

# AMSTERDAM / EINDHOVEN

SUPERB®  
wallpapers



Amsterdam

Studietur til Amsterdam og Eindhoven  
Vejle Kommune, Teknisk Udvalg  
søndag den 8. marts - onsdag den 11. marts 2015

*Vejle*  
...med vilje

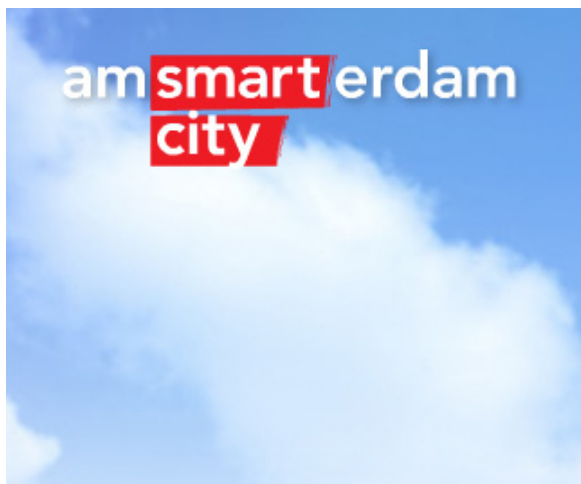
# Studieturens formål

Formålet med studieturen er at få inspiration til, hvordan Vejle kan integrere smartcity koncepter i Vejle Kommunes videre udvikling af byen, herunder bystrategien, infrastrukturen og den kollektive trafik.

Grundtanken er, at tendenser i den teknologiske udvikling så tidligt som muligt overvejes, indtænkes og indarbejdes ved planlægningen, initiativer og i den videre udvikling af byen, med henblik på i videst muligt omfang at muliggøre en opdatering/opgradering af fx infrastrukturelle tiltag - så de i længere tid er tidssvarende og opfylder borgernes behov. Nøglen er således bæredygtig investering i fremtidens by.

I lyset af at Vejle blev udvalgt til en af verdens 100 resilient cities - i Rockefeller Foundations 100RC - vil resiliensperspektivet blive inddraget, hvor det er muligt og relevant.

Amsterdam & Eindhoven er blevet valgt som mål for udvalgets studietur, idet det forventes, at byerne vil kunne bidrage til inspiration og oplysning i disse sammenhænge.





# Deltagere

Formand for Teknisk Udvalg Peder Hummelrose  
Næstformand for Teknisk Udvalg Leif Skov  
Udvalgsmedlem Alex Vejby Nielsen  
Udvalgsmedlem Christa Laursen  
Udvalgsmedlem Christoffer Aagaard Melson  
Udvalgsmedlem Jens Erik Jørgensen (afbud p.g.a. sygdom)  
Formand for Udvalget for Lokalsamfund og Nærdemokrati Niels Clemmensen

Direktør for Teknik & Miljø Michael Sloth  
Direktør for Økonomi- & Arbejdsmarked Peter Karm  
Stabschef Thomas Kirsten  
Områdechef Jørgen Chris Madsen  
Områdechef Lars Buksti  
Områdechef Mikael Jakobsen  
Projektleder Poul Erik Larsen  
Faglig koordinator Camilla Jørgensen

## **Kontaktpersoner:**

Thomas Kirsten  
Camilla Jørgensen

## **Kontaktperson i Amsterdam:**

Rob Aalders, R.A.U.M. urban media

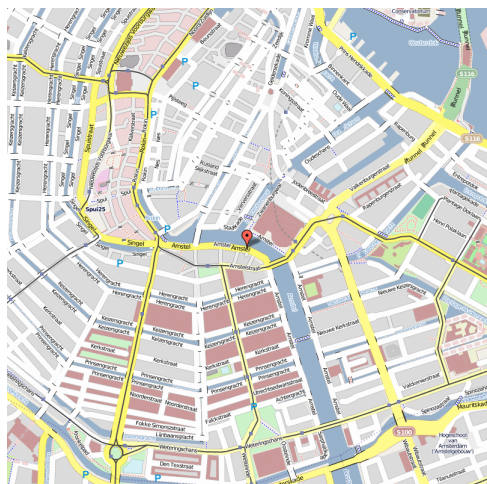
Taxi TCA – 0031 20 777 7777

# Hotel

## **Hampshire Hotel – Eden Amsterdam**

Amstel 144  
Amsterdam, 1017 AE, Holland  
0031 20 530 7878  
[www.edenhotelandamsterdam.com](http://www.edenhotelandamsterdam.com)

Hampshire Hotel - Eden Amsterdam ligger i hjertet af Amsterdam, lige i nærheden af den berømte Rembrandt-plads og blomstermarkedet. I nærheden er også Skinny Bridge og Hortus Botanicus. Der er 250 m til Det Jødiske Historiske Museum.



# Program søndag 8. marts

## Program:

Søndag den 8. marts:

Rejsedag

Kl. 15.45      Afgang fra Kirketorvet

Kl. 16.30      Check-in i Billund Lufthavn

Kl. 18.30      Afgang med fly nr. KL1348 til Amsterdam

Kl. 19.45      Ankomst Schiphol Airport - og let aftensmad

Kl. 20.30 ca.      Check-in på hotellet Hampshire Hotel – Eden Amsterdam



# Program mandag 9. marts - Amsterdam

## Program:

Mandag den 9. marts:

### Amsterdam

- Kl. 08.30      Afgang med bus fra hotellet
- Kl. 09.00      Amsterdam Kommune  
Weesperplain Kantoor  
v/Katalin Gallyas
- Kl. 10.30      Transport
- Kl. 11.00      Vehicle2Grid  
Borneokade 74, 1019 AW Amsterdam  
v/Hugo Niessing
- Kl. 12.00      Transport
- Kl. 12.30      Frokost
- Kl. 14.00      Smart Energy / Geyser / Green Metropole & Green IT  
New Energy Docks, Distelweg 113, Amsterdam  
v/Vasiliki Georgiadou
- Kl. 15.30      Wifi IJburg  
New energy docks, Distelweg 113, Amsterdam  
v/Nico Dammers
- Kl. 16.30      Tilbage på hotellet  
Formandsmøde TU  
Hotel Hampshire
- Kl. 19.30      Middag

# Program tirsdag 10. marts - Eindhoven

## Program:

Tirsdag den 10. marts:

Eindhoven

- Kl. 09.00      Afgang med bus fra hotellet til Eindhoven (information om Eindhoven i bussen)
- Kl. 11.00      Ankomst  
Open data & Smart City Eindhoven  
City Hall  
v/Gaby Sadowski
- Kl. 12.30      Interactivity in public space VentureSpring  
Atelierruimte via park strijp beheer  
v/CJ Mol
- Kl. 13.00      Frokost
- Kl. 14.30      Mobility-S. New ways of mobility  
Videolab / atelierruimte strijp-s  
v/Paul Bloemen
- Kl. 16.00      Transport til city center
- Kl. 16.30      Living Lab. Light and security  
Stratumseind 32 (De Oude Rechtbank, brasserie) 1e etage  
v/Tinus Kanters
- Kl. 18.00      Til fods til middag
- Kl. 18.30      Middag
- Kl. 20.30      Light-S  
Smart Light - Byens lys  
Atelierruimte strijp-s  
v/Lorna Goulden
- Kl. 22.00      Bus tilbage til hotellet i Amsterdam

# Program onsdag 11. marts - Amsterdam

## Program:

Onsdag den 11. marts:

Amsterdam

- Kl. 09.00      Afgang fra hotellet med bagage
- Kl. 09.30      WeGo – SmartParking  
v/ Manuel Cayre
- Kl. 10.30      Til fods til Glimworm
- Kl. 11.00      Glimworm  
Eerste Weteringplantsoen 8, 1017 SK Amsterdam  
v/Jonathan Carter
- Kl. 12.00      Til fods til frokost
- Kl. 12.30      Frokost
- Kl. 14.00      Smart lighting, Open Smart Grid Platform  
v/Jeffrey de Gijs
- Kl. 15.30      Cition  
Cition Office, Nieuwpoortstraat 5-9, Amsterdam  
v/Jan Lukkien
- Kl. 17.00      Afgang med bus mod Schiphol Airport
- Kl. 19.40      Check-in
- Kl. 21.40      Afgang med fly nr. KL1349 til Billund Lufthavn
- Kl. 22.45      Ankomst Billund Lufthavn
- Kl. 23.20 ca.    Ankomst til Kirketorvet 22

## Idee Voor Je Buurt





# Amsterdam - byen og historien

## Amsterdam - om byen

Er den største by og hovedstad i den europæiske stat Nederlandene. Byen er ikke sæde for regeringen og parlamentet – en rolle, der i stedet tilfalder landets tredjestørste by, Haag.

Amsterdam har 800.000 indbyggere (med forstæder 2.300.000) og er en del af Randstad-området, som er en sammenvoksning af flere store og mellemstore byer, som har ca. 7.500.000 indbyggere.

Byen er bl.a. kendt for Rijksmuseum, Van Gogh-museet, Rembrandt-museet, Anne Franks hus, kanalerne og de mange cykler. Amsterdam er også kendt for red-light distriktet de Wallen og de såkaldte "Coffeeshops", hvor der bl.a. serveres cannabis.

Lige uden for Amsterdam ligger en af Europas mest trafikerede lufthavne, Amsterdam Schiphol Airport.

NB! Navnet Amsterdam er udledt af de hollandske ord Amstel og dam, det vil sige en dæmning ("dam") i floden Amstel.

Nye og gamle kanalhuse i Amsterdam



## Amsterdam - lidt historie

Amsterdams tidligste historie kan spores til et tidspunkt i 1200-tallet, hvor der var et mindre fiskersamfund ved åen Amstels bredder.

Amsterdam omtales første gang 1275, da grev Floris 5. af Holland gav den begrænsede privilegier under navnet Amstelledamme.

Byen tog ivrigt del i handelen på Østersøen. På Skåne-markedet var amsterdammerne de mest fremtrædende blandt de hollandske købmænd. Byen var dog ikke medlem af Hanseforbundet, men handlede ivrigt med de deltagende byer.

I 1500-tallet blev byen et fristed for religiøse, der var forfulgt i deres hjemland, bl.a. jøder fra Spanien og Portugal, som flygtede fra den spanske inkquisition, og huguenotter fra Frankrig. Jøderne grundlagde en omfattende diamanthandel, som byen dog stort set mistede efter anden verdenskrig grundet deportationen af den jødiske befolkning.

I 1600-tallet var byen en af verdens ledende finans- og søfartsbyer samt centrum for landets kolonirige. I 1602 oprettedes det Ostindiske Handelskompagni og i 1621 det Vestindiske Handelskompagni.

I 1622 havde Amsterdam 100.000 indbyggere og var en af Europas største byer.

Ved midten af det 18. århundrede var Amsterdam Europas førende handelsby, men i 1787 blev den erobret af preusserne, igen i 1795 af franskmændene, og derefter blev den gjort til hovedstad i den Bataviske Republik og i 1808 ligeledes i Kongeriget Holland. Da dette i 1810 forenedes med det franske kejserrige under Napoleon, blev Amsterdam fællesrigets tredjestørste by. Napoleonstiden medførte dog en betydelig nedgang i handel og befolkningstal.

Efter etableringen af Kongeriget Nederlandene som en selvstændig stat i 1815 kom der igen en stabil udvikling, og Amsterdam blev atter en af verdens rigeste byer. Slutningen af 1800-tallet bliver derfor af og til betegnet som Amsterdams anden guldalder.

Efter årtusindeskiftet begyndte sociale problemer som sikkerhed, etnisk diskrimination og opdeling mellem religiøse og sociale grupper at udvikle sig. 45% af befolkningen i Amsterdam har ikke-hollandske forældre. Amsterdam er karakteriseret ved en (tilsyneladende) stor social og kulturel tolerance.

Den sociale tolerance blev bragt i fare af mordet på den hollandske filmskaber Theo van Gogh i 2004 af Mohammed Bouyeri, en islamisk fundamentalist. Borgmesteren i Amsterdam, Job Cohen, og hans oldermænd for integration, Ahmed Aboutaleb, formulerede en politik, der skulle "holde ting sammen", og involverede social dialog, tolerance og hårde straffe til dem, der brød loven.



# SmartCity Amsterdam



## Amsterdam - som SmartCity

I Amsterdam er der indgået et partnerskab mellem virksomheder, myndigheder, forskningsinstitutioner og befolkningen i Amsterdam i Amsterdam Smart City (ASC). Det er målet at udvikle Amsterdam Metropolitan Area til en Smart City. En by er smart, når investeringer i kapital og kommunikation, brændstof og infrastruktur bygger på en bæredygtig økonomisk vækst og en høj livskvalitet, i kombination med en effektiv udnyttelse af naturressourcerne. I løbet af de seneste tre år har Amsterdam Metropolitan Area arbejdet for at blive en Smart City.

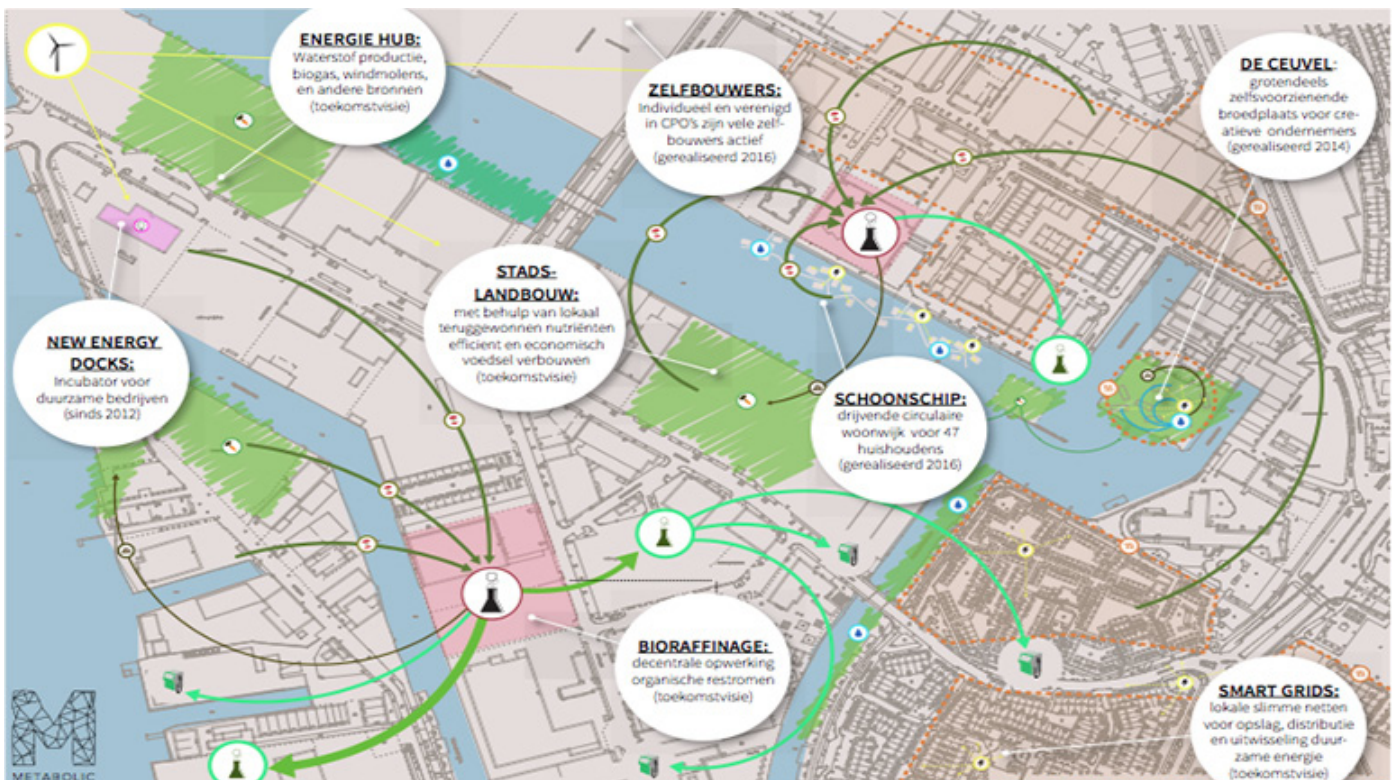
Amsterdam Smart City (ASC) blev indledt med Amsterdam Innovation Motor, byen Amsterdam, Liander og KPN. Den er vokset til en bred platform, med mere end 90 partnere, der er involveret i en række forskellige projekter, der fokuserer på energiovergang og åben forbindelse.

ASC handler om den samlede sum af at teste innovative produkter og tjenester, forståelse af beboeres og borgeres adfærd og brugere af Amsterdam hovedstadsområde og bæredygtige økonomiske investeringer. Ved hjælp af en kollektiv tilgang ved at bringe parterne sammen og oprettelse af lokale projekter gør ASC det muligt at afprøve nye initiativer. De mest effektive tiltag kan derefter implementeres i større skala.

<http://amsterdamsmartcity.com/>



The area Buiksloterham in Amsterdam Noord is the living lab for circular area development. It's the place where on this moment the experiment and research is taking place concerning renewable energy and closed cycles of for instance nutrition and materials on a local scale. Therefore, Buiksloterham will be the example of the development of the futuristic and circular city.



# Eindhoven - byen og historien

## Eindhoven - om byen

Eindhoven er en nederlandsk by og kommune med 221.402 indbyggere (2014) og dermed landets femte største og den største i provinsen Nord-Brabant (Noord-Brabant) i den sydlige del af Holland, ved det oprindelige sammenløb af floderne Dommel og Gender.

Floden Gender blev opdæmmet i byens centrum i 1950'erne, mens Dommel stadig løber gennem byen.

I området er ligger byer som Son en Breugel, Nuenen, Geldrop-Mierlo, Heeze-Leende, Waalre, Veldhoven, Eersel, Oirschot og Best. Byområdet har en befolkning på 337.487. Hovedstadsområdet består af 419.045 indbyggere. Byens region har en befolkning på 749.841. Også Eindhoven er en del af Brabant Stad, et kombineret storbyområde med mere end 2 millioner indbyggere.

Eindhoven er hjemsted for elektronikvirksomheden Philips og fodboldklubben PSV Eindhoven.

Mellem Eindhoven og Veldhoven indviedes 29. juni 2012 Hovenring, verdens første hængende cykelrundkørsel i form af en cirkulær hængebro, der fungerer som rundkørsel for cyklister.

## Eindhoven - lidt historie

Eindhoven blev bygget på en høj ved sammenløbet af de to floder Dommel og Gender på en handelsvej gennem Nederland mod Liège.

Byen blev grundlagt i 1232 af grev Henrik 1. af Brabant. I den første skrevne beretning tilbage fra grundlæggelsen i 1232 nævnes det, at byens rettigheder blev givet til Endehove. På det tidspunkt havde Eindhoven ca. 170 huse omgivet af en vold. Lige uden for bymurene stod et lille slot. Byen blev også tildelt retten til at organisere et ugentligt marked, og bønderne i nærliggende landsbyer blev tvunget til at komme til Eindhoven for at sælge deres produkter. En anden faktor i etableringen var dens placering på handelsruten fra Holland til Liège.

I 00'erne blev Eindhoven hovedstaden inden for hollandsk industrielt design. Design Academy Eindhoven (DEA) har opfostret store hollandske designere som f.eks. Maarten Baas, Marcel Wanders, Richard Hutten, Jurgen Bey og Hella Jongerius. Skolen har også en stærk tilknytning til Droog design.

I 2003 udnævnte Time Magazine akademiet til "The School of Cool". På grund af DAE's berømmelse har Eindhoven været i stand til at vokse sig store i designbranchen med begivenheder som Dutch Design Week, der finder sted hvert år i oktober. Mens de fleste af Philips' industrier er flyttet ud, ligger Philips Design Bureau stadig i Eindhoven.

Eindhoven blev kåret som verdens mest intelligente samfund ved Intelligent Forum for 2011.



Cykelparkering i Eindhoven





# Eindhoven som SmartCity

## Eindhoven - som SmartCity

Byen er bredt anerkendt som det mest innovative område i Holland og Europa. Mange innovative højteknologiske virksomheder er blevet grundlagt og har til huse i Eindhoven og nærmeste omegn. Philips, for eksempel, blev grundlagt her.

I 2011 har BRIGHT Magazine givet Eindhoven en placering som nr. 2 i Top 25 over innovatorer, og samme år har Intelligent Forum kaldt Eindhoven den smarteste region i verden.

I Eindhoven bliver teknologi og innovation sat ind i kampen mod nogle af de mest presserende udfordringer, som verden står overfor i dag. Stigende energiomkostninger, problemer omkring mobilitet og sundhedsvæsenet er alle emner, hvor teknologien inddrages.

For at blive en smartere by har Eindhoven et tæt samarbejde med forskningsinstitutter og lokale virksomheder, da man klart er af den opfattelse, at samarbejde er nøglen til succes.

[http://smartercitieschallenge.org/city\\_eindhoven\\_netherlands.html](http://smartercitieschallenge.org/city_eindhoven_netherlands.html)



Evoluon Eindhoven - konference og eventcenter

Philips og Blob - Eindhoven





# Amsterdam - IJburg - Free Wifi

## Amsterdam Free Wifi

**For at servicere et voksende antal "dagsbesøgende" har havnen i IJburg siden april 2013 haft eget gratis wifi. Næste skridt er at udbrede projektet med gratis wifi til andre offentlige områder i Amsterdam.**

From April 2013 onwards, the harbour of IJburg has its own live 'Amsterdam Free wifi'. The next step will be to extend this project of Free Wifi to other public places in Amsterdam.

Due to the rising amount of day-trippers, the municipality of Amsterdam and bars in the harbour of IJburg wanted to facilitate Free Wifi. The success was enforced by the 4 leg cooperation between municipality, entrepreneurs, Amsterdam Smart City (ASC) and KPN. The initiative of combining fibre as wifi antenna connector has come up from ASC and the municipality. Together with café's and KPN, the free wifi was set up.

IJburg - Smart City projekter - bl.a Free wifi



# Amsterdam - IJburg - Incident App

## The Digital Road Authority - Incident Management

**Formålet med projektet er at forbedre fremkommeligheden for udrykningskøretøjer. Problemet er, at de ofte sidder fast i trafikken og derfor ikke kan overholde responstiden på 15 min., men The Digital Road Authority vil gøre det muligt for ambulancerne at komme hurtigere frem ved at forbinde dem med trafikkontrol- og informationssystemet, som kan angive hurtigste rute, holde vejbaner åbne og spærre broer af for anden trafik, når der kommer udrykningskøretøjer. Når app'en er færdigudviklet, skal den testes som pilot projekt.**

In cooperation with the Department of Traffic and Infrastructure of the Municipality of Amsterdam, Amsterdam Smart City and the Research Institute for Mathematics and Computer Science (CWI), TrafficLink is developing The Digital Road Authority which will shorten the response time of emergency services.

The response time guideline for ambulances is fifteen minutes, but they often get stuck in traffic. The Digital Road Authority allows ambulances to arrive on time by linking them to traffic control. This makes it for example possible to clear traffic lanes for emergency services, keep bridges closed when emergency services are approaching and provide emergency services with the quickest route, based on real-time traffic information. CWI is developing 'what if scenario's', based on models and probability calculations for optimal use of these possibilities.

TrafficLink is currently working on the development of the app, and the connection to the TrafficLink traffic management system which is used by the traffic control of the Municipality of Amsterdam. When the app becomes available, a pilot will be run to test it.

IJburg - Smart City projekter - bl.a Incident app





# Amsterdam - IJburg - Traffic flow

## The Digital Road Authority - Traffic flow IJburg

*I myldretiden er det svært at komme til og fra øen IJburg, da den kun er forbundet med fastlandet med to broer. Det betyder trafikkaos, som gør IJburg til et mindre attraktivt sted at bo og arbejde. Det er derfor vigtigt at forbedre trafikstrømmen. Kommunen og private aktører arbejder på at udvikle en app, som kan give bilisterne personlige trafikinformationer baseret på aftaler i telefonens kalender, bestemmelsesstedet og den øjeblikkelige status for signalanlæg.*

*Så snart app'en er færdigudviklet, inviteres en mindre gruppe indbyggere i IJburg til at deltage i en pilot test. I næste fase vil app'en blive tilgængelig for alle indbyggere. Jo flere, der gør brug af den, jo større effekt.*

During rush hours the island of IJburg suffers from reduced accessibility, due to the fact there are only two bridges connecting IJburg to the mainland. This results in traffic jams, making IJburg a less attractive place to live and work. It is therefore important to improve traffic circulation.

The Digital Road Authority, a collaboration of the Department of Traffic and Infrastructure of the Municipality of Amsterdam, Amsterdam Smart City and TrafficLink, facilitates the cooperation between government bodies and private parties. It combines different types of traffic data in order to provide the residents of IJburg with personalised travel advice. Residents receive advice through an app, based on appointments in their phone's calendar, their destination and the current situation at the traffic lights. The

Digital Road Authority is not only in contact with departing travellers, but also with the traffic lights. It divides personal 'travel slots' based on current and expected traffic density. In case of (expected) high traffic density, the Digital Road Authority can also increase the 'green time' at the traffic lights to improve traffic circulation.

Currently the app is in development by TrafficLink and the Dutch Research Institute for Mathematics and Computer Science (CWI) is working on the required calculation models for managing the traffic. As soon as the app becomes available, a pilot starts and a small group of inhabitants of IJburg can start testing. In the next phase the app will become available for all inhabitants. The more participants, the greater the effect.



IJburg - Smart City projekter - Traffic flow





# Amsterdam - IJburg - YOU decide!

## IJburg YOU decide!

*IJburg er et nyt velorganiseret boligområde med beboere, der er parat til aktivt at bidrage med ideer til, hvordan deres bydel kan gøres smart'ere og mere bæredygtig. Derfor blev der lavet en online undersøgelse, hvor ét af spørgsmålene var: "hvis vi modtog en halv million euro til at gøre IJburg mere bæredygtig, hvad skulle vi så bruge dem på?" Der kom mange gode svar, og vi forventer flere. Disse danner nu grundlag for en handlingsplan.*

IJburg is a special neighborhood, because it is quite new and therefore already organized. It's also because the IJburg citizens are willing to think actively about the future of their neighborhood. So who better to decide on how to make their city smarter than the citizens and companies themselves?

In the EUDI (End User Driven Innovation) project, IJburgers were asked to describe their issues and ideas on energy and mobility in their neighborhood. We queried the IJburg citizens about what they think of their neighborhood: how would they describe it and what are their ideas to make it sustainable. To do so we created a webtool, where IJburg citizens can fill in a short questionnaire. One of the questions is for instance: What would you do if you would receive half a million euro to make IJburg more sustainable?

### First results and next steps

The project has been concluded. We collected several beautiful stories. But we are still looking for more stories. On the basis of these stories we have created an action plan for ASC on IJburg.

IJburg - Smart City projekt - You decide!



# Amsterdam - NIEUW WEST - Smart Grid

## City-zen - Smart Grid

*Amsterdam New West distriktet har ca. 40.000 husholdninger, hvoraf ca. 10.000 betjenes af Alliander Smart Grid. New West har et stort antal intelligente målere og har den største mængde solpaneler i Amsterdam. For at være på forkant med den aktuelle udvikling og tilgodese de høje ambitioner om bæredygtig strømfor- syning i New West, er dette distrikt valgt til at være stedet, hvor man implementerer den første smart grid (intelligent el-netværk) i Holland. Ekstra computere og sensorer placeret i netværket giver bedre og billigere muligheder for at gøre brug af energi og seneste udvikling på området. Ved hjælp af the Smart Grid er det muligt at udvikle en metode til at spare energi både nu og i fremtiden.*

The Amsterdam New West district contains approximately 40.000 households, of which around 10.000 are served by Alliander's new Smart Grid. New West has a high penetration of smart meters and contains the largest amount of solar panels in Amsterdam. To align current developments and further ambitions in the field of sustainable power supply in New West, this district has been chosen for the construction of the first smart grid in the Netherlands.

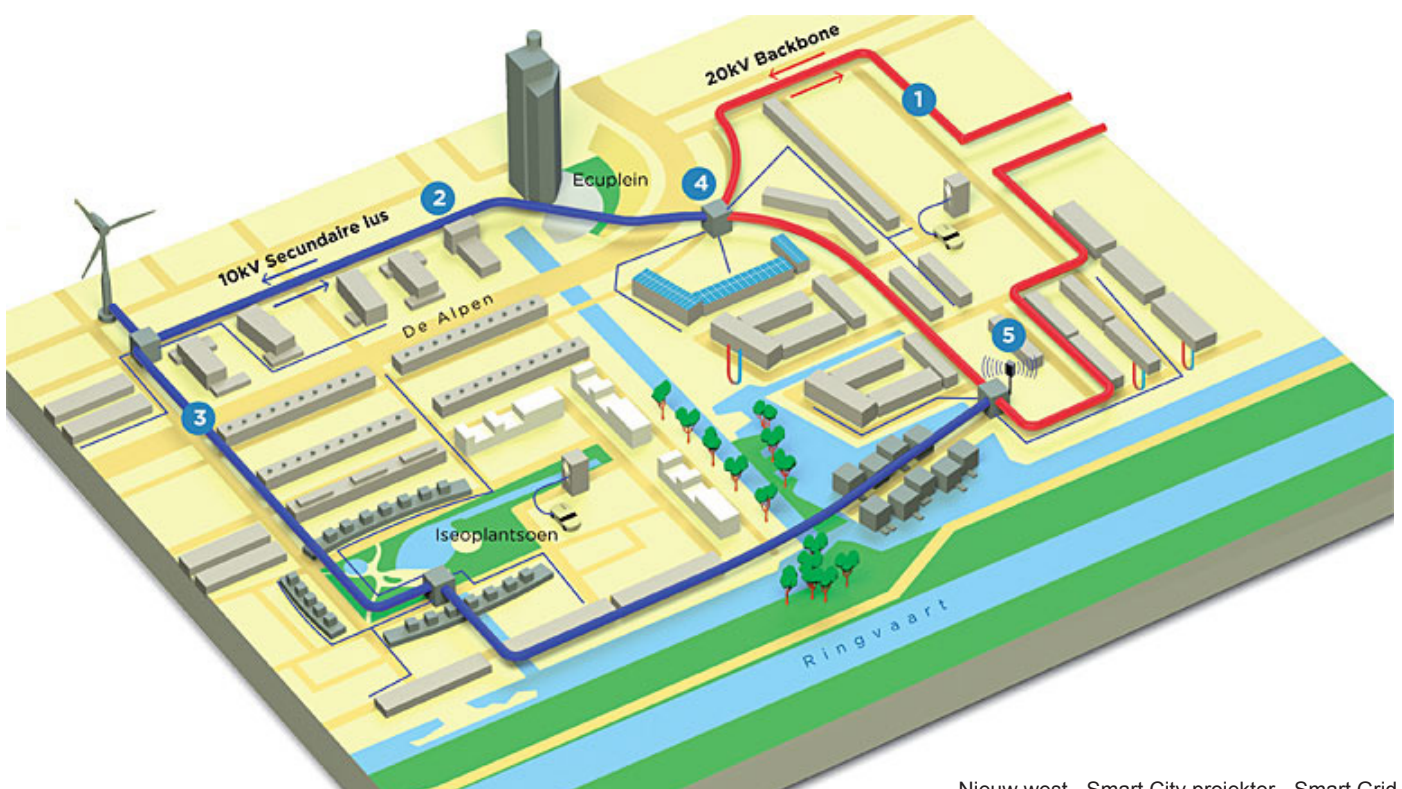
This intelligent electricity network (Smart Grid) contains additional computers and sensors placed in the grid. As such current and voltage are monitored continuously to provide more accurate monitoring and control functions. In the past these functions weren't available at this level. The Smart Grid provides us with better and cheaper options to facilitate the energy transition and latest developments. Consumer benefits:

- Reduction of the number and duration of power outages
- Better opportunity to feed consumer-produced electricity back to the grid
- Increased capability to support the integration of electric-powered vehicles
- Prevention of large price increases for electricity transmission
- Enablement of active participation in a sustainable energy supply

This grid is intelligent because it is equipped with computer and sensor technology at key nodes. Liander can therefore operate the medium voltage grid completely remotely, something that was not previously possible. In addition, the existing network power has been increased in key areas and the network structure has been improved. In the future, slumbering power outages are visible in the smart grid and can therefore be prevented. This network is eventually cheaper because targeted maintenance can be committed, the number of power failures decreases and the grid power will not have to be increased for a long time.

### Next Steps

This grid enables the development and application of sustainable innovations in the New West district to determine how energy can be saved both now and in the future. Various companies are being brought together to investigate and test the use of various technologies, products and services in this neighborhood. Participating companies focus amongst others on innovations in the field of e-mobility, large scale generation of solar power by consumers and discharge to the grid, small scale balancing of demand, vehicle to grid etc.





# Amsterdam - NIEUW WEST - Streetlight

## Flexible street lighting

*Som en virksomhed, der leverer offentlige tjenesteydelser, ser Alliander det som sin pligt at lette overgangen til en bæredygtig, pålidelig og sikker energiforsyning. Et af elementerne, som Alliander fokuserer på, er bæredygtig udvikling af det offentlige rum.*

*Alliander tilbyder en "Open Smart Grid Platform", der gør det muligt at overvåge og styre alle mulige forskellige objekter i det offentlige rum ved hjælp af diverse programmer eller kommunikationsinfrastruktur. Inden for offentlig belysning er kommunen nu i stand til at styre kontakter og dæmpe enheder uden at være afhængig af en bestemt leverandør.*

*I begyndelsen af 2013 gennemførtes en pilottest i Amsterdam, Leiden og Zaltbommel for at få erfaring med det fleksible system. Testene i Amsterdam og Leiden involverede 50 »intelligente« lysmaster.*

As a company providing public services, Alliander sees it as her duty to facilitate the transition to a sustainable, reliable and safe energy supply. One of the elements Alliander focusses on is the sustainable development of public space.

## Maximalisation of market mechanisms

Alliander offers an 'Open Smart Grid Platform' that makes it possible to monitor and manage all kinds of different objects in public space, through any kind of application or communication infrastructure. Alliander hopes to stimulate the maximalisation of market mechanisms.

## Flexible switch system

In the field of public lighting, municipalities and provinces can now be able to control the switches and dimming devices. They are not dependent upon one specific supplier. Alliander wants municipalities and provinces to make the transition to this flexible switch system for public lighting.

## Pilots in Amsterdam, Leiden and Zaltbommel

In early 2013, a pilot got underway in Amsterdam, Leiden and Zaltbommel, to gain experience with the flexible switch system. The Amsterdam pilot (in Osdorp, Nieuw-West) forms part of the Amsterdam Smart City programme. The tests in Amsterdam and Leiden involved placing 50 'smart' light masts, to try out the flexible switch system.



Nieuw west - Smart City projekter  
bl.a Streetlight





# Amsterdam - NIEUW WEST - Vehicle2Grid

## Vehicle2Grid

*I Amsterdam vil der blive startet et Vehicle2Grid pilot-program op. Formålet er, at beboerne bliver i stand til at bruge batteriet i deres elbil til at gemme deres lokalt producerede energi. De kan selv beslutte, hvordan deres lokalt producerede energi (fra solpaneler) skal bruges. Energien kan overføres til et energinet, anvendes straks eller opbevares i batteriet på en elbil til senere brug eller gemmes til brug i husholdningen.*

*Pilotprogrammet vil være med til at fremme en storstilet implementering af el-køretøjer, brug af solenergi og en energimæssig uafhængighed i husholdningerne. Og på længere sigt er det målet at bringe en bedre balance i energinettet.*

In Amsterdam and Lochem gaat een Vehicle2Grid a Vehicle2Grid pilot program will get started. Residents will be able to use the battery in their electric car to store their locally produced energy. Residents will be able to decide how to put their locally produced energy (i.e. from solar panels) to use. The energy can be transferred to the energy grid, used immediately or stored in the battery of an electric car, to be used at some later time to drive the car or run household appliances.

Several partners are cooperating in the pilot: Cofely, Alliander, ABB, Mitsubishi Motors Corporation, Amsterdam Smart City, Amsterdam University of Applied Sciences and the borough of Nieuw-West. TKI Switch 2 Smart Grids provided a subsidy for the project, so that an investment of 1,6 million euro will be available. The cooperating partners will provide support for three years, to tackle the various technical, economic and social impediments. This pilot will help move forward the large scale implementation of electric vehicles, the use of solar energy and the energetic independence of households.

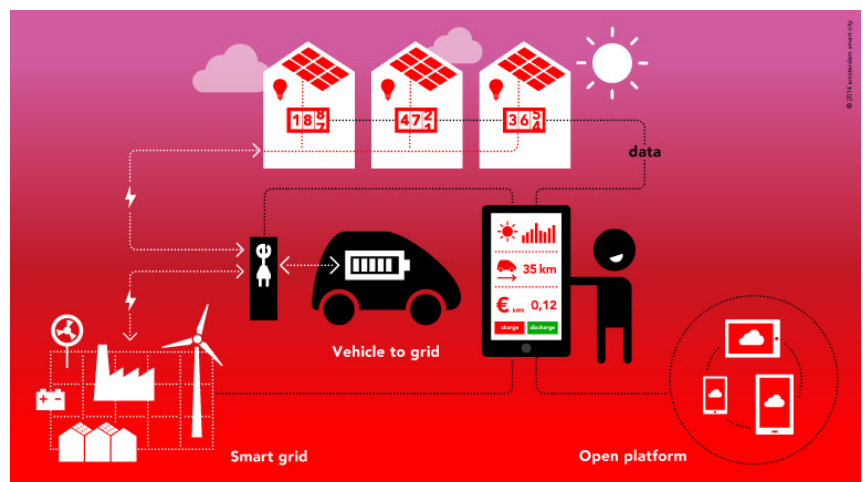
### Open Platform and residents' research

In the pilot program, a system is tested to give residents control of their own energy supply. In the future, this can help to better balance the energy net. Residents could be

given incentives to put up their cars as a storage unit of energy, or the opposite: to unload the stored energy in their batteries back to the grid. Students of the Amsterdam University of Applied Sciences will study the behaviour of residents and chart their energy use. Another important part of the pilot is the development of an open online platform for data communication. This open platform connects several entities that normally would not automatically cooperate because of differences in communication protocols. Data from a household can be connected to data in a car battery, or a charge station. The data can be of use in creating new products and services for the end user, for instance by developing apps that arrange sustainable energy, electric vehicles or trading of energy between households.

In 2014, the Vehicle2Grid pilot will begin its three-year run. The program is divided into three stages:

- 1. Vehicle2Home 2014, Lochem:** A handful of selected enthusiastic households will perform the first tests, so the system and the data platform can be optimised.
- 2. Vehicle2Building 2015, Amsterdam:** The experience gained in Lochem is put to use in a second test situation, in which (company) cars and a handful of electric cars are connected.
- 3. Vehicle2Grid 2016, Amsterdam:** For part three, all garnered insights are collated in the last phase of the pilot. A whole street or neighbourhood in Nieuw-West will be connected.



# Amsterdam - ZUIDOOST - Model Me

## Model Me

***Glamour Manifest samarbejder med Burton Hamfelt om at udvikle et online program kaldet "Model Me". Parterne både i og uden for regionen kan bruge programmet til at udveksle oplysninger om forskellige initiativer. Det kan for eksempel være en beachvolley turnering, deling af parkeringsplads eller ombygning af en kontorbygning. Dette værktøj vil stimulere udviklingen af sådanne bottom-up initiativer og bidrage til at skabe et ressourcestærkt samfund.***

***Model Me er en ramme, inden for hvilken parterne kan udveksle analyser, spørgsmål eller forslag baseret på egne informationer og data. I den indledende fase vil der blive udviklet en fuldt funktionsdygtig prototype.***

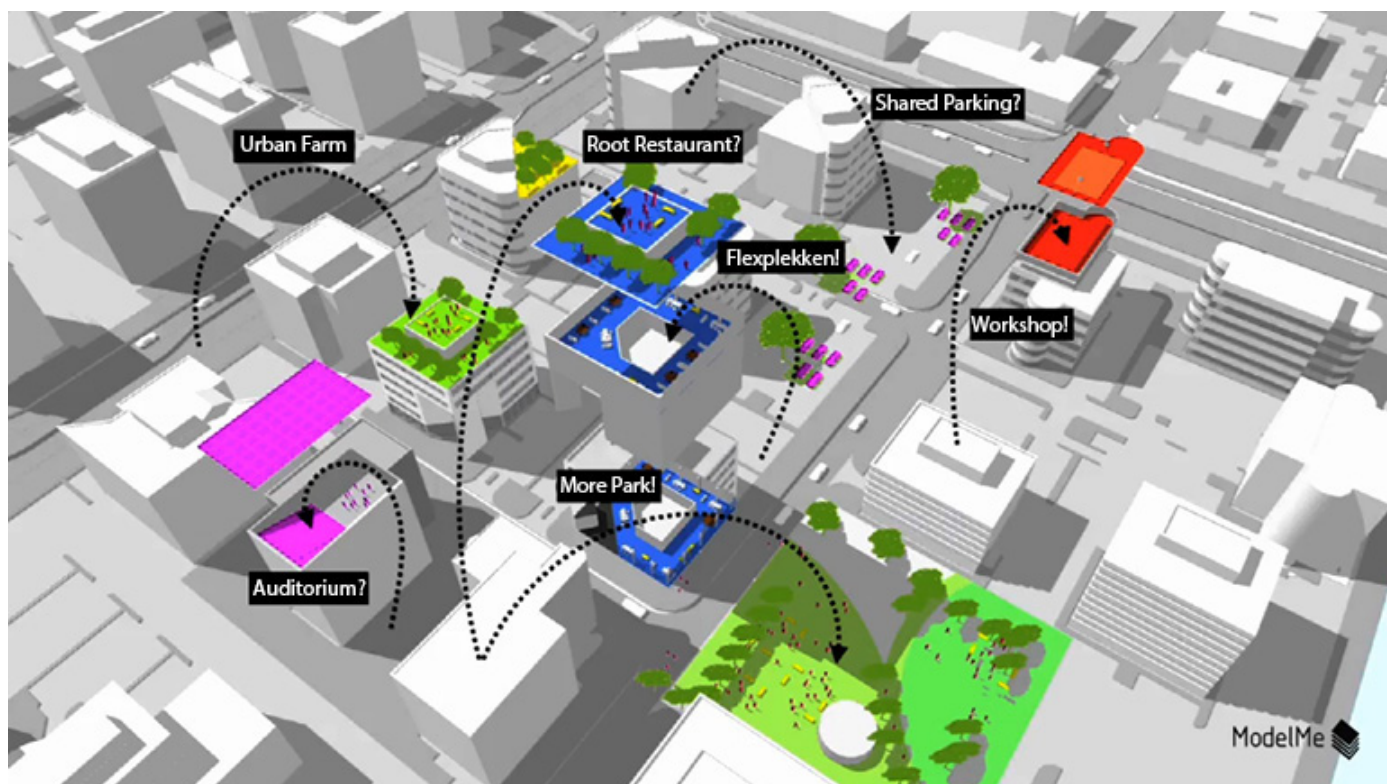
Glamour Manifest is collaborating with Burton Hamfelt to develop an online application called 'Model Me'. Parties both in and outside of the region can use to the application to post initiatives for development. For example: a beach volleyball tournament, parking space sharing or the redevelopment of an office building. This ICT tool will stimulate

the development of such bottom-up initiatives and help create a strong community.

The initial development steps for Model Me involve the harmonisation of numerous databases and map information. Model Me is the framework upon which parties can formulate their analysis, question or proposition, drawing on their own insights and data. Amsterdam Smart City is also coordinating research into the best methods for incorporating a visual representation of time-based data in Model Me.

Model Me is supported by Amsterdam Smart City, the City of Amsterdam and several parties active in the sector. All involved parties will provide input to assist in the development of the application. A fully functional prototype will be produced in the initial phase. Together with the involved parties, work will subsequently begin to introduce the application before it is developed further in a second phase.

Zuidoost - Smart City projekt - Model Me



# Amsterdam - ZUIDOOST - Smart Light

## Smart Light

*Indledende forsøg med intelligent gadebelysning vil finde sted i nærheden af Amsterdam ArenA. Forsøget fokuserer på forskellige aspekter af intelligent gadebelysning i det offentlige rum. Belysningen kan justeres i en række situationer via fjernstyring eller sensorer, hvilket bidrager til at forbedre sikkerheden og spare energi. For eksempel kan belysningen dæmpes eller justeres efter vejret, og trafiklys kan styre strømmen af trafik og fodgængere. Bevægelses-sensorer kan også bruges til at undersøge, om lyset skal være stærkere. Sparet energi kan så bruges til andre funktioner, såsom at styrke WiFi-netværket eller måle luftkvaliteten.*

Initial trials of smart street lighting will take place in the vicinity of the Amsterdam ArenA. The trial is focused on various aspects of smart lampposts in public spaces. The lighting can be adjusted for a range of situations via remote operation or sensors, helping to improve security and save energy. For example, lighting can be dimmed or adjusted according to the weather, and coloured lighting can control the flow of traffic and pedestrians. Movement sensors can also be used to register if the lighting needs to be brighter. Saved energy can then be used for other functions, such as powering the Wi-Fi network or measuring air quality.

The trial is part of the Smart Lights in Metropolitan Areas project. In October 2012, former Amsterdam Alderperson Carolien Gehrels signed an agreement with her counterparts in Rotterdam and Eindhoven outlining the goals of the project.

Subsequent to the trial in the vicinity of the Amsterdam ArenA, it will be extended to the Amsterdamse Poort shopping centre and a nearby residential area.

Zuidoost - Smart City projekt - Smart Light



Zuidoost - Smart City projekter





# Amsterdam - ZUIDOOST - Solar Gambling

## Solar Gambling

**Mange huse i Amsterdam Zuidoost har tage, der egner sig godt til montering af solpaneler. Solar Gambling har til formål at øge bevidstheden om dette faktum. Det introducerer solenergi for et bredt publikum og fremhæver solenergiens positive effekt. Det mobile anlæg kan anvendes på en række forskellige steder.**

**Projektet startede som et undervisningsprojekt i faget Applied Sciences på Amsterdam universitet i september 2014, hvor de studerende har til opgave at udvikle konceptet og producere en prototype.**

A notable amount of houses in Amsterdam Zuidoost have roofs suitable for the installation of solar panels. Solar Gambling is an installation designed to raise awareness of this fact. It introduces solar energy to a wide audience and explicitly highlights the power of solar energy. The mobile installation can be used at a range of locations.

Solar Gambling is being developed in collaboration with students of the Amsterdam University of Applied Sciences.

In addition to building the actual mobile installation, students will develop an application that allows people to predict how much solar energy is being produced. Students will also work together with local shops to arrange prizes for accurate predictions. Raising awareness for product development, collaboration and the generation of sustainable energy are all key elements of this project.

The educational module will be introduced at the Amsterdam University of Applied Sciences in September 2014. Students will develop the concept and produce a prototype. During this process, there will be a strong emphasis on collaborating with shops in Zuidoost and seeking out parties to manage the installation in the future.



# Amsterdam - ZUIDOOST - Smart Living

## Smart Living Showroom

*Der udvikles hele tiden en bred vifte af produkter, der skal hjælpe os til at leve mere intelligent. For at hjælpe forbrugerne med at forstå, hvordan disse produkter fungerer, er IKEA i Amsterdam Zuidoost i gang med at udvikle et koncept for et demonstrationshus. Dette hus vil blive pakket med intelligente produkter udviklet af IKEA og potentielt af andre parter som f.eks Liander og Waternet. Disse intelligente produkter fokuserer primært på områderne vand, energi og affald.*

*Demonstrationshuset vil introducere de intelligente projekter til ca. 3 mill. besøgende i IKEA årligt. De besøgende kan se produkterne i deres aktuelle fysiske form og få relevant information (formentligt digitalt).*

A wide range of products are constantly being developed to help us live 'smarter'. In order to help consumers understand how these products work, IKEA in Amsterdam Zuidoost is working on a concept for a demonstration house. This house will be packed with smart products developed by IKEA, and potentially by other parties such as Liander and Waternet. These smart products are primarily focused on the fields of water, energy and waste.

The demonstration house will introduce the smart products to the approximate 3,000,000 people who visit IKEA every year. The products can be viewed in their actual physical setting and background information will be available in various forms (potentially also digitally). As such, this project unites products, information and lifestyle.

Steps have already been taken to initiate the collaboration between IKEA, Liander and Waternet; the involved parties will sign a collaboration agreement at the end of the concept phase. The realisation phase will subsequently begin. The project will see further development in autumn 2014.





# Amsterdam - ZUIDOOST - Smart Parking

## Smart Parking

*Det bliver sværere og sværere at parkere i byerne. Mange bilister tilbringer megen tid med at være på udgik efter en p-plads, og det øger CO2-udledningen. Smart Parking-projektet gennem MobyPark giver bilisterne mulighed for at booke en p-plads på forhånd både på private og offentlige p-pladser. Det reducerer tiden, som bilisterne bruger på at lede efter p-pladser og mindsker således luftforureningen.*

*Private parkeringspladser, offentlige parkeringshuse samt p-pladser ved hoteller og hospitaler vil alle stille deres ledige parkeringspladser til rådighed for bilister gennem MobyPark, som tilbyder alle de tilgængelige steder på en platform, hvor det er muligt at bestille en parkeringsplads på forhånd eller se, hvornår en bestemt p-plads er tilgængelig.*

The Smart Parking project allows you to book your parking spot in advance in private or public spaces. It enables drivers to spend less time looking for parking and reduce air pollution.

Parking in cities is becoming more and more difficult. Many drivers spend too much time looking for a parking spot and this increases CO2 emissions. MobyPark, a company that advocates parking sharing, will make parking easier and more efficient.

Private parking lots, public parking garages, hotels, and hospitals: they all make their unoccupied parking spots available to drivers through MobyPark. MobyPark offers all the available places on a platform where it is possible to book a parking spot in advance or see real time availability. As a result, drivers spend less time searching and reduce emissions.

The main activities consist of enlarging the database of parking spots and inviting more drivers to use MobyPark. Drivers can not only make reservations, but they can also see which parking spots are available in real-time, pay online and access better pricing.

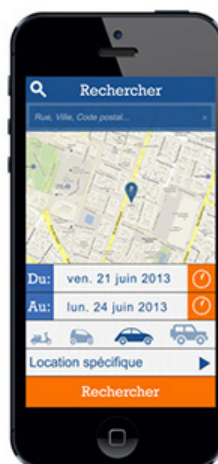
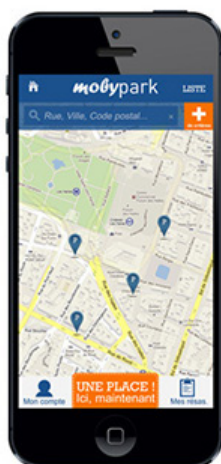
In France, MobyPark has already signed up with more than 130 private spaces and made partnerships with big parking lots, allowing driver to park in a larger amount of spots. In Amsterdam, MobyPark is part of the Startupbootcamp and in only 8 weeks here, pinned 3 private parking locations with more than 100 spots.

NH Krasnapolsky and MobyPark ran a successful pilot during Sinterklaas and helped more than 70 drivers to quickly find the cheapest parking in the area. In that way, drivers reached their final destination without roaming around. In only a week after launching the Android application, there were more than 90 downloads from drivers who were willing to test the app.

Next steps are to enlarge the amount of parking locations and partner up with different public and private organizations to give more users access to this parking sharing initiative. MobyPark aims to make parking more and more sustainable every day.



Park Smart  
Save time, Pollute less



# Amsterdam - ZUIDOOST - WEGO Car share

## WEGO Car sharing

*WeGo er en online person-til-person delebilplatform, der giver ikke-bilejere mulighed for at leje biler fra bilejere i deres nabolag. I modsætning til andre internationale delebilsplatforme er WeGo den eneste udbyder, der har udviklet en app til ejere og lejere, så de kan booke og derudover åbne og lukke for bestillinger. For nylig lancerede WeGo også en platform for virksomheder, der ønsker at spare på udgifterne og investere i bæredygtig mobilitet.*

WeGo is an online peer-to-peer car sharing platform that allows non-car owners to rent cars from car owners in their neighborhood. As oppose to other peer-to-peer car sharing platforms worldwide, WeGo is the only party that developed an app for owners and drivers to manage their reservations and open and close the car. Recently WeGo also launched a business platform for companies that want to save cost and invest in sustainable mobility.

WeGo enables this car-sharing model by providing the platform, insurance and technology to make every transaction safe, convenient and easy.

WeGo works by exploiting the overcapacity in the private car market to provide a range of affordable vehicle access to non-vehicle owners, and benefits vehicles owners by lowering their cost of vehicle ownership and helping them generate extra revenue.

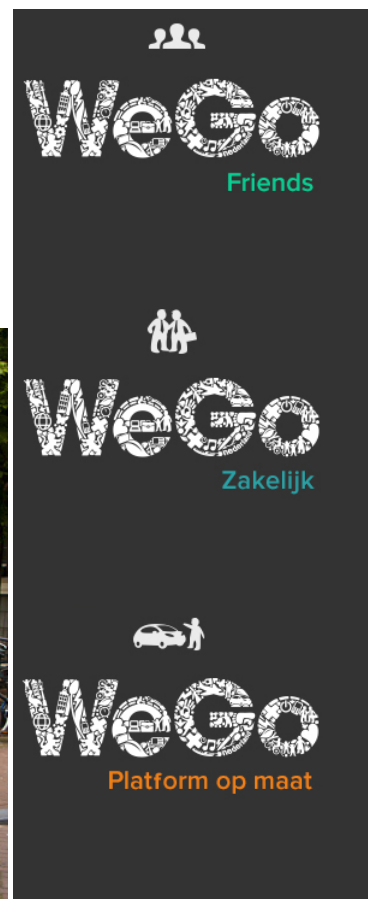
The WeGo app is suitable for owners, drivers and businesses. Peer-to-Peer members can use the app for setting availability, make and manage reservations, find cars in their neighborhood and open and close the car. Other peer-to-peer car sharing parties work with swipe cards or the hand-to-hand model, which means that drivers dependent on the availability of owners to be able to rent their cars. Through the WeGo app, members can rent cars 24/7.

Businesses receive a customized app with similar functionality's. Through the WeGo App employees can see where a company vehicle is located and whether it is available. Online, they make a reservation. The App provides in all necessary car information and enables the employee to open and close it. Through WeGo's technology, companies can see exactly who is driving where and in what company vehicle. The driven kilometers are administrated automatically. With the WeGo technology and software, it is possible to monitor and facilitate company vehicles 24/7. All company vehicles can be used more efficiently and this results directly in saving costs for a company.

WeGo is an example of a new development in the field of sustainable mobility and corporate social responsibility. WeGo is a brand that offers benefits to consumers, businesses, society and the environment.



Zuidoost - Smart City projekt - WEGO Car share





# Amsterdam - ZUIDOOST - Smart Traffic

## Smart traffic management

*Amsterdam-regionen er et af de mest trafikerede områder i Holland. De tre aktører, Amsterdam kommune, provinsen Noord-Holland og staten forsøger alle at optimere trafikstrømmen inden for hver deres forvaltningsområde, men deres foranstaltninger har nogle gange været i konflikt med hinanden. For at forbedre trafikstrømmen var det nødvendigt at etablere et samarbejde mellem parterne.*

*Byen Amsterdam bruger nu TrafficLink's SCM system, der er forbundet med det statslige trafiksystem. Begge centre kan se, hvad der foregår, på bare én skærm og således i fællesskab styre trafikken i regionen.*

*Siden indførelsen af intelligent trafikstyring er andelen af spildtimer i trafikken i Amsterdam-området faldet med 10 procent.*

The Amsterdam region is one of the busiest regions of the Netherlands. Three road managers are active; the municipality of Amsterdam, the province of North Holland and the national government. They all try to optimize the traffic flow within their management area, but the measures they take

sometimes conflict with each other. To improve traffic flow cooperation between all parties was necessary.

## Joint and automatic management

The city of Amsterdam now uses TrafficLink's SCM system that is connected to the traffic system of the national government. Both centres can see what is going on, on just one screen. This is how the centres can jointly and automatically manage traffic within the region.

## Vehicle loss hours dropped by 10 percent

Since the initiative for regional cooperation and the implementation of intelligent traffic management, the percentage of vehicle loss hours in the Amsterdam area has dropped by 10 percent.

## Futureproof

Amsterdam's smart traffic management system can easily be prepared for connection with in-car and navigation equipment. This way, also in the future, Amsterdam can have its own modern digital road manager, which helps optimizing traffic flow within the whole region.



# Noter/idéer/skitser

---

---

---

---

---

---



# Noter/idéer/skitser

---

---

---

---

---

---

---

---

---

---

---

---

