

LCS-Rnet, 6th Annual Meeting, 1&2 October 2014

Governance and communication for energy efficiency



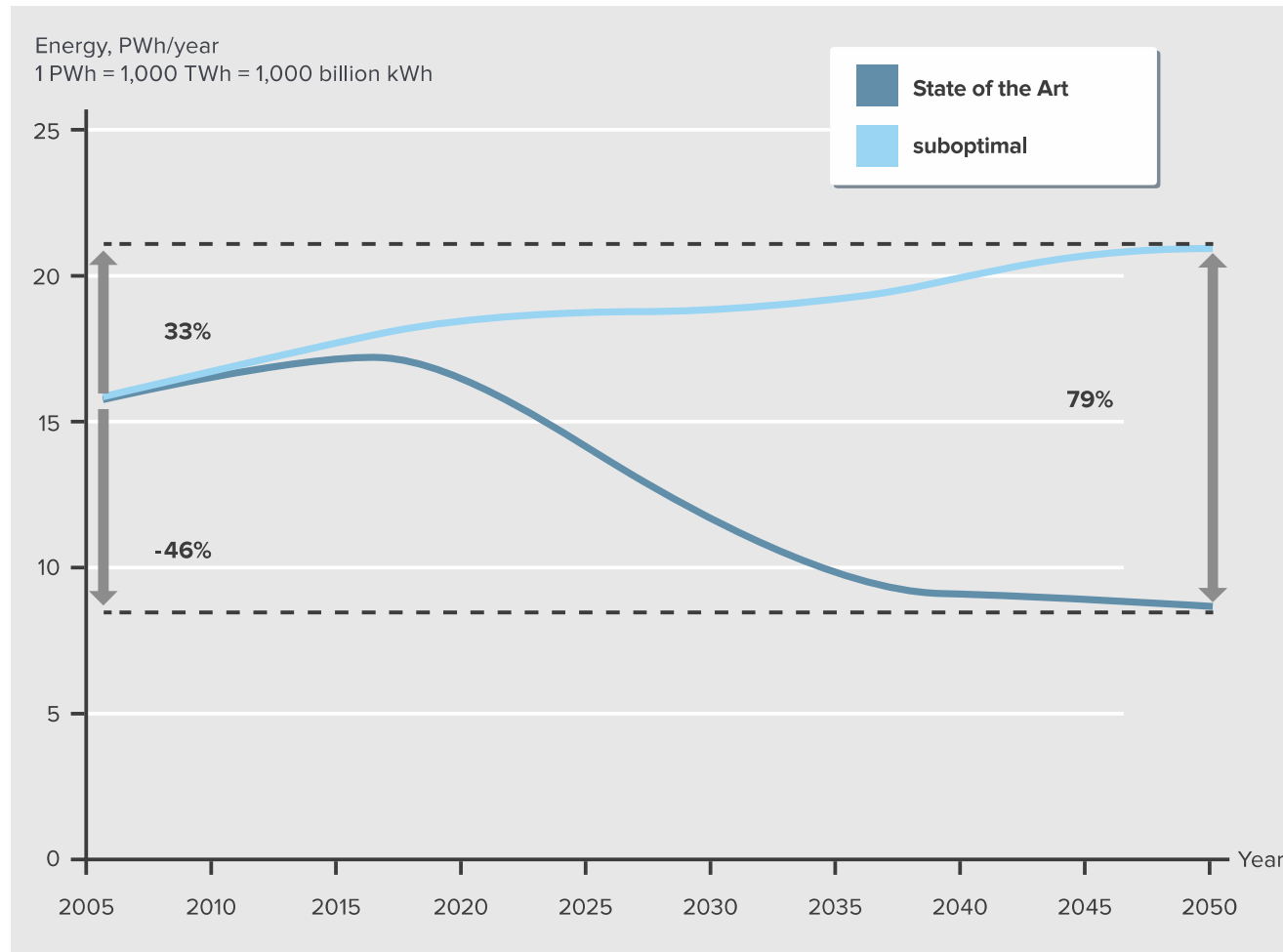
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Some benefits of energy efficiency (1)

Efficiency may outperform growth:

Worldwide energy consumption to 2050 for space heating and cooling (state of the art versus BAU/suboptimal)

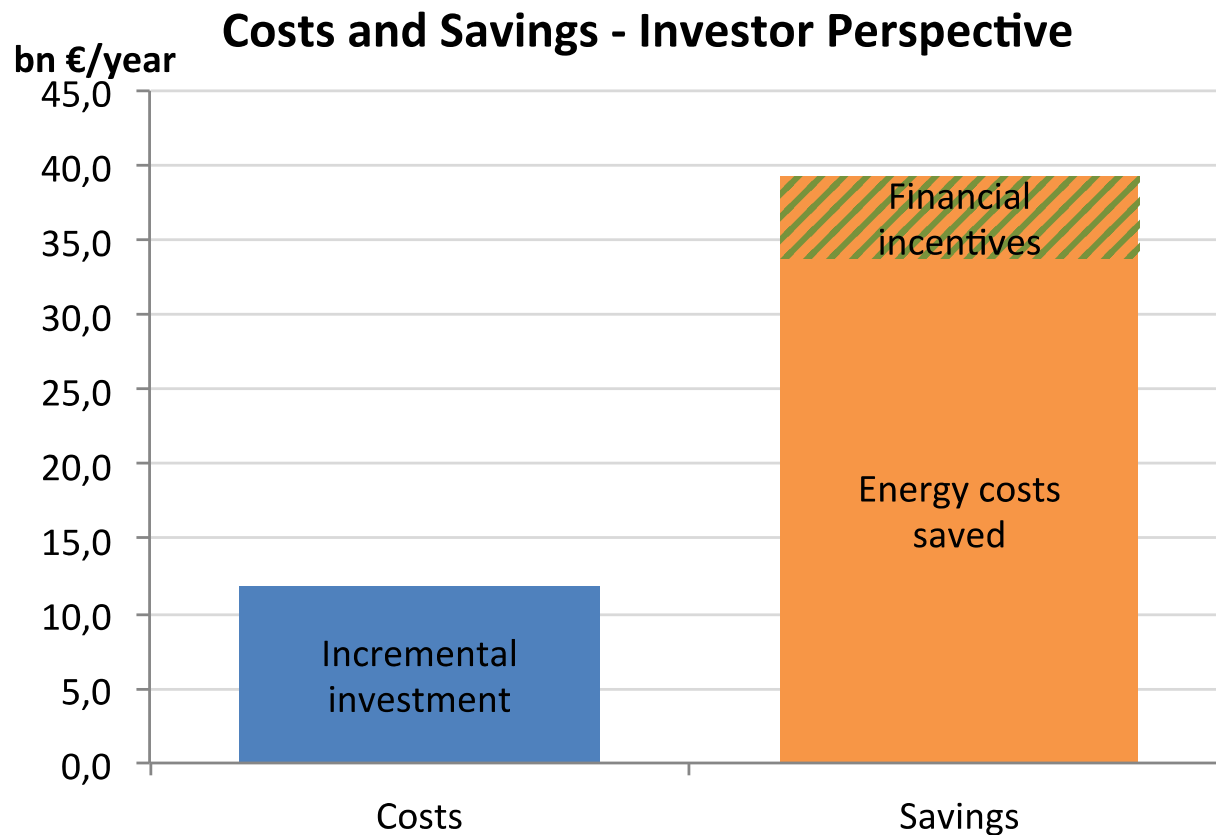


Source: www.bigee.net,
data from
Global Energy
Assessment 2013

Some benefits of energy efficiency (2)

Efficiency is cost-effective using life-cycle cost calculations:

Potential costs and benefits (present values) for enterprises and consumers per year of implementation of an illustrative portfolio of energy efficiency programmes in Germany (would achieve Art. 7 EED targets)



Source: Wuppertal Institute 2013

Why do we need governance for energy efficiency?

To overcome the plethora of barriers

- Energy efficiency = many small to medium technical improvements
 - lack of oversight (where to start?),
 - lack of information (both consumers and technology providers!),
 - sometimes small financial gains from an improvement

- => lack of priority
- sometimes lack of funds
- split incentives between investors and users or between technology/building providers and buyers

- => make energy efficiency easy, attractive, and eventually the default
- => **policy packages** with more information, practical guidance, regulation, and financing support needed („the sticks, the carrots, and the tambourines“)

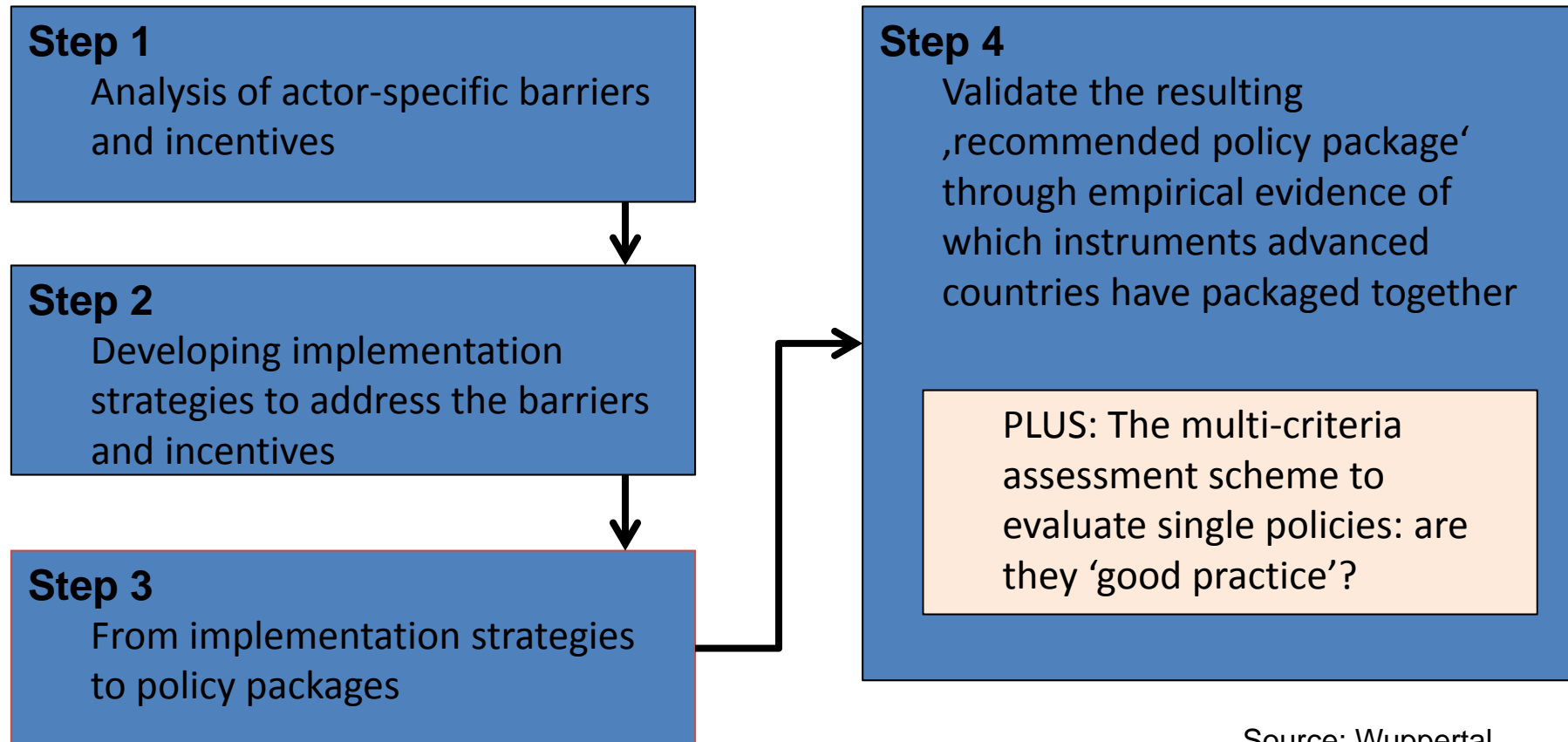
Source: Wuppertal
Institute

Methodology for developing sector-specific policy packages



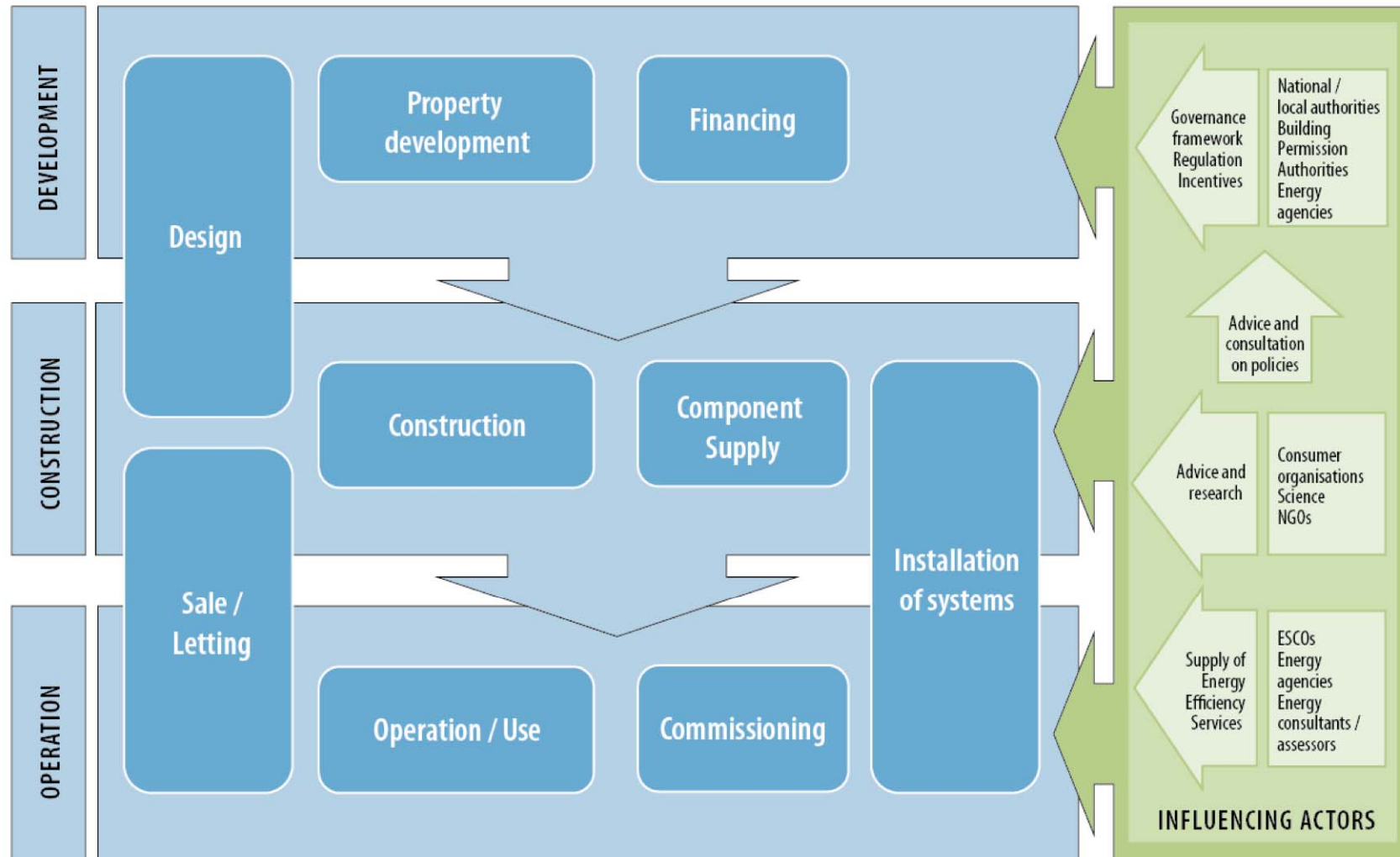
Actor-oriented theoretical analysis

The empirical proof



Source: Wuppertal Institute 2012

General Actor Constellation New Buildings

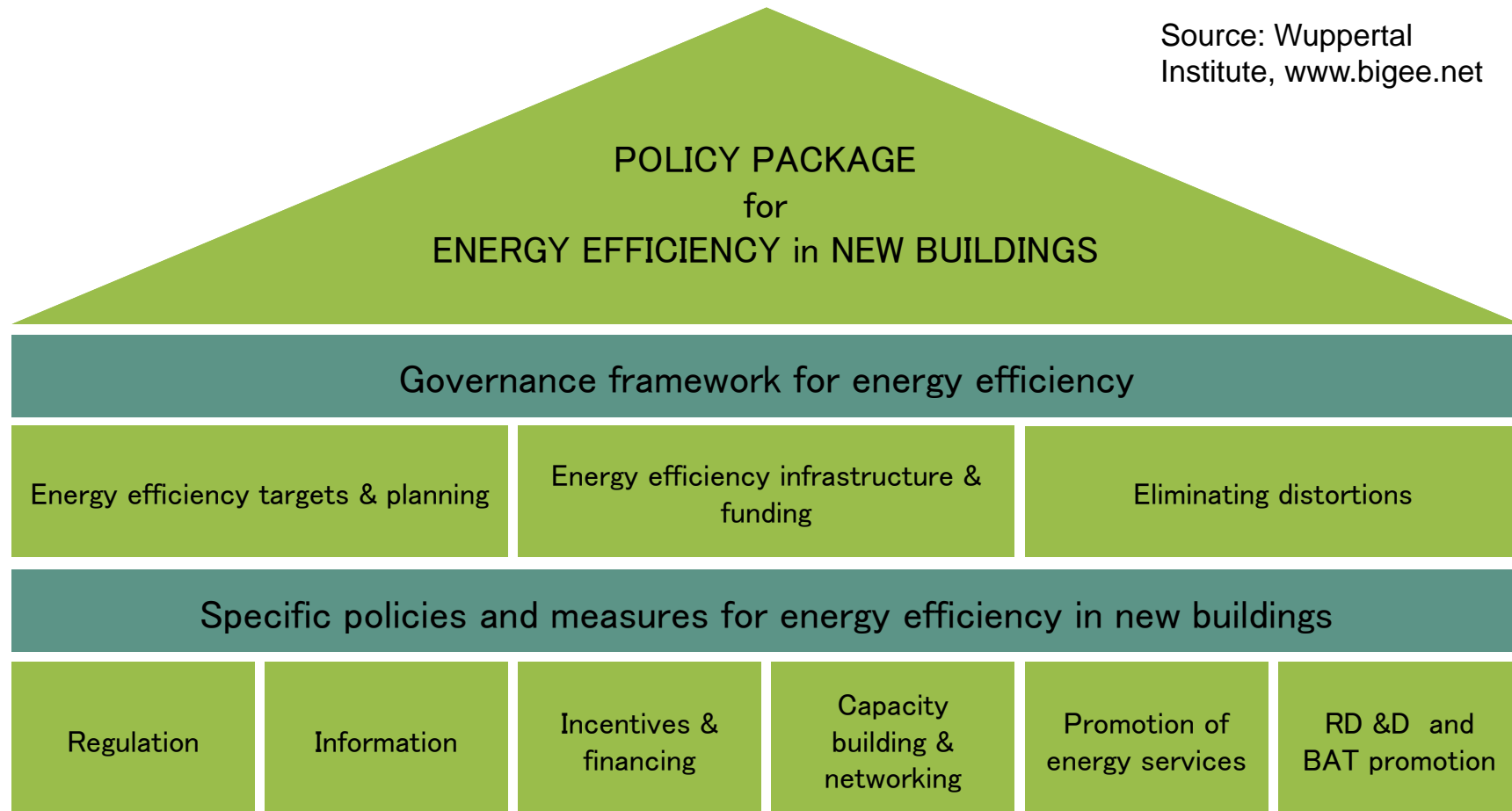


Source: Wuppertal Institute, www.bigee.net

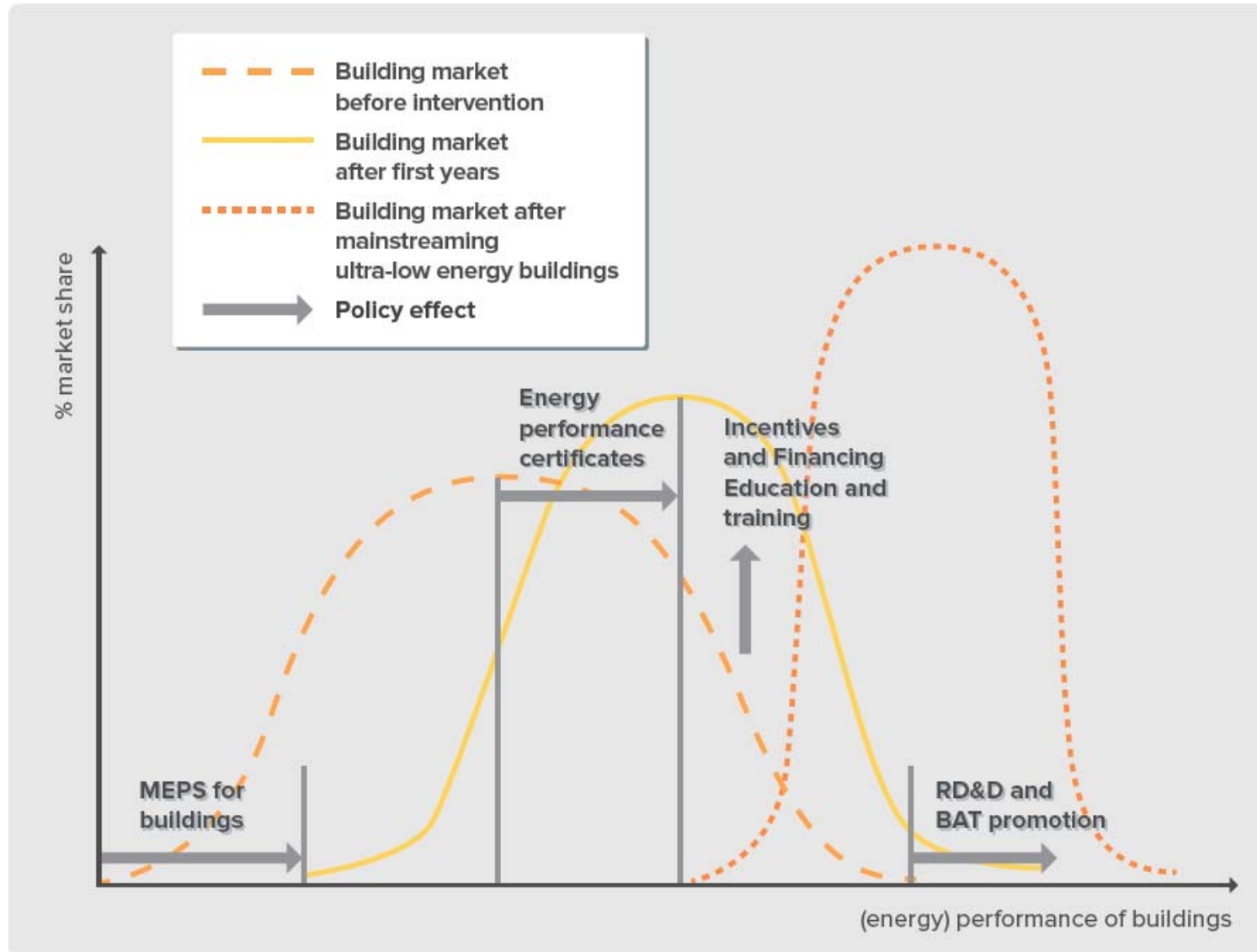
Example for a recommended sector-specific policy package:
New buildings



Source: Wuppertal
Institute, www.bigee.net

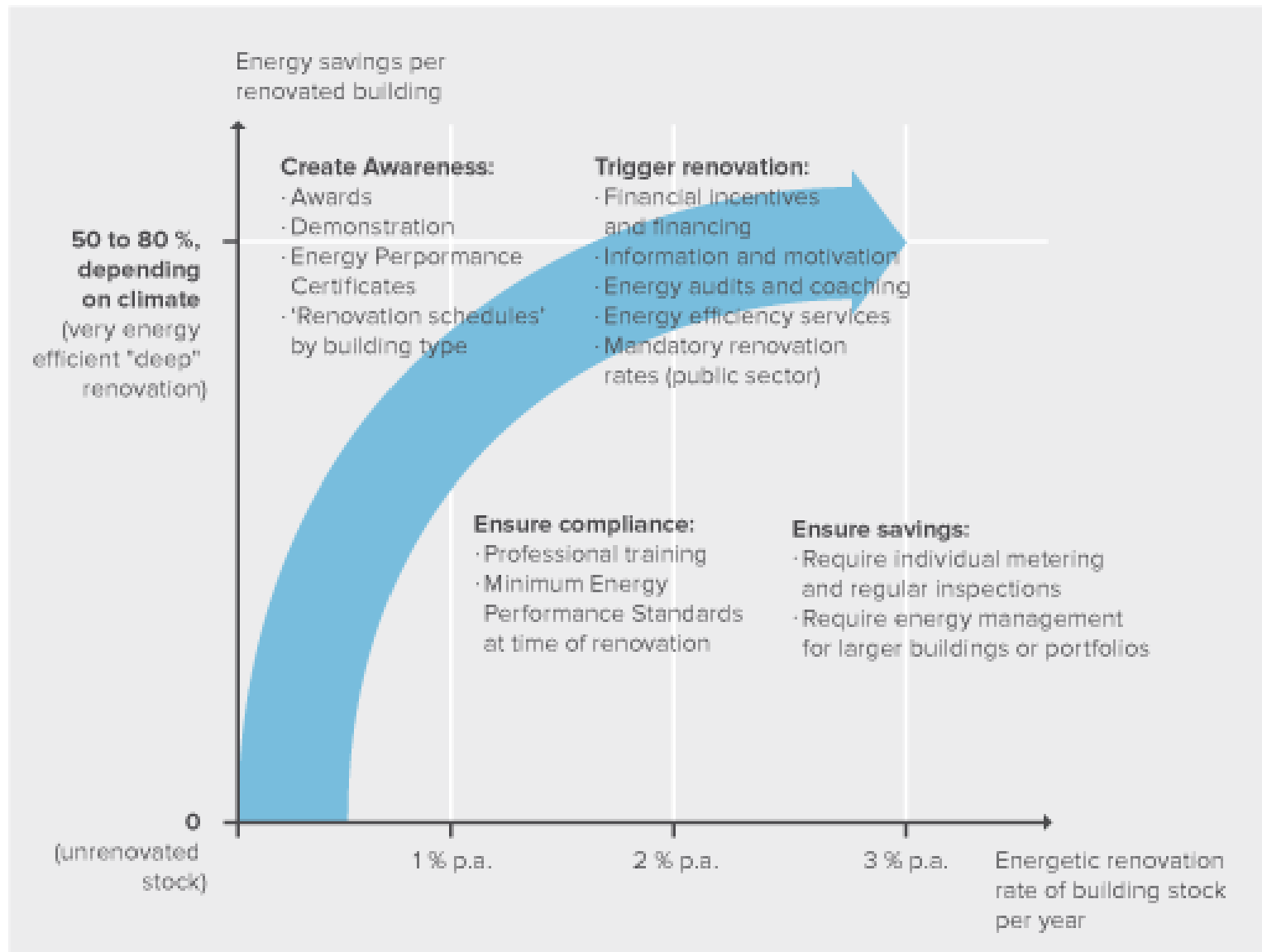


How instruments in the sector-specific package interact: New buildings



Source:
Wuppertal
Institute,
www.bigee.net

How instruments in the sector-specific package interact: Renovation of existing buildings



Source:
Wuppertal
Institute,
www.bigee.net

Step 4: Validate the resulting recommended package through empirical evidence

- As the most advanced countries show, the policy package that we derived from our actor-centred analysis comes close to what countries have introduced to approach very high levels of energy efficiency

Policy	California	China	Denmark	Germany	Tunisia
Targets	x	x	x	x	
Energy Agency	(x)	(x)	x	x	x
Funds or DSM	x	(x)	x	(x)	x
MEPS	x	x	x	x	x
Labels	(x)	(x)	x	x	(x)
Advice/audits	x	x	x	x	x
Grants	x	(x)	x	(x)	(x)
Soft loans/PAYS	x			x	x
Training	x	x	x	x	x

Status of research on recommended policy packages for energy efficiency

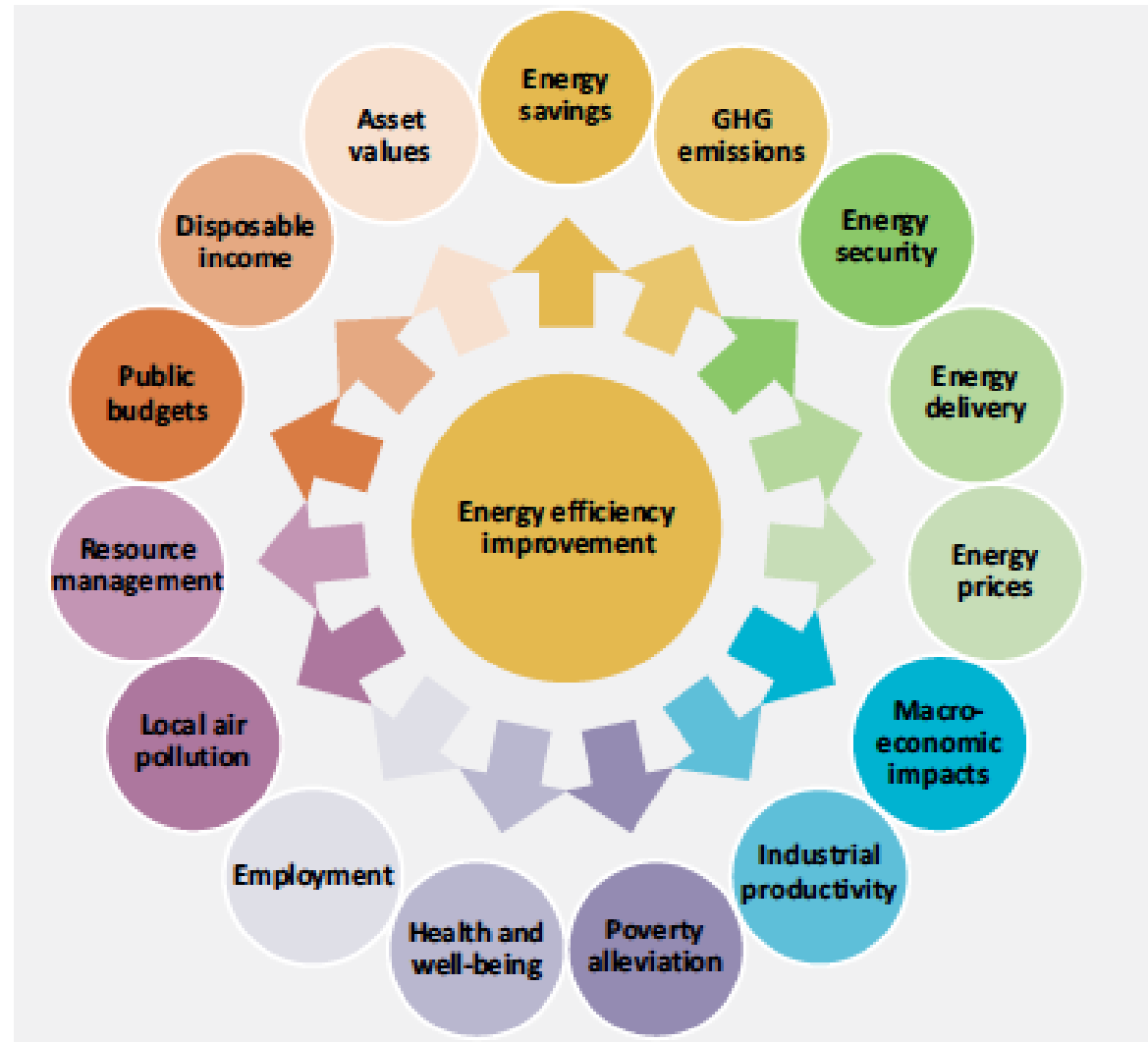
- Where are we now, what needs to be completed?

Sector/objective	Status
New buildings	Well developed
EE renovation of buildings	Developed but further proof needed
Appliances	Well developed
Industry	Further analysis needed
Transport: Avoid – shift - improve	Further analysis needed
Integration of energy efficiency and sufficiency	Initial stages
Integration of energy and material efficiency	Initial stages

Communication for Energy Efficiency: Make use of the multiple benefits

- Recent publication by the IEA (2014):

Capturing the Multiple Benefits of Energy Efficiency



Communication for Energy Efficiency:

Make use of the multiple benefits – some examples

- Findings by the IEA (2014) for large-scale energy efficiency programmes:
 - GDP: growth rate + 0.25 to 1.1% per year
 - Employment: 8 to 27 job years per EUR 1 million invested
 - Public budgets: EE in buildings in the EU could bring revenues and savings of EUR 67 to 128 billion to public budgets
 - Health and well-being impacts: may quadruple economic savings compared to energy cost savings alone
 - Productivity improvements: may be worth 2.5 times the energy cost savings alone
 - Etc.
- Wuppertal Institute 2014: Thailand could limit the share of energy import costs in GDP to 20 % through energy efficiency (baseline projection: almost 30%)

Is efficient sufficient?

... or do we also need energy sufficiency and the related governance and communication?

Sufficiency:
Reduction



Sufficiency:
Substitution



Sufficiency:
Adaptation of service to needs



Energy Efficiency

Conclusions

- Energy efficiency has multiple benefits. It usually is a win-win-win option for all aspects of sustainability
- We need much more evaluation and communication of these multiple benefits – to citizens, companies, and politicians!
- Energy efficiency will still only to a part happen by itself - because of the manifold and strong market barriers
- Governance and policy packages for energy efficiency are needed to tap the full potential and develop energy efficiency markets
- Evaluation shows they can achieve around 2 % per year of additional energy savings – we need more policy evaluation too

Many thanks for your attention!

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