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Partnership Instrument)

Energy Efficient and Integrated
Urban Development Action

URB Energy

Urb.Energy: a project to promote sustainable and energy efficient urban development in the Baltic Sea Region

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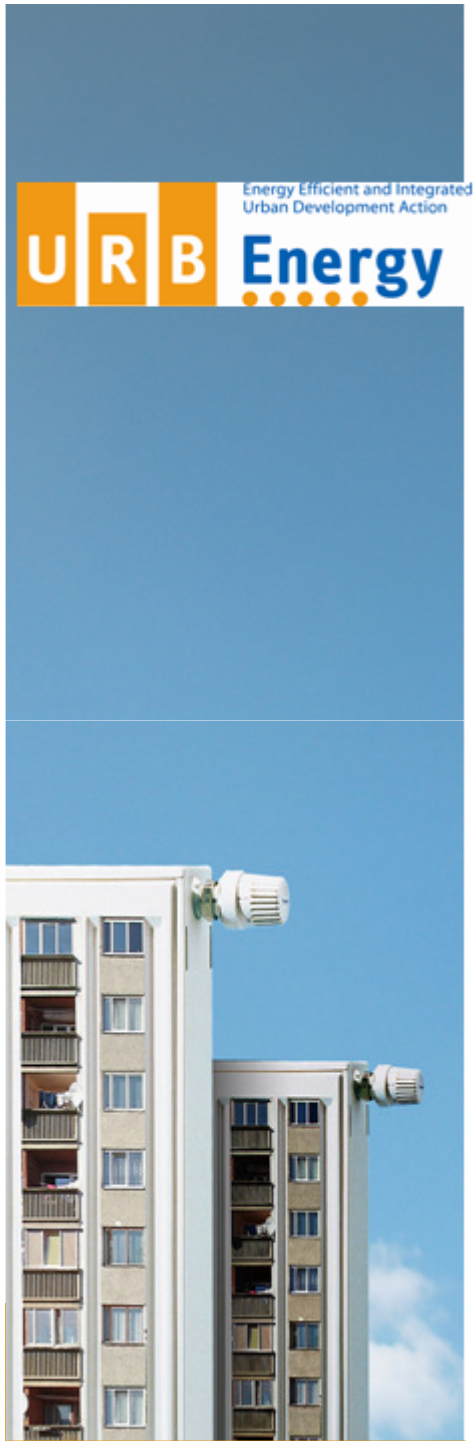
German Association for Housing, Urban and Spatial Development (DV)

10 June 2010 – Urb.Energy Midterm Conference



Content:

- Framework for energy efficient upgrading of the housing stock
- Project setting
- Challenges and potentials of the sample neighborhoods
- First conclusions (crucial points to promote energetic upgrading)

Political Framework:

Kyoto-Protocol (1997/ 2009) and the Copenhagen Accord

Energy and Climate Change Policy „20-20-20“

Energy Performance of Building Directive 2002/91 (EPBD)

Directive on “energy end-use efficiency and energy services” (ESD 2006/32/EC)

Covenant of Mayors
(self-commitment)

National policies and commitments about CO_2 reduction

CO_2 – reduction

&

more energy efficiency

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Development of energy prices for private consumers:

Prices of natural gas for private consumers (in € per kWh):

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estonia				1,67	1,67	1,67	1,71	2,39	3,53	3,95
Germany	3,52	4,45	4,18	4,41	4,43	4,93	5,98	6,47	7,02	6,48
Latvia					1,56	1,64	2,11	2,67	4,06	5,23
Lithuania					1,91	1,86	2,39	2,54	3,56	4,25
Poland	2,21	2,61	2,75	2,59	2,35	2,79	3,47	3,91	4,65	3,89

Prices of heating oil for private consumers (in € per 1000 liter):

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Estonia					327,6	457,6	558,8	529,7	710,4
Germany	360,9	378,5	331,3	369,9	360,0	510,4	619,9	581,8	707,6
Latvia					393,8	527,7	629,3	601,2	764,3
Lithuania					330,2	439,5	545,8	510,5	644,1
Poland					372,4	500,9	626,4	579,6	729,5

Source: Federal Ministry of economics and Technology 2009

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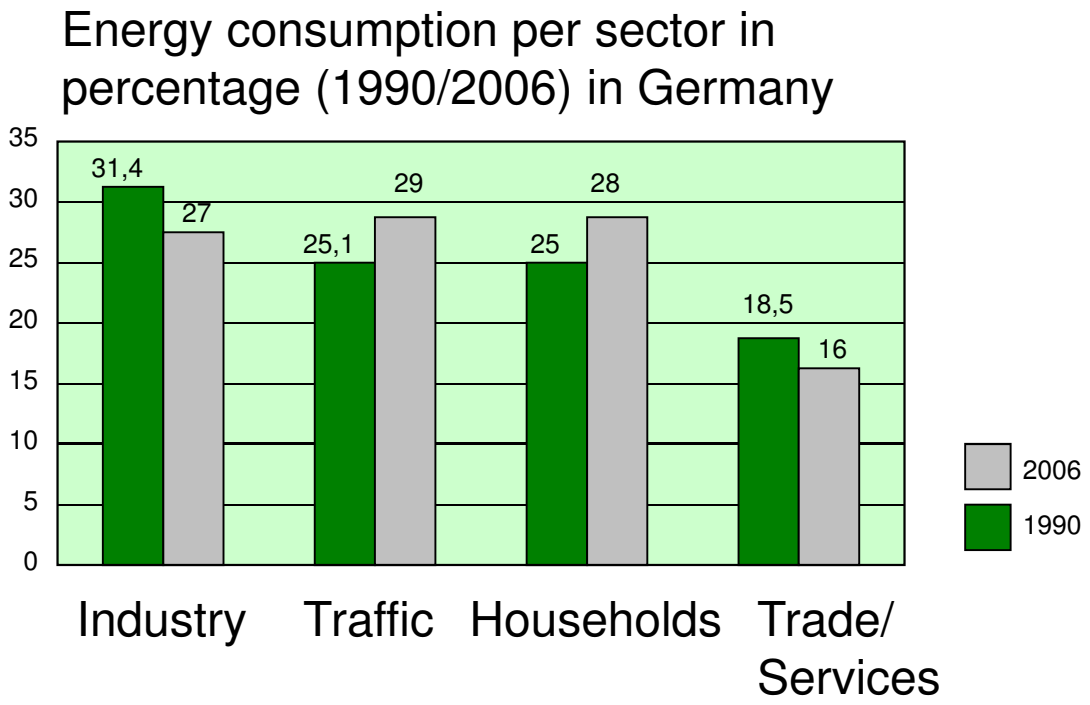
Energy consumption of the housing sector (1):



Source: Federal Ministry of economics and Technology 2008

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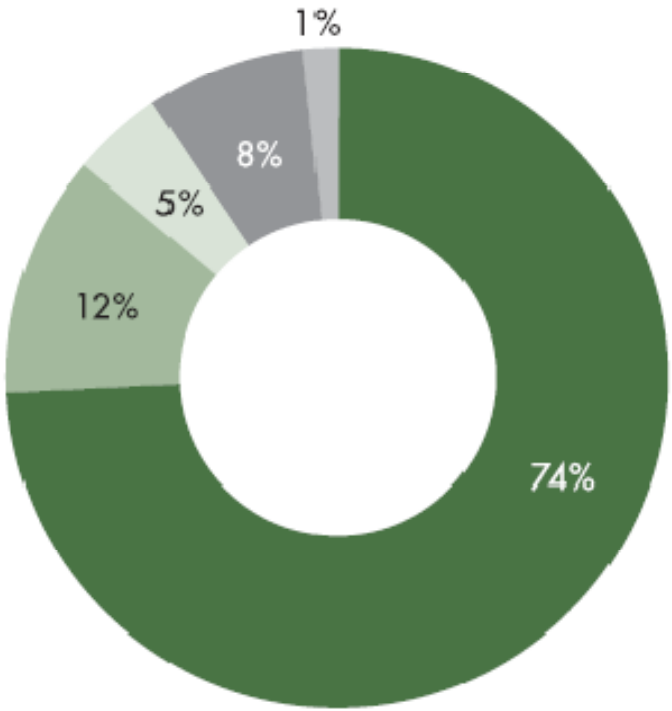
Energy consumption of the housing sector (2):

Energy consumption of private households according to field of application (2006) in Germany



Source: Federal Ministry of economics and Technology 2008

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Energy consumption of the housing sector (3):

Potential reduction of heating energy in multi-apartment buildings

Example: Urb.Energy Target Area Riga – Jugla:

Heat load of multi-apartment building:	87 W/m^2
Reduction potential of space-heating	**30% - 50% *)**
Annual saving potential	11.6MW – 19.3MW

*) Refurbishment of a multi-apartment building according to the recent requirements of Latvia building code LBN-002-01

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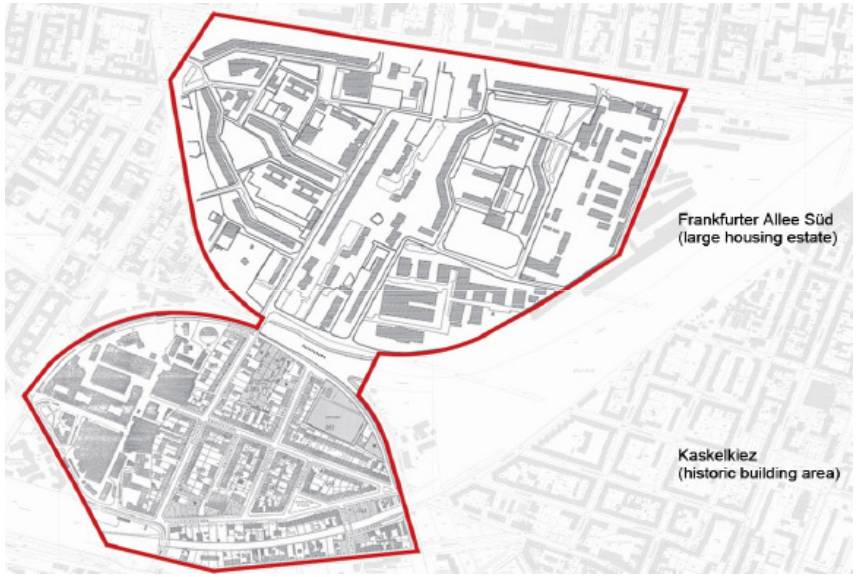
Promotion of energy efficiency in the housing sector in the frame of

Integrated Development of Neighborhoods

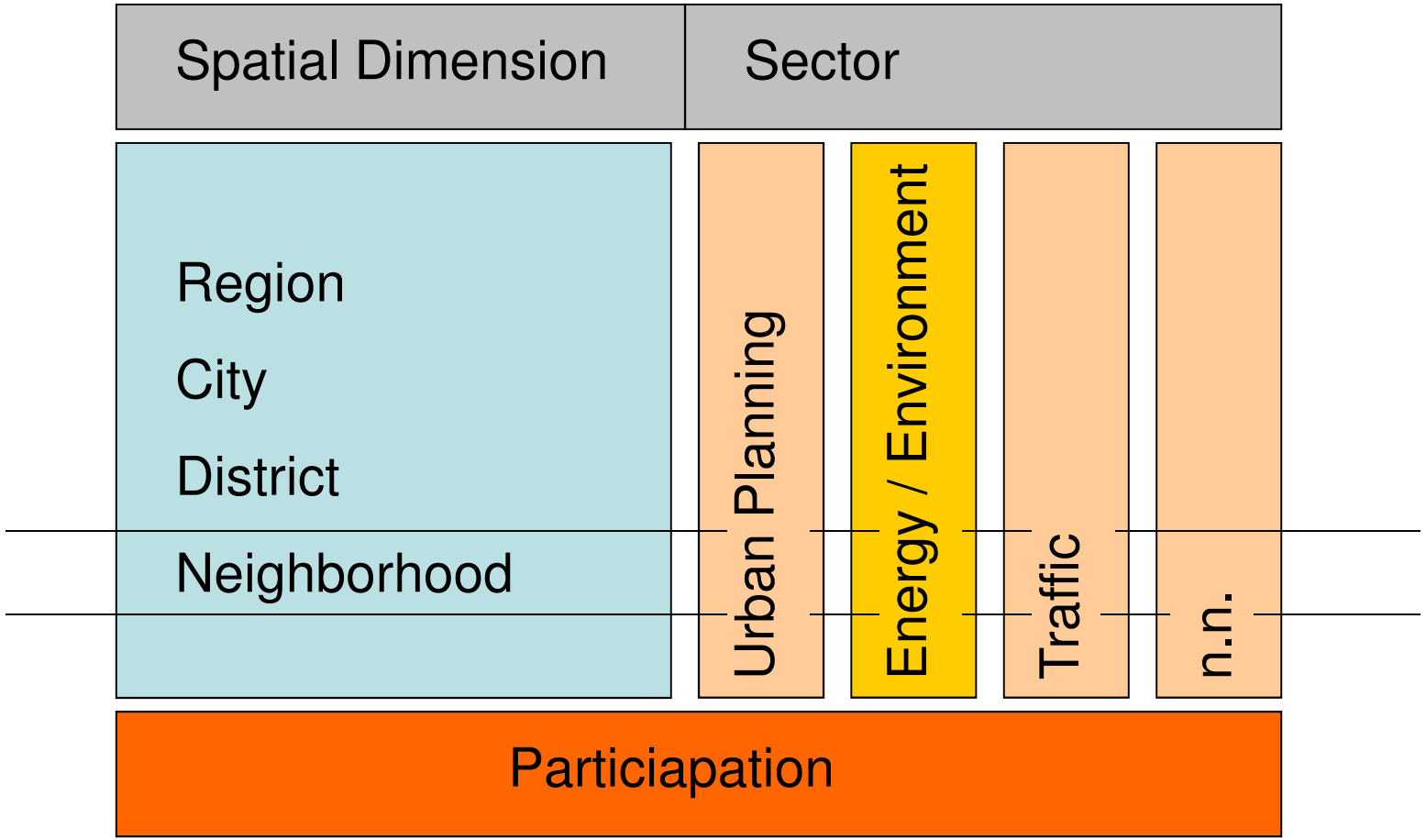


Sample neighborhood Berlin, Frankfurter-Allee-Süd / Kaskelkiez

Target Area Jelgava

Neighborhood: residential area that is a functional and structural unit but not necessarily an administrative unit

Integrated approach:



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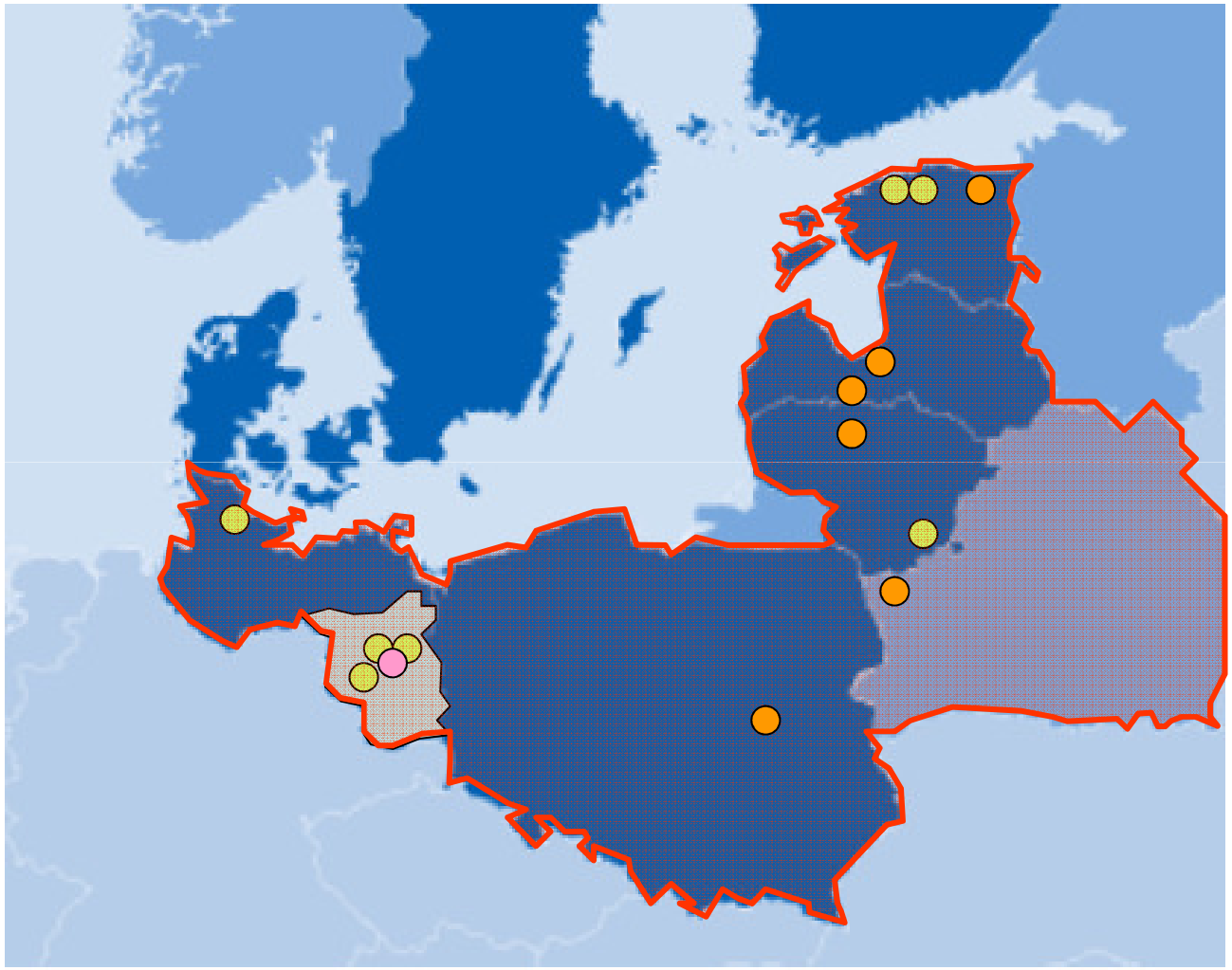
Project Partnership:



- Target Area - neighborhood
- Case study - neighborhood
- Case study - region
- Mainstreaming partner
- Transnational output

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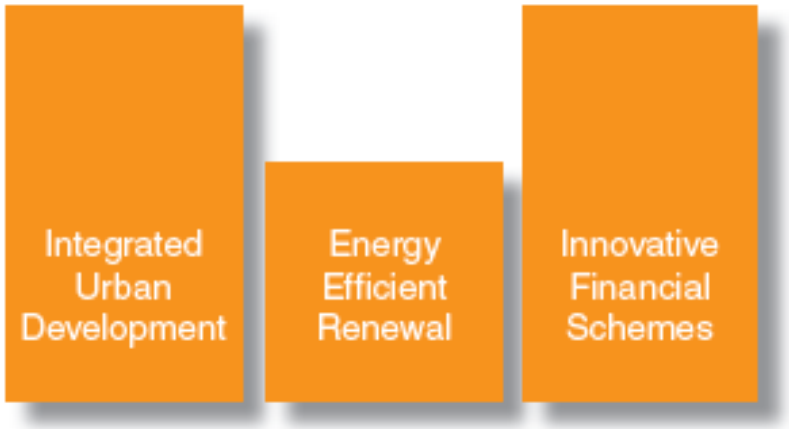
Project setting:

Project objective:

Urb.Energy's key objective is the development of integrated concepts and strategies for the comprehensive energy efficient renewal of residential areas in the Baltic Sea Region

Thematic Areas: (work packages)



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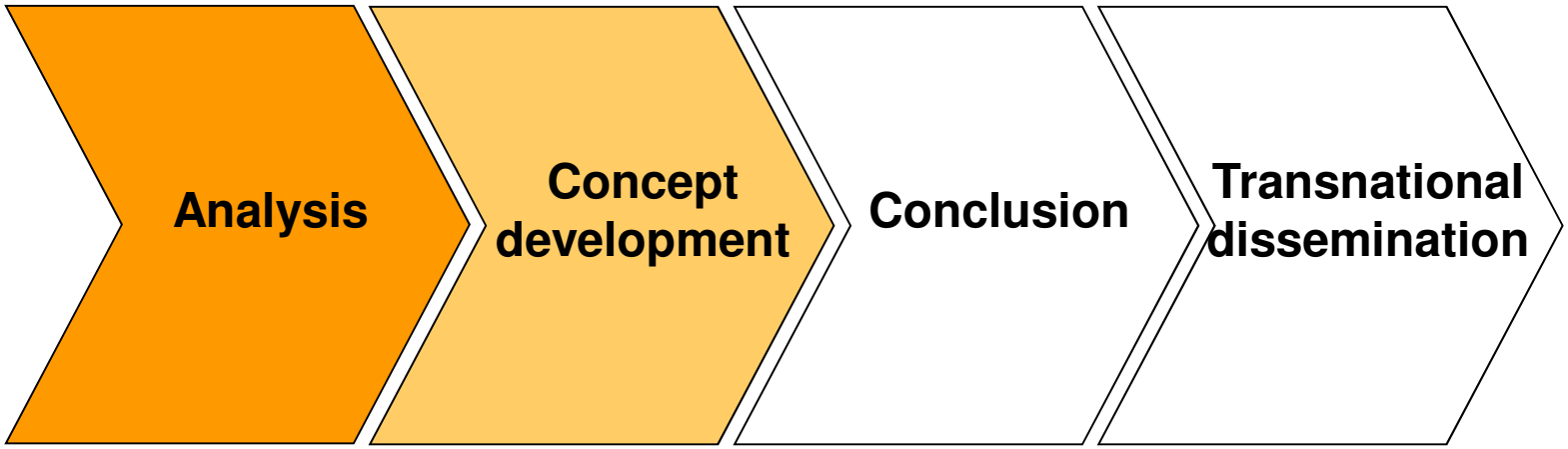
Current working stage of the project:



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Sample Neighborhoods

target areas and case studies

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Arbeitshilfe

Structure of the Sample Neighborhoods:

Planned at constructed between 1960 - 1989

Multi-apartment buildings

Pre-fabricated concrete panels

Detached buildings with open space between the buildings

District heating systems

Predominately residential areas

Predomiately private owned appartments and sourunding area remains in the property of the municipality

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Typical challenges at the Sample Neighborhoods:

Housing	Energy/ Environment	Urban planning	Social	Traffic

Participation





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Typical challenges at the Sample Neighborhoods:

- Poor overall condition of the buildings, need for maintenance
- Inefficient energy efficiency of the buildings
- Technical condition of heating systems (in the buildings and district heating system)
- Predominately pure residential areas → high share of commuters
- Labor market and social structure
- Inadequate use and property rights of open space between buildings
- Increasing number of residents with private cars and negative impacts on traffic and parking situation

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Crucial points to enable the energy efficient upgrading of neighborhoods:

- Relation investment costs to saving potential
  - costs for refurbishment
  - possibilities for financial support
- Heterogeneous owner structure is a challenge
- Integrated concepts initiate processes
- Integrated concepts offer the possibility to foster the prioritization of energetic aspects and build the frame for awareness raising
- Steering capacity of the local administration

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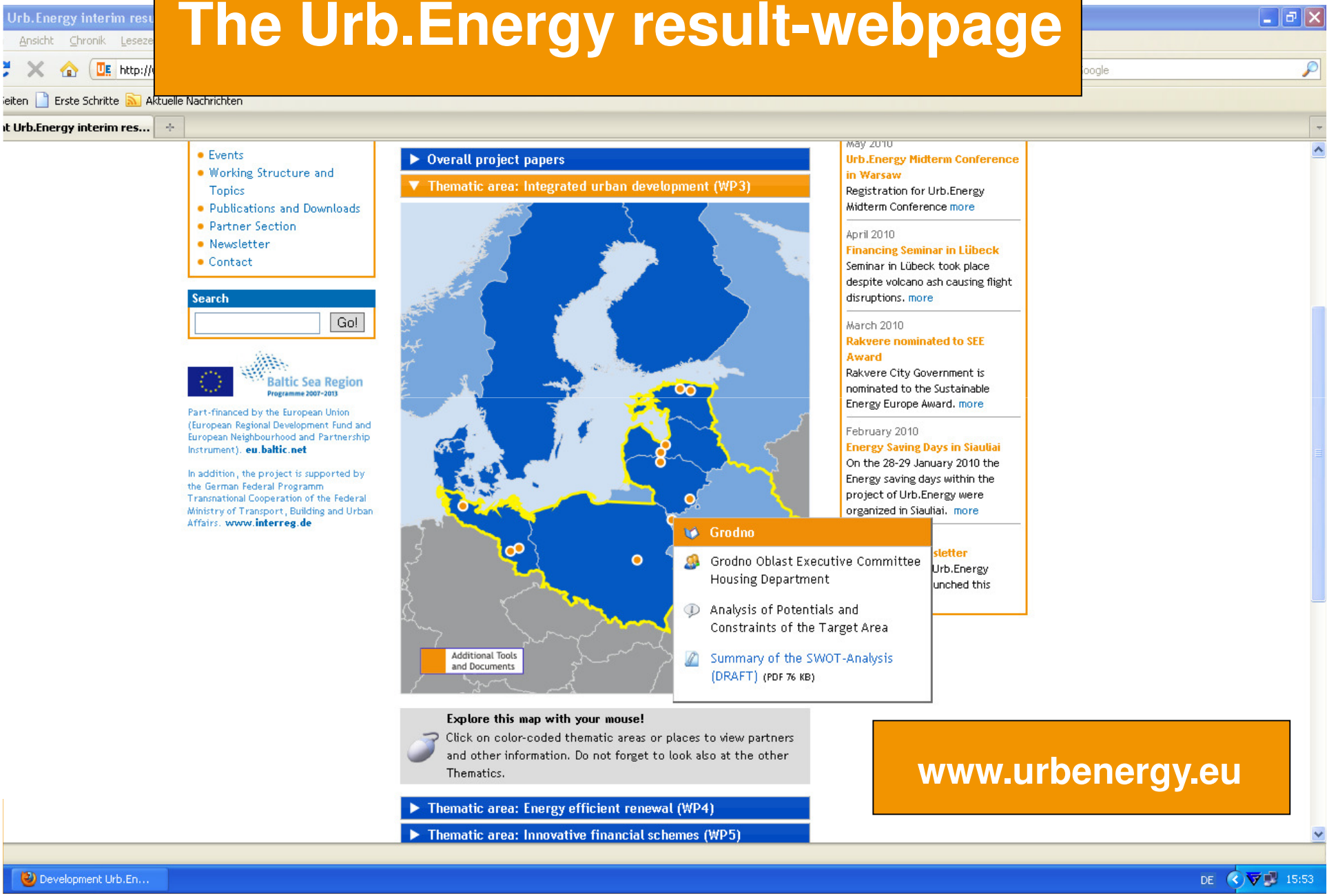
The Urb.Energy result-webpage



www.urbenergy.eu

Thank you very much!

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