



Smart Cities in Belgium

13 June 2014

Agenda

- Agoria
- Why ?
- Smart Cities
- Examples Europe
- Examples Belgium
- Smart City Index



Agoria in the picture



FEDERATION FOR THE TECHNOLOGY INDUSTRY

- the largest sectoral employers' federation in Belgium
- defending the interests of companies in the technology industry

4
**Public Policy
Groups**

Federal
Flanders
Wallonia
Brussels

**1700
members**

Innovation
Talent & Labour Market
Regulations & Standards
Energy
Environment
Social Affairs

13
**Business
Communities**

ICT
Building Technology
Contracting
Materials Technology
Subcontracting
Production Technology & Mechatronics
Transport Systems & Solutions
Energy Systems & Solutions
Environment Systems & Solutions
Aeronautics, Space, Security, Defence Technology
International Business
Smart Cities
Public Infrastructure



Why ?



Photographs by Gary Braasch (and historical sources) from the project *World View of Global Warming*

Athabasca Glacier in Jasper National Park Alberta, Canada. 1917 and 2005



Panarze Glacier in Austria. 1875 and 2004



Qori Kalis Glacier of the Quelccaya Ice Cap in Southern Peru. 1978 and 2004



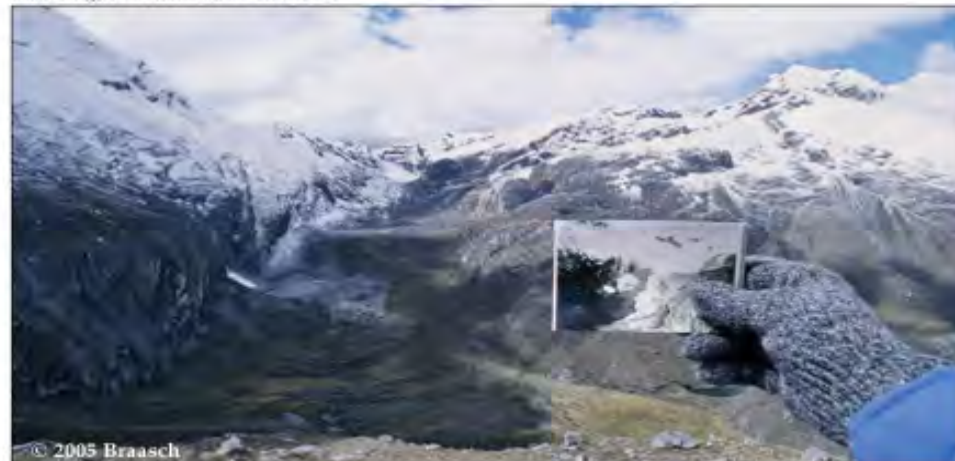
Rhone Glacier in Gletsch, Switzerland. 1850 and 2001



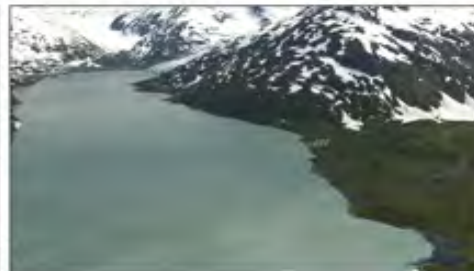
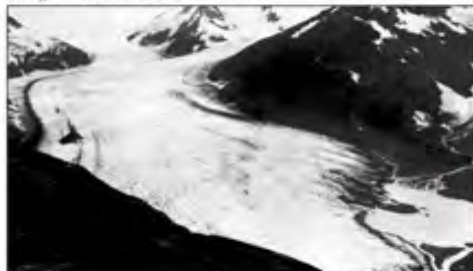
Gunnell Glacier in Glacier National Park, Montana. 1911 and 2001



Glacier Brégoi in the Peruvian Andes. 1932 and 1999



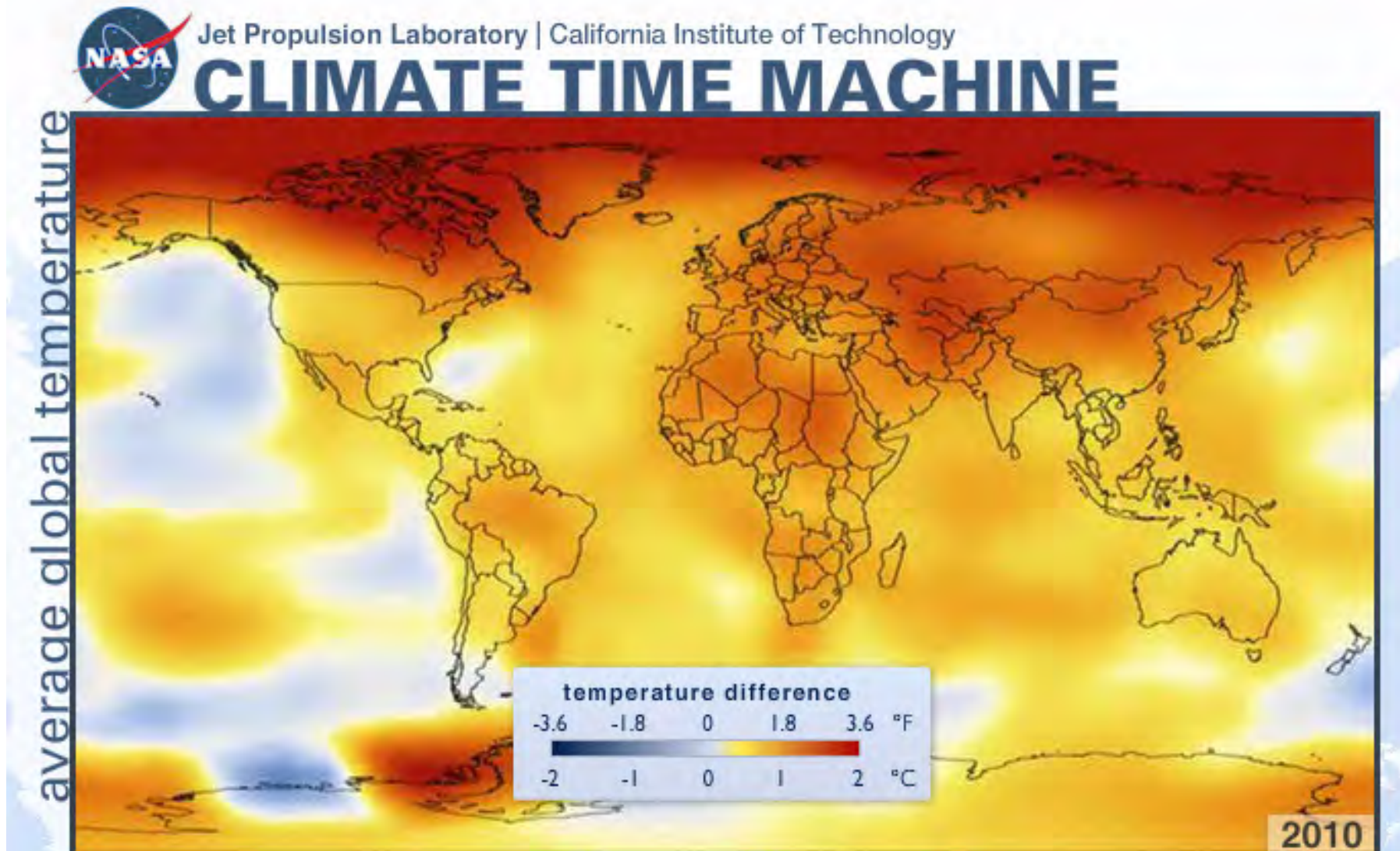
Portage Glacier in Alaska. 1911 and 2004



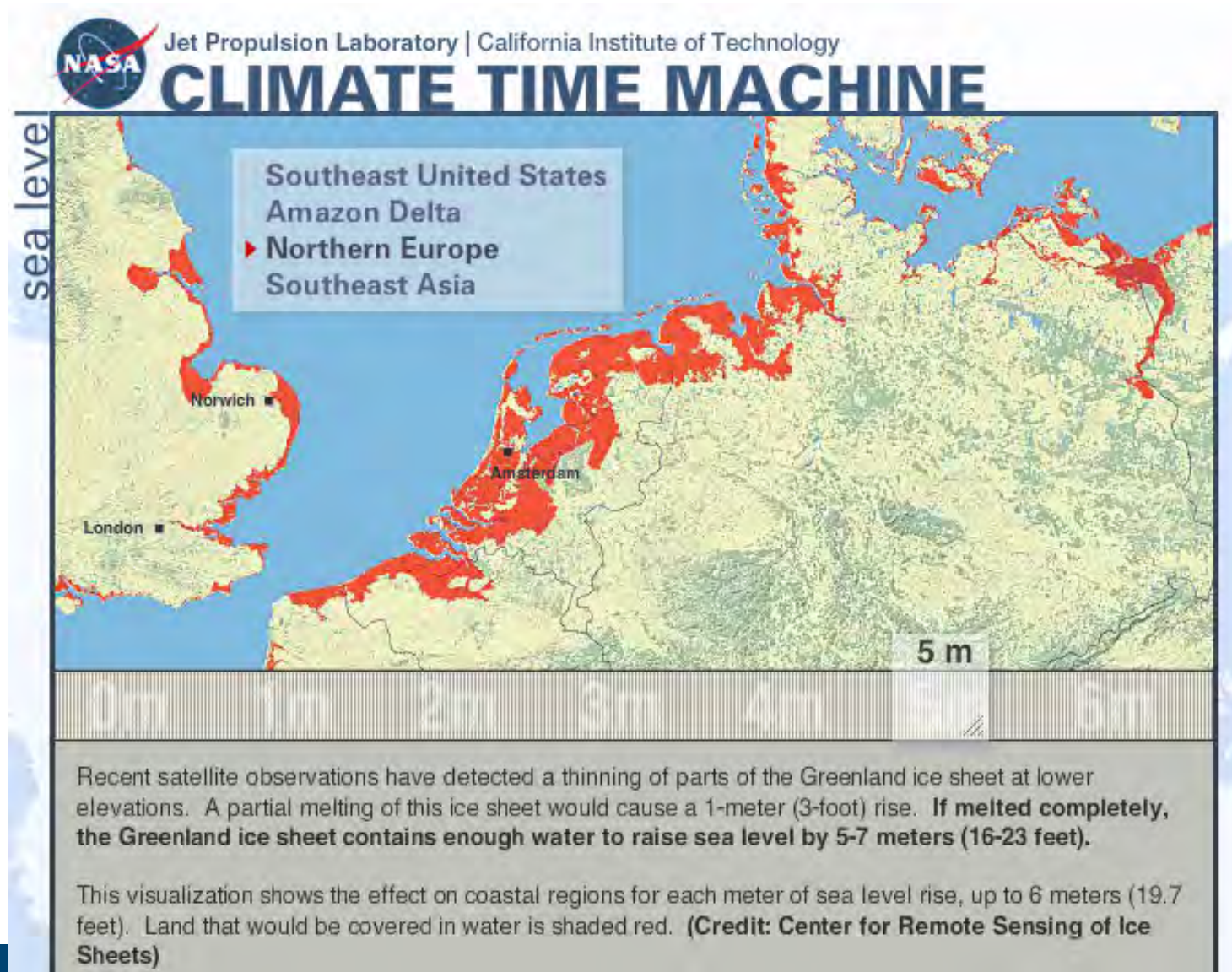
Photographers' Perspectives on Global Warming

JW Gallery October 14 - November 6th
Contemporary Glacier Photographs by Gary Braasch ©
www.worldviewofglobalwarming.org

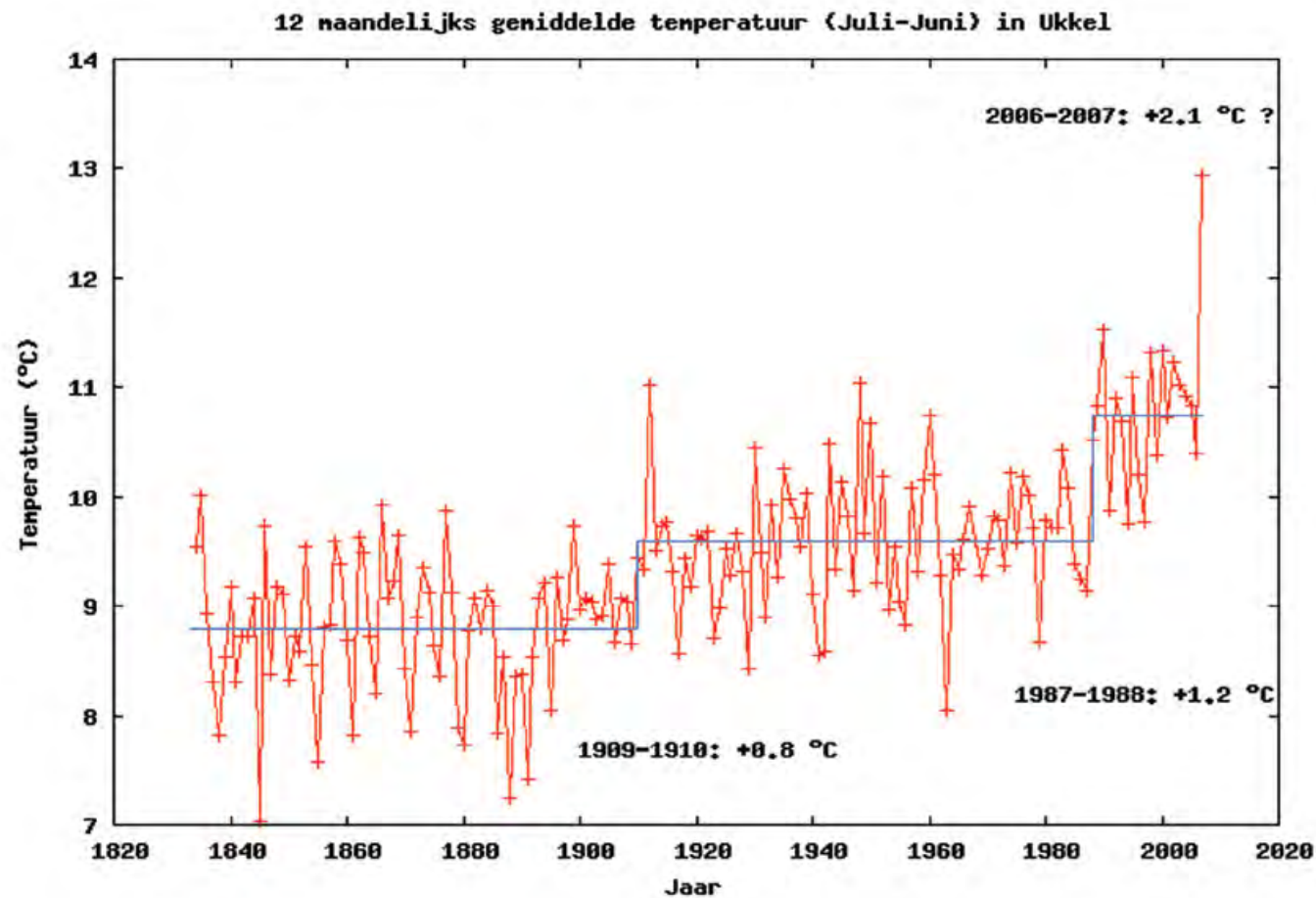
Temperature change since 1884



Sea level rise



Average temperature Belgium



Figuur 1. Twaalf maandelijks gemiddelde temperatuur (gemiddelde van juli tot juni) in Ukkel van 1833 tot 2007.

Source: KMI



Smart Cities



EU:

75%

Google

smart city

Web

Afbeeldingen

Maps

Shopping

Meer

Ongeveer 766.000.000 resultaten (0,26 seconden)



Duurzame Ontwikkeling



Knowledge ?



The elements of a 'Smart City'

Smart City

Water

- Reduce leakages
- Smart metering



Buildings

- Retrofit
- Smart Buildings

Communication

- Infrastructure
- Secure network

Energy

- Decentralize energy systems
- Combined heat and power generation
- Renewable sources
- Smart metering
- Smart grids



Mobility

- Public transport alternative
- Integrate all modes of transport
- Congestion charge
- Clean vehicles
- Telepresence



Public Safety & Health

- Health prevention and health care system
- Measure and improve air, water and soil quality



Open Platform & City Management

Public Administration and Services

Natural Resource Management

Transportation

Health and Safety

Waste Management

Education and Culture



Education

- Education of quality
- Creativity and innovation

Green space

- Young people and children
- Elderly

Waste

- Waste-to-energy
- Solid waste collection systems
- Recycling

Source: Accenture

Belgium

134 cities

5,7 million residents

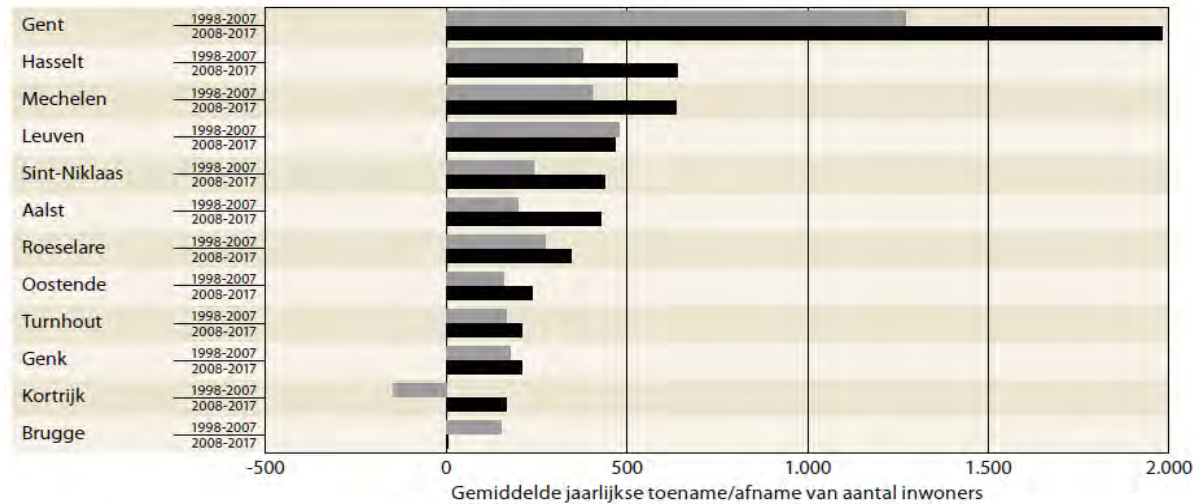
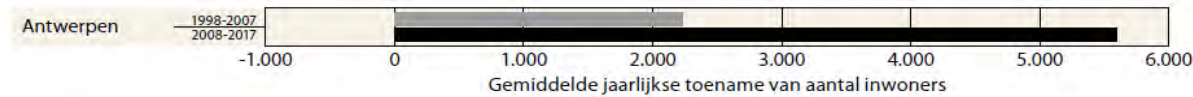
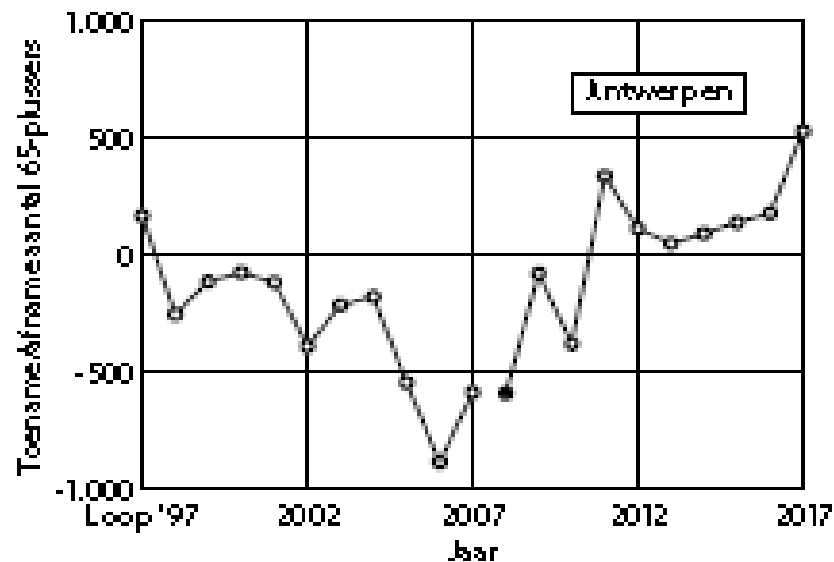
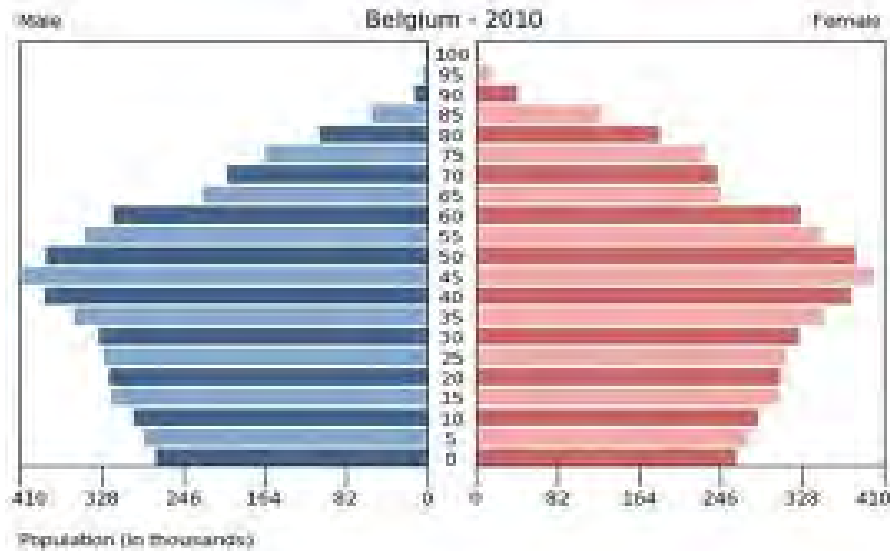
Cities: motor of growth

- Cities are in a global competition to attract people to live and to invest in the city
- Challenges to find the right balance between competitiveness, quality of life and financing the solutions



➤ CO₂ targets

Cities: aging and urbanization



Bron: ADSEI, SVR-bewerking; SVR-Bevolkingsprojecties 2009-2030.

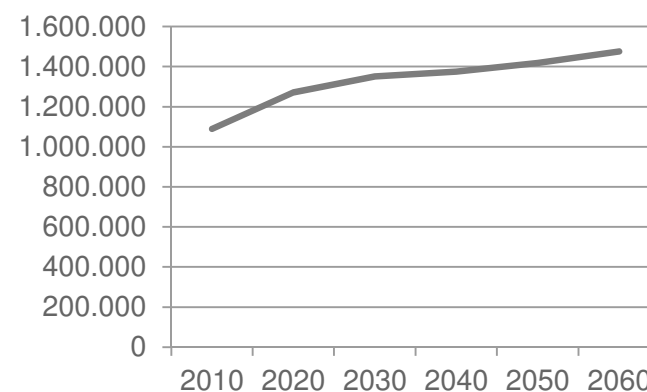
	Taux de la population croissance de 2011-2026 (en %)	Taux de croissance du nombre de ménages de 2011-2026 (en %)
Arlon	21,22	24,03
Ath	11,65	14,82
Bastogne	14,83	19,33
Charleroi	5,23	9,23
Dinant	11,19	16,58
Huy	12,81	16,87
Liège	6,92	9,75
Marche-en-Famenne	11,69	17,99
Mons	6,19	9,99
Mouscron	12,24	15,15
Namur	11,66	16,17
Neufchâteau	13,48	17,32
Nivelles	11,56	16,68
Philippeville	8,83	15,03
Soignies	9,52	13,21
Thuin	7,33	11,79
Tournai	8,18	11,77
Verviers	9,44	14,8
Virton	14,43	17,43
Waremmes	18,23	22,39

Évolution de la structure par âge (2007-2060) par région (en % de la population)

	Flandre		Wallonie		Bruxelles	
	2007	2060	2007	2060	2007	2060
Moins de 15 ans	16,2	15,0	17,8	16,1	18,6	18,5
15-64 ans	65,9	57,2	65,7	58,0	66,7	61,8
65 ans et plus	17,8	27,7	16,5	25,9	14,8	19,7
65 à 79 ans	13,3	16,6	11,9	15,9	10,1	12,1
80 ans et plus	4,5	11,1	4,6	10,0	4,7	7,6

Source : Bureau fédéral du Plan.

Brussel / Bruxelles/Brussels Inwoners / Habitants



35%

Bron: Federaal Planbureau

Source: Centre de recherche en Démographie et Sociétés de l'UCL – Conversion IWEPS (8 mars 2012)

Bruxelles, championne du monde des embouteillages

Le Vif Source: Knack
jeudi 29 août 2013 à 15h20

Nulle part ailleurs dans le monde, il n'y a autant de files qu'à Bruxelles et Anvers. C'est ce qui ressort des chiffres d'Inrix, une plateforme info-traffic, et repris par De Tijd.



Bruxelles, capitale mondiale des embouteillages

Andrea Di Nicola (st.)
Mis en ligne vendredi 24 mai 2013, 19h19



'Filehoofdstad bedreigt de economische aantrekkelijkheid van Brussel'

DONDERDAG 12 JANUARI 2012, 15U40 | BART BIESEMANS

0

0

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Aanbevelen

Tweeten

+1

Reageer

Mail

Print



BRUSSEL - Voor zeven op de tien technologische bedrijven zouden mobiliteitsproblemen een reden kunnen zijn om het Brussels gewest op termijn te verlaten. Dat blijkt uit een enquête bij Brusselse technologiebedrijven van Agoria, de sectorfederatie voor technologische industrie in België.



nieuwe studie: Brussel is Europese filehoofdstad

woensdag 24 april 2013, 14u40 © brusselnieuws.be

Brussel was in 2012 de Europese stad met de meeste files, voor Parijs en Londen. Dat moet blijken uit cijfers van het informatieplatform Inrix.



Electricity

41%

Energy efficiency in the city with existing technology

Existing technology leads to an efficient energy balance and CO2 emissions:

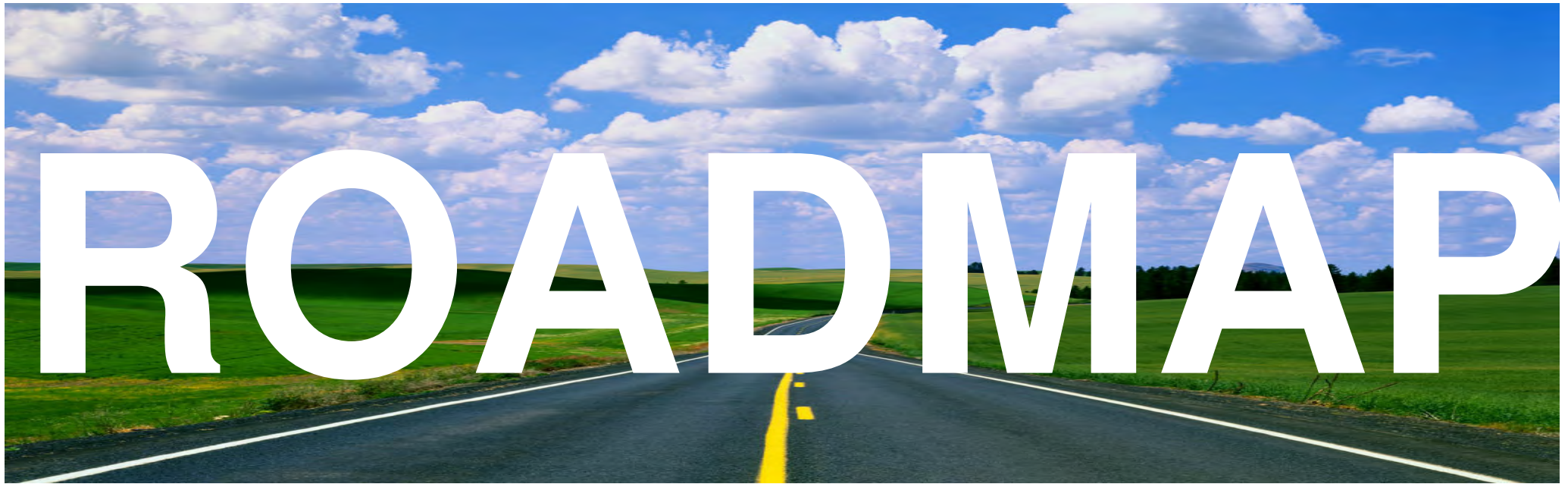
- ↻ Wind turbines: power up from 1 MW to 6 MW (and more)
- ↻ Energy management of buildings: 30% reduction in energy use
- ↻ Intelligent traffic control:
 - | Speed of traffic: +37%
 - | Travel time: -17%
- ↻ Local grid connection for ships: 12 ton less CO2 / Ship a day
- ↻ Street lighting with LED systems: 3.5 million ton reduction of CO2 (EU)
- ↻ Steam Power Plant: growth of the energy production efficiency from 40% to 47%
- ↻ Mobility network: attractive public transport, reduction of waiting time (stability), petrol use -20%

Source: Siemens

A scenic view of a park with a stream, trees, and buildings in the background. The word "VISION" is overlaid in large white letters.

VISION





City: complex entity with many divisions
and stakeholders

=> Need for knowledge management

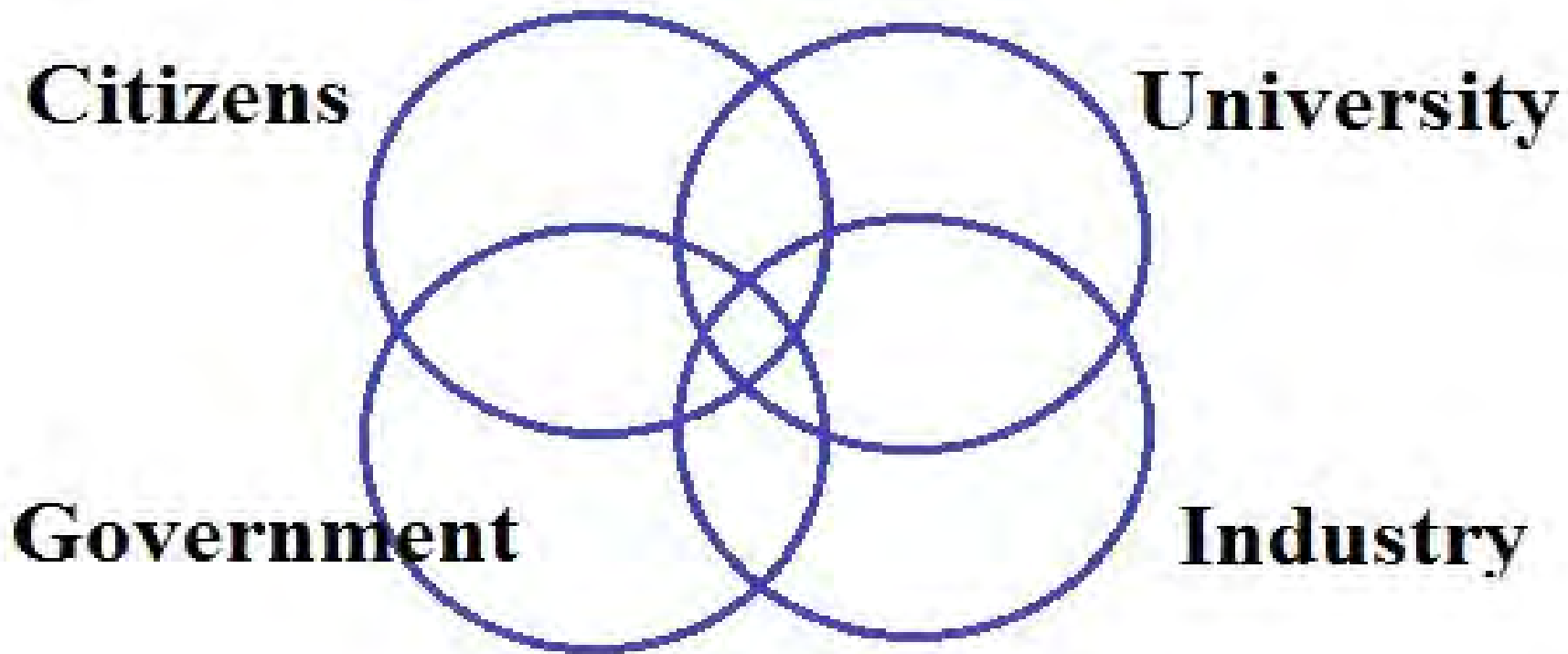


Behavioural change



Equal partners

Quadruple Helix Model

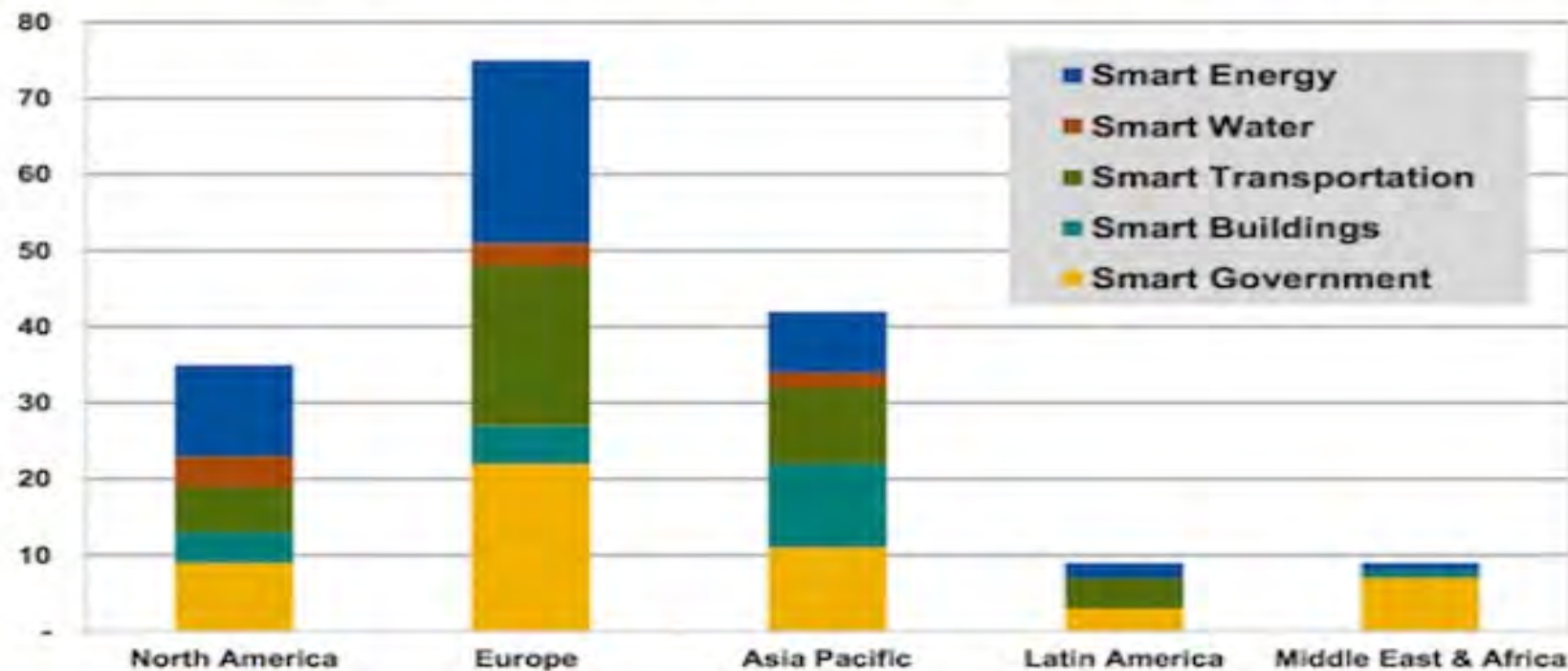


Smart City Market to Grow to \$6.1 Billion by 2020

October 15, 2013 by Energy Manager Today Staff



Chart 1.1 Smart City Projects by Region and Primary Industry Sector, World Markets: 3Q 2013



(Source: Navigant Research)

The global smart city technology market will grow from \$6.1 billion in annual revenue in 2012 to \$20.2 billion by 2020, according to a study by [Navigant Research](#).

That represents a compound annual growth rate of 16.2 percent, according to [Smart City Tracker 3Q13](#).



Examples Europe



European Policy charters









- The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories. By their commitment, Covenant signatories aim to meet and exceed the European Union 20% CO2 reduction objective by 2020.



- Initiated by EUROCITIES
- Stimulate cities to reduce the footprint of ICT and to use ICT solutions in buildings, transport and energy to become more energy efficient

Open data: Londen

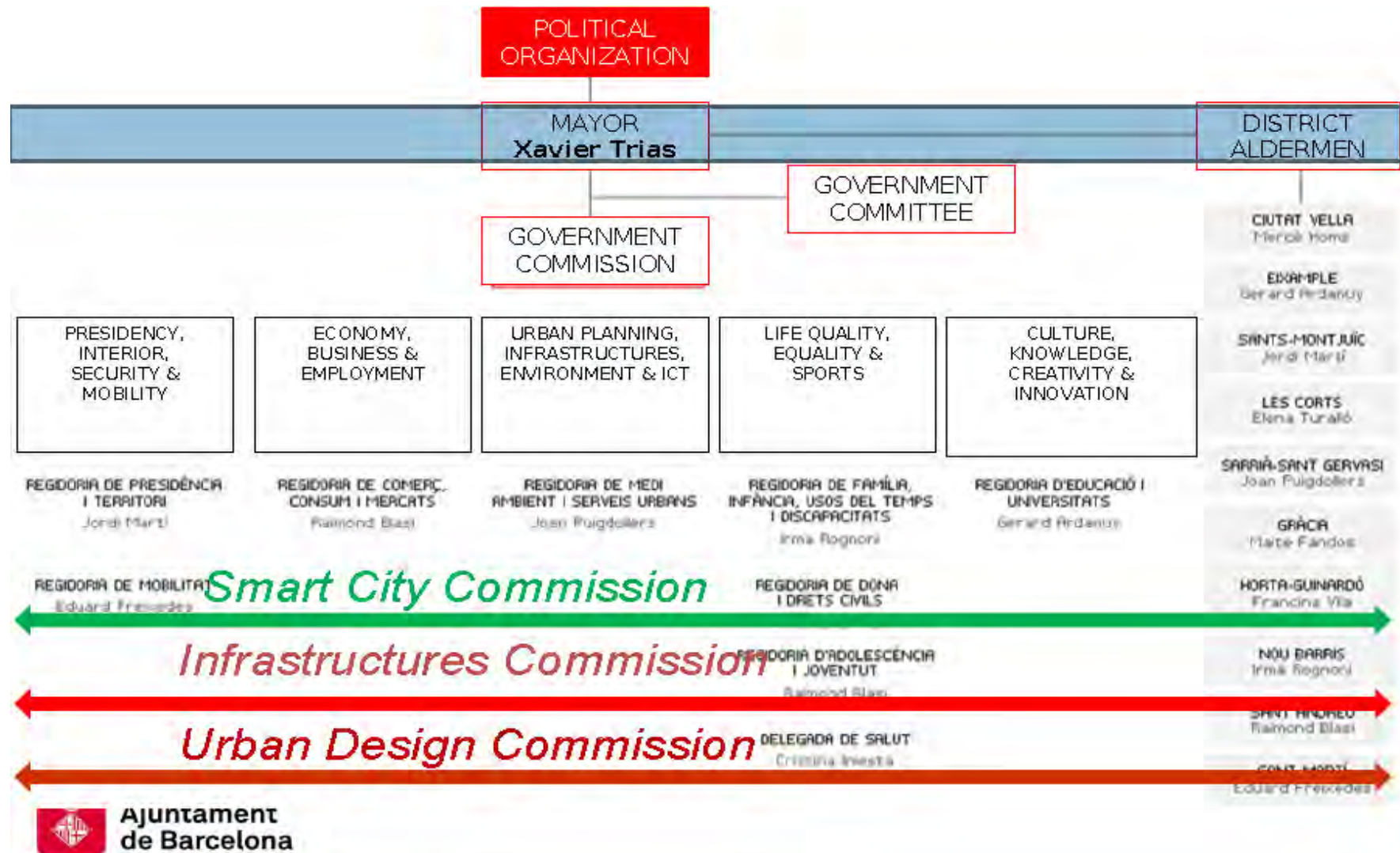
<http://data.london.gov.uk/>

-  Water
-  Energy consumption on district level
-  Criminality on district level
-  Birth rate
-  Public transport
-  ...

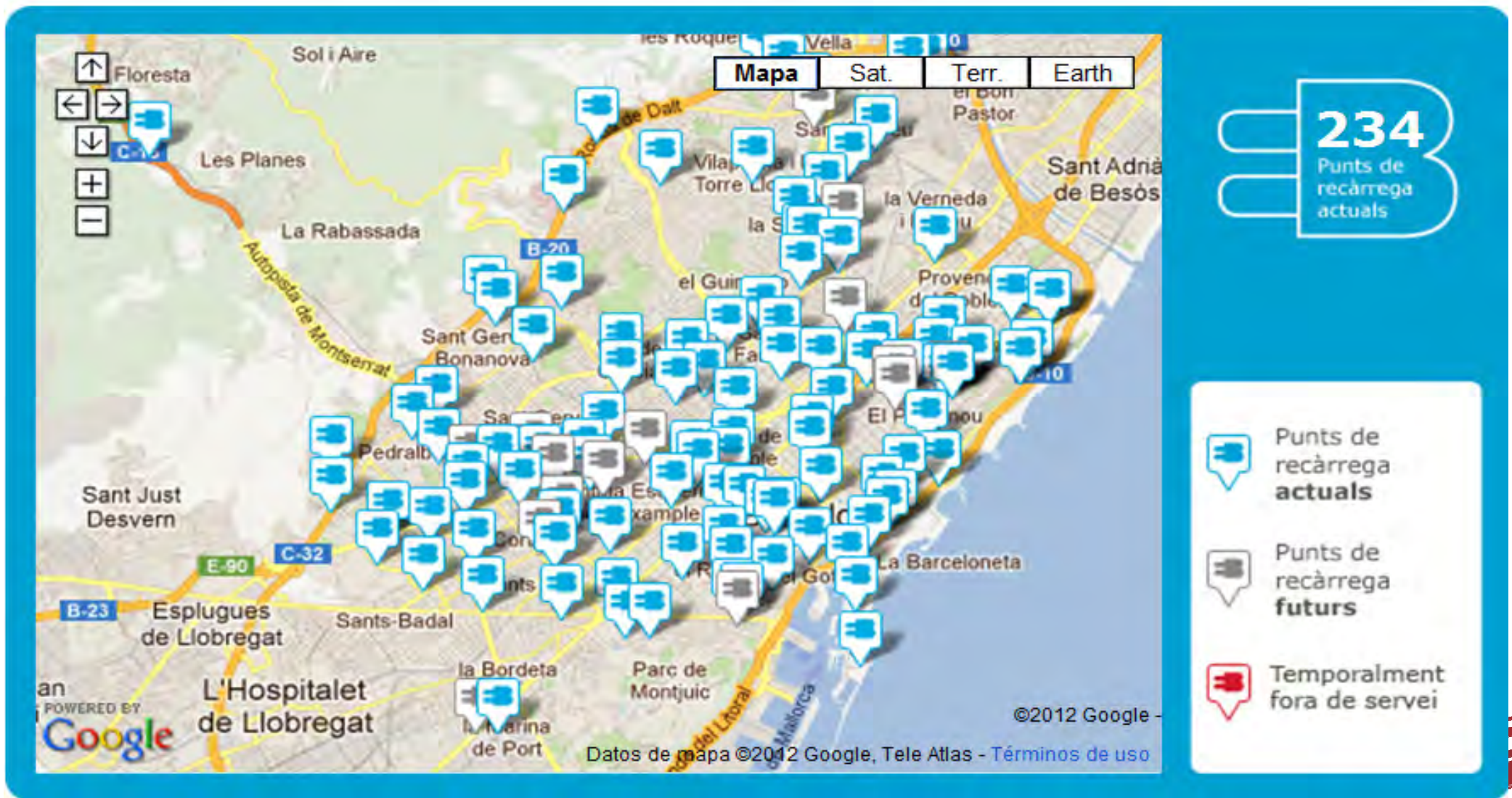
European Commission estimate:
€ 27 billion revenue in Europe



Barcelona



Barcelona: load infrastructure electrical vehicles, 234 charging points



Climate Street (Amsterdam)

- Objectives:
 - *Reduce CO2 and energy consumption*
 - *Generate more business*
- Research fields:
 - *Hardware in street (lighting / LED)*
 - *Logistics in street (waste management)*
 - *Interior (displays)*
- Results:
 - *36% energy savings in street and 9% per business*



Amsterdam

Vienna : N° 1 in the world

Towards A Sustainable Development Of The City

- Inhabitants 1,714,142
- Number of buildings 168,167
- Total number of companies 70,802

The goal:

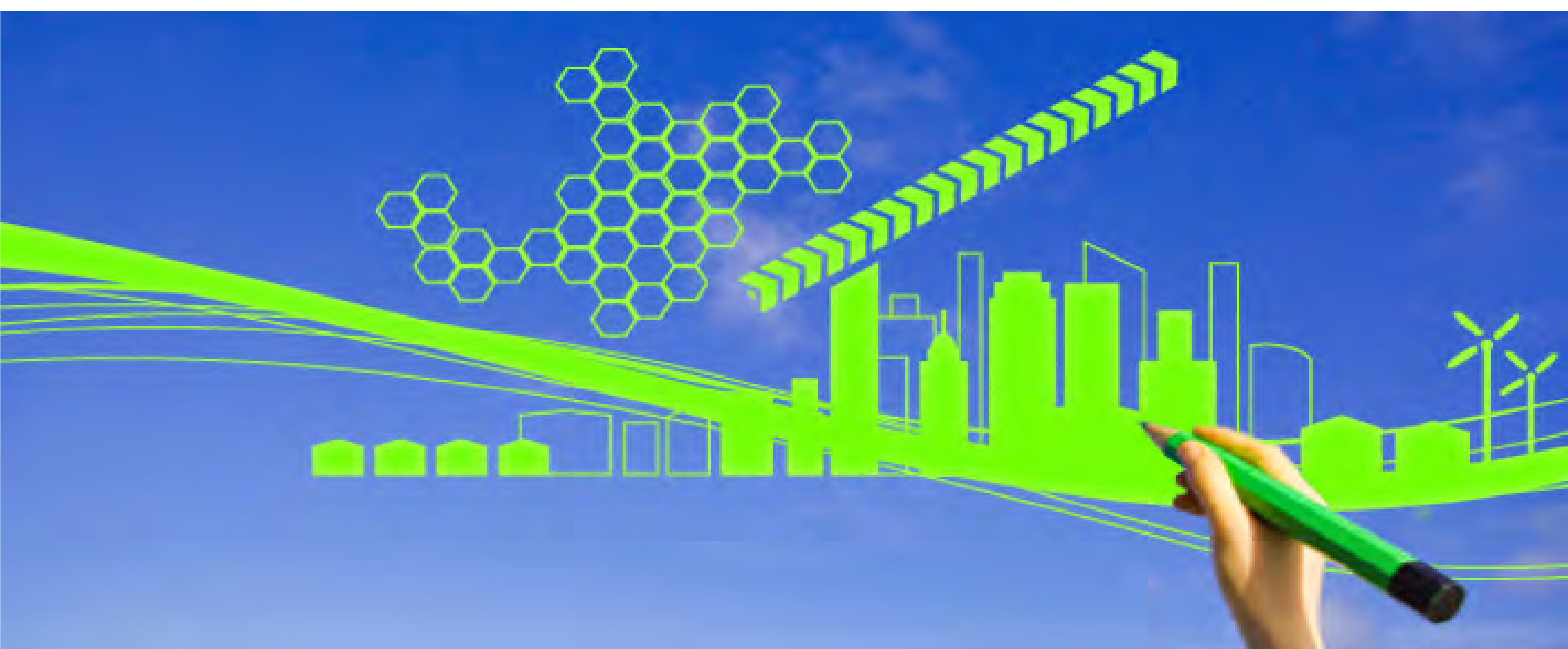
Vienna's energy future as a long term Smart Energy **Vision 2050, Roadmap 2020 and Action Plan 2012-2015.**

Formulated with a **close connection** with the urban development plan.

Integration of users when implementing **new technologies.**

Acceptance of the **stakeholders** is needed.





Examples Belgium



Euro Green IT: 4 phases

Start

- Meeting with city:
 - Frame
 - Confirmation of the vision of the city and the objectives (evaluation)
 - Definition of the weights for the different items that will be analysed
 - Identification of the parameters of the city
 - Explain the approach



Collect information

- Collection of city data and of the cities to compare with
- Collection of the city data
- Check the quality of the data and investigate if necessary
- Collect all data in analyse tool



Analyse

- Put all 7 main parameters in graph for each city
- Analyse the individual results
- Compare cities results
- Analyse the position of each city and the actions that can be taken to ameliorate it
- Preparation of the final workshop



Workshop

- Workshop with the representatives and responsible persons of the city
 - Presentation of the results
 - Discussion of the results and the on how to ameliorate this
 - Link with the vision and the future objectives
 - Recommendations
 - Identification priority actions

+ Conclusions et recommandations (1/3)

- 1. Logement** - Afin d'améliorer l'efficacité énergétique des bâtiments et de contribuer à la réalisation d'un développement économique durable, la ville devrait introduire des critères énergétiques dans le règlement communal et mettre en œuvre une gestion encore plus efficace de ses propres bâtiments

Sur le territoire, les priorités sont d'améliorer l'efficacité énergétique des bâtiments existants et garantir l'efficacité énergétique des nouveaux bâtiments.

Les services communaux doivent se concentrer sur la réduction de consommation de gaz de leurs bâtiments:

- Réduction de la température de chauffage de 1°C: réduction de 7% des émissions correspondantes
- Améliorer l'efficacité énergétique des bâtiments: minimum ~40% de réduction pour les anciens bâtiments

Sint-Niklaas: citizen - business – local government

<p>Er zijn geen evenementen voor de komende 24u.</p> <p>Mijn agenda</p>	<p>24</p> <p>donderda mei</p>	 <p>26°</p> <p>overwegend bewolkt</p> <p>50% kans op regen</p>	 <p>Nieuws uit mijn buurt</p>
<p>Bespaar op uw energiefactuur!</p> <p>leer hoe u uw verbruikers onder controle krijgt</p> 	 <p>Scholen</p>	 <p>Verenigingen & jeugdbewegingen</p>	 <p>Stadsdiensten</p>
 <p>Winkel in Sint-Niklaas.</p> <p>21 beschikbare winkels</p>	 <p>Medische diensten</p>	 <p>Zoek</p>	 <p>Diensten</p>



Ambachtelijk Chocolatier Wauters

Dinsdag t.e.m. Zaterdag van 09:00u tot 18:00u
 Tel. 03/777 65 23

Alle producten ▼



Ballotin gemengde pralines 1000gr
 € 39,00 per **stuk**, bestellen per stuk



Ballotin gemengde pralines 250gr
 € 9,75 per **stuk**, bestellen per stuk



Doosje gemengde huisgemaakte koekjes 500gr
 € 19,50 per **stuk**, bestellen per stuk



Doosje negerzoenen gemengd (puur - melk - wit) 15
 € 19,50 per **stuk**, bestellen per stuk



Orangettes pure chocolade
 € 3,90 per **stuk**, bestellen per stuk

ik bestel **1 doos** voor €3,9



Zakje huisgemaakte spekken (puur - melk) 250gr
 € 6,25 per **stuk**, bestellen per stuk

ik bestel **1,00 zakje** voor €6,25



Leveringsmethode

Via Shop & Deliver ▼



Ik bestel als **De Bruyne Jacques** mijn afspraak met bpost is "donderdag om 20:00"
 Mijn leveradres is **Teststraat 1234 9100 Sint-niklaas**.

Leveringskost €0,00

Traiteur Le Couvert*
Pleasantstraat 143 bus1
9100 Sint-Niklaas
03 613 95 62
BTW

Kaasschotel met brood
1 stuks voor €13,95 per stuk €13,95

TOTAAL (incl. BTW)

€13,95

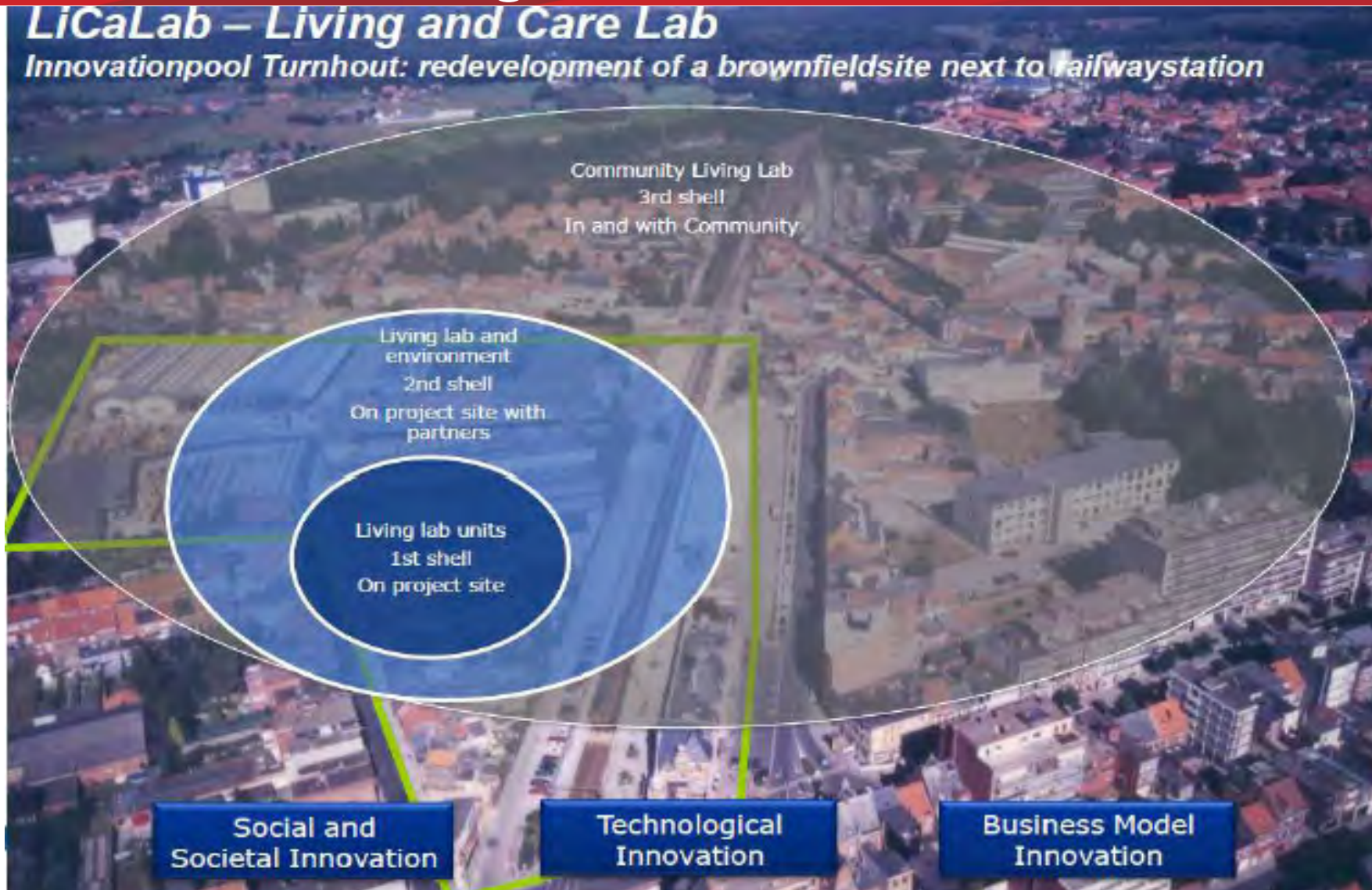
Levermethode:
Afhalen
23/02/2012 14:57

Klant:
Demo01 User
Uitbreidingstraat 184
2600 Berchem

23/02/2012 14:58:34 [444]



City of Turnhout: Living Lab



Municipality takes the lead as example - Kortrijk



Sportcentre



Technical building
80 kWpeak PV-installation



Complementary city buildings on one decentralised high-voltage cabinet

Sharing of decentralised energy production and follow-up via smart metering

Next phase: adding intelligent users

Renovation: loans, subsidies, support

Stad KORTRIJK



Comfort grows, lower energy consumption

City for people: smart communication

Welcome to all new citizens, communication and close the digital gap

Reception for all new citizens


CitizenFirst project

- PC training for 3500 citizens
- Network of 80 kiosks and internet PC's in public places and in public library



120 hotspots in 30 buildings of the city and in the centre of the city



A photograph of a modern, multi-story residential building with a courtyard. The building has a light-colored facade with dark horizontal bands. The courtyard is lush with green trees and grass. In the foreground, there are several outdoor seating areas with white umbrellas and wooden chairs. People are seen walking and sitting in the courtyard. The overall atmosphere is bright and sunny.

"The best way to predict the future is to invent it."

— Alan Kay, noted computer scientist

Hasselt:
Carehome of the Future (living lab)





Living Tomorrow 2020: Brussels

2013 – 2018

7.000 m²

*House, Office, Store, Hotel,
Bank, Street, Charging Station*

Customer interaction center

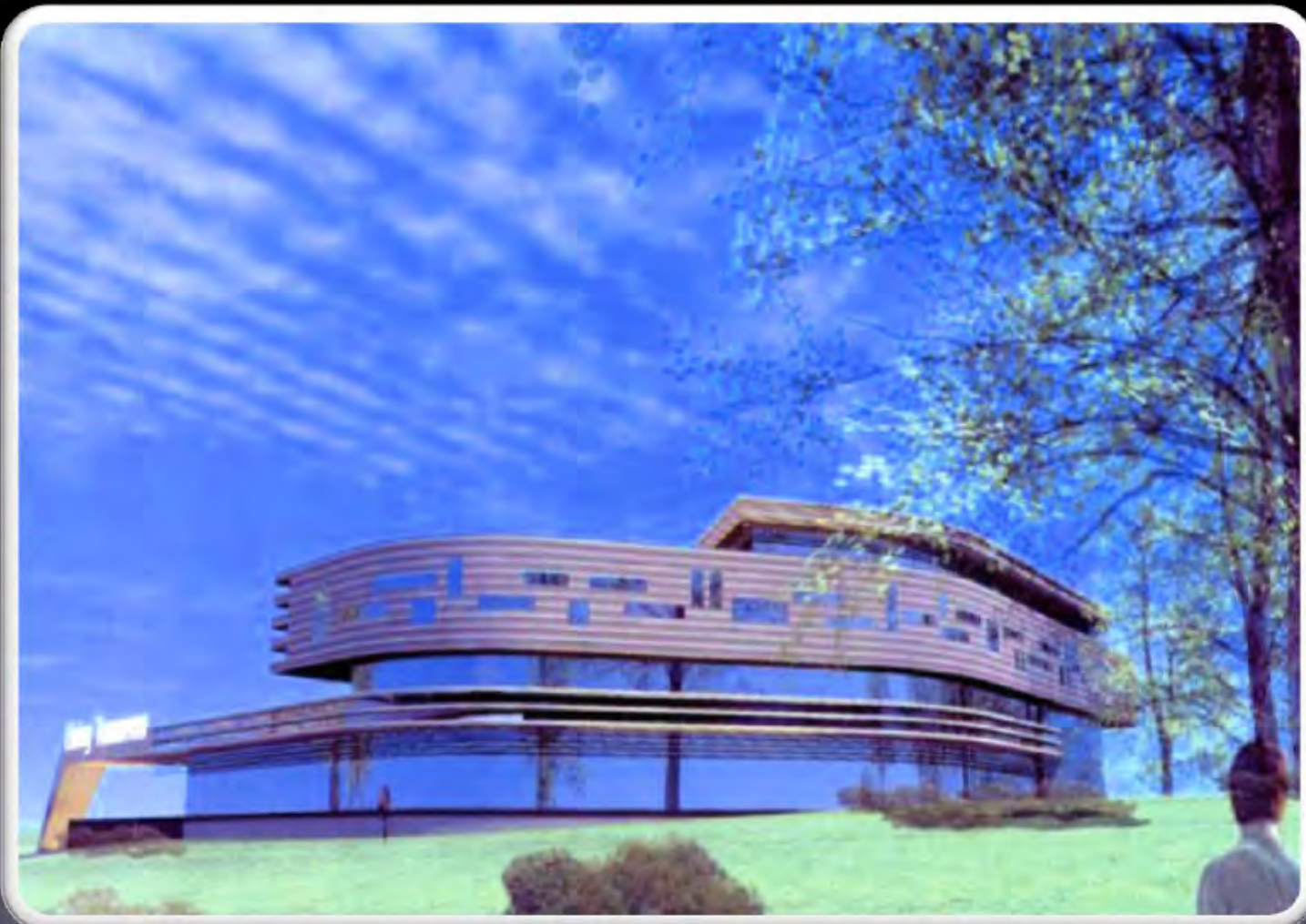
Pilots, POC & Living Lab

Target group:

+800.000 decision makers

Max. 100 participants

25.000.000 €

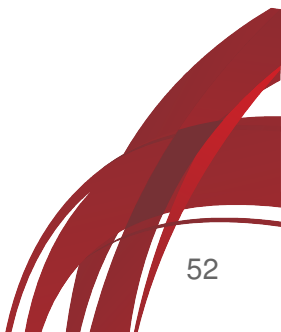


Parking in a city

- 30% of traffic: people looking for a parking space
- Put a sign at every parking space
- Connect the information to a platform
- Interface to the web (app)
- Smartphone: information, reservation, guide, payment

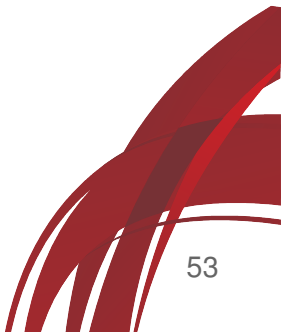


- Climate covenant with different stakeholders defining concrete CO2 reduction targets
- Climate neutral in 2050 for the city and ambitious targets for the harbour
- Strategy and action plan

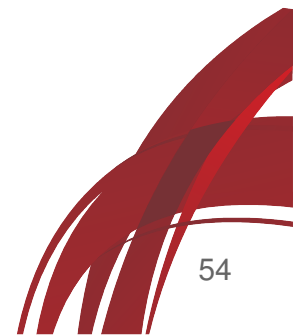


APPs for Ghent

- Example of ICT: innovation and co-creation
- Competition for the creation of apps, website, concepts, ...
- www.appsforghent.be



Ghent: Waalse Krook



Ghent: Waalse Krook



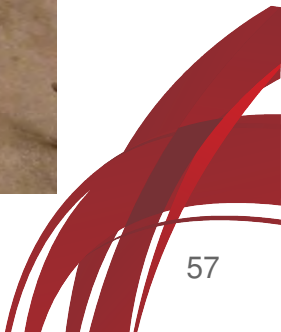
AGORIA
SMART CITIES



Winter Circus: an intelligent ruin



Winter Circus an intelligent ruin



Winter Circus: new functions





Signal broken things

(take a picture and send it to the local authorities)



Belgian railway

Het Station : slimme mobiliteit





Smart Cities Community: <http://www.agoria.be/smartcities>



#SmartC



Smart Cities Belgium



Smart Cities Belgium





Today and future

European Smart City Stakeholder Platform

- | Energy Efficiency and Buildings
- | Finance Group

European Funds

Belgian Cities: round table



Financing the Smart City

 Belfius and EIB (European Investment Bank)

 400 million EUR

 Smart City projects

 Communities and Cities



Smart City Index

Covenant of Mayors: 60 Belgian cities and communities

minimum 20% CO₂ reduction in 2020


Signatories	Population	Adhesion	Status	Signatories	Population	Adhesion	Status
Alken, BE	Heers, BE			Mouscron, BE	52,800	27 Feb 2012	
Antwerp, BE	Herk-de-Stad, BE			Neerpelt, BE	16,448	24 Oct 2011	
As, BE	Herstappe, BE			Nieuwerkerken, BE	6,732	17 Nov 2011	
Attert, BE	Heusden-Zolder, BE			Ohey, BE	4,806	29 Feb 2012	
Beringen, BE	Hoeselt, BE			Oostende, BE	68,931	23 Jan 2010	
Bilzen, BE	Houthalen-Helchteren, BE			Opglabbeek, BE	10,053	21 Nov 2011	
Bocholt, BE	Kinrooi, BE			Overpelt, BE	14,054	27 Oct 2011	
Borgloon, BE	Kortesseem, BE			Peer, BE	16,157	23 Nov 2011	
Bree, BE	Lanaken, BE			Riemst, BE	16,144	14 Nov 2011	
Brunehaut, BE	Leopoldsburg, BE			Roeselare, BE	58,800	27 Feb 2012	
Bruxelles-Capitale, BE	Leuven, BE			Sankt Vith, BE	9,450	1 Mar 2012	
Diepenbeek, BE	Liège, BE			Sint-Truiden, BE	39,309	17 Oct 2011	
Dilsen-Stokkem, BE	Lommel, BE			Sivry-rance, BE	4,700	15 Oct 2009	
Genk, BE	Lummen, BE			Tessenderlo, BE	17,685	28 Nov 2011	
Gent, BE	Maaseik, BE			Tongerren, BE	30,042	25 Oct 2011	
Gingelom, BE	Maasmechelen, BE			Viroinval, BE	5,745	31 Jan 2012	
Halen, BE	Mechelen, BE			Voeren, BE	4,194	25 Oct 2011	
Ham, BE	Meeuwen-Gruitrode, BE			Wellen, BE	7,356	25 Nov 2011	
Hamont-Achel, BE	Molenbeek-Saint-Jean, BE			Zonhoven, BE	20,570	24 Oct 2011	
Hasselt, BE				Zutendaal, BE	7,009	24 Nov 2011	
Hechtel-Eksel, BE							


Siemens Green City Index

Brussels Belgium


Score Rank
78.01 **9**

Visualization


 Spider

 List

Compare city

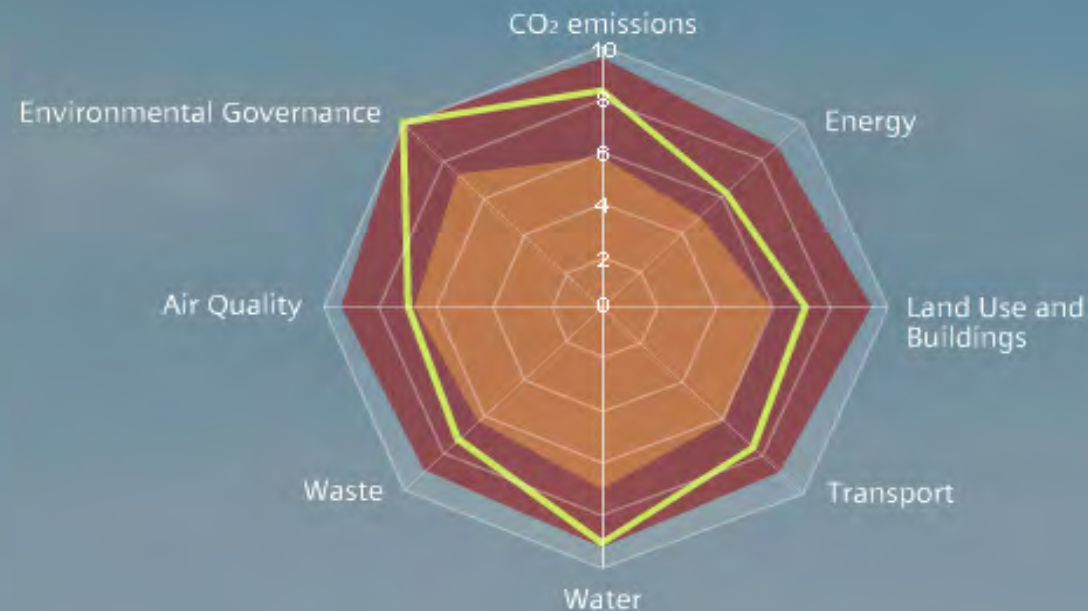
 Brussels

Average 


Best 


Brussels ranks ninth overall in the index, with a score of 78.01 out of 100. The city scores particularly well for water, and environmental governance is another strong area, with its environmental plan ranking joint first. The city's overall score is held back by high levels of energy consumption per head.

Brussels is the capital of Belgium, and also serves as the location for the EU's headquarters. With just one-tenth of the country's population, the Brussels-Capital region contributes around 17% of Belgian GDP. As in many other developed cities, there has been a shift from manufacturing towards business-related services.



Related Information

 [City Portrait Brussels](#)


 [Overall report: European Green City Index](#)

[Siemens Belgium](#)

Contact



Marc D'Oosterlinck
 Business Development,
 Siemens One, Siemens
 Belgium

 [Send a Message](#)

Source: Siemens

Agoria Smart City ranking: start

- ↻ 25 largest cities in Belgium (total inhabitants)
Brussels: Brussels-Capital region
- ↻ Relative ranking
- ↻ Publicly available data
- ↻ Not perception, no interviews, other rankings, ...
- ↻ No weight in criteria
- ↻ 5 relevant different, criteria
(in function of 'what is a smart city')
- ↻ Need to see what is behind the figures, ...

Agoria Smart City ranking: criteria

Energy

What is the consumption in MWh/inhabitant/year? If it is high, the city should take action. With the existing technology it is possible to lower with one third the energy use in residential houses.

Environment

How many non selective waste is collected per inhabitant per year? Cradle to cradle principle is necessary to keep a city attractive, certainly with a growing population.

Mobility

How intensely are the roads used? If there is a 'smart' mobility policy with a well organised public transport, facilities for bikers, ... people will use it and less their own car!

Agoria Smart City ranking: criteria

City planning (public space)

Are there many public areas, recreation areas, public parks?
... This is necessary for the inhabitants, visitors, work force, ...

ICT

Is there a 'digital desk' in the city? How many documents can be downloaded, asked, ... Via this e-desk?

Inhabitants do not have to travel to the town hall (less traffic, gain of time, ...) and the administration of the city can concentrate on the more complex files instead of the 'pure administration' (documents, demands, ...). A leaner administration, better and faster service to the inhabitants, companies, ...

Agoria Smart City ranking

	STAD	residentieel energieverbruik per inw (MWh)		restafval		Gebruik van wegen				ICT Score		SCORE
				kg/inwoner		afgelegde afstand in miljoen km / per km gemeente-, provincie-of gewestweg		Recreatiegebied/totale opp.		Aantal doc	Punten	
1	Genk	7,8	25	143	21	0,94	15	5,2%	20	44	17	98
2	Aalst	10,4	12	120	25	1	13	3,2%	13	122	23	86
3	Beringen	9,4	16	153	18	0,24	25	1,5%	2	56	19	80
4	Dendermonde	8,7	21	146	19	0,92	16	1,9%	3	62	21	80
5	Antwerpen	10	13,5	230	4	0,89	18	4,6%	18	171	25	78,5
6	Sint-Niklaas	8,3	23	198	10	0,89	19	3,1%	12	33	14	78
7	Roeselare	8,2	24	176	15	0,55	23	2,6%	8	10	7	77
8	Kortrijk	8,8	19	154	17	0,64	21	2,3%	5	35	15	77
9	Turnhout	9,1	18	128	23	0,9	17	2,5%	7	12	9	74
10	Leuven	12,1	5	134	22	1,12	10	5,4%	21	38	16	74
11	Oostende	11,3	10	249	3	1,03	12	7,1%	23	160	24	72
12	Gent	10	13,5	191	13	1,28	4	5,8%	22	54	18	70,5
13	Hasselt	9,9	15	121	24	1,17	8	3,0%	11	16	12	70
14	Namen	11,7	7,5	143	20	0,59	22	2,7%	9	15	11	69,5
15	Mechelen	9,2	17	157	16	1,15	9	3,4%	14	32	13	69
16	Brussel (gewest)	9	21	326	1	2	1	11,0%	24	60	20	67
17	Brugge	8,7	21	200	9	1,22	6	2,0%	4	103	22	62
18	La Louvière	11,7	7,5	191	12	0,66	20	3,8%	15	7	4	58,5
19	Moeskroen	11,5	9	228	5	0,96	14	4,7%	19	7	4	51
20	Doornik	10,9	11	219	6	0,52	24	1,4%	1	8	5	47
21	Verviers	11,8	6	204	7	1,21	7	4,2%	17	11	8	45
22	Luik	14,1	1	252	2	1,27	5	13,2%	25	9	6	39
23	Seraing	12,8	2	192	11	1,1	11	2,8%	10	7	4	38
24	Bergen	12,5	3	181	14	1,53	2	2,5%	6	15	11	36
25	Charleroi	12,4	4	201	8	1,36	3	3,9%	16	7	4	35

Agoria Smart City ranking

1	<u>Genk</u>	98
2	<u>Aalst</u>	86
3	<u>Beringen</u>	80
4	<u>Dendermonde</u>	80
5	<u>Antwerp</u>	78,5

Energy	Waste	Mobility	City planning	ICT
Genk 25	Aalst 25	Beringen 25	Luik 25	Antwerpen 25
Roeselare 24	Hasselt 24	Doornik 24	Brussel 24	Oostende 24
Sint-Niklaas 23	Turnhout 23	Roeselare 23	Oostende 23	Aalst 23
Brussel 21	Leuven 22	Namen 22	Gent 22	Brugge 22
Dendermonde 21	Genk 21	Kortrijk 21	Leuven 21	Dendermonde 21

Agoria Smart City

Local government agreements



Agoria Smart City

Local government agreements: 41 points

- Smart buildings: 6
- Smart cities: 1
- Smart digital communication and education: 6
- Smart energy: 7
- Smart health: 2
- Smart mobility: 12
- Smart public safety: 2
- Smart space: 1
- Smart waste management: 1
- Smart water management: 3



Agoria Smart City

Local government agreements

smart cities in local government agreements



1	Gent	38
2	Mechelen	29
3	Genk	24
4	Roeselare	23
5	Antwerpen	22
6	Brussel/Bruxelles	22
7	Namur	18
8	Sint-Niklaas	16

9	Tournai	16
10	Mons	14
11	Verviers	14
12	Leuven	11
13	Oostende	9
14	Turnhout	4
15	Brugge	4

Smart City Award

2013



Smart City Award 2013

Nominees:

- Kortrijk – Shop & Go
- Ghent – ZWERM
- Liège – Interface de traduction de langue des signes
- Roeselare – Réseau de chauffage urbain
- Sint-Niklaas – Nuvonet



Smart City Award 2013

Award:

Kortrijk

