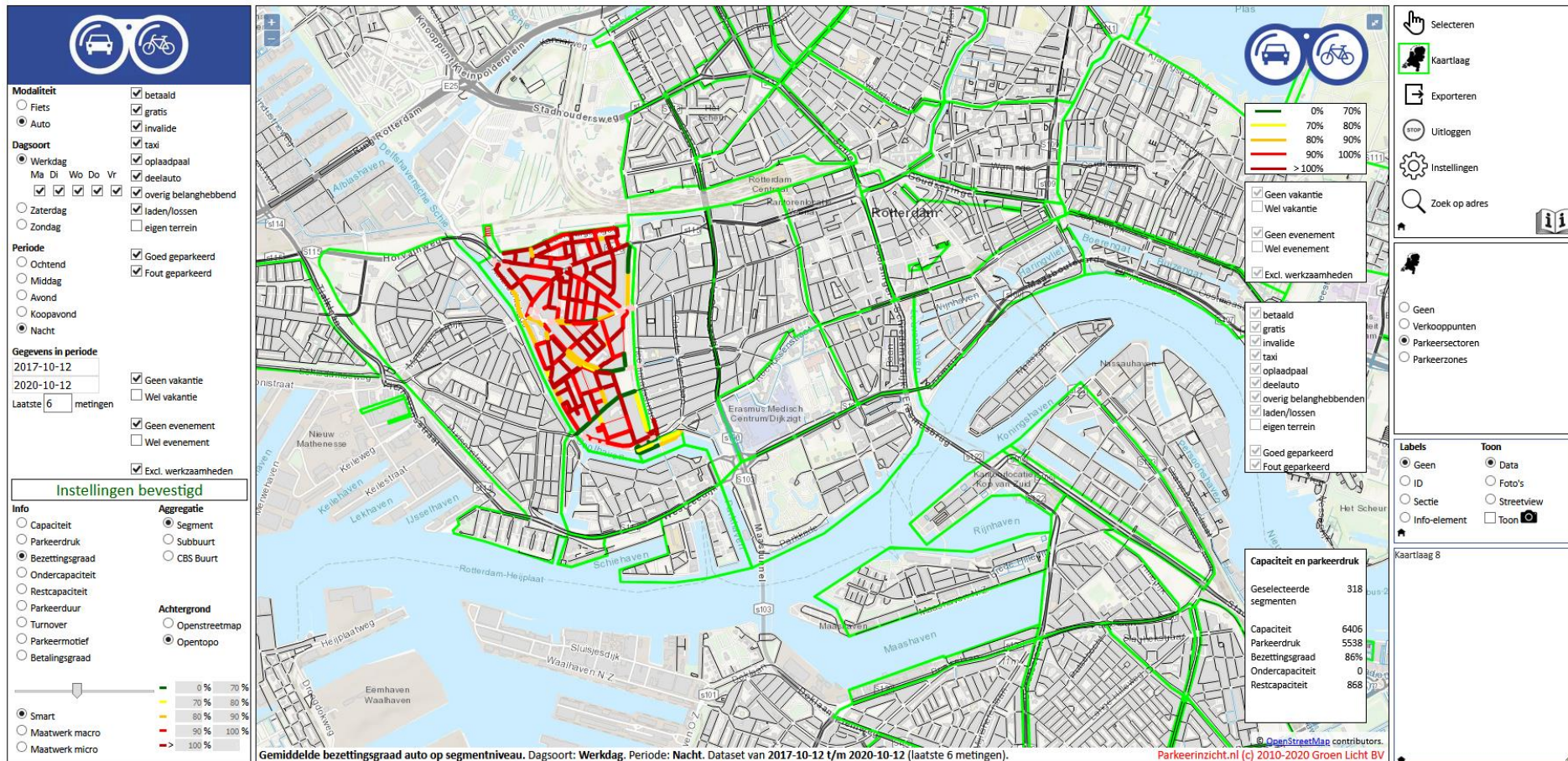- **Analyses of available data to guide the scanvehicle**

Zone	Maandag	Maandag_2	Maandag_3	Dinsdag	Dinsdag_2	Dinsdag_3	Woensdag	Woensdag_2	Woensdag_3	Donderdag	Donderdag_2	Donderdag_3	Vrijdag
10	96,74%	95,23%	95,50%	95,86%	95,92%	96,97%	95,58%	94,97%	96,27%	96,26%	95,60%	95,30%	95,60%
11	94,77%	95,48%	95,17%	94,99%	95,03%	95,80%	95,10%	95,91%	95,63%	95,50%	95,85%	95,68%	95,68%
12		92,02%	88,82%			95,19%	97,67%	89,66%	89,59%	97,50%	97,24%	94,81%	91,07%
120	96,62%	96,53%		97,16%	96,87%		96,68%	95,23%		95,96%	95,63%		95,59%
121	96,94%	95,47%	93,80%	95,89%	96,15%	94,31%	96,63%	96,05%	92,74%	95,88%	96,15%	92,30%	94,86%
13													
130	91,35%	92,82%	91,71%	92,10%	93,06%	90,53%	93,31%	93,44%	92,48%	92,60%	94,69%	91,10%	91,57%
20	95,56%	96,18%	96,92%	96,69%	96,81%	97,29%	96,99%	96,00%	96,11%	96,94%	96,75%	96,25%	94,95%
200	92,55%	91,83%		94,06%	94,02%		95,48%	94,48%		93,36%	92,11%		92,75%
201	89,07%	92,26%		90,91%	89,51%		91,01%	89,73%		89,53%	82,35%		74,19%
202	94,10%	96,87%	96,54%	94,76%	96,52%	96,58%	95,96%	96,15%	96,06%	93,00%	95,83%	95,06%	95,62%
21	95,22%	94,47%	95,25%	94,55%	94,22%	94,48%	94,21%	95,05%	95,53%	93,57%	94,64%	95,93%	95,61%
230	94,91%	94,08%		94,91%	94,36%		94,79%	94,99%		94,50%	93,76%		94,67%
231	94,22%	90,95%		95,51%	93,41%		93,63%	94,43%		92,73%	92,05%		95,40%
232	91,47%	93,22%		92,45%	89,71%		94,30%	93,77%		94,06%	90,45%		89,65%
240													
30	92,07%	92,24%	91,43%	92,47%	92,44%	91,89%	92,31%	84,97%	90,87%		92,52%	90,12%	95,56%
300	93,86%	93,82%		94,69%	92,79%		95,02%	93,50%		94,86%	92,64%		95,43%
301	85,00%	84,70%		91,43%	88,10%		86,70%	98,52%		85,55%	83,82%		86,84%

Smart enforcement, innovations

- **Follow up done on distance, since 2020**

- **Planning of scan vehicles done based on analyses of data**

- **Introduction of panoramic pictures to reduce number of complaints**

- **Counting of cars done by scan vehicle**

Smart Enforcement, data

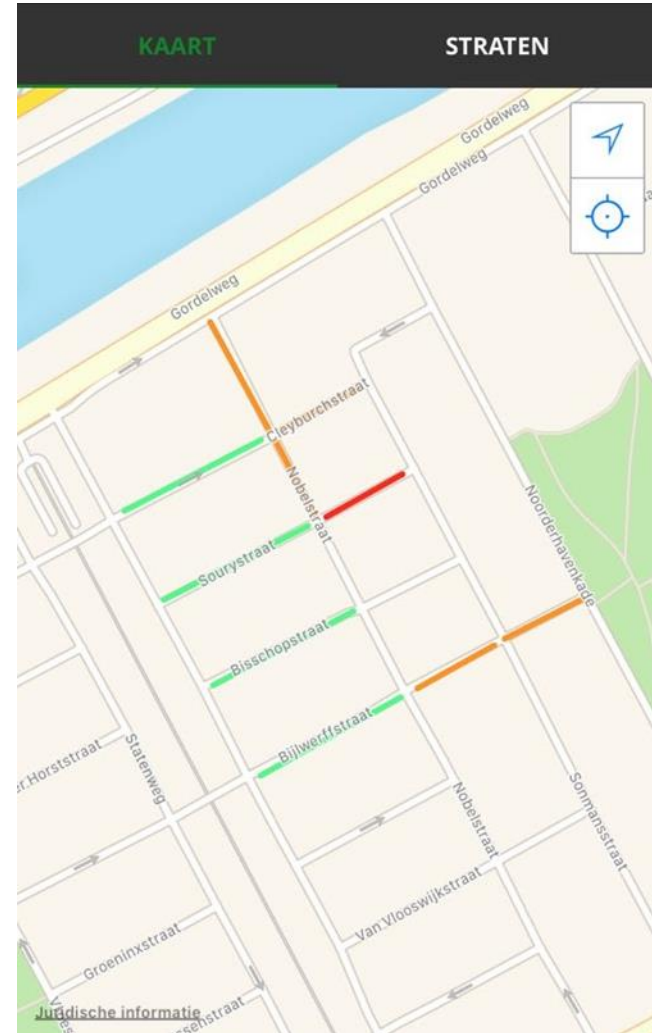- Dashboard on the manual counting provided by a commercial party: Parkeerinzicht.nl

- **Sensors**

  Different use of sensor technolgy

  - Blijdorp, informing the citizens and restriction of search traffic

  - Karel Doormanstraat/Aert van Nesstraat - parkingtime

    restriction

  - Veerhaven charging-hub

Parking innovations

- **Parking sensors for analisys on use of charging infrastructure on non-reserved (for charging) places on the location of "Veerhaven".**

- **Park4sump.eu**

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