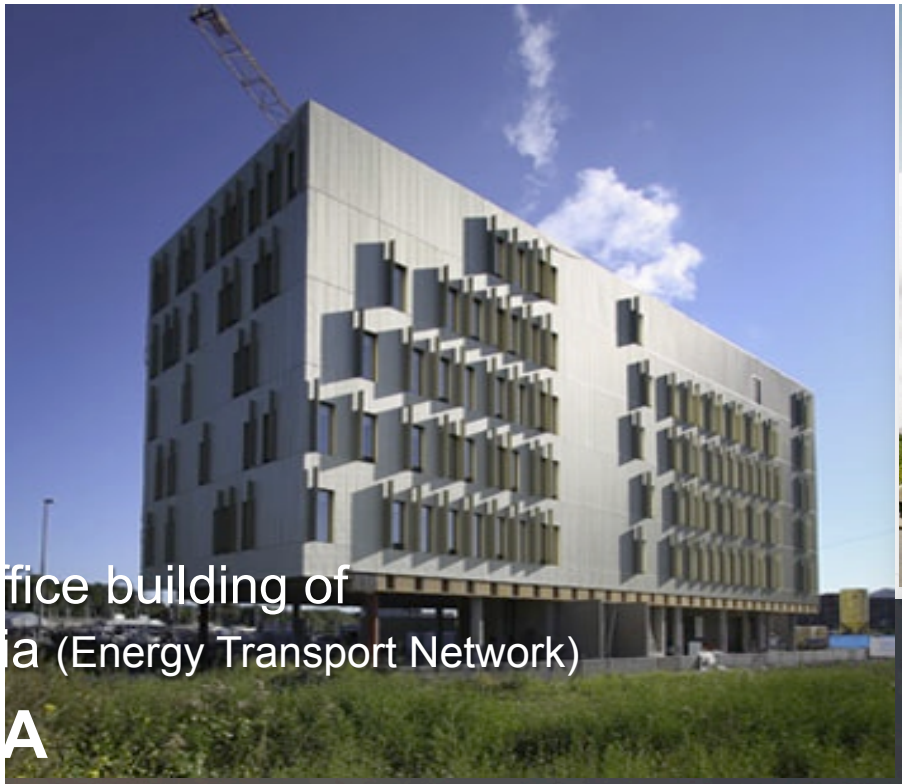
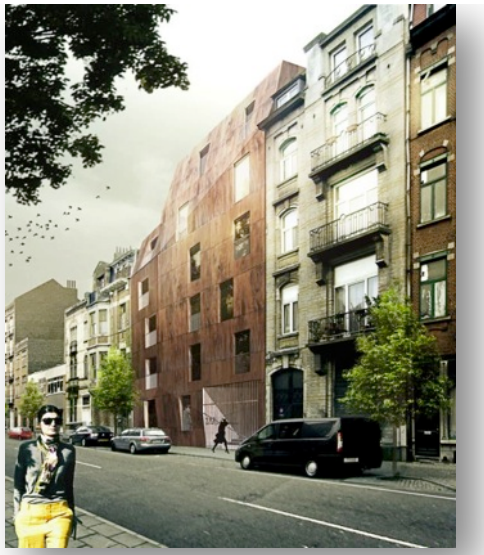

ffice building of
ia (Energy Transport Network)
A

A2M

ussels Parliament
cooparch

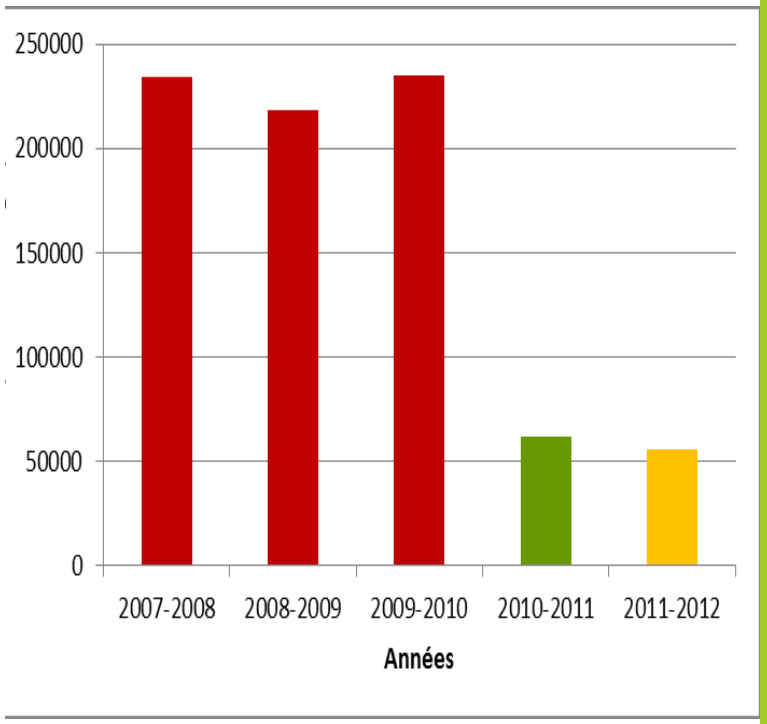
private
housing
A2M



la creche
de kribbe
95

Does it work?

Total consumption of 14 families before and after their moving to passive building



BatEx Passif in BxL

CONSOMMATIONS 12/2011 → 12/2012

Rue Loosens - Jette

duplex 1 (1 adulte + 4 enfants)		8 710 kWh
duplex 2 (1 adulte + 3 enfants)	+	6 030 kWh
Total		14 740 kWh
Production PV (...m²)	-	7 300 kWh
Consommation Energie Finale	=	7 440 kWh
Consommation annuelle / m²		**27 kWh/m².an**

pour rappel:

consommation Energie Finale =

énergie pour chauffage, ECS, ventilation, auxiliaires et électricité domestique

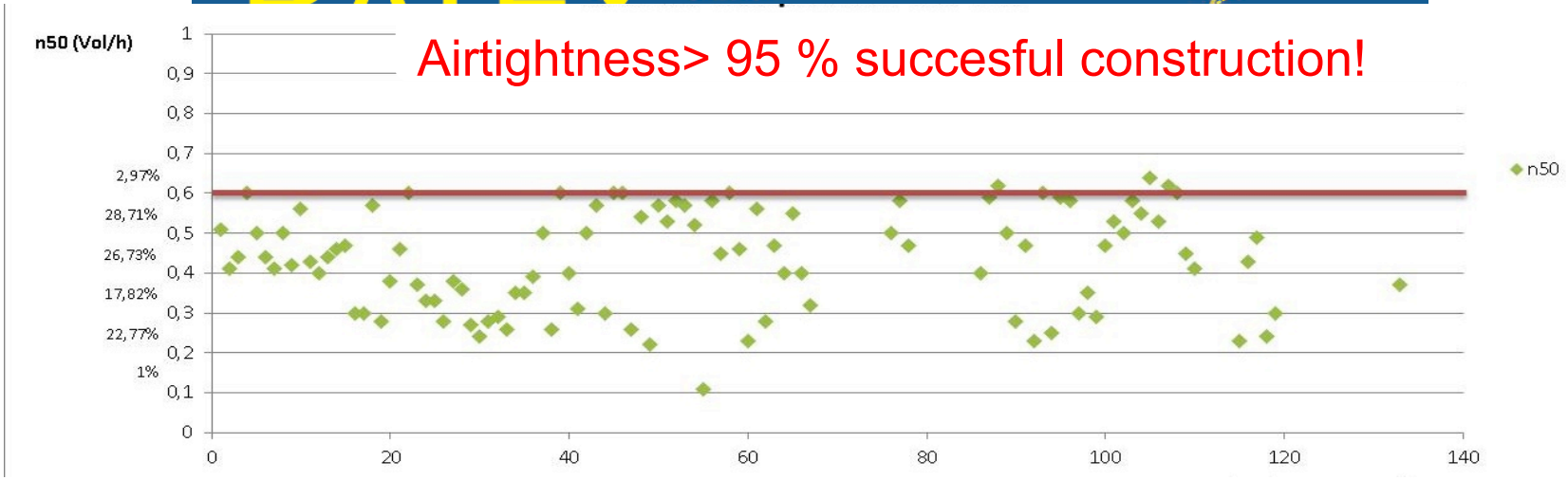
Les 15kWh/m².an = besoin énergie pour le chauffage

It works ! If you keep in mind:

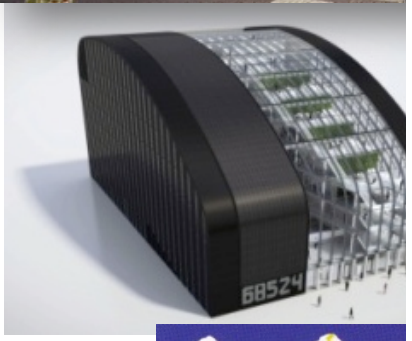
- Choice and dimensioning of installations:
  - Heating system: individual vs. collectif, relaunch after absence, easy control by inhabitant
  - choice of fuel: if electricity → bill ↗
  - Ventilation system : individual vs. collectif, maintenance
- wiring: parabola, cable television, phone, …
- Understanding of inhabitants
- …

No panic on the Construction sites

Airtightness> 95 % succesful construction!



Commitment of the public authorities



Since 2010:

Contrats Quartiers Durables	130.000 ft²/year (120 housing units) 8 collective facilities
SDRB	580.000 ft² (P) + 270.000ft² after 2014 285.000ft² (P) urban industry
SLRB	2,5 Mio ft² (P, VLE, LE)
Bruxelles Environnement	180.000 ft² (P)
MRBC	480.000 ft²
Local authorities	stimulating effect

SLRB - BGHM

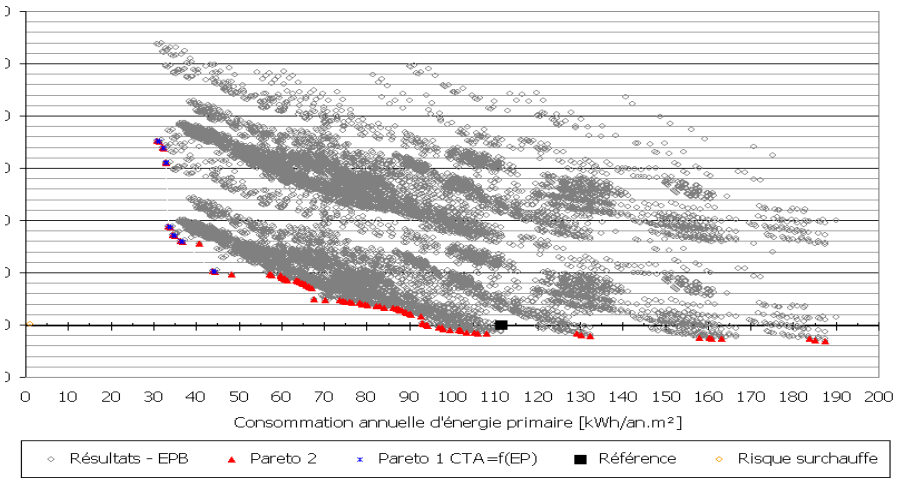
SDRB GOMB

lso boosting the private sector !

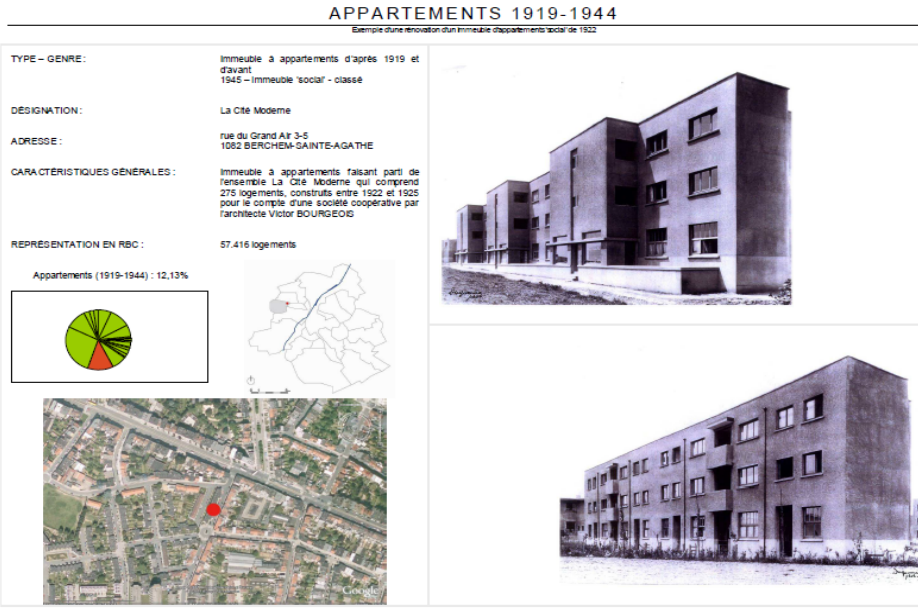
- In Brussels there will be much more than **5,4 Mio ft²** of Passive Ho uildings built by 2015 !

lajor studies to gather necessary knowhow

07 (2009) (2013) – Pareto based analysis profitability of energy saving investments

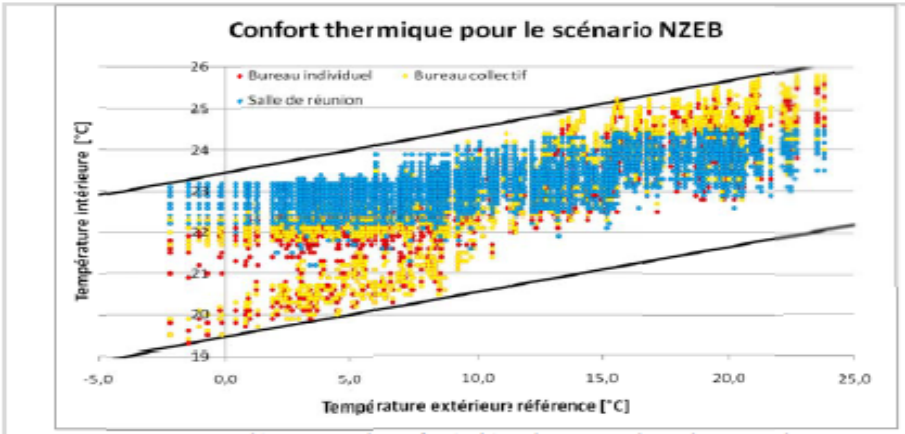


2008 – applicability of passive concept in the brussels' context



11 – definition of passive criteria for tertiary ctor

2012 – Sucessful passivehouse skyscrapers



Graphique 2.5.2.3.d - Confort intérieur des 3 zones - le cas de NZEB – Classe B

Content

*Situation of the Brussels Region

*Building foundations

- A match between demand and supply
- Exemplary Buildings
- Commitment of Public Authorities

*And next …

*Conclusion

6 th Call for projects “Exemplary Buildings 2013”

Launched February 19, 2013

Application deadline : June 27, 2013

Jury: 11-13th September, 2013

Budget: 5 million € - 6,5 Mio $

And next …

*Brussels is one of the Front runner regions

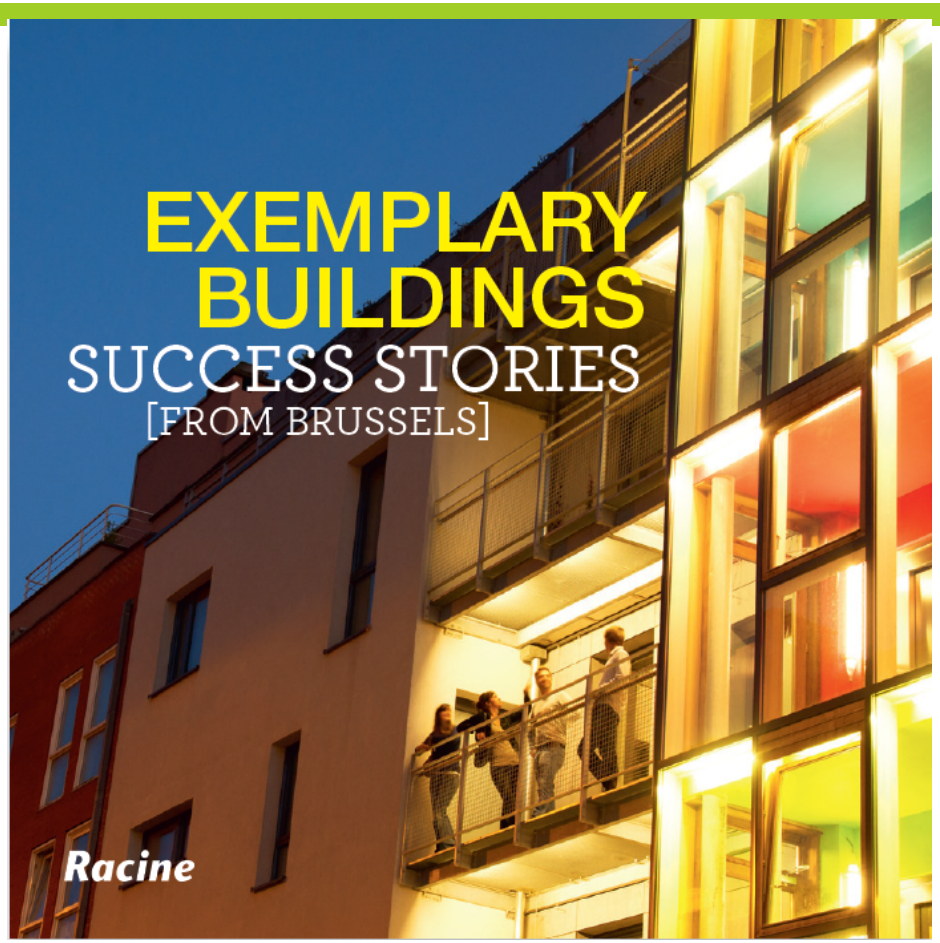
PassREG – Serpente –…
EUSEW.eu Award 2012 !

*Technical feedback

*Monitoring

*Studies & Surveys

And next …



In the face of all the uncertainty about the future, is it possible to imagine a city becoming more beautiful, more practical and more economical to live in, while at the same time becoming more sustainable?
This was the challenge the Brussels-Capital Region set itself in 2007 – and its response was to launch the Batex call for projects targeting everyone wanting to build or refurbish a building in Brussels. The term "Batex" is the abbreviation for "Bâtiments exemplaires" or "exemplary buildings", and the whole idea is to leverage each project, whether large or small, whether private or public, to spread the word about eco-construction, what it involves and how it can help transform the city, building by building.

Exemplary Buildings: Success Stories from Brussels
Bernard Deprez and Jean Cech
29,95 € | october 2012 | Soft cover with flaps | Colour illustrations
247 x 247 mm | 232 pages | ISBN en 978 2 87386 800 0 | ISBN fr 978 2 87386 798 0
ISBN NL 978 2 87386 799 7

BATEX - Influence

PASSIEF 2015

Mandatory for each building permit for new buildings or important refurbishment (>75% of building shell) from 2015:

- Unthinkable in 2004
- The exemplary buildings showed technical and financial feasability
- First positif feedback of building users
- Public authorities showing the example
- **Negociared agreement with belgian building federations (construction, architects, promotor, engineers) – 19 octobre 2012**
- Brussels, pioneer, international interest

Passive will be mandatory from 2015 for housing, offices, schools

housing

Specific space heating demand	≤ 15 kWh/(m²a)
Airtightnes (from 2018)	0,6 Volume/h under 50 Pa
primary energy demand (heating, cooling, hot water, auxiliary)	45 kWh/m².Year
overheating	maximum 5% of time> 25°C

offices + schools

Specific space heating demand	≤ 15 kWh/(m²a)
cooling demand	≤ 15 kWh/(m²a)
Airtightness (from 2018)	0,6 Volume/h under 50 Pa
primary energy demand (heating, cooling, hot water, auxiliary)	95 – 2,5 x Compactness (max 4) kWh/m².year
Overheating	maximum 5% of time> 25°C

Overriding rule, if bad compactness or orientation

Heavy refurbishment: **>** 75% of loss surfaces and all installations are replaced

→ same requirements x 1,2 (except overheating)

2015 : Brussels goes passive !

Training for excellence

- Energy management
- Passive and low energy concept
- Acoustics
- eco-materials
- Water
- Waste
- Territory and environment

Nearly 15,000 hours of training to professionals in 2012

Tools for professionals

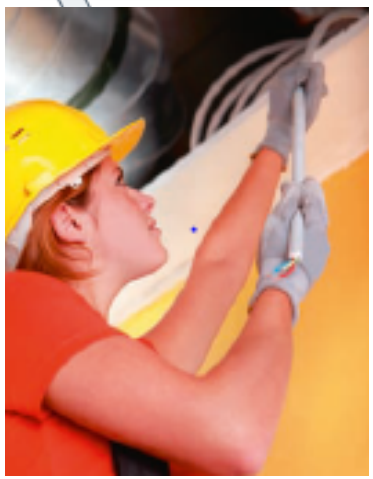
SUSTAINABLE BUILDING" QUALITY LABELLING

Evaluate the environmental and energy performance of Belgian buildings with a view to international recognition

TECHNICAL GUIDE FOR SUSTAINABLE BUILDINGS

Guide for good practice and technical solutions for sustainable construction and refurbishment

lliance employment-environment



What?

Stimulate transition of construction firms to sustainable construction

Why?

150.000 new inhabitants by 2020

70.000 new lodging units

Interest for building renovation works increases

How?

Unite brussels actors that can influence supply side – over 110 participants

Identification of 44 actions

Goals?

30 000 hours of training, 2 500 new local jobs

Content

*Situation of the Brussels Region

*Building foundations

- A match between demand and supply
- Exemplary Buildings
- Commitment of Public Authorities

*And next …

*Conclusion

And would they do it again?

I would certainly start again ..

I would do it again! It was long, complicated and tiring but the result is great and really comfortable to live in. It was really worth it.

We are doing it again, with the advantage of more knowledge and more available companies.I would also build the wooden frame with my own hands.

I would start all over again!

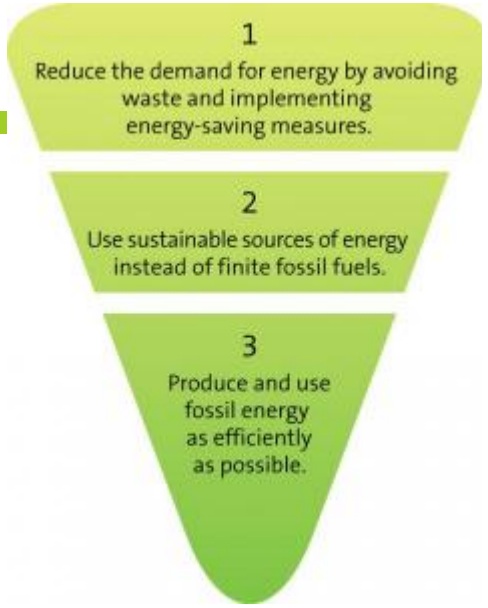
Off course, it needs to b repeated!

Probably, with more knowledge this time...

Yes, but better... Making the building more airtight isn't that complicated, it's just (very) long to do.

Quotes from the satisfaction survey

Conclusions – Why should YOU go passive ?



Up to 90% energy savings

Comfort

reparing the future

-75% CO_2-emissions

Professional skills of the future

Decrease of energy dependance

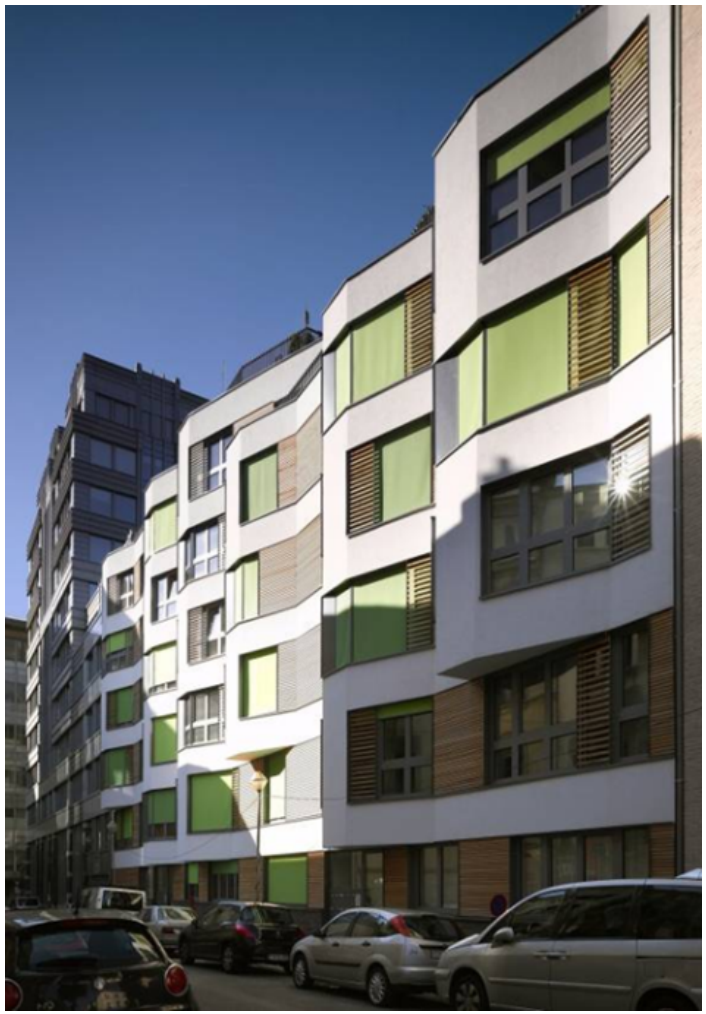
Using proven technologies

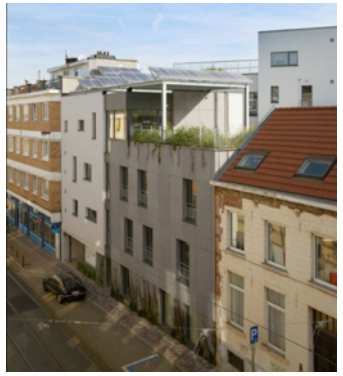
Excellent choice for social housing

Cost

Passive = concep
→ free choices

Questions ?





jdockx@leefmilieu.irisnet.be

More informations: www.bruxellesenvironnement.be/batimentsexemplaires