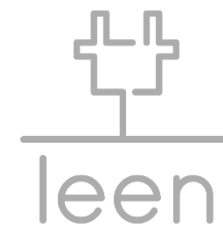




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Energy efficiency financing in the industrial sector –

Experience of the Learning Energy Efficiency Networks (LEEN) initiative and how it stimulates investments

Mirko Krück, CEO LEEN GmbH

Extensive know-how through international customer base



Germany

Bundesministerium
für Wirtschaft
und Energie

+360 sites

Research project
„30 pilot-networks“



Austria

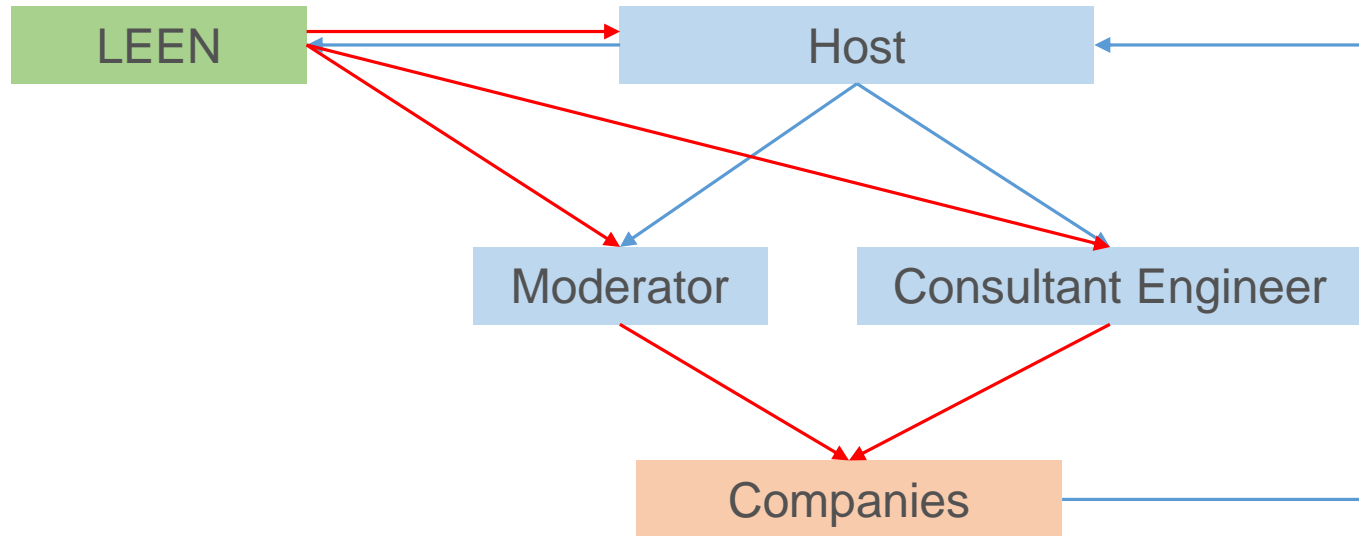


Serbia

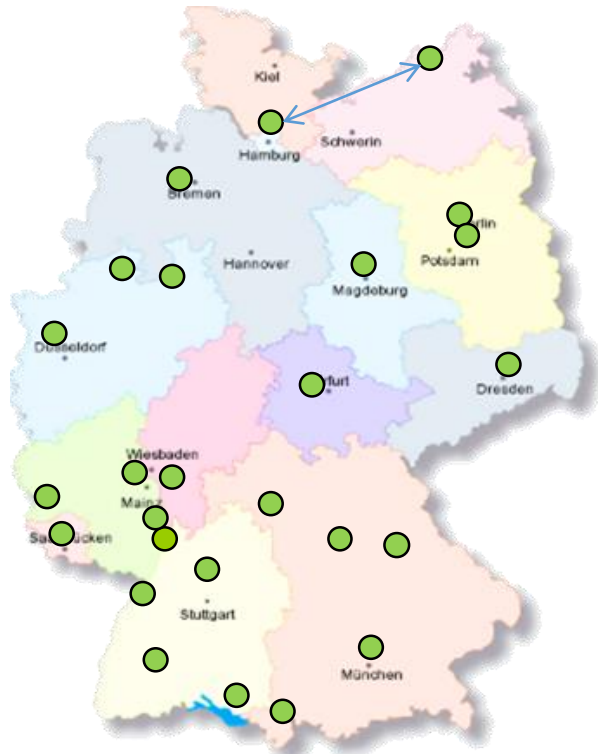


Belgium

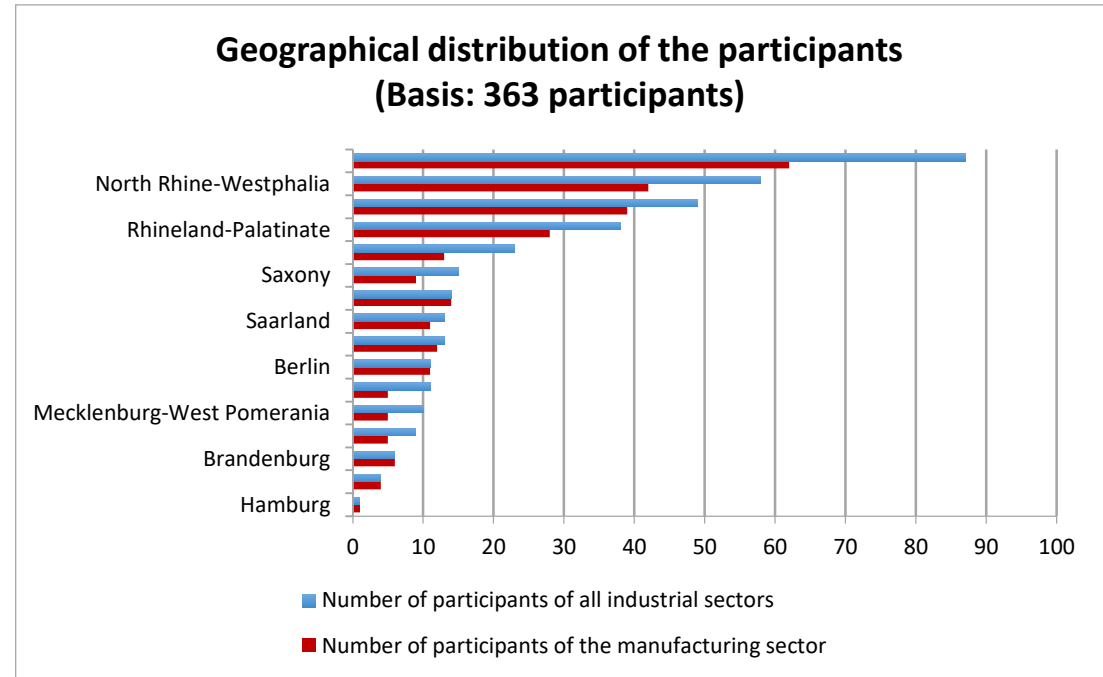
Typical organizational structure



- Money flow
- Training & quality control



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The 30 networks represent

- Total energy costs around 1 billion €/a
- Energy consumption > 15 million MWh/a
- CO₂ emission > 5 million t/a

Who were the participants?

Classification No.	Economic sector	No. of companies
10	Manufacture of food products	34
28	Manufacture of machinery and equipment n. e. c.	31
22	Manufacture of rubber and plastic products	26
25	Manufacture of fabricated metal products, except machinery and equipment	22
20	Manufacture of chemicals and chemical products	22
29	Manufacture of motor vehicles, trailers and semi-trailers	20
23	Manufacture of other non-metallic mineral products	15
27	Manufacture of electrical equipment	14
11	Manufacture of beverages	13
35	Electricity, gas, steam and air conditioning supply	11
86	Human health activities	11
18	Printing and reproduction of recorded media	10

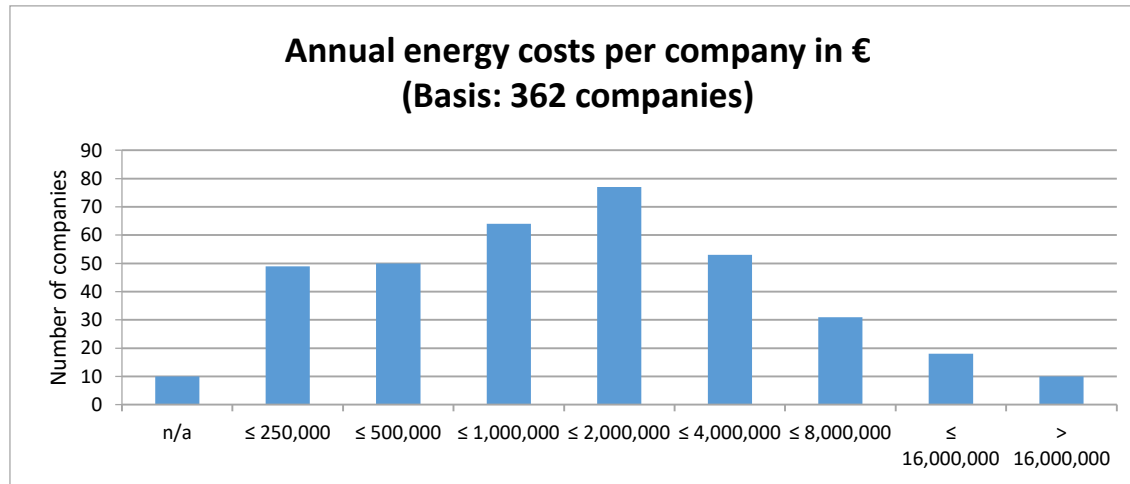
Industry sectors:

74 % manufacturing

5 % healthcare sector

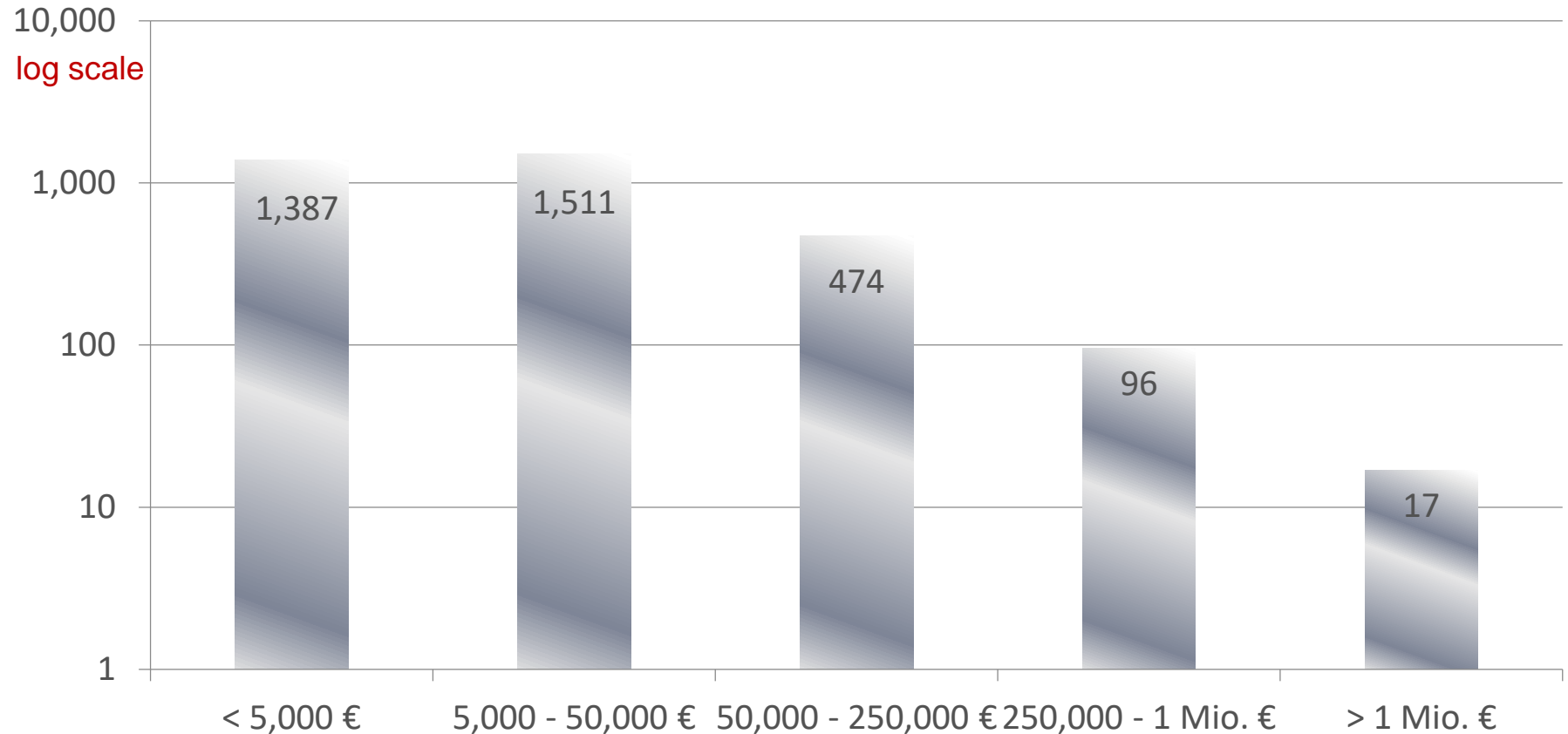
3 % energy suppliers

3 % trading



- 57 % of the factories are enterprise locations of a bigger company
- 54 % of the companies have energy costs between 500,000 and 4 million € per year
- For 75 % of the companies the reduction of energy (costs) has always been important!

Findings 30 Pilot Networks – Total investment Volumes



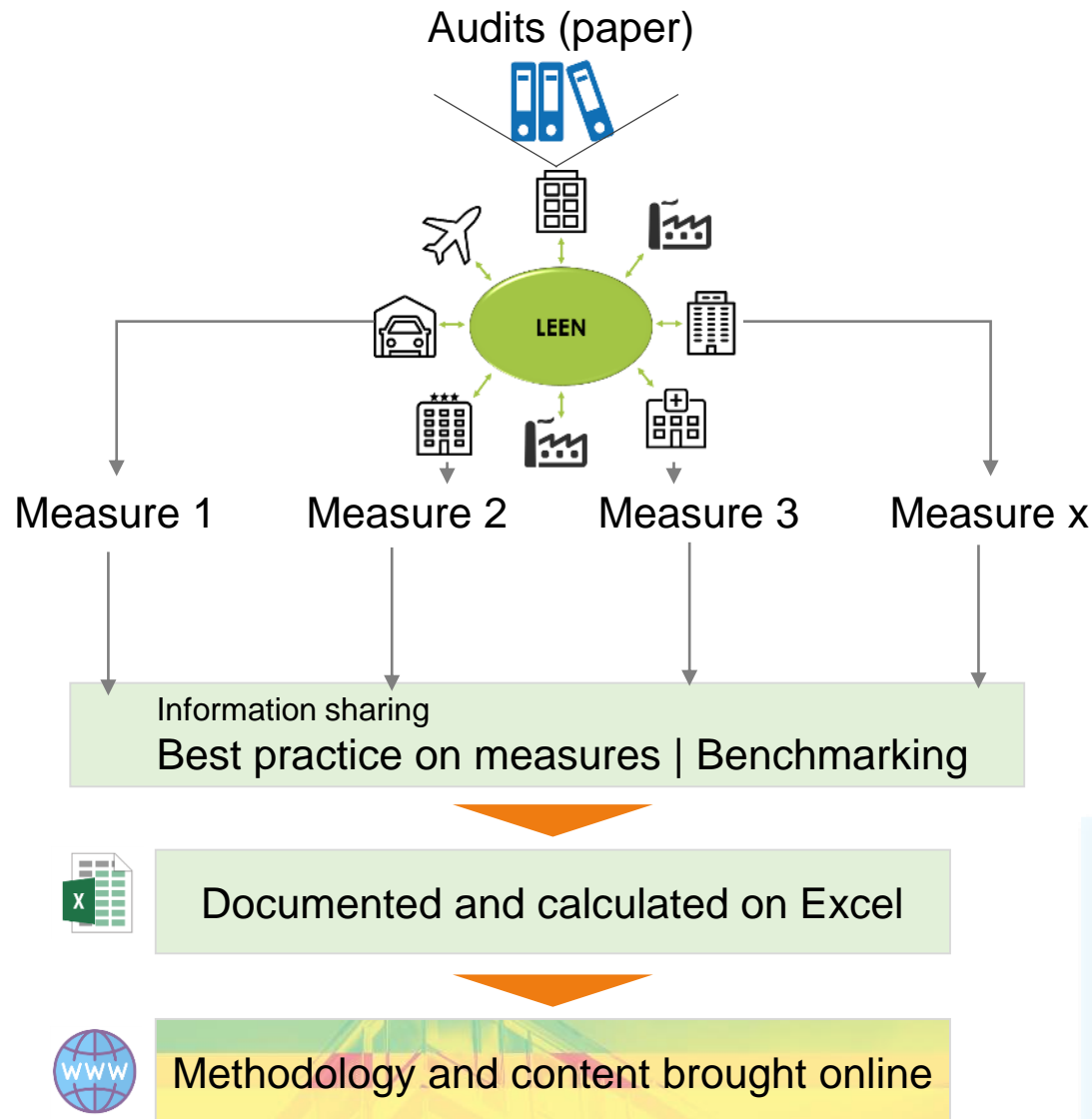
Ø IRR of all profitable measures	31%
Ø static payback period of all profitable measures	3.2
Ø investment per measure [EUR]	55,700

Findings 30 Pilot Networks – Implemented measures in one network

Category (Ø per measure)	Value
number of measures	107
Ø investment [EUR]	20,700
Ø energy cost savings [EUR/year]	6,750
Ø internal rate of return (IRR)	33.0%
Ø static payback period [years]	3.0
Ø energy savings [MWh/year]	98.5
Ø reduction of CO ₂ emissions [t/year]	25.6

We've doubled the speed of efficiency investments: average implementation of 10 measures as a follow-up on audits.

Benchmarking as the next step to stimulate investments



- Outcome
- > Knowledge sharing (benchmarks) among participants within one network
 - > Common structure of diverse paper audits
 - > Best possible savings

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Thank you for your attention!

Mirko Krück, CEO LEEN GmbH

mirko.krueck@leen.de

