Amsterdam Smart City: Developing a Smart City with business partners

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Smart Cities: the Next Step – Policies, Future Visions and Best Practices from Europe and Japan

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Amsterdam facts and figures

- 800,000 inhabitants
- 2.3 million in Metropolitan region
- 178 nationalities
- 880,000 bicycles
- 165 canals
- 6.800 16th, 17th and 18th century buildings
- 206 paintings by Van Gogh
- 6.200 shops
- 2.98 Coffee shops per 10,000 inhabitants
Between now and 2050 the global population is expected to increase from 7.2 billion to more than 9 billion, with 98% of this growth happening in cities and in the developing and emerging world. 

“70-80% will live in cities by 2050”
• Amsterdam Smart City: a public private partnership

• Initiated in 2009 to transform the Amsterdam Metropolitan Region in a Smart City

www.amsterdamsmartcity.com
Smart projects in the Amsterdam Metropolitan Area

Collective approach

Central position citizens

Knowledge dissemination

Economic viable

cities

Partners

residents + users

Amsterdam Smart City platform

smart solutions
smart technologies
smart products
smart services
smart approaches
ASC focus

- Smart Mobility
- Smart Living
- Smart Society
- Smart Areas
- Smart Economy

Big & open data

Infrastructure
water / wegen / energie / ICT
ASC package

Knowledge
- Local ecosystems in the city
- 5 years of public-private project management
- City data
- Collaboration with knowledge institutes

Network
- 100+ active partners
- Citizen initiatives
- International programme: Amsterdam Connects
- 10 city alliances
- Trade missions

Market
- Project development
- MRA Living labs
- Innovation climate: conditions for a Smart City
- Replicability and upscalability
- Amsterdam Connects

Exposure
- Promotional presentations
- Community website
- Your product or service: Tested in Amsterdam!
- Local, national and international exposure
- Co-develop programme
Programme Partner
• Involvement determining programme strategy and projects
• Part of ASC team
• Visibility on all ASC programme branding
• Active access to ASC network

€100,000 & Contribution FTE
For the Smart City project approach the following framework is used:

1. Determine city goals
2. Playing field analysis
3. Determine stakeholder incentives
4. Challenge definition
5. Identify existing solutions
6. Determine hurdles
7. Activation actors
8. Developing potential solutions
9. Project execution
# TRANSFORM Program

<table>
<thead>
<tr>
<th>City</th>
<th>Key Features</th>
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<tbody>
<tr>
<td>Amsterdam</td>
<td>TRANSFORM program is run by a consortium of 6 leading European cities and their 13 partners</td>
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<tr>
<td>Copenhagen</td>
<td>TRANSFORM program is developing methods and tools aimed at enabling these cities to transform themselves into low carbon and smart energy cities</td>
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<td>Genoa</td>
<td>EU energy and climate targets</td>
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<td>Hamburg</td>
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<td>Lyon</td>
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<td>Vienna</td>
<td>Carbon emissions</td>
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Each city participating in Transform has a different context and is in a different stage of implementing their energy strategies.
Projected result TRANSFORM

- **12 products**
  - 6 improvements Energy strategy on a city level
  - 6 implementation plans of an Energy strategy on a district level

- **Build a roadmap towards sustainable cities**

Projected result Amsterdam

- **Innovate on Energy strategy – what is essential?**
  - Qualitative decision support – Online calculations based on Energy Atlas
  - Build stakeholder knowledge
**Datacentre & Greenhouse**
Using the waste heat of a data center to heat a new greenhouse. This project researches the possibility to use this type of waste heat and decreasing the CO₂ emissions in the area. Moreover, the project is an experiment to green the data industry and links the city to food production with innovative forms of urban farming in the greenhouse.

**Hospital Waste heat**
The AMC hospital owns a private powerplant to ensure power for the vital parts of the hospital. Most of the time, the total capacity of the powerplant is not used. Recent ideas are to bring this capacity to the electricity market. If the hospital succeeds in doing so, a big amount of heat is generated. The possibilities to use this heat in the local district heating system will be examined.

**Playground ESCO**
A project that invites the ESCO industry to start a small project to overcome the assumed main hurdle: trust. The journey to implementation of an ESCO will reveal the real barriers and helps the ESCO industry to develop suitable services.

**Lighthouse IKEA**
Showcase within the IKEA store of a sustainable house equipped with solar panels, insulations and KEA’s sustainable products, and a normal house without energy saving measures and basic products. By visualising the reduction in energy usage and the amount of saved money in € and actual groceries, it will create greater public awareness.

**AJAX Public Action**
Encouraging the Ajax supporters to use sustainable energy and generate a public motion in a relatively short time. One of the possible concepts is an innovative construction of crowd funding which enables Ajax to support local social facilities with investing in solar panels. Through savings on the energy bill the solar panels’ energy can be refunded and the structural cost for energy will drop.

**Solar Gambling**
Raising awareness by playing! Present a working solar panel on the local market and let people bet. People can place a bet for free on the estimated amount of energy the solar panel will produce. Prizes are coupons for services and products of local retailers: a free meal, a haircut or groceries. Monthly prizes are bigger: a ticket for the ZiggoDome or Pathé, and the yearly prize could be a solar panel or an e-bicycle.

**Community Lighthouse**
Inspiration lighthouses are schools, libraries, community centers and youth centers in South-East that run a program for children (and their parents) on renewable energy and energy efficiency. The program is based on learning about renewable energy in a light, playful way in order to challenge people to undertake new initiatives. State of the art technologies are presented in an understandable, visual way.

**Smart living Gasaarland**
Combining several new, innovative products and services on energy reduction and smart living for the residents of Gasaarland. In that way, companies can make smart product combinations and present a package at once to the residents. This new impulse in the area raises the comfort of current residents and makes the area more attractive for new residents.
Energy cooperation
Joint purchasing and exchange of energy (large scale consumers)

Amsterdam Arena
Ajax football stadium

Waste heat from data centers
Use of waste heat of new data center in the immediate vicinity

Local Data Centers

Sun PV AMC
AMC hospital develops a viable business case for 35000 m² solar PV on the roof

Amsterdam AMC Medical Centre

Urban Transformation
• Starts in April 2014
• 23 partners, 30 million investment
• Citizen empowerment
• Project includes:
  • Smart grids
  • Solar energy & storage
  • Renovation. 52,000 m²
  • Grinder
  • Serious Gaming
  • Watercooling Schiphol
Keep in touch!