COP15 Side Event, 11 December 2009

Solutions for Change:

(How) local authorities are contributing to meet international climate targets

Climate Alliance

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Climate Alliance








Partnership between

European local authorities

and indigenous rainforest peoples

to reduce GHG emissions &

protect the rainforests





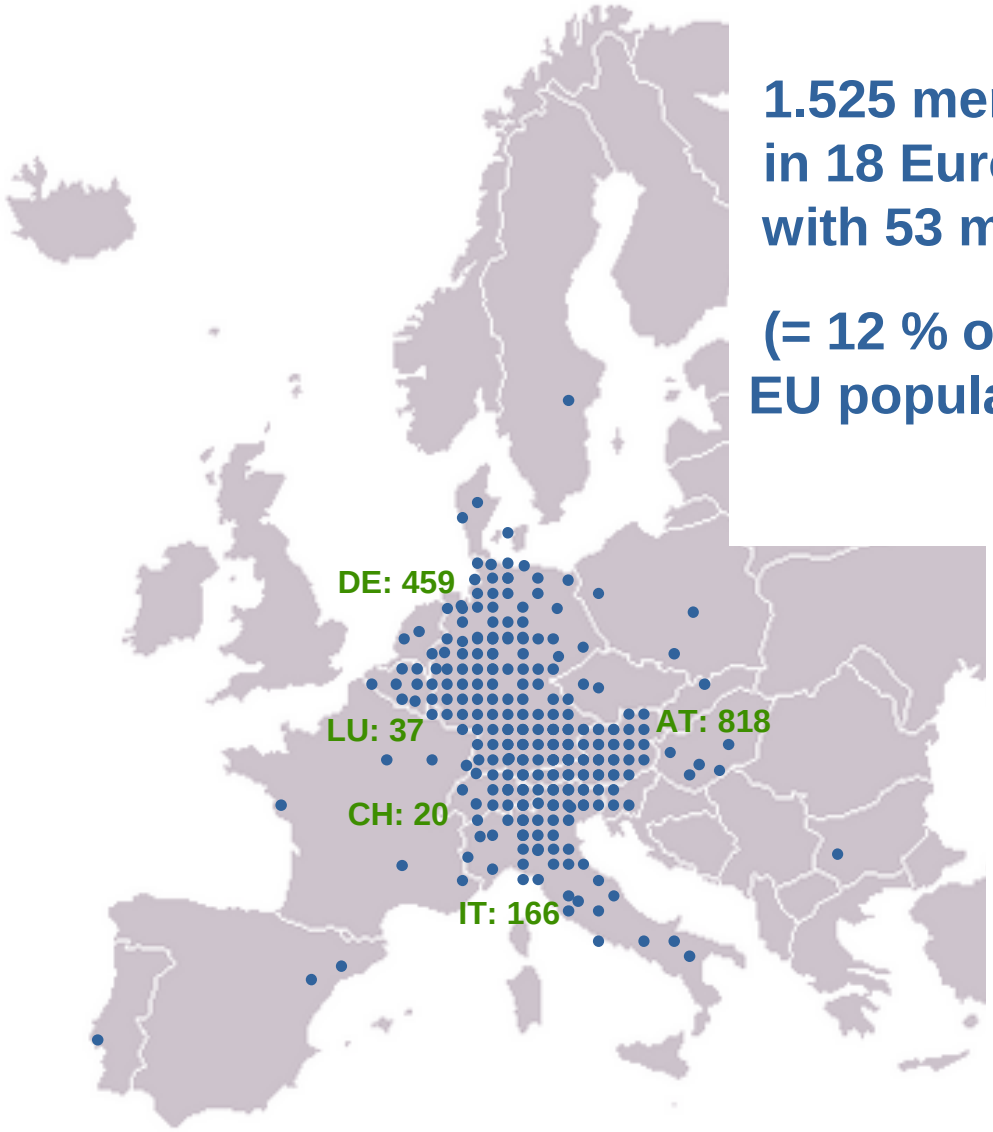


The Climate Alliance Commitments

- To cut CO_2 emissions by 10 % every 5 years
- To halve per capita emissions (baseline year 1990) at the latest by 2030
- To aim at a sustainable level of 2,5 tons CO_2 equivalent emissions per capita and year by energy saving, energy efficiency and the use of renewable energy sources
- To abstain from timber derived from destructive logging
- To co-operate with Indigenous Peoples

1990 2009 2030

Climate Alliance‘s members



1.525 members
in 18 European countries
with 53 mio. inhabitants

(= 12 % of the
EU population)

A lot of activities are being undertaken

How to come from single pilot action to „mainstreaming“ of local climate policies?

Climate Alliance develops methodologies & tools

- Recommendations for a strategic development of action programmes
- Support local authorities from initial decision to become active right through monitoring of progress
- Provide simple & pragmatic tools
- to arrive at a qualitative and quantitative evaluation of local authorities‘ efforts
  - as self-assessment
  - as Climate Alliance as a whole
- to identify need for further work & support
- to provide a stage for the successful and to motivate „newcomers“

ECORegion

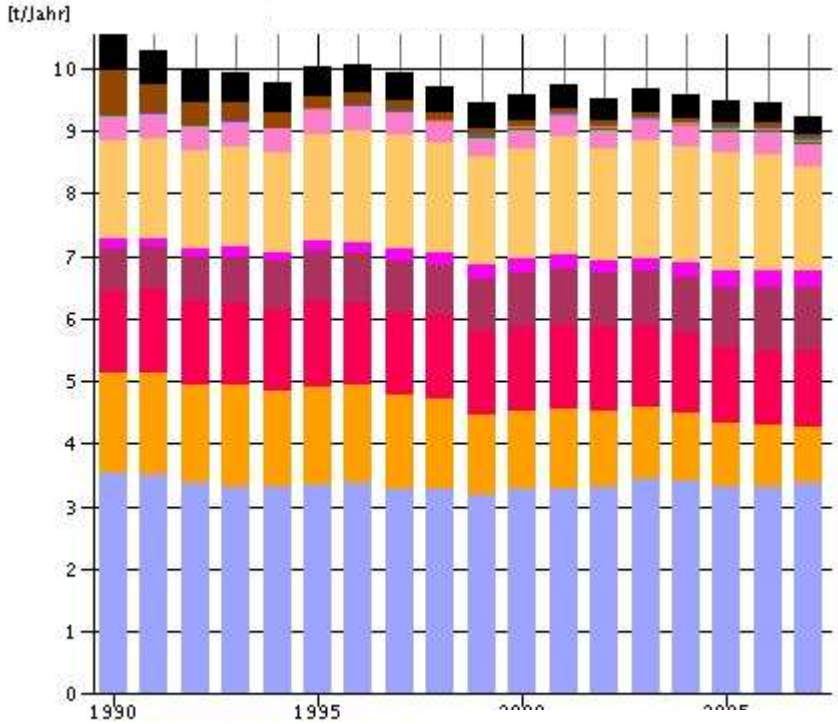
Internet based CO2 Inventory tool

Launched in August 2008 with versions for Germany and Switzerland: 250 users

New Versions Italy, Luxembourg, France early 2010

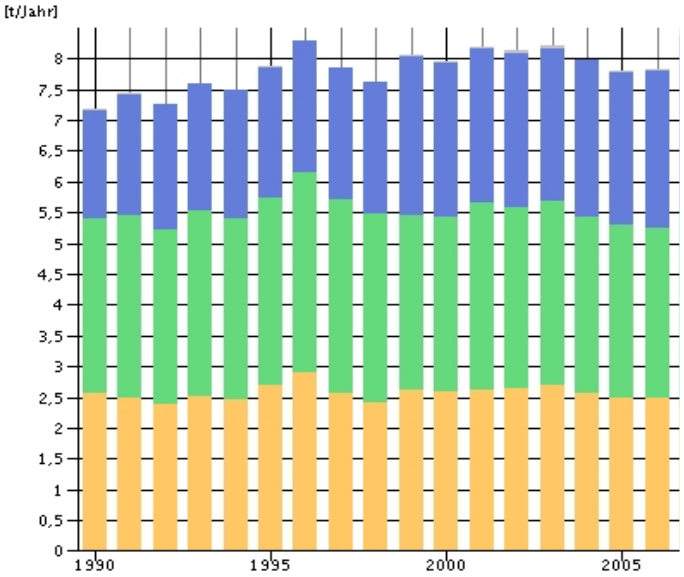
CO2 emissions per energy carrier

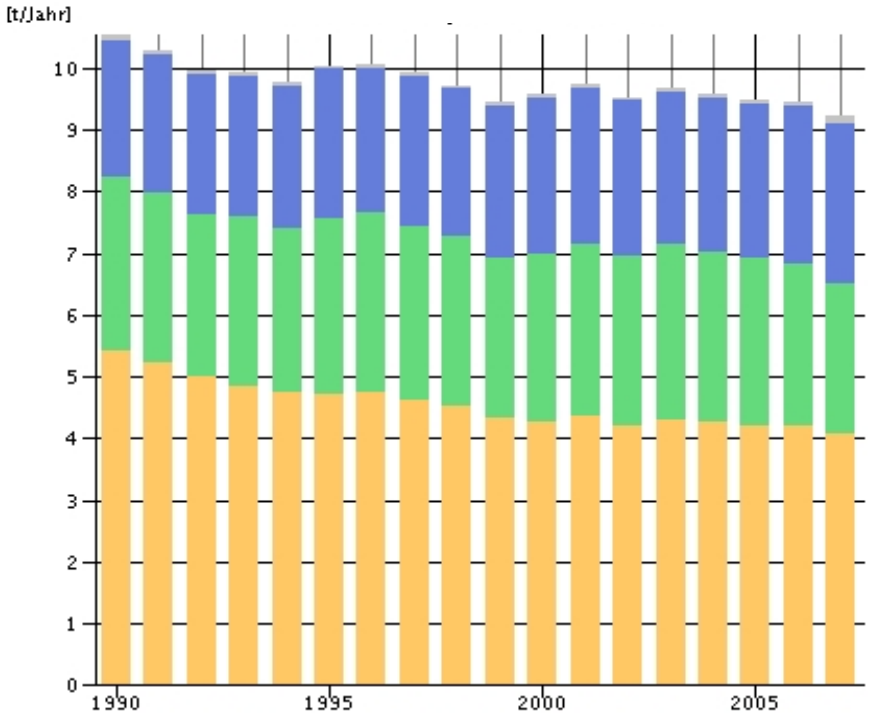
- Basis: 68 cities, all size categories



Climate Alliance cities:
- 10 % CO2 emissions compared to national mean value

CO2 emissions per sector, 2 size categories





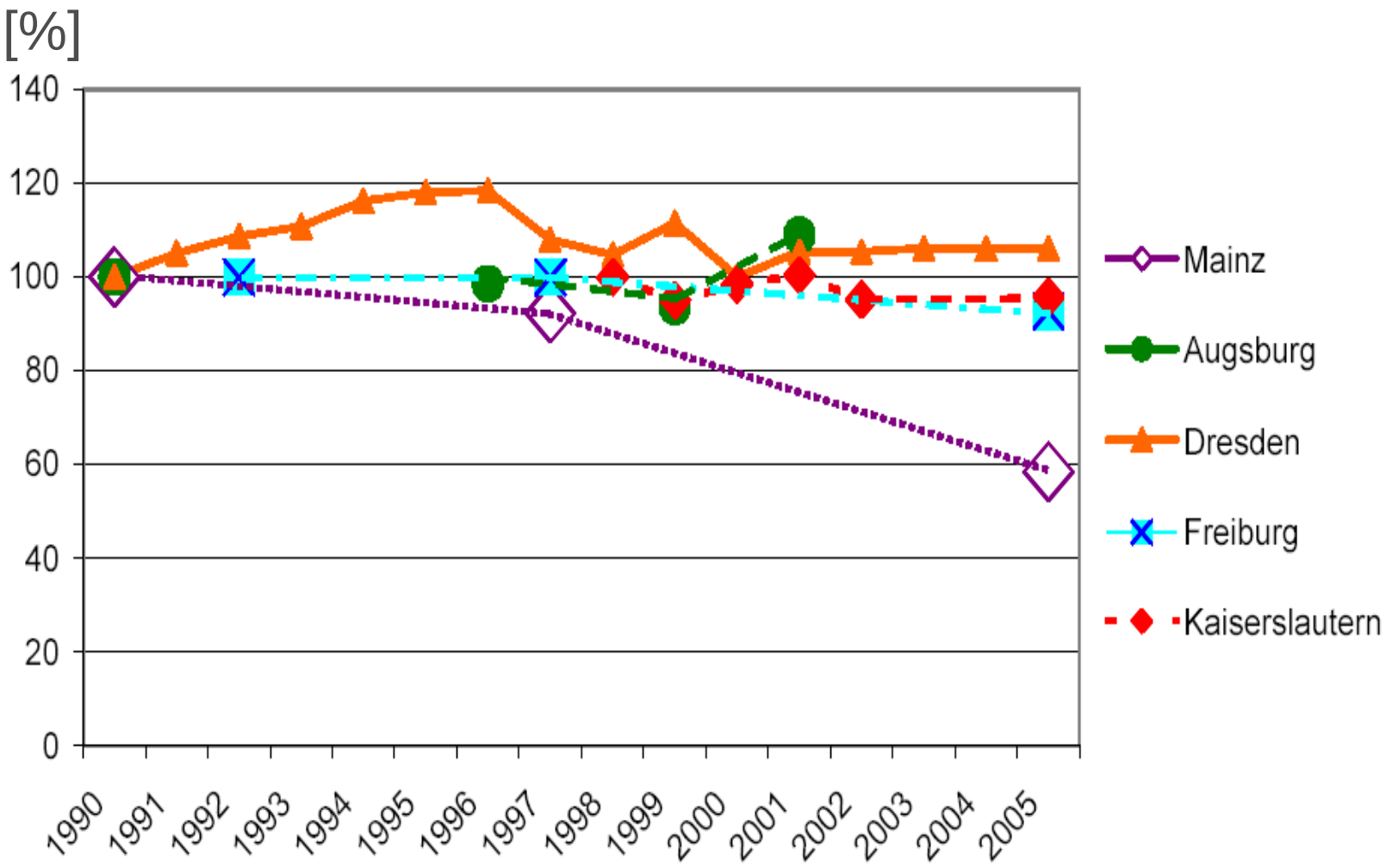
10.000 bis 20.000 inhabitants

50.000 bis 100.000 inhabitants

Economic sector
Private households
Transport
Public facilities

CO2 emissions of German Cities 1990 -2005

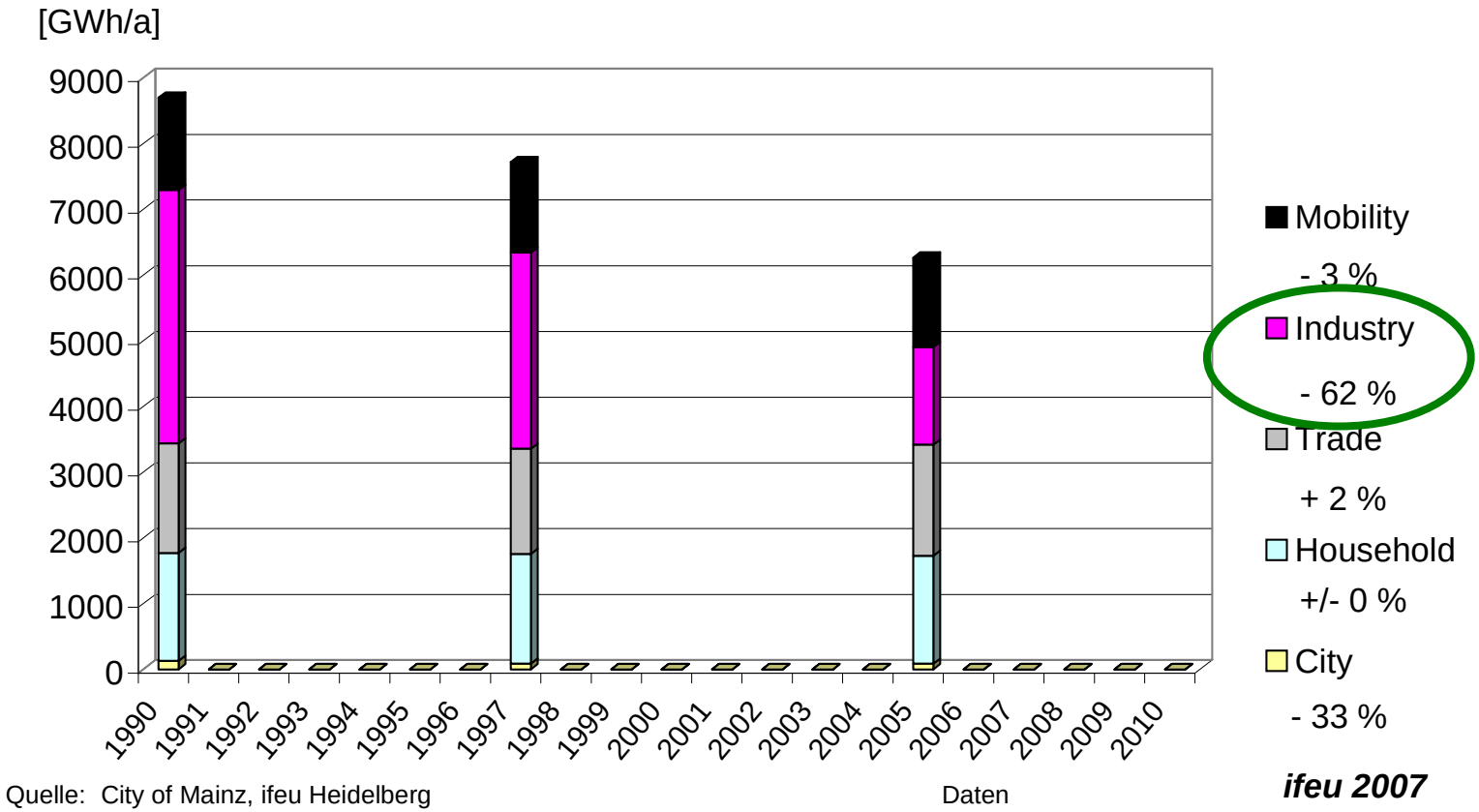
- Bouquet
- Potentials
- Data
- Solutions



(Final energy matrix for the city of Mainz)

Bouquet
Potentials
Data
Solutions

62 % reduction of final energy from 1990 to 2005, but: Industry is not really gone, it has only moved to other countries



Quelle: City of Mainz, ifeu Heidelberg

Daten

Potentials of local actions

Bouquet
Potentials
Data
Solutions

climate cities Benchmark

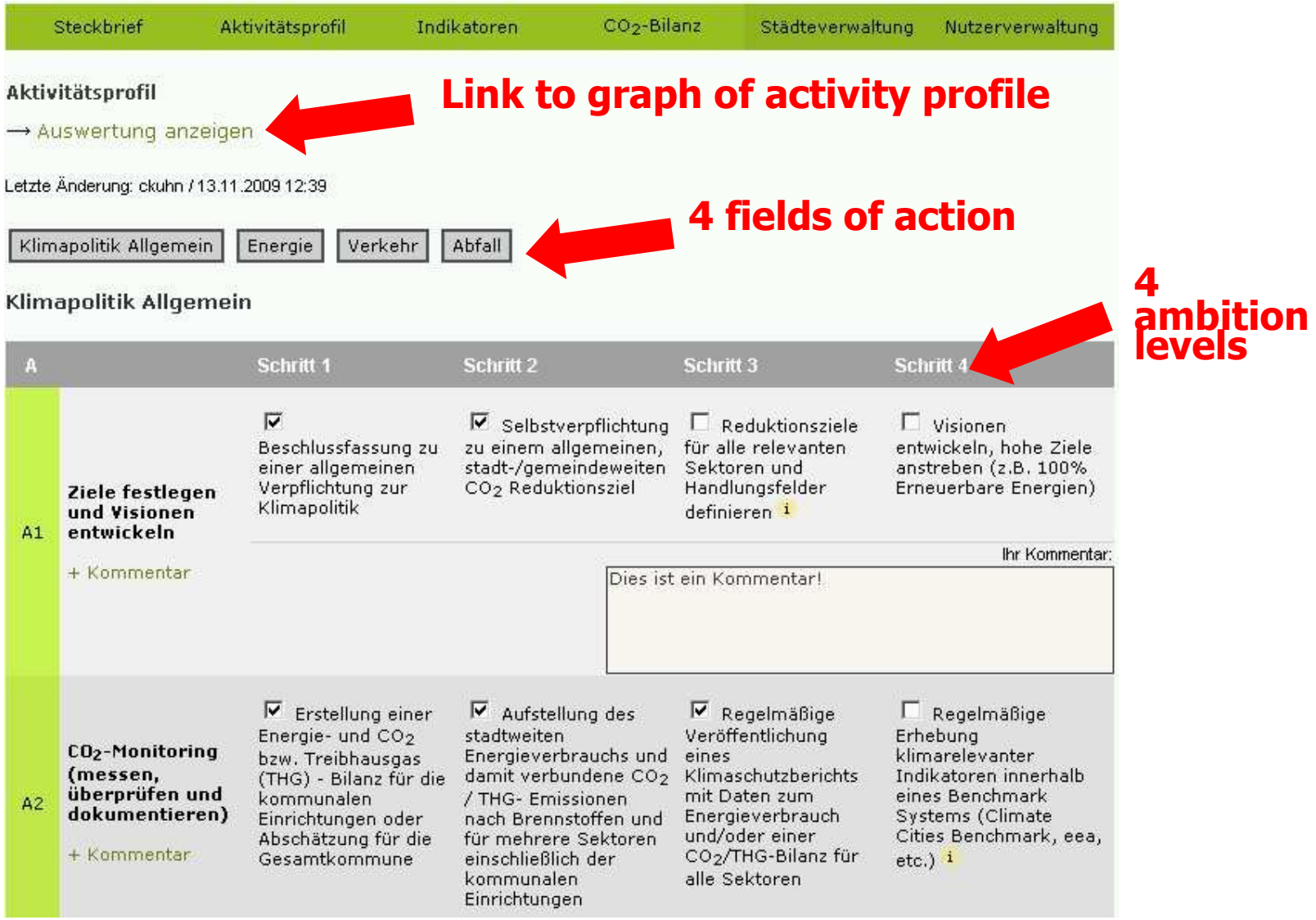
- as a systematic approach for visualisation and analysis of local action incl. strengths-weaknesses analysis and recommendations for action
- based on CO2 emissions, but also on activity profiles and indicators

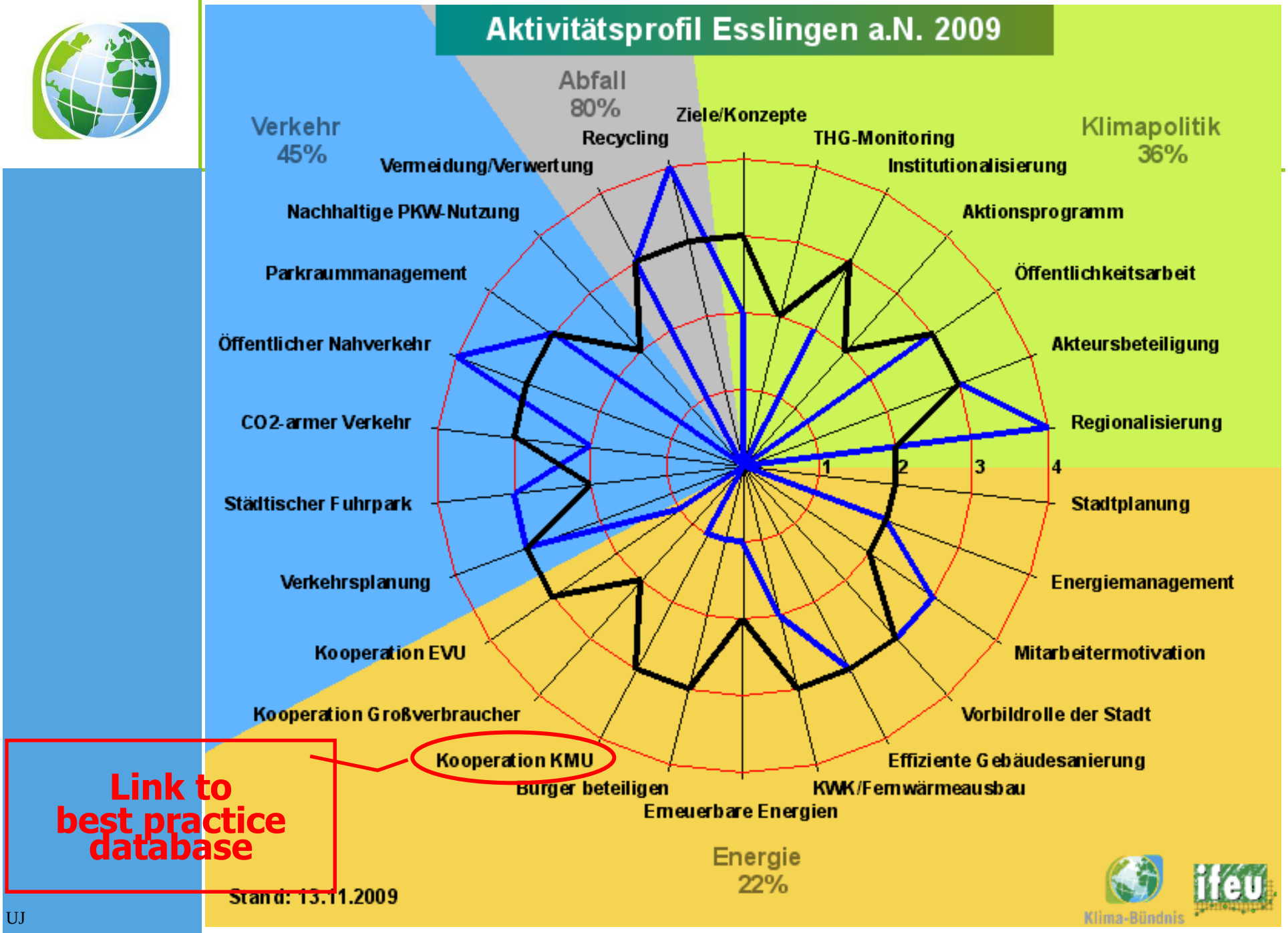
Climate Alliance

ifeu

Umwelt Bundes Amt
Für Mensch und Umwelt

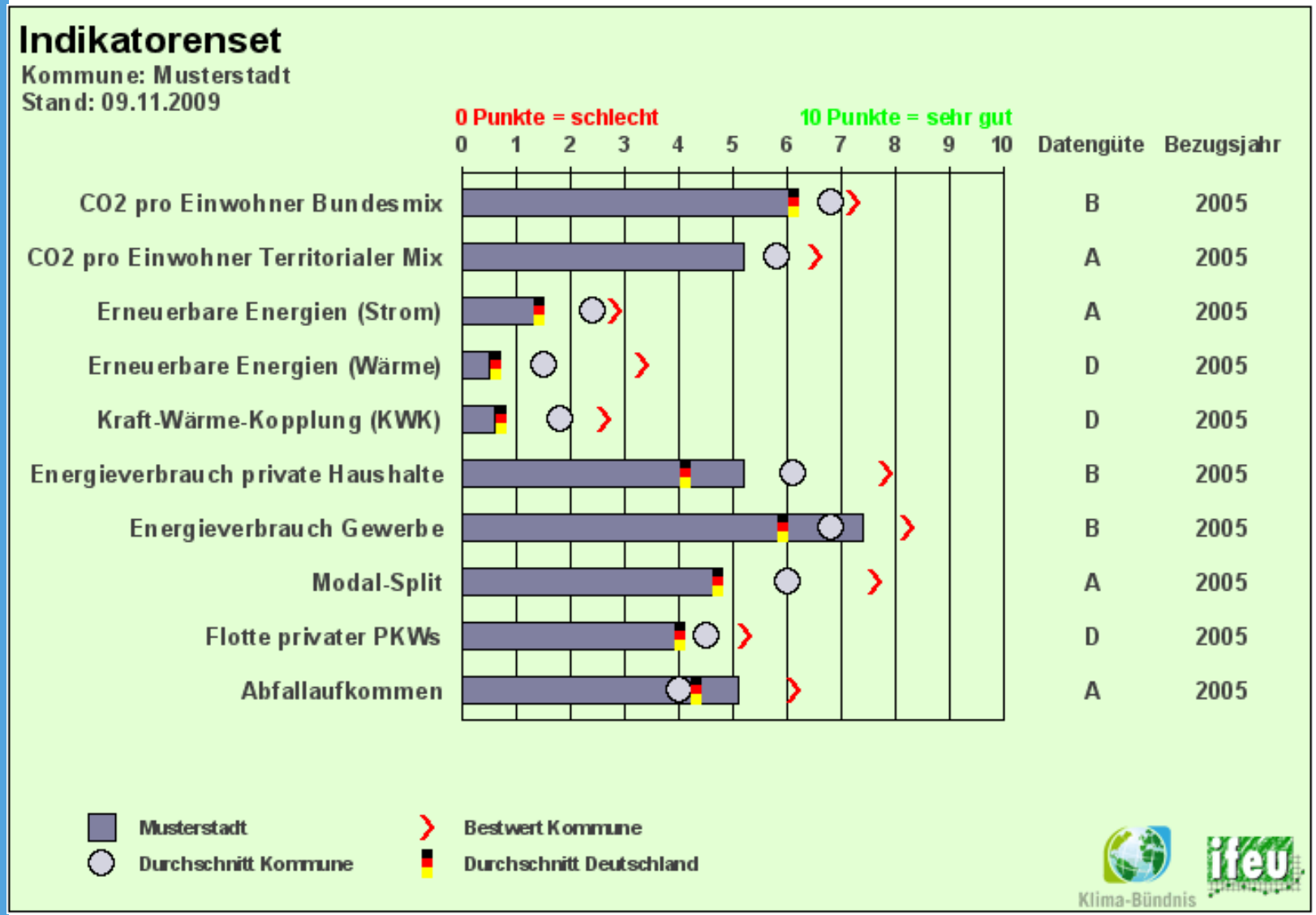
Activity profile: input matrix




Aktivitätsprofil Esslingen a.N. 2009
Abfall
80%
Verkehr
45%
Klimapolitik
36%
Energie
22%
Ziele/Konzepte
Recycling
THG-Monitoring
Vermeidung/Verwertung
Institutionalisierung
Nachhaltige PKW-Nutzung
Aktionsprogramm
Parkraummanagement
Öffentlichkeitsarbeit
Öffentlicher Nahverkehr
Akteursbeteiligung
CO2-armer Verkehr
Regionalisierung
1
2
3
4
Städtischer Fuhrpark
Stadtplanung
Verkehrsplanung
Energiemanagement
Kooperation EVU
Mitarbeitermotivation
Kooperation Großverbraucher
Vorbildrolle der Stadt
Kooperation KMU
Effiziente Gebäudesanierung
Bürger beteiligen
KWK/Fernwärmeausbau
Erneuerbare Energien
Link to best practice database
Stand: 13.11.2009
Klima-Bündnis
ifeu

UJ

Fallbeispiel Freiburg



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Potentials of local actions

Depending very much on local conditions,
but there are some studies
and a lot of local experience
which can be used
as rough guidelines!

Potentials of local actions

Some input for this presentation is based on the study:

"Local Climate Protection: Strategies for Halving CO_2 emissions using the example of Munich"

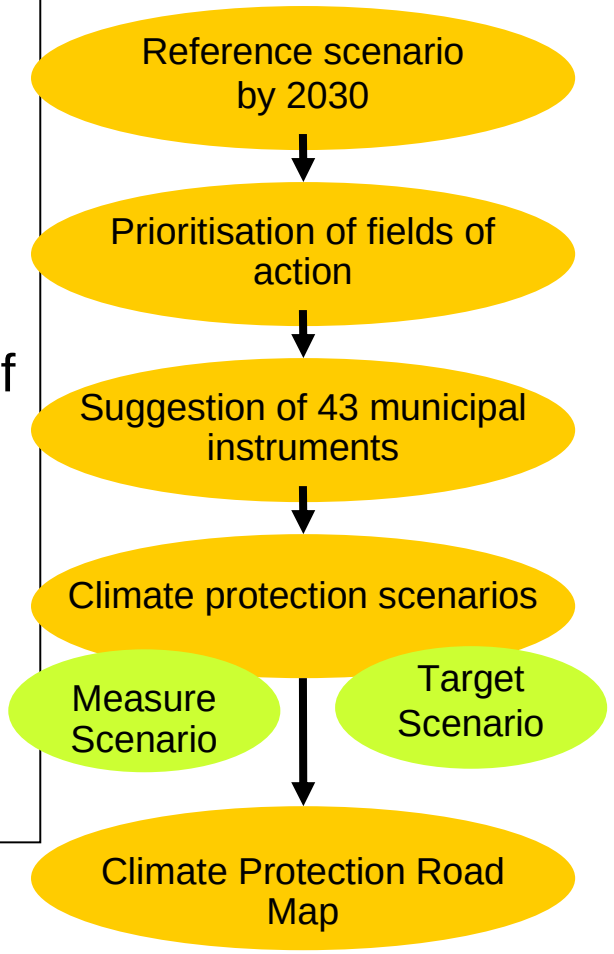
by the Öko-Institut Freiburg

co-funded by the Ministry for Environment and the Federal Agency for Environment

Task and Methodology

Bouquet
Potentials
Data
Solutions

- Development of an ambitious strategy for the reduction of CO_2 emissions in Munich in the fields of Energy and Transport
- Estimate of the effects of such a strategy on CO_2 emissions of the City of Munich
- Development of a „climate protection road map“
- Assessment of applicability to other cities

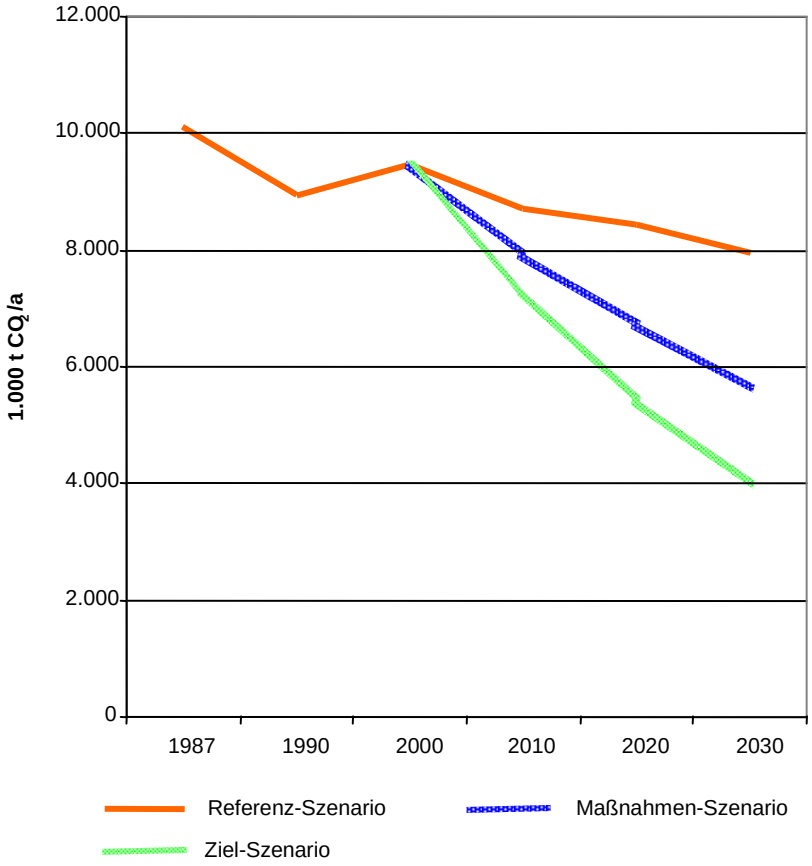


Target Scenario
far beyond the instruments of the reference scenario

- Over 50% of reduction potentials are in households and homes, ca. 10% in the field of transport

  Estimates
- e.g. regarding electricity and district heating:
  - Increased application of CHP
  - Additional combustion of 10% biomass/biogas in ThPS
  - More hydro power and photovoltaics
- By 2030 a drop in emissions by ca. 60% compared with 1987 seems possible

  (-39% in comparison with the reference scenario)



Potentials of local actions

Reduction potentials at a glance:

Municipal buildings:

- **25 % to – 60 % in heating,**
- **< - 10 % electricity**

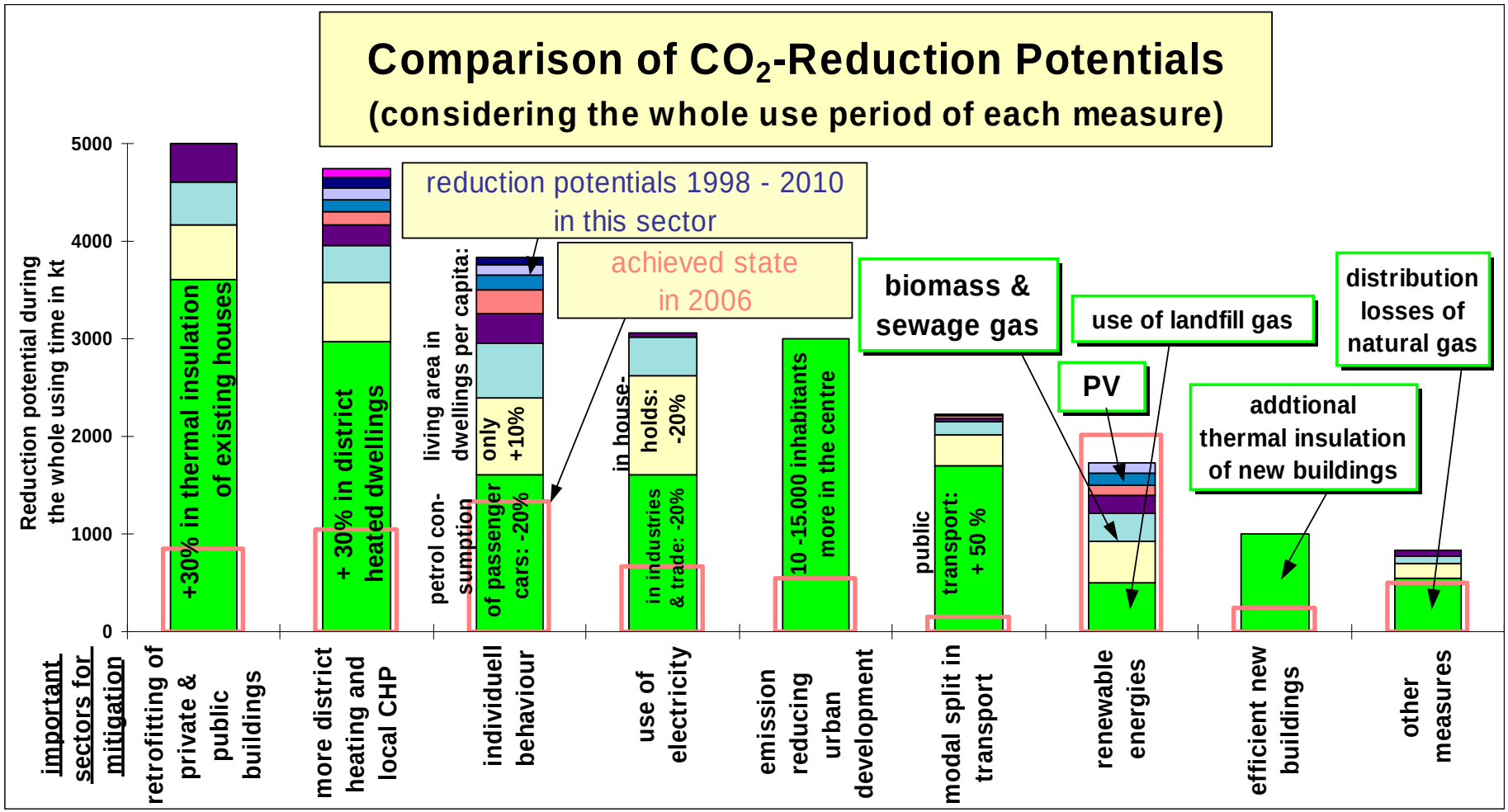
Retrofitting of existing Buildings:

Up to -20 % of total CO2 emissions!

Users' behaviour, small investments: ~ 5 %)

Transport: - 30 % !

Local Potentials in CO_2 Reduction: the example of Dresden



ENERGY USE IN HOUSEHOLDS

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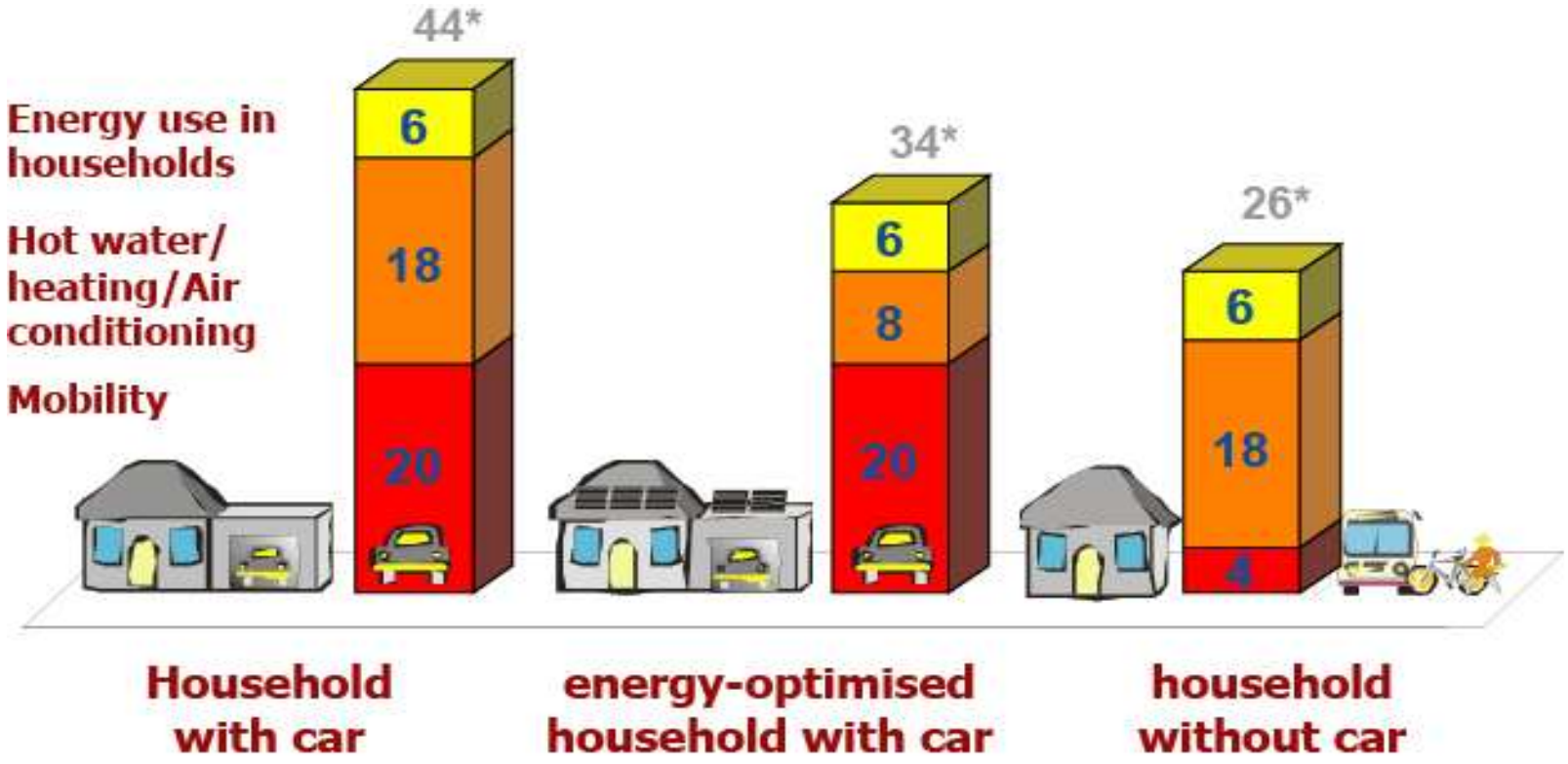
Potentials
Data
Solutions



* In kWh/ year
energy-optimised household = optimisation in insulating, conditioning of hot water by solar energy and semi-solar heating

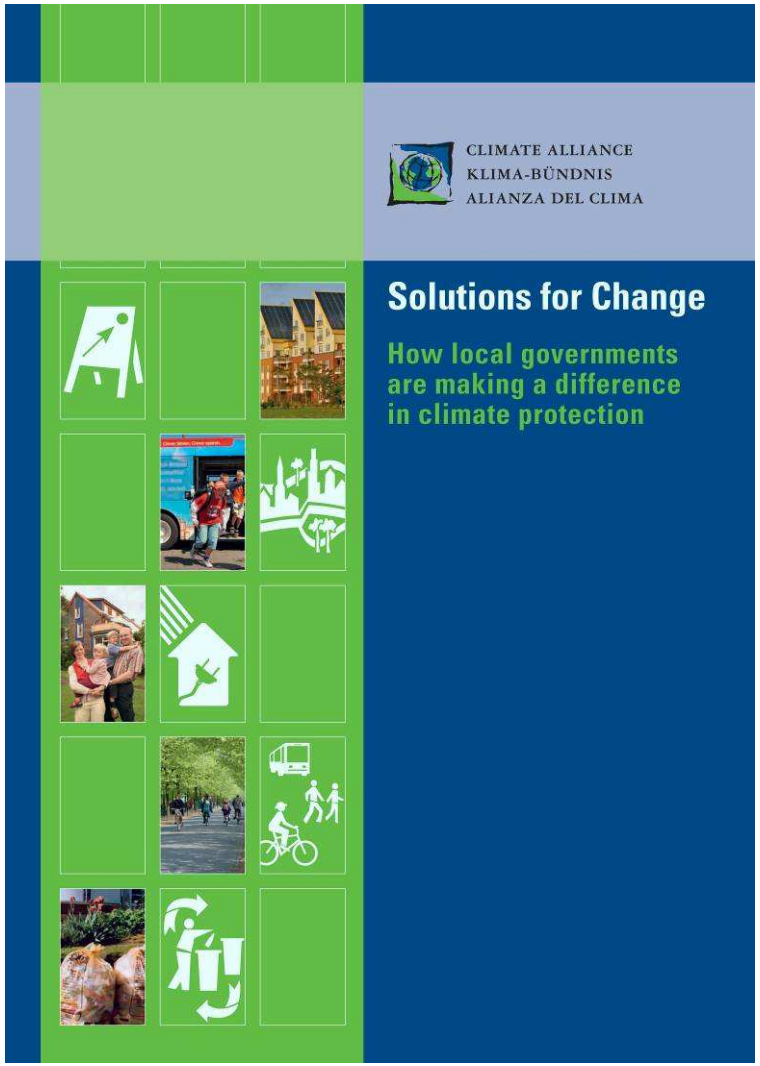
Source: FGM-AMOR; Energy-efficient mobility SAVE Project IMPACT

Practical Examples: Concrete Solutions for Change

- Bouquet
- Potentials
- Data
- Solutions

44 examples

from
22 cities
in Germany
setting
benchmarks for
local action



Concrete Solutions for Change

Bouquet
Potentials
Data
Solutions

- **Local authorities &**

Tübingen: - 95 % of CO_2 emissions due to fleet renewal, use of regional biodiesel, eco-driving

Bonn:
Use of public roofs for solar plants, Wood pellet heating

mayors as role models

Heidelberg:
Testimonial campaign – „all of us can" – 400 participants

Tübingen: Climate campaign together with shopkeepers and businesses

Concrete Solutions for Change

Bouquet
Potentials
Data
Solutions

- **Urban Planning**

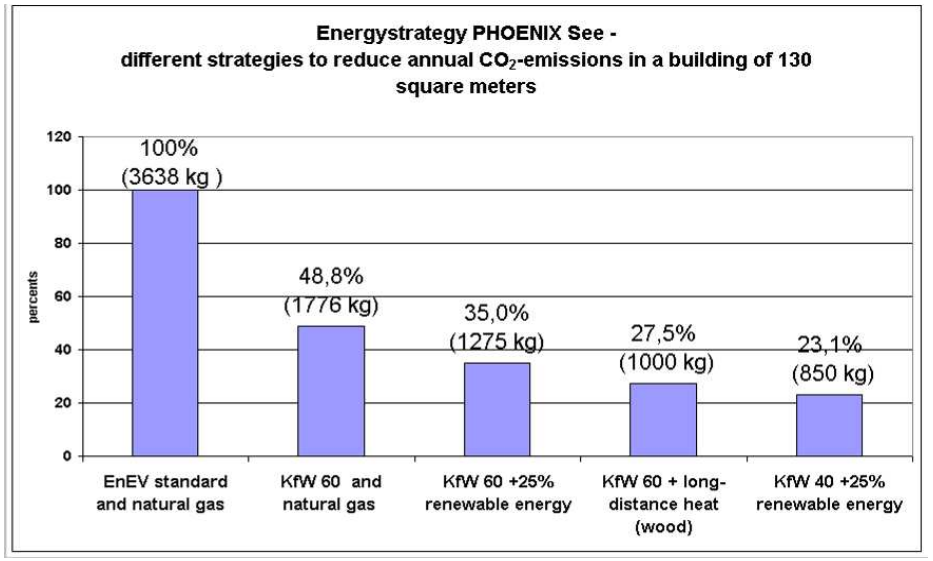
Freiburg: energy features taken into account in early planning steps, obligation for builders to implement most sustainable energy solution, Low-Energy-Standard

Stuttgart: Strategic approach: compact urban development vs. conservation of green space

Heidelberg: largest passive house building project in the world: funding programme, consultancy concept for builders, rest heating from biomass and geothermal, electricity-saving concept

Dortmund | Germany

- No local project without energy efficiency
- Energy concepts for all local plan areas greater than 50,000 m²
- Low energy standard "KfW 60" (60 kWh/m²)



Potentials: Muenster

Bouquet
Potentials
Data
Solutions

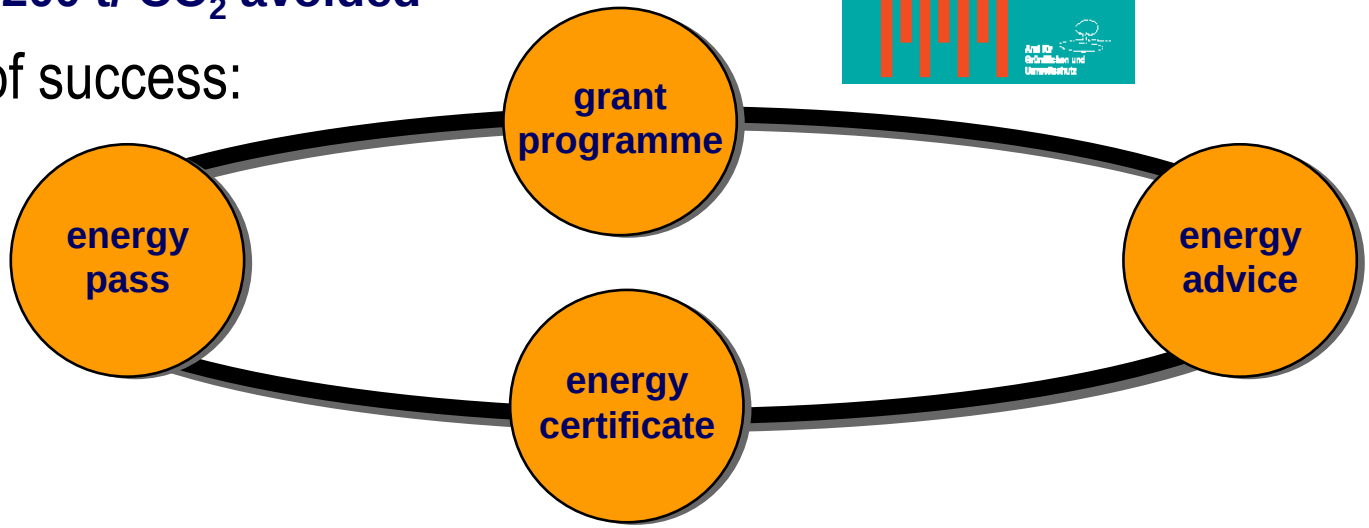
- highest potentials and achievements:

  retrofitting of existing buildings

grant programme

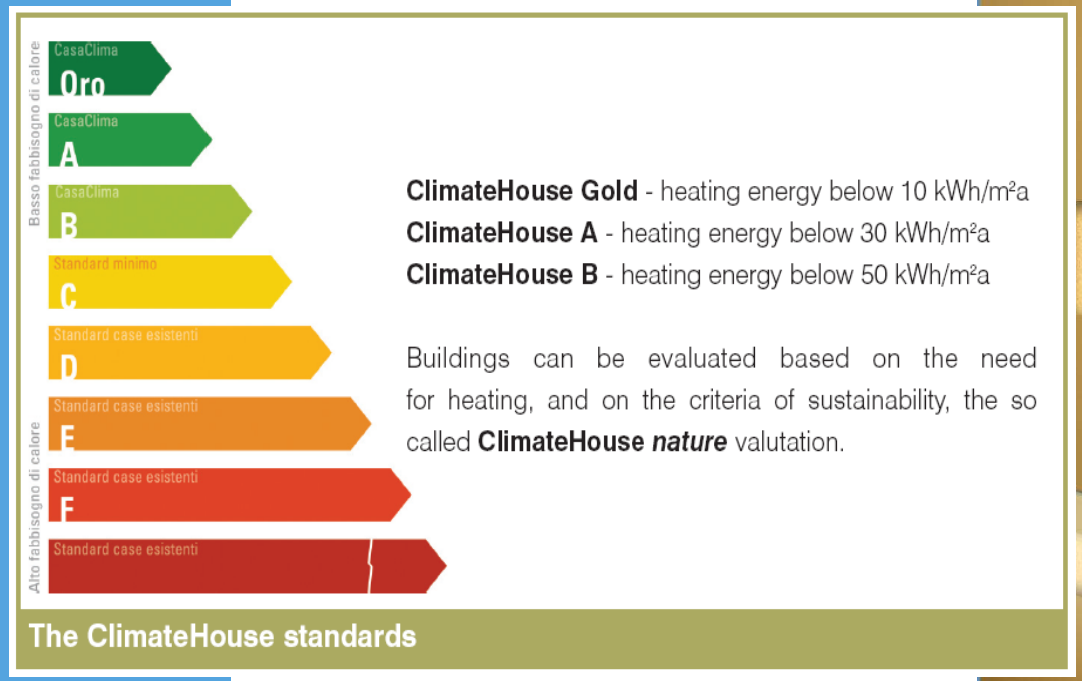
5,1 mio. Euro grants have:
- **kicked-off 40,0 mio. investments**
- **safeguarded 560 jobs**
- **8.200 t/ CO_2 avoided**

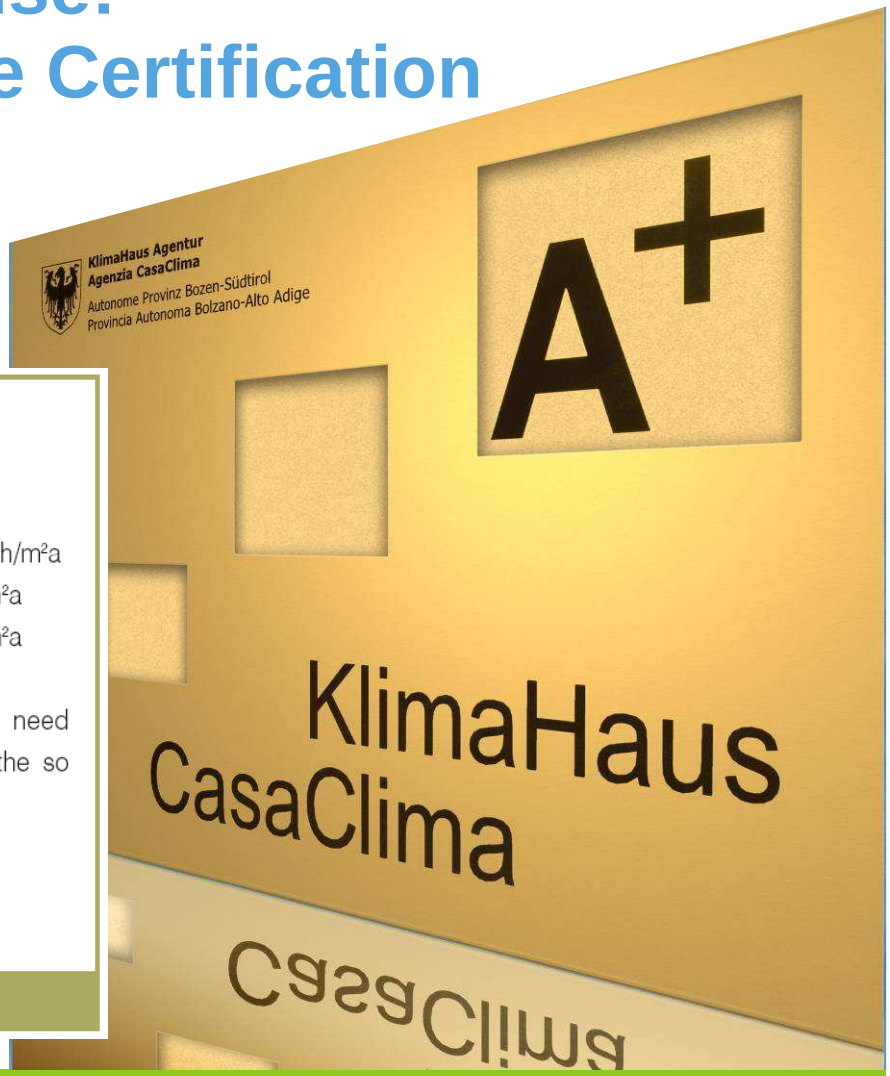
factor of success:



Concrete Solutions for Change

ITALY: ClimateHouse:
Energy Performance Certification





Concrete Solutions for Change

- “ClimateHouse” is a term developed to describe energy-saving construction and dynamic living
- ClimateHouse classifies buildings according to their energy consumption
- A practical calculation system is used to determine a building’s energy requirement, making the KlimaHaus programme simple and user-friendly.
- The energy index and KlimaHaus placard are the fundamental pillars
- The positive image associated with KlimaHaus has inspired builders’ imitation.
- KlimaHaus not only focuses on new construction, but also on retrofitting of the existing building stock

2.000 certified ClimateHouses in Italy = save up to 12.000 t CO2 per year

www.climatehouse.org

Concrete Solutions for Change

Bouquet
Potentials
Data
Solutions

• Smart Financing Mechanisms

Stuttgart:
Savings in
Energy costs: 1.2 million Euro
Water: 32,000 m^3
Heating: 15,000 MWh
Electricity: 2,000 MWh
Due to City-Internal Contracting

Berlin:
Energy Saving Partnership
Contracting of
22 pools with a total of 1,300 buildings
Investments: 60 million Euro
Energy Saving: 15 to 36 %
CO_2 reduction: 60,000 t/a

Concrete Solutions for Change

• Renewable Energies

Rostock: futuristic residential area „Saw Tooth Houses“

Bonn:
1 wood pellet heating
= less CO_2 acc. to 130 single houses heated by natural gas

Munich: Solar District Heating
large seasonal hot water reservoir
- 60 % heating than with natural gas supply

Offenbach:
877 kWp output
662,000 kWh/a
CO_2 : - 600 t/a
due to roof renting to private investors

Concrete Solutions for Change

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Solutions

• Energy Efficiency

Frankfurt am Main:
„Capital“ of Cogeneration
120 plants with 24,000 kW_{el}
- 75,000 t CO_2/a

Münster: Gas and Steam Cogeneration Plant
Factor 3 increase in energy efficiency: - 190,000 t CO_2/a

& combatting Energy Poverty

Nuremberg:
Specific advisory service for low-income households
60 % of energy savings potentials by altering heating or lighting habits identified:
training & small investments

Concrete Solutions for Change

- **Buildings**

Cologne:
11 energy efficient housing estates
with 900 residential units
Latest project:
Improvements in thermal insulation by 80 %
Central heating with wood pellets
150 m^2 of solar thermal collectors
200 m^2 photovoltaics

Hanover:
Integrated retrofitting in 300 apartments
On-site training of architects and craftsmen, quality assurance briefings

Concrete Solutions for Change

Bouquet
Potentials
Data
Solutions

- **Awareness raising, campaigns**

Bonn:
Yearly Energy Day

Lübeck:
Partner in Climate Alliance‘s Ice Block Bet

Concrete Solutions for Change

Bouquet
Potentials
Data
Solutions

- **Partnerships**

Hanover:
Climate Alliance 2020

Hamburg:
Environmental Partnership Programme

Bonn:
Low-Emission Mobility Partnership

Concrete Solutions for Change

- Bouquet
- Potentials
- Data
- Solutions

Nuremberg

Rostock

Esslingen

- **Transport**

Münster

Dresden

Lübeck

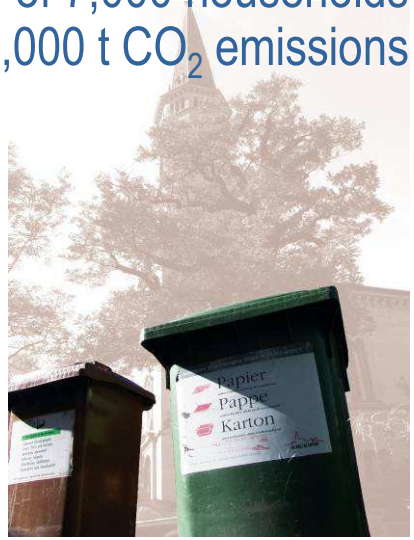
Concrete Solutions for Change

- **Waste Management**

Munich:
Green electricity from biowaste
via dry fermentation
supply of 1,600 households

Freiburg:
Methane from landfill for co-generation
Heat supply of 7,000 households
- 10,000 t CO_2 emissions

Mainz:
Electricity supply for
40,000 households
+ heat + process steam



Message to the Parties

COURAGE:

Yes, (altogether) we can!

More information

www.climatealliance.org

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