

Welcome in the CASCADE project



Study Visit in Mannheim

23rd till 25th September 2013

Malmö, Eindhoven, Milan,
Timisoara and Sliven

Agnes Hähnel-Schönfelder

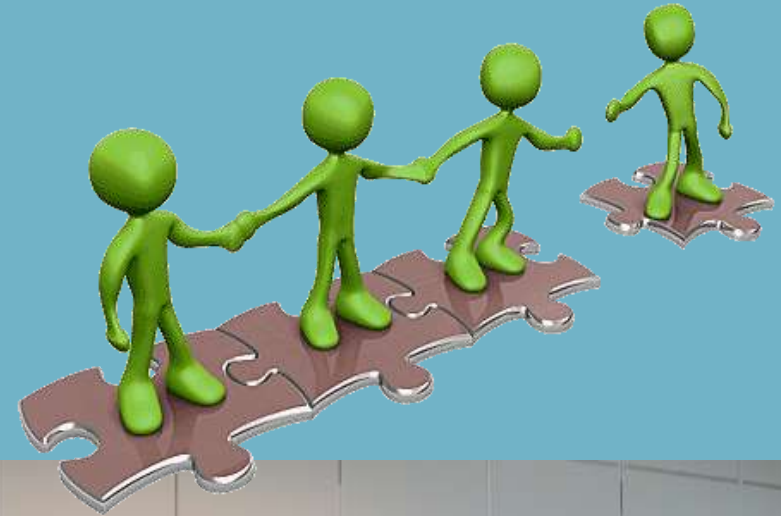
Head of Climate Protection Centre, City of Mannheim



European Networking



Konvent der
Bürgermeister/innen
Für lokale nachhaltige Energie



Climate Alliance



EURO
CITIES



CASCADE
Cities exchanging on
local energy leadership

CASCADE project

Cities sharing solutions for a smarter and sustainable energy future in Europe.



Experts:

*Malmö
Kourcky & P.
Göteborg
Wuppertal-
Institut*

Coordinator:

*EUROCITIES
Brussels*



19 Cities:
Malmö
Stockholm
Tampere
Amsterdam
Eindhoven
Warsaw
Mannheim
Nantes
Sunderland
Gateshead
Birmingham
Edinburgh
Venice
Milan
Genoa
Amaroussion
Terrassa
Gijon
Burgas

Cities Exchanging on Local Energy Leadership



Peer learning methodology

Delivering in-depth assessments of local energy policies in a transnational context.

visit
energy
CASCADE exchange
Peer
questions
peers
report
city
benchmark
interviews
team
one

Demonstrating local energy leadership

19 leading European cities from 11 member states are partners in CASCADE



Focusing on three main areas

Energy efficiency in buildings and districts, renewable energy sources & distributed energy generation, and energy in urban transport.



Year 1 – Peer Learning Visits / Benchmark



Energy efficient buildings and districts



Renewable energy sources and distributed energy generation



Energy in urban transport

18 Interviews
26 Key Factors

- A. Local leadership and ambitions
- B. Local strategies and policies
- C. Organisational and managerial issues
- D. Stakeholder and citizen involvement
- E. Information, knowledge and awareness
- F. Financing, investments and risks

intensive **peer learning visits**: Mannheim visited Birmingham and Tampere

Year 2 - study tours, work shadowing and mentoring, 20 additional cities
mentoring visit in Amaroussion, shadowing in Birmingham, *mentoring in Edinburgh*
study tour in Mannheim

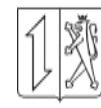
Year 3 - national and regional networking across 11 member states



Peer Review Learning in Tampere & Birmingham



visit us on
www.cascadecities.eu



Climate Protection Strategies



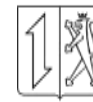
Agnes Hähnel-Schönfelder

Head of Climate Protection Centre, City of Mannheim

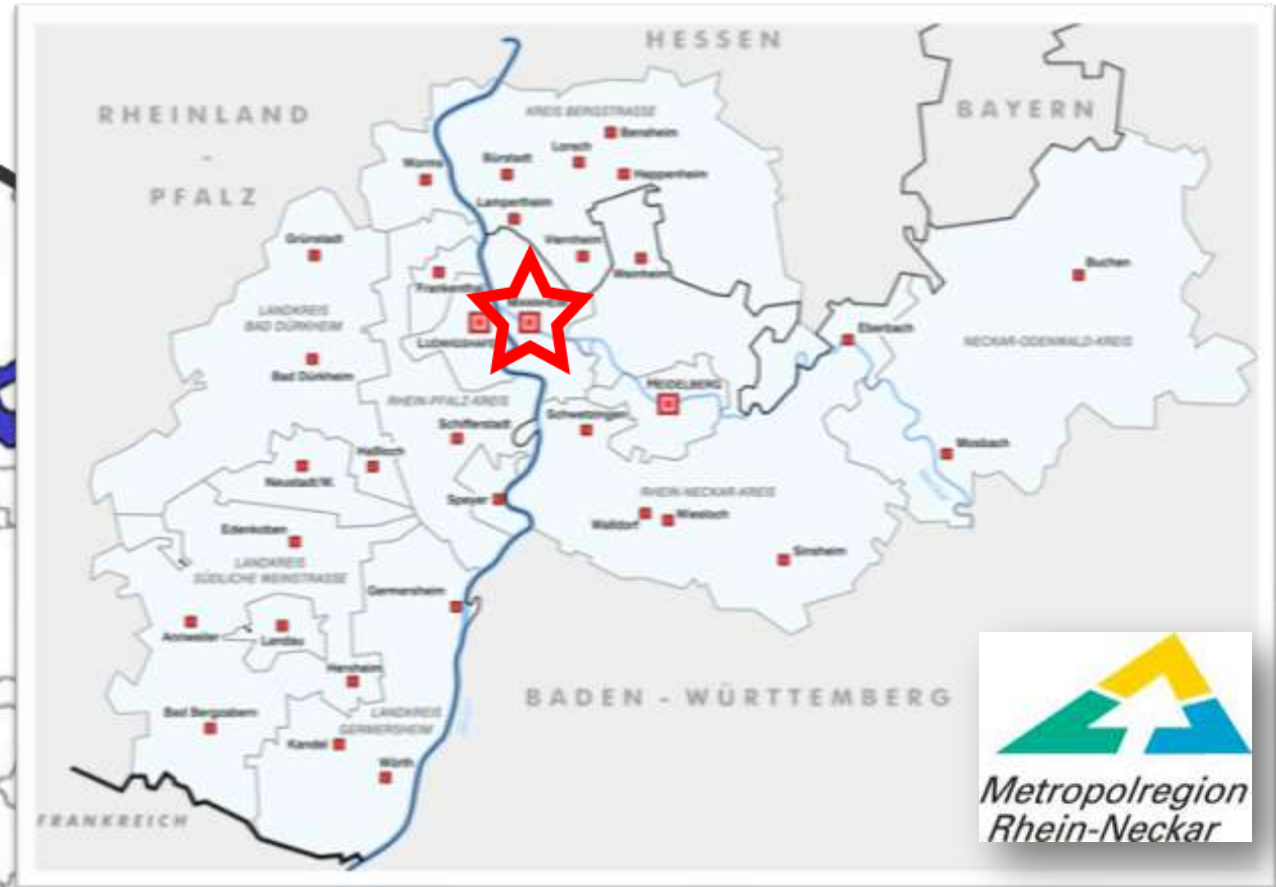
...or how to fix
climate and energy issues
as a cross-sectoral task...

24.09.2013, study visit in Mannheim

「MANNHEIM AUF
KLIMAKURS」
...
Miteinander. Mittendrin.



Mannheim in the Metropolitan Region Rhine-Neckar





planer and initiator

energy supplier

permissions and
urban planning



owner of properties

energy consumer

consultant, model



Role of the City



■ 320.000 residents

■ 145 km² area

■ 1/3 nature reserves and protected
landscape areas

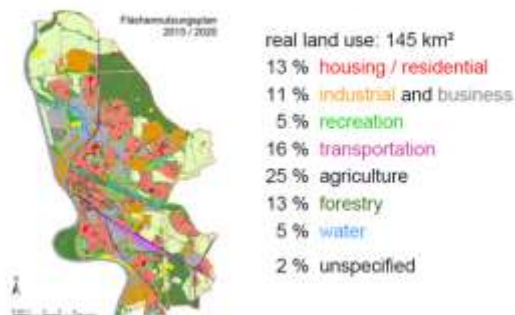


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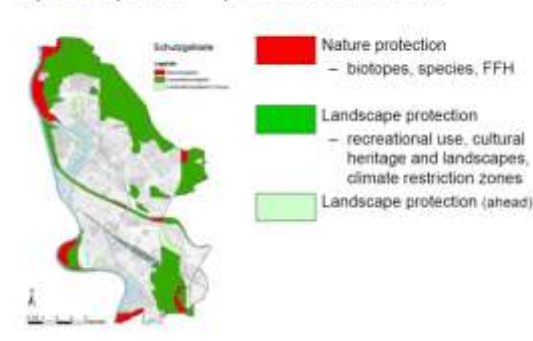
Main Energy Policies

- strategic documents addressing local climate policy:
 - Climate Protection Conception 2020 Mannheim
 - = SEAP (Sustainable Energy Action Plan) of the Covenant of Mayors
 - Energy Guidelines for municipal buildings
- main local strategic planning documents with indirect effects:
 - Comprehensive Land Use Plan 2015/2020 + Model of Spatial Order
 - Open Space–Protected Areas Plan + City Climatic Map
 - 21-Point Plan Cycle Traffic

comprehensive land use plan



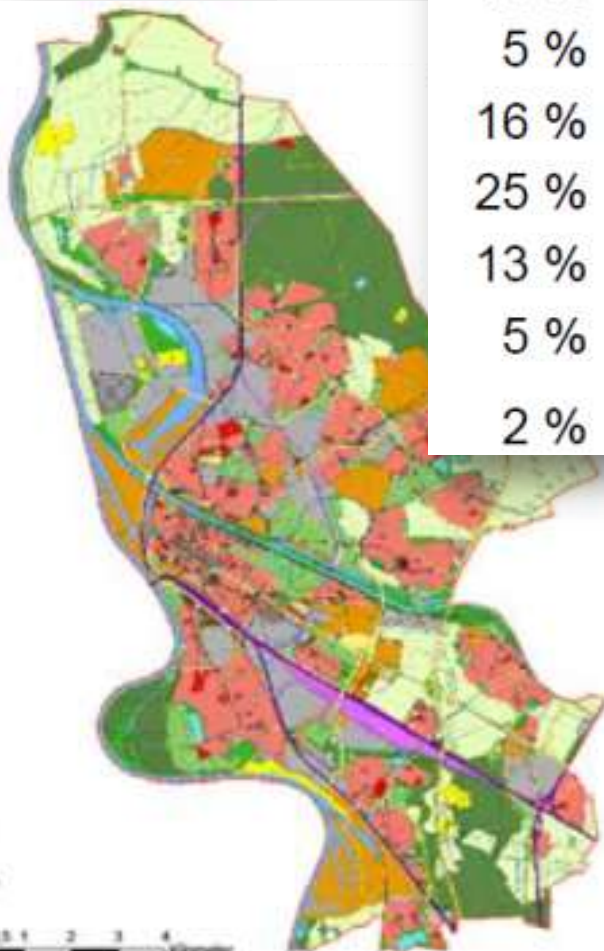
open space – protected areas



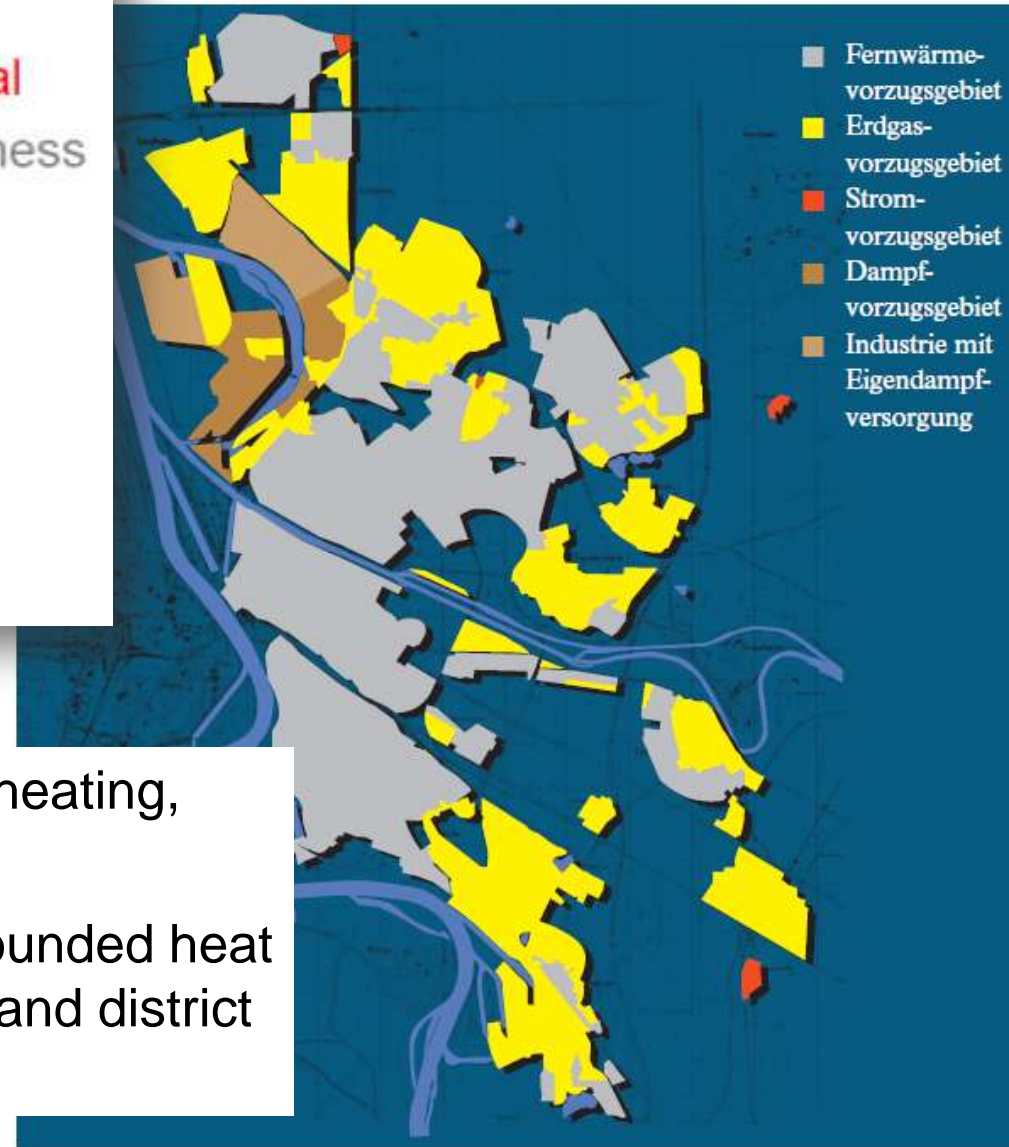
land use and heat supply

real land use: 145 km²

- 13 % housing / residential
- 11 % industrial and business
- 5 % recreation
- 16 % transportation
- 25 % agriculture
- 13 % forestry
- 5 % water
- 2 % unspecified



- gas, district heating, fuel oil,
- 82 % grid bounded heat supply (gas and district heating)



municipal climate protection strategy

- **1. Conception + 2. Infrastructure + 3. Financing**
- approval by the City Council
 - 2009: **Climate Protection Conception**
 - 2009: **Climate Protection Centre**
 - 2009: **Climate Protection Agency**
 - 2010: **Covenant of Mayors**
 - 2011: **SEAP submitted**
 - 2012: SEAP approved by CoM





Covenant of Mayors – SEAP has been accepted by the EU



Covenant of Mayors - Unterzeichner des Konvents - Mozilla Firefox
Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

stories_de.html?city_id=1880&seap



STADT MANNHEIM²



Klimaschutzkonzeption 2020 der Stadt Mannheim Sustainable Energy Action Plan



Mannheim

STADT MANNHEIM²

Overview Action Plan Benchmarks Support

Action Plan in a Nutshell

Date of formal approval: 13 Oktober 2009
Overall CO₂ emission reduction target: 40%
Link to the SEAP website: <http://www.mannheim.de/bu...>

Sustainable Energy Action Plan Documents

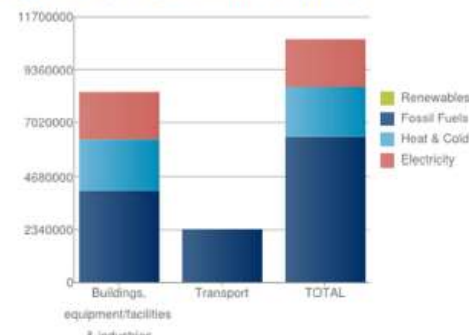
Title	Size	Language
Sustainable Energy Action Plan	2.59 Mo	de

Disclaimer:
This action plan is subject to a verification by the European Commission's Joint Research Centre. The verification process is explained [here](#). Highlights of the SEAP template will be shown publicly once it is approved.

Key results of the Baseline Emission Inventory

Base year: 1990

Final energy consumption per sector in 1990 (MWh)



CO₂ emissions per sector in 1990 (t)



Download
Bürgermeisterkonvent - Text

Neueste Aktionspläne

- Virgilio, Italy**
CO₂ emissions reduction target by 2020 **-26%**
- Casazza, Italy**
CO₂ emissions reduction target by 2020 **-22%**
- Caronno Pertusella, Italy**
CO₂ emissions reduction target by 2020 **-22%**
- Castro, Italy**
CO₂ emissions reduction target by 2020 **-20%**
- Trescore Balneario, Italy**
CO₂ emissions reduction target by 2020 **-20%**

Neueste Benchmarks

- Municipality Of Amaroussion, Greece**
Cities Exchanging on Local Energy Leadership (CASCADE)
- Castaño del Robledo, Spain**
Replacement of conventional ballasts for electronic ones and replacement of conventional lamps for more efficient and less consumption ones in municipal audited buildings.
- Hersonisos, Greece**
Energy Autonomous House

Climate Protection Conception 2020 SEAP



Comprehensive Measures (11)

Measures for Private Households (10)

Measures for Trade and Industry (6)

Measures for Civic Institutions (7)

Measures for Public Actors (4)

Measures for Energy Service Provider (6)

Measures Transport (16)



Klimaschutzkonzeption 2020
der Stadt Mannheim
Sustainable Energy Action Plan



Goal: 40 % CO₂-Reduction till 2020



Maßnahmenplan Klimaschutzkonzeption 2020: 2010-12/13
Maßnahmen Energie

Nr.	Maßnahmentitel	GR Vorlage	IFEU Beratung	Maßnahmenträger			Umsetzung			Finanzen 2012/13
				Stadt	KSA	Andere	2010	2011	2012/13	
Ü	Übergreifende Maßnahmen									
Ü 1	Klimaschutzagentur Mannheim	48/09		63	KSA	MVV, GBG	umgesetzt			gesichert
Ü 2	Klimaschutzleitstelle in der Stadtverwaltung	48/09		63			umgesetzt			gesichert
Ü 3	Mannheimer Klimaschutzfonds			63	KSA	MVV	umgesetzt			gesichert
Ü 4	Gesamtkonzept Klimaschutzkommunikation		ja	63	KSA				begonnen	gesichert
Ü 5	Internetplattform für den Klimaschutz		ja	63	KSA		in Umsetzung			KSA
Ü 6	Klimaschutzallianz Mannheim		ja	63	KSA	alle Akteure			geplant	neutral
Ü 7	Klimaschutzleitlinie	624/11	ja	63,25,61 66,GQ,80			begonnen			neutral
Ü 8	Selbstverpflichtung		ja	63		alle Akteure	begonnen			neutral
Ü 9	Mannheimer F...			63	KSA	Kreditinstitute			geplant	offen
Ü 10	Qualifizierungsprogramm				KSA	HWK,IHK,	begonnen			KSA, HWK, IHK, MVV
Ü 11	Klimaschutz-Benchmark Mannheim							begonnen		gesichert
H	Maßnahmen Private Haushalte									
H 1	Mannheimer Projektplattform Klima		ja	63					geplant	KSA
H 2	Klimarechner Mannheim und Region		ja		KSA					KSA
H 3	Mannheimer Stromsparm...			63	KSA	MVV			begonnen	KSA
H 4	Abwrackprämie Kühlgeräte				KSA		umgesetzt			KSA
H 5	Heizungspumpencheck / Hydraulikcheck				KSA	MVV	in Umsetzung			MVV-KSF
H 6	Mannheimer Qualitätsstandards energetische Sanierung				KSA	HWK, GBG			geplant	KSA
H 7	Klimaschutz „Am Hochwald“	215/10		61,25, 63	KSA		in Umsetzung			neutral
H 8	Förderung Passivhauselemente im Altbau		ja	63	KSA	Kreditinstitute		begonnen		gesichert
H 9	Förderung Kraft-Wärme-Kopplung		ja		KSA		in Umsetzung			MVV-KSF
H 10	Förderung erneuerbare Energien plus Effizienz		ja	63	KSA	MVV		begonnen		KSA

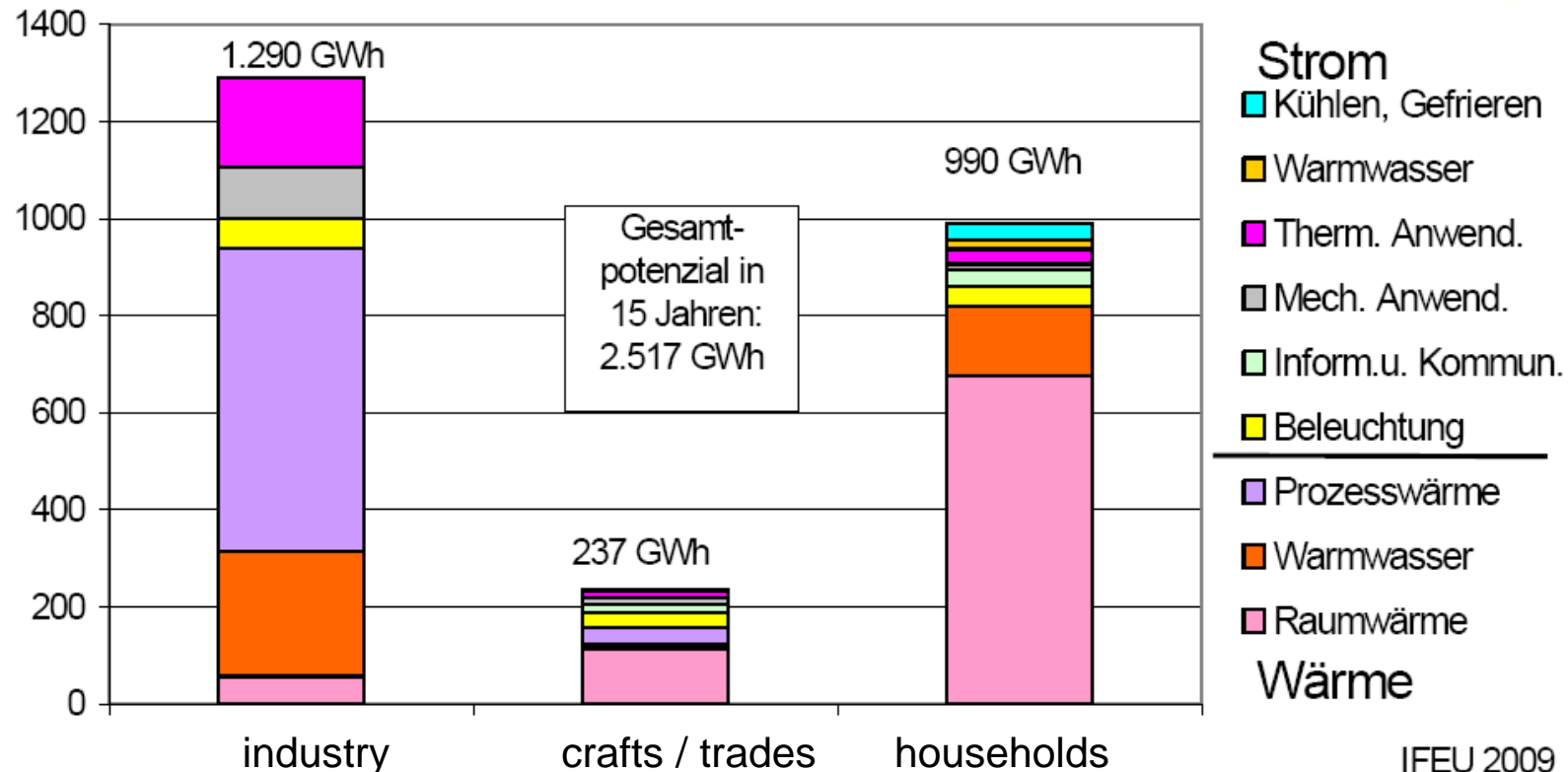
2/3 of measures are in implementation
1/3 in planning

Energy Saving Potentials (2005-2020)

Wirtschaftliche Einsparpotenziale in Mannheim nach Sektoren und Anwendung (15 - Jahre)

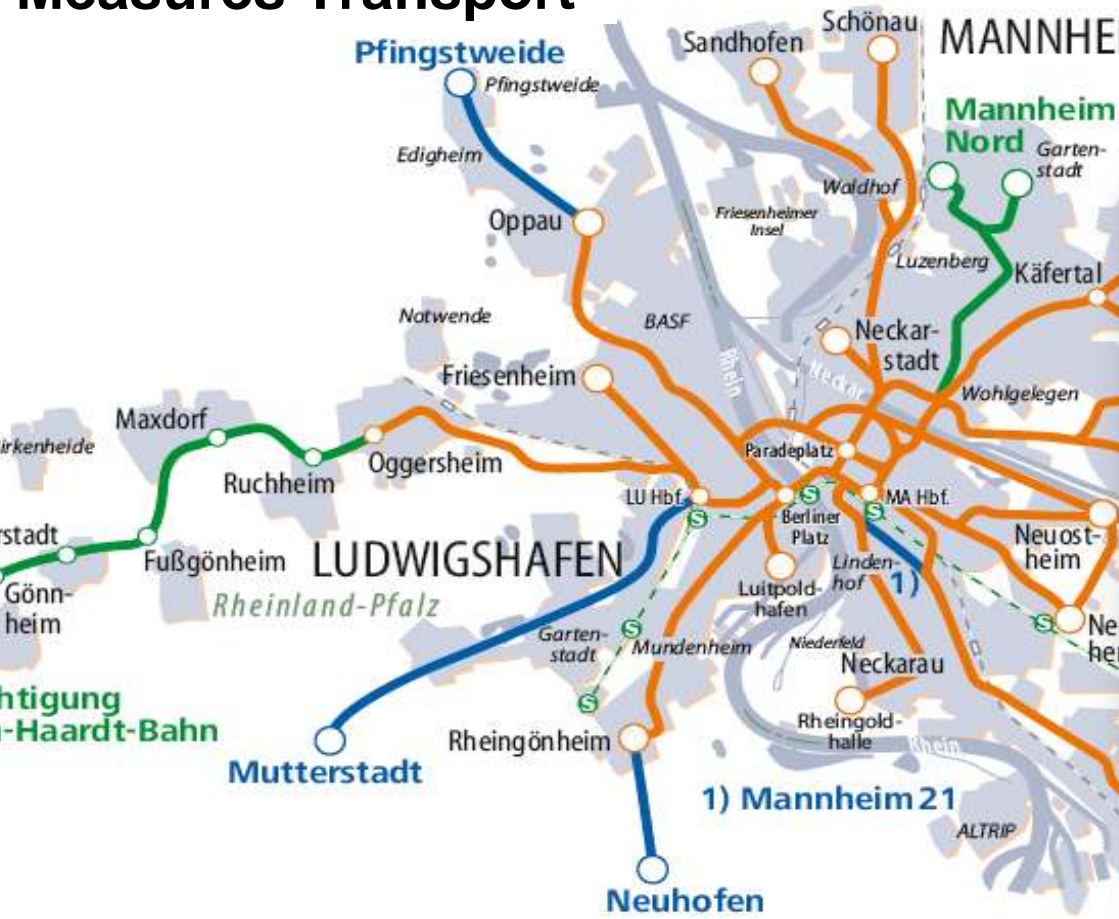


GWh / a



IFEU 2009

Measures Transport

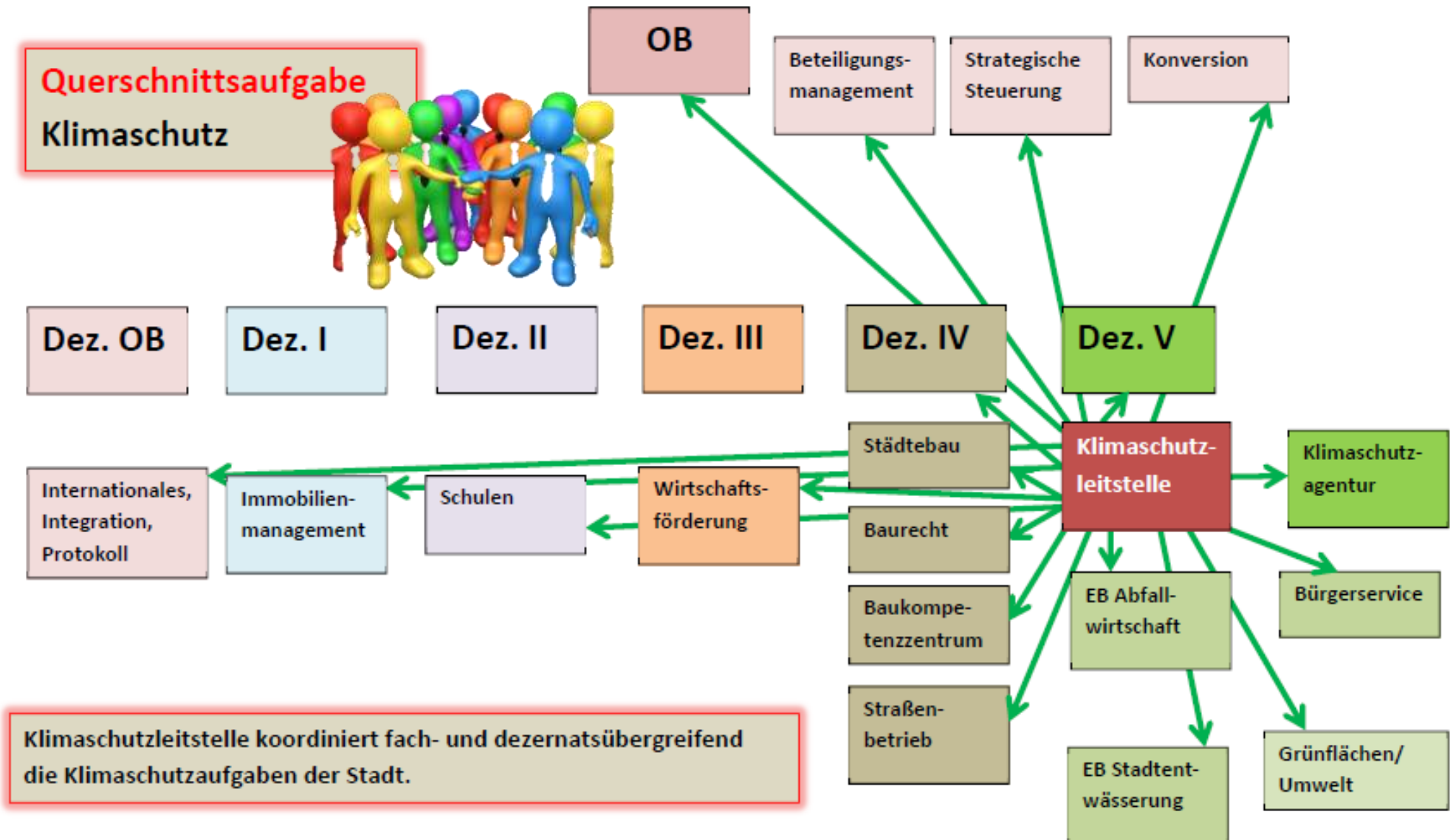


Netz RN
Planungen
e Netzerweiterungen

21-Point Plan Cycle traffic

- Mannheim is developing as one of the most cycle friendly town
- share of cycle traffic is increasing
 - till 2014 to 20%, till 2020 to 25%
- consider cycle traffic interests in all road building measures
- expansion of the cycle route network:
 - 1 route per year
- city centre extensive usable for cycle traffic
- expansion of parking places and places for Bike & Ride
- identification of 100 dead-end roads open for cycling
- opening of one-way roads for cycling
 - 42% open in the opposite direction





What does a climate protection centre?

- cross-departmental function overall the departments and offices
- specialist contact person in the field of climate protection within the municipality – climate protection manager
- develop strategies for the implementation of the SEAP
- initiate, coordinate and also lead different projects concerning energy efficiency and CO₂-reduction
- project funding and promotion
- local budget for climate protection projects
- draft resolutions for the City Council
- connecting link between City and Climate Protection Agency
- campaigns, actions and events to motivate people for climate protection
- Networking local, regional, international (Covenant of Mayors, EUROCITIES, Climate Alliance)



Personnel resources



- Climate Protection Centre (1)
 - supported by Climate Protection Agency Mannheim (5)
- Energy Management (4) at the Office of Property Management
- Additional personnel (about 10):
 - at the Office of Urban Planning: Urban Planning + Traffic Planning
 - at the Office of Road Planning: Street Lighting
 - at the owner operated municipal enterprises for waste water treatment and for waste management



Positioning of climate protection issues in the municipality

- cross-departmental positioning of climate and energy issues in the project planning and -development
- support, coordination, realisation of climate and energy projects
- development and implementation of climate protection strategies and conceptions
- Energy and CO₂-inventory, analysis of potentials, reporting
- Promotion of climate protection, development of promotion programmes
- creating of cooperation structures, networking
- information and communication about climate and energy issues

Climate Protection Agency Mannheim

■ Tasks:

- expert consulting in terms of energy efficiency and renewable energies
- advising and work on promotion programmes
- for private households, trade companies, associations, churches ...

■ Shareholders:

- City of Mannheim (51 %), energy utility MVV Energie AG (40 %), housing company GBG (9 %)

■ Financing:

- regional start up funding: 100.000 €, annual grant shareholders: 450.000 €

■ Personnel:

- 5 full time jobs: CEO, 3 energy consultants, projektmanager, 1 assistance



>> Earth Hour 2012 

>> (D)eine Stunde für unseren Planeten



>> Macht mit beim Earth Hour Dinner

>> 31. März, 20.30 Uhr

Die Klimaschutzagentur ruft auf zum klimafreundlichen Dinner 2012

Organisieren Sie Ihr eigenes Earth Hour Dinner im Restaurant, stiften Sie ein Foto ab und erhalten Sie an der Kasse ein kleines Geschenk zum Dank für Ihren Einsatz.

Stiftungsmöglichkeiten: von 10€ bis 100€ und mehr. Günstigste Preise für Gruppen. Sie dürfen bei der Klimaschutzagentur Vorname, Adresse und Telefonnummer angeben. www.klimaschutz-agentur.de

 **KLIMASCHUTZAGENTUR MANNHEIM**

Die Klimaschutzagentur Mannheim ist eine Initiative der Stadt Mannheim und der Klimaschutzagentur Baden-Württemberg. Sie ist eine 100%ige Tochtergesellschaft der Klimaschutzagentur Baden-Württemberg.



MANNHEIM AUF KLIMAKURS²

Miteinander. Mittendrin.

Die Zukunft erleben
am Energietag Baden-Württemberg

Sonntag 15. September, 10:00 - 18:00 Uhr
Ausstellung, Beratung und Aktionen
Energieerzeugung im Baden-Württemberg
Technisches Museum

Dienstag 18. September, 19:00 Uhr
Vortragsveranstaltung
„Klimaschutz in Mannheim - was haben wir erreicht?“
Zentrum für Umwelt und Energie

Donnerstag 20. September, 19:00 Uhr
Vortragsveranstaltung
„Klimaschutz in Mannheim - was bringt die Zukunft?“
Zentrum für Umwelt und Energie



In Mannheim
16. - 20. September 2012



Financing climate protection and energy projects



- City budget
- Funding / promotion programmes with Climate Protection Agency, MVV-climate fund energy utility
- regional, national and EU-funding
- financing with the owner operated municipal enterprises
- energy cooperatives to finance PV



energy efficiency measures addressing urban planning and energy management

- **Energy Guidelines for municipal buildings**
 - standards for refurbishment and new city-own buildings
 - decreasing final energy use of city-own buildings
- **Climate Protection Guidelines for Urban Planning**
 - energy efficiency criteria for private houses and non residential buildings on city-own areas
 - development of green, energy efficient urban quarters
 - climate protection pilot area for energy efficient and passive houses “Beim Hochwald“
 - high energy efficiency standards (45% under German energy saving regulations) and in part passive house standards will be implemented



Energy Guidelines for municipal buildings

City-owned non-residential buildings

requirements on new **buildings, refurbishment, management**

- insulation
- renewable energy
- building services (heating, cooling, ventilation)
- energysaving (user behaviour)

■ EnEV 2009
minus 30 %



City aims to construct buildings with demonstrating / experimental character



Energetic Reburishment of civic gardening buildings

- Reconstruction of the heating (district heating)
 - energy saving: ca. 1.115 MWh/a
 - cost saving: ca. 50.000 EUR/a
 - CO₂-reduction 203 t yearly
 - energy shields on the ceiling
 - rainwater reusing



63-Klimaschutzleitstelle



Renewable Energies in Mannheim

Solarenergy:

- solar-powerplant Friesenheimer Insel
- PV on municipal buildings
- Solartracking-Anlage at the harbor
- New: citizens' cooperative BürgerEnergie Mannheim

Geothermie:

- near-surface heat pumps on private and commercial properties

Biomass:

- biomass-powerplant Friesenheimer Insel
- gasification of sewage sludge
- pelletheatings

Heat recovering from wastewater:

- pumpstation Ochsenpferch + new office building owner-operated municipal enterprise of waste water treatment



- 95 % electricity requirement + 100 % required heat from own generation (energy self sufficient)
- new: gasification of sewage sludge / 5.000 t/a sewage sludge / 3 lines are planned
- CO₂-reduction 40.000 t / year

Waste Water Treatment Plant towards energy self sufficiency



Solar Power Plant on the city waste dump Friesenheimer Insel

- costs 3 Mio. Euro
 - area 2 hectare
 - 5000 crystalline photovoltaic modules
 - 1 MW power
 - CO₂-reduction 710 t / a



EU-Greenbuilding Restaurant „Strandbad“ on the Rhine



- need: primary energy consumption EnEV – 25 %
- reached – 40 %
- solar heat + pellet heating
- costs 3,1 Mio. Euro
- supportet by MVV-Climate fund (160 T€) and Climate Protection Agency Mannheim (55 T€)
- CO₂-reduction 40 t / a



LED-Christmas lighting



- 15.000 light bulbs (7 W) changed with LED-lights (1 W)
- energy consumption 85 % reduced
- MVV Energie 30 T€, Climate Protection Agency 15 T€, Advertising Community City 5 T€

Next steps

- development of a Climate Protection Communication Concept
- encourage all actors and stakeholders to be active in the process, so that they implement their own measures themselves addressed in the SEAP
- found a Climate Protection Alliance with companies in Mannheim
- further development of Energy Guidelines for municipal buildings and Climate Protection Guidelines for Urban Planning
- advisory support of our external consultant IFEU with monitoring the state of implementation – top down and bottom up analysis
- secure financial and personnel capacities (budget of the city),
- cooperation with the Covenant of Mayors and the supporting structures to get EU-subsidies for the implementation of the SEAP

New Quarter in the City: Glückstein-Quartier



- innovative district heating using residual heat from return
- energy efficient buildings, EnEV minus 30%

Conversion of military areas – opportunity for urban development in Mannheim (510 ha)



STADT MANNHEIM²

In cooperation with enterprises and citizens the city wants to create new green corridors, facilities for engineers and artists as well as cross-generational accommodation.





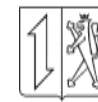
Wir halten Mannheim auf Klimakurs

Tina Schindowski, Josef Krah
Klimaschutzagentur Mannheim
Agnes Hähnel-Schönfelder
Klimaschutzleitstelle
(v.l.n.r.)

**MANNHEIM AUF
KLIMAKURS**

Miteinander. Mittendrin.

STADT MANNHEIM



efforts for refurbishment of old private houses in Mannheim



national, regional and local targets

■ national targets of the Energy Concept 2050

- **reduction of heat demand** in buildings by 20 % (2008 – 2020)
and **reduction of primary energy consumption** till 2050 by **80 %**.
- increase the **rate of refurbishment** from **1 %** to **2,0 %**



■ local targets of the SEAP, Climate Protection Conception 2020

- **38 % reduction of heat demand in private households (2005-2020)**



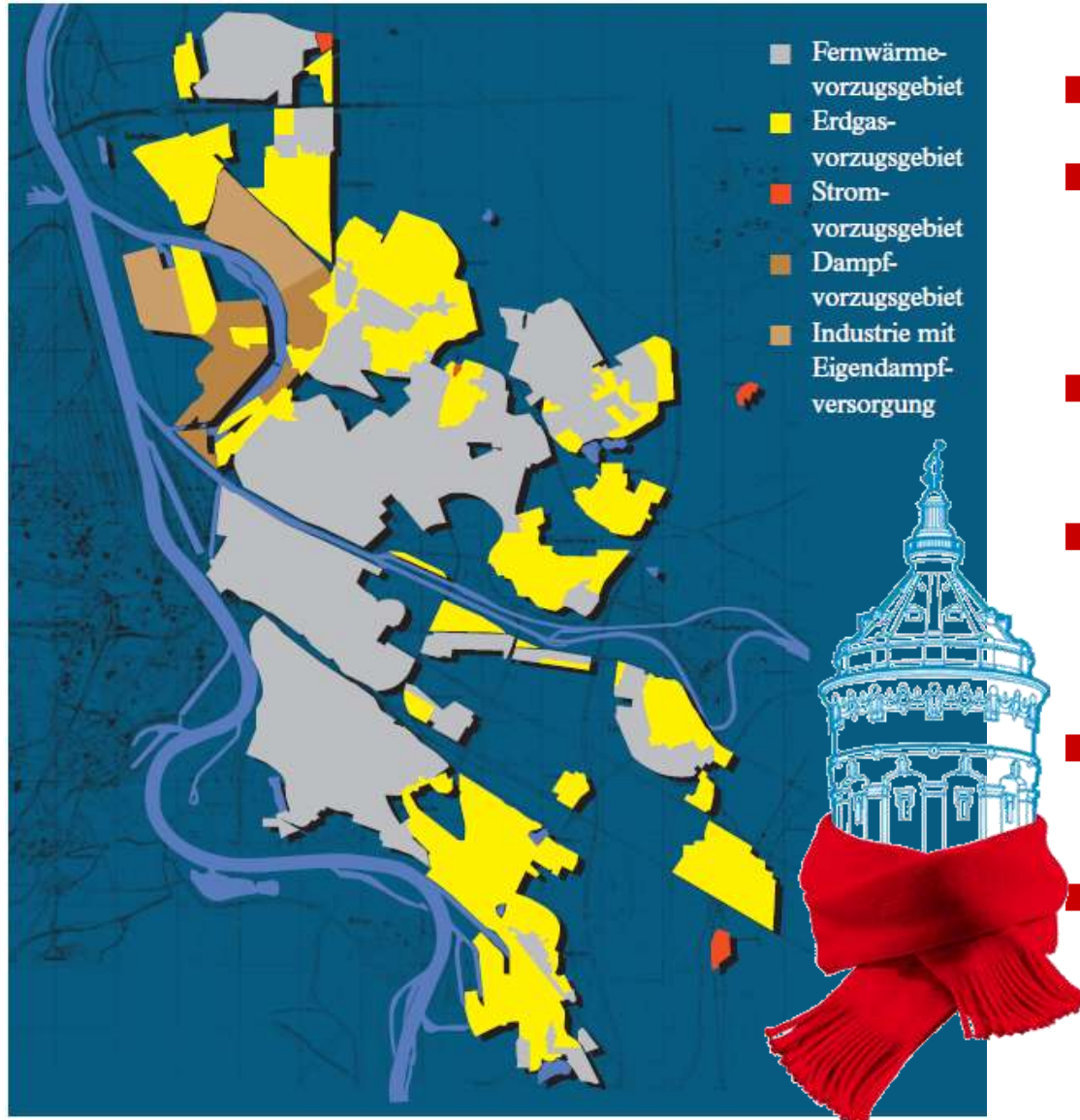
■ support the regional Initiative Energy Efficiency, Metropolitan Region Rhein-Neckar



- **Doubling of the rate of refurbishment of one- and two-family-houses**



basic data: heat supply in Mannheim



- gas, district heating, fuel oil,
- 82 % of Mannheim have a grid bounded heat supply (gas and district heating)
- district heating grid Mannheim total length: 525 km
- 12.000 houses: 59 % of the households in Mannheim - in the next 15 to 20 years 70 %
- older urban quarters have gas and oil heatings
- 3 areas with electric heating

basic data: number of flats, residential houses

real land use: 145 km²

13 % housing / residential

11 % industrial and business

5 % recreation

16 % transportation

25 % agriculture

13 % forestry

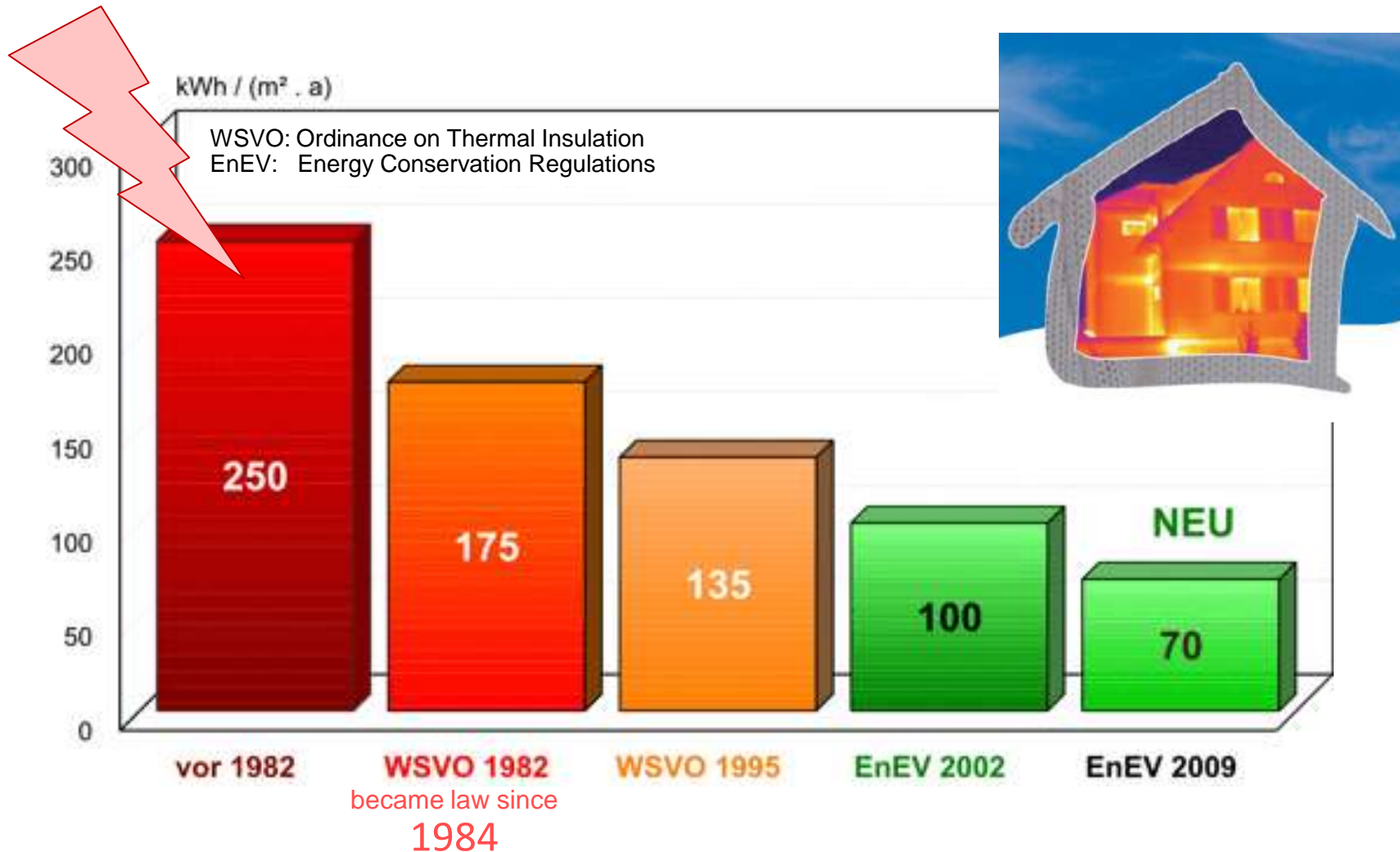
5 % water

2 % unspecified

- 40.240 residential houses
 - 166.304 flats
 - 38.411 flats in 23.438 one- and two-family houses
- **20.000 one- and two family houses with build years till 1986**



heat demand relative to the build year (heating + warm water)





types of buildings one- and two-family houses – detached, semi-detached, terraced houses -

till 1918



1919 - 1948



1949 - 1958



1959 - 1968



1969 - 1978



heat demand before and after insulation measures: kWh/m² a



no insulation



roof insulation



basement ceiling
insulation



wall insulation



new windows



Climate Protection Agency Mannheim



- Tasks:
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 - advising and work on promotion programmes
 - for private households, trade companies, associations, churches ...
- Shareholders:
 - City of Mannheim (51 %), MVV Energie AG (40 %), GBG (9 %)
- Financing:
 - start up funding: Land BW: 100.000 €, annual grant shareholders: 450.000 €
- Personal
 - 5 full time jobs: CEO, 3 energy consultants, projektmanager, 1 assistance



energy consultations 2011 – Climate Protection Agency

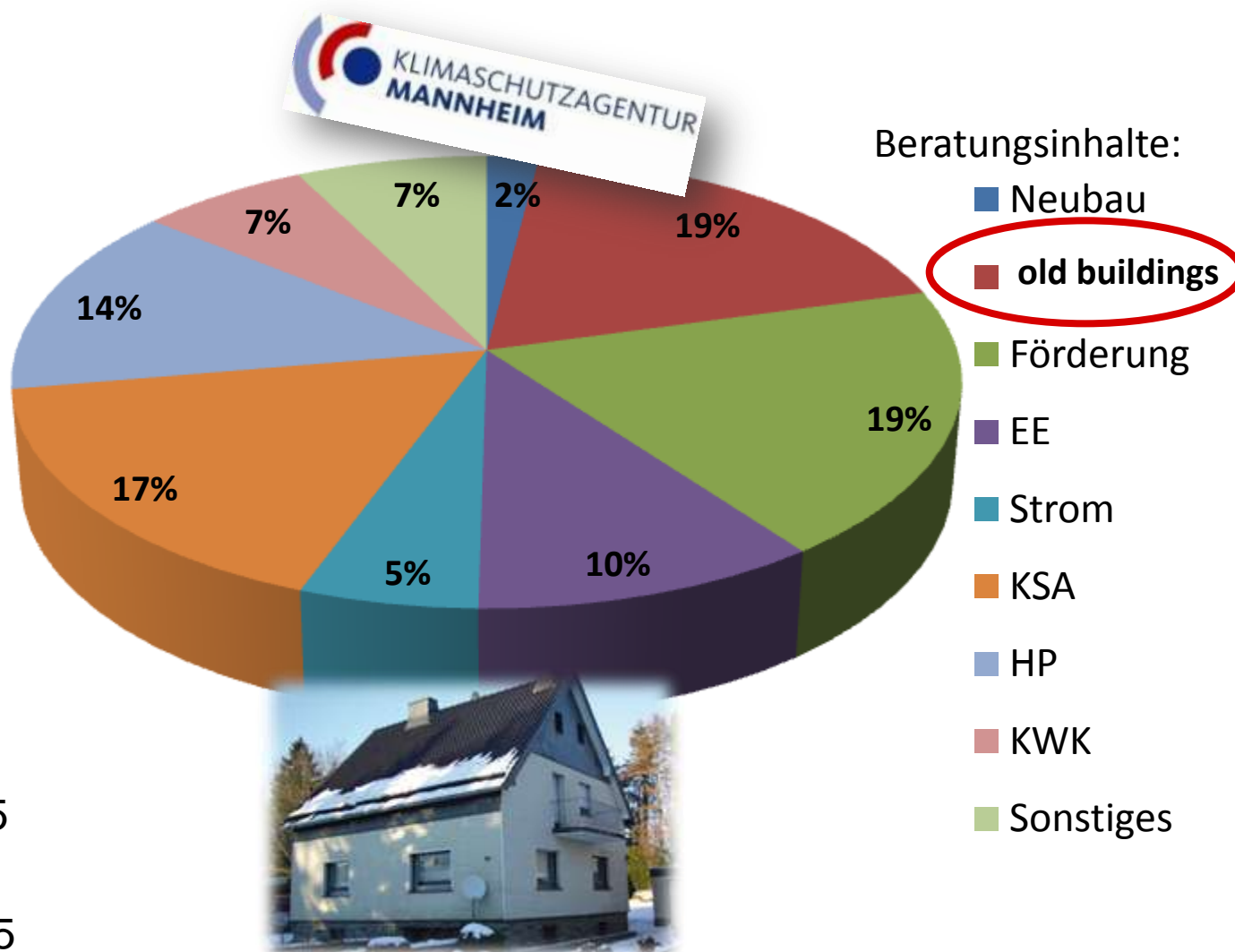
■ in the agency

- personally: 1.000
- by phone: 2.150
- by E-Mail: 400



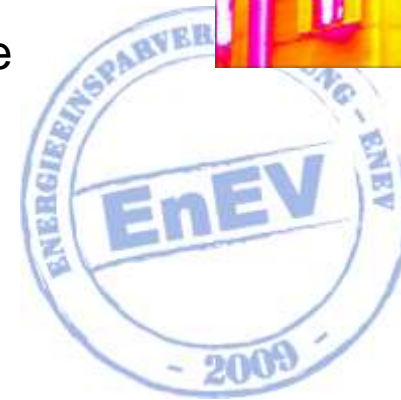
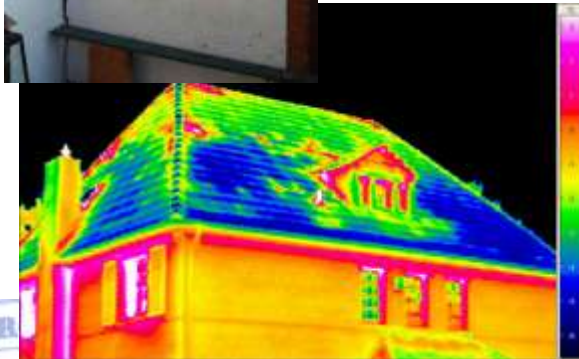
■ at presentations and events

- consultations: 705
- audience presentations: 745

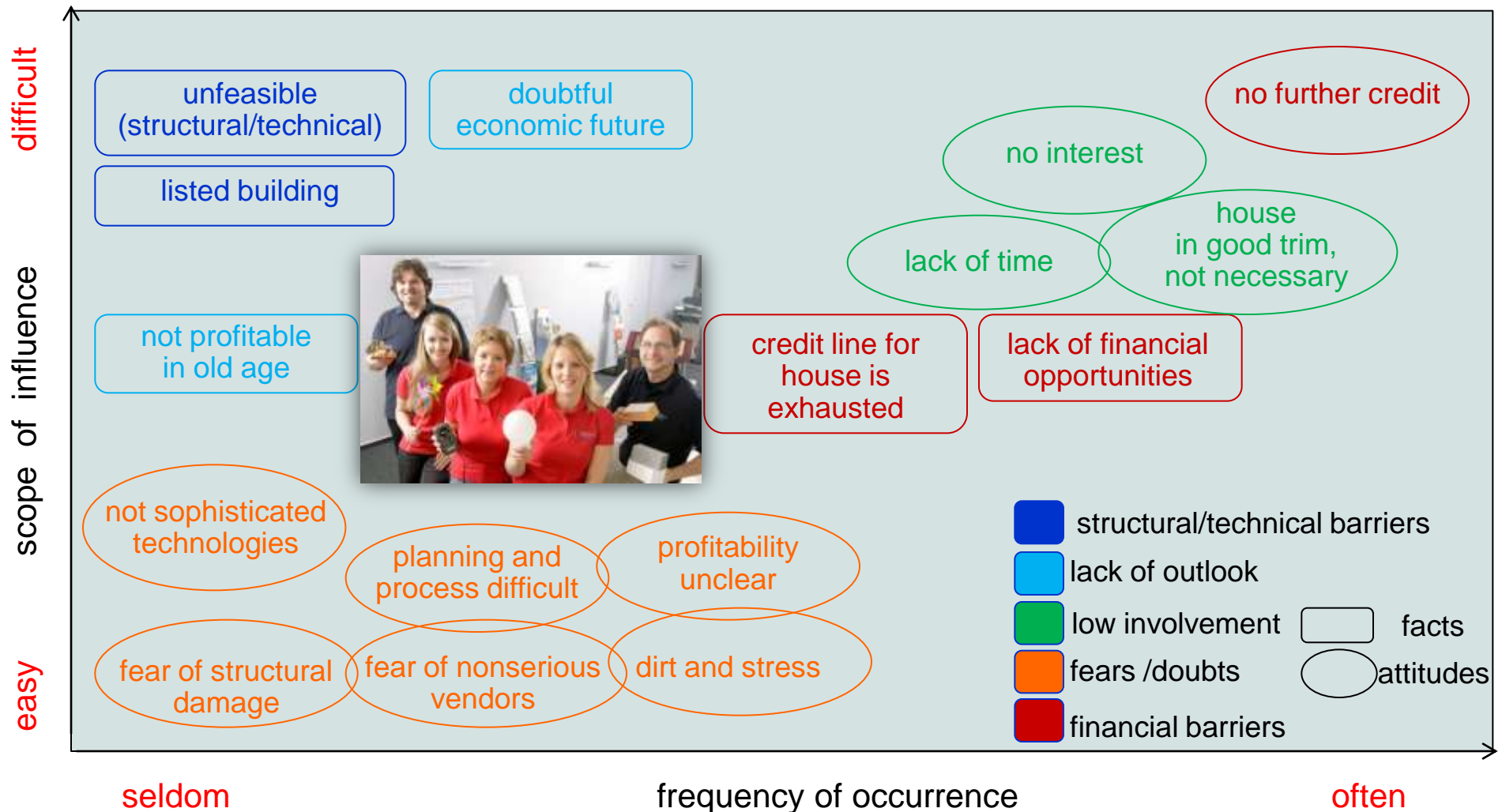


motivation for a (energetic) building refurbishment

- reasons for a refurbishment
 - useful life of building components is reached (damage)
 - realise necessary maintenance
 - beautification of the house
- reasons for an **energetic** refurbishment
 - save heating energy and reduce energy costs
 - create a pleasant living environment
 - conservation/increasing the value of the house
 - compliance with legislation standards



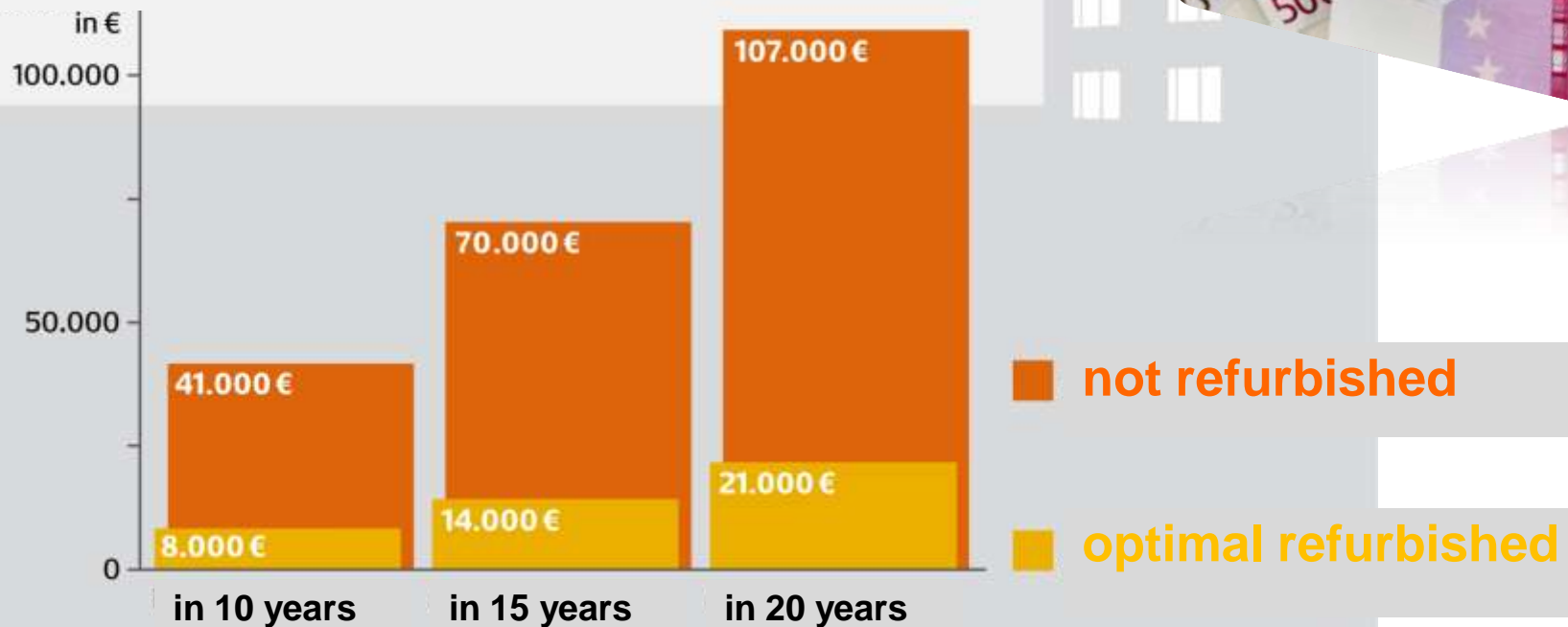
break down barriers to energetic refurbishment



refurbishment of an old house pays!

heating costs in a one family house:
optimal refurbished and not refurbished

heating costs



Quelle: dena



Promotion Programmes



Energetische Sanierung

110 förderfähige Anträge
424.000 €

**promotion of energetic
refurbishment of private
houses
City of Mannheim**

Energieeffizienz in
Wohngebäuden

Förderprogramm
Energetische Sanierung



Heizungsumwälzpumpen

261 förderfähige Anträge
60.000 €

Effiziente Heizungspumpen
Hydraulische Optimierung

Förderprogramm
Heizungsumwälzpumpen

**promotion of
circulating heating pumps
Climate fund MVV**



Blockheizkraftwerk (BHKW)

Förderprogramm
erdgas- oder biogasbetrie-
bete Mikro-KWK-Anlagen



**promotion of combined
heat and power
Climate fund MVV**

Gering investive Maßnahmen Kirchen / Vereine

8 förderfähige Anträge
6.000 €

BHKW

7 förderfähige Anträge
37.000 €

funding programme

„Energetic refurbishment of one – three family houses“

- programme adopted from the City Council in Mai 2000
- continuation and steady increase up to today
 - funds increased in 2012: **400.000 EUR** / year
- grant for the energetic refurbishment
 - outerwall wall insulation, roof insulation
 - top floor ceiling insulation
 - windows with heat protection glass (only combined with wall/roof insulation)





example refurbishment



detached one family house:

build year 1970

living area 150 m²

measures package	investment	grant City MA	grant KfW
outer wall insulation	30.000,- €	5.000,- €	7,5% der Invest costs, max. 3.750,- € per flat
roof insulation	25.000,- €	2.500,- €	
new windows	20.000,- €	1.500,- €	
total	75.000,- €	9.000,- €	3.750,- € *
share grant to total investment		12 %	5,6 %
one measure outer wall insulation	30.000,- €	5.000,- € (16,7 %)	2.250,- € * (7,5 %)

new ways to refurbishment – the Energy Caravan

- tasks:
1. find a suitable urban quarter
 2. find out 400 addresses with old one / two family houses
 3. do 400 phone calls by energy consultants to the house owners
 4. fixe a date for a cost-free energy consultation

Ablauf:



experiences of other Cities:

20 – 25 % of called houses owners take the offer

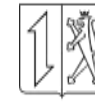
50 – 60 % realise refurbishment measures

costs: ca. 13.000 € per City

funding programme: 9.000 €

City: 4.000 €

start in Mannheim: September 2012, 4 weeks

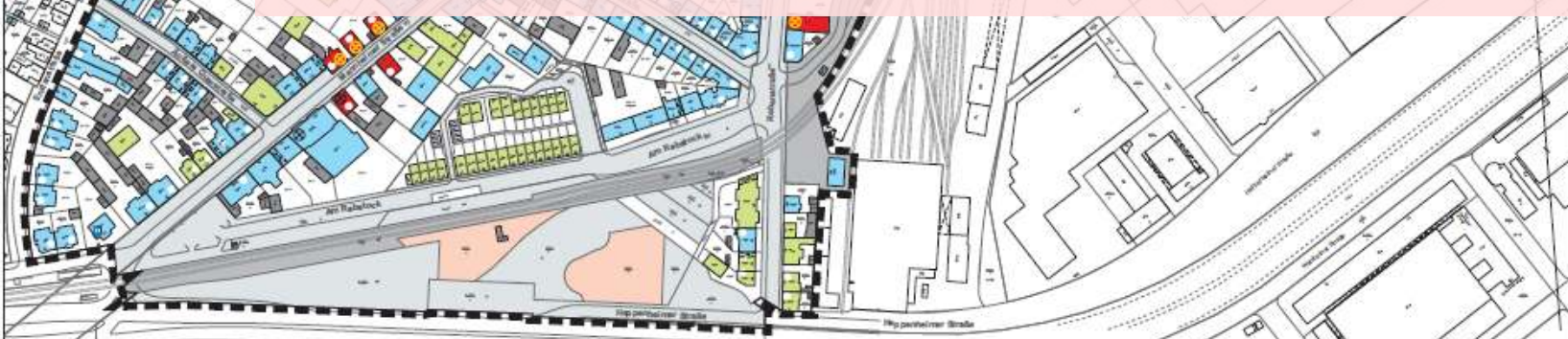


urban quarter refurbishment





- energetic refurbishment Mannheim Käfertal-Zentrum
 - area of 30 ha
 - residential and non residential houses
 - 60 % need of refurbishment
- national funding programme: 65 % of costs for an integrated concept + financing of a refurbishment manager (120.000 € / 2 years)





Competition „The Oldest Heating Pump“

Energie: Klimaschutzagentur sucht älteste Heizungstechnik der Stadt

Geld für betagte Pumpen

Die Klimaschutzagentur Mannheim will alte Heizungspumpen gegen neue tauschen: Die Leiterin der Klimaschutzstelle

Mannheim, Dipl.-Ing. Agnes Hähnel-Schönfelder, und Geschäftsführer der Klimaschutzagentur, Timo Gensel, stellen im Rahmen ihrer Projektreihe „Zwölf Monate – ein Klima“ einen Wettbewerb um die älteste Heizungsumwälzpumpe vor. Alle Marktaufgerufen, es geht um die älteste Heizungsumwälzpumpe der Stadt. Den drei Gewinners Ende der Monate ermittelt werden. Die Gewinner erhalten eine kostenlose neue und eine Einsparung von bis zu 1000 Euro.

Weniger

In vielen Häusern sind Heizungspumpen über 20 Jahre alt. Sie verbrauchen viel Energie. Eine neue Heizungspumpe spart bis zu 800 kWh Strom im Jahr. Eine moderne Hocheffizienzpumpe genügt lediglich 100 kWh, da sie nur dann arbeitet, wenn die Heizung

sächlich gebraucht wird. Somit können bis zu 90 Prozent der Energiekosten eingespart werden, was in einem Einfamilienhaus jährlich 100 bis 150 Euro ausmacht. „Bürger müssen ihre Handwerker direkt auf die Neuerungen aufmerksam machen, da viele noch die alten Pumpen einbauen“, rät Sebastian Böhner, Energieberater der Agentur.

und Klimaschutz in der Stadt voranzutreiben. Mit einer Vielzahl größerer und kleinerer Projekte soll eine Minderung des CO₂-Ausstoßes in der Großstadt um 40 Prozent bis 2029 erreicht werden. Unter anderem bieten daher Energieberater der Agentur persönliche Gespräche mit interessierten Bürgern an, um sie über für ihren Haushalt sinnvolle Maßnahmen zur Energieeinsparung zu informieren. Die Teilnahme ist unabhängig vom Wettbewerb. Einbau einer Hocheffizienzpumpe für Kunden der MVV Zuschuss von 25 Prozent, 1000 Euro, von der Klimaschutzagentur gefördert. Weitere Informationen stehen im Internet unter www.klima-mannheim.de bereit.

BEWERB

Wer teilnehmen will, schickt ein Foto seiner alten Heizungspumpe sowie die Adresse, in der sich das Haus befindet, vom 1. April bis 30. Juni an die Klimaschutzagentur Mannheim, „Mannheims älteste Heizungspumpe“, D2, 5-8, 68159 Mannheim.

Neueste Technik zeigt Timo Gensel von



Effiziente Heizungspumpen
Hydraulische Optimierung

Förderprogramm
Heizungsumwälzpumpen

- started in April 2011 (3 month)
- the 3 Winners got a new heating pump + installation



Scrapping Premium for Cooling Appliances



Das haut einen glatt um:
Heiße Prämien für
kühle Schränke!

Informationen:
www.klima-ma.de
Klimaschutzagentur Mannheim
gemeinnützige GmbH
D 2, 5-8, 68159 Mannheim
Tel. 0621-862 484 10

 12 Monate
- ein Klima

 KLIMASCHUTZAGENTUR
MANNHEIM

30.000 €: 300 x 100 €
CO₂-reduction 55 t
energy saving 80.000 kWh

Die Abwrackprämie für Kühlgeräte in Mannheim!
100 € für Ihr altes Kühlgerät
beim Kauf eines neuen energieeffizienten Gerätes (Klasse A++)!



*Wir halten
Mannheim auf
Klimakurs*

Tina Schindowski, Josef Krah
Klimaschutzagentur Mannheim
Agnes Hähnel-Schönfelder
Klimaschutzleitstelle
(v.l.n.r)



Here we go – Thank you!