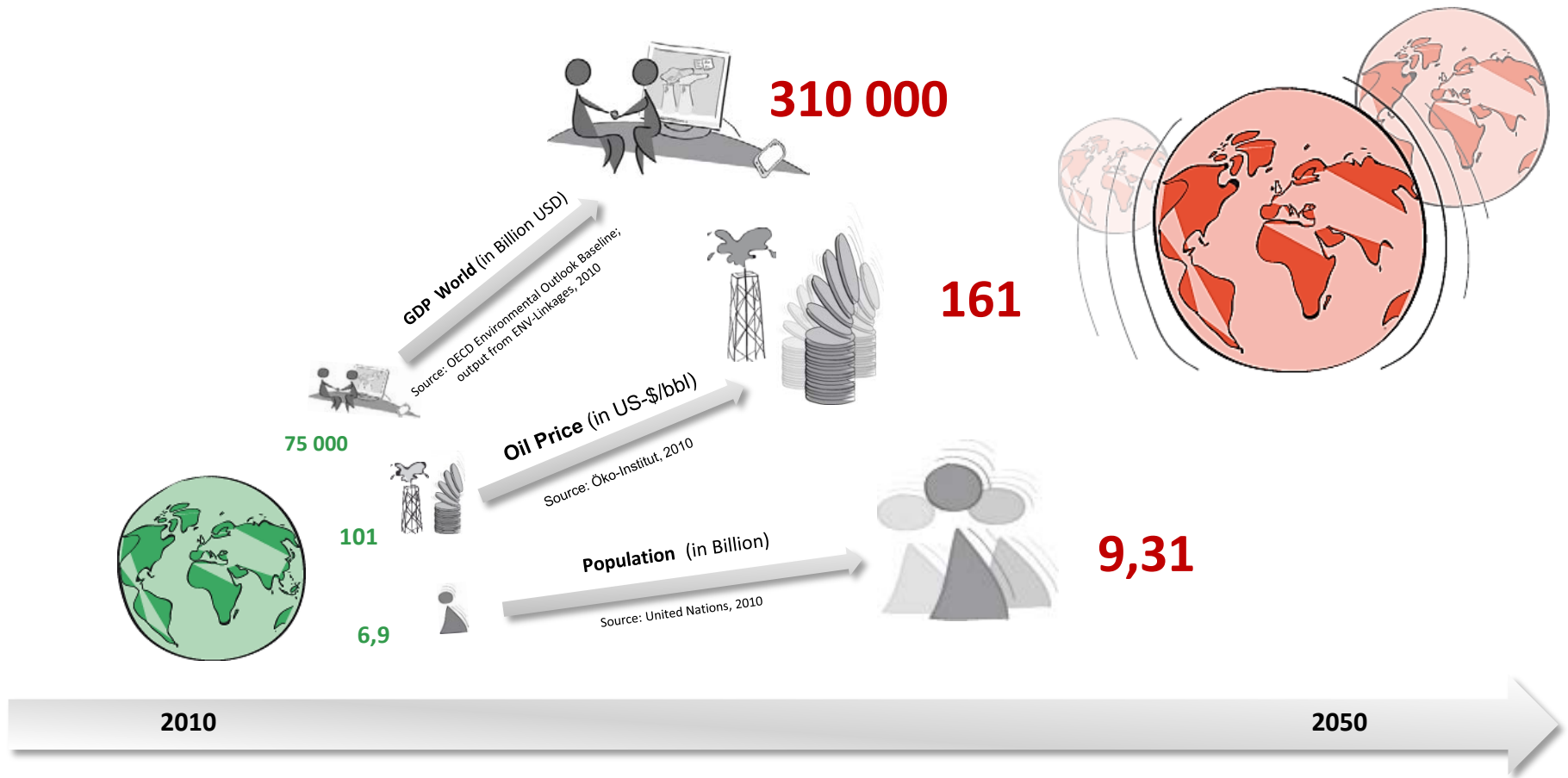


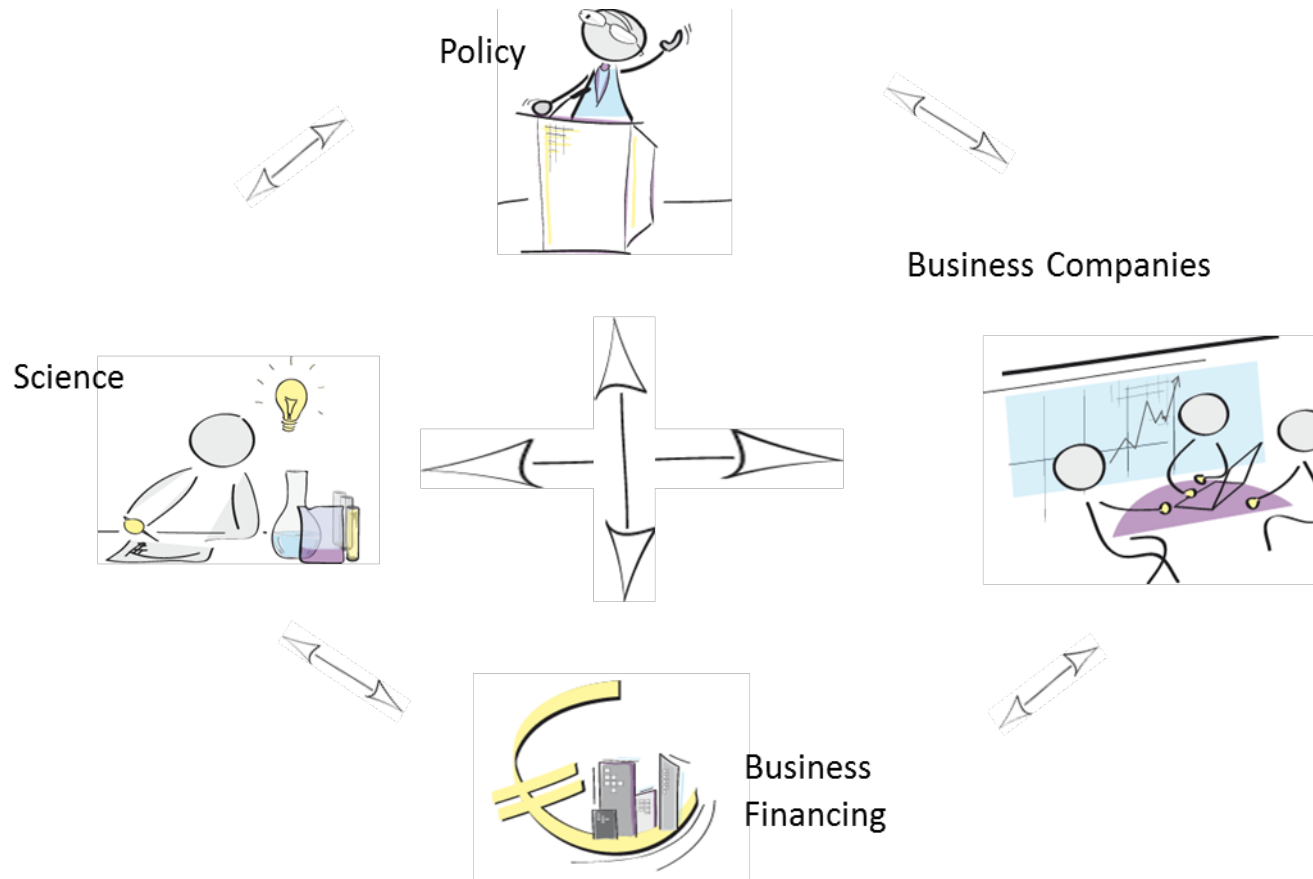
# **Innovative Financing Instruments for Eco-Innovation in SME**

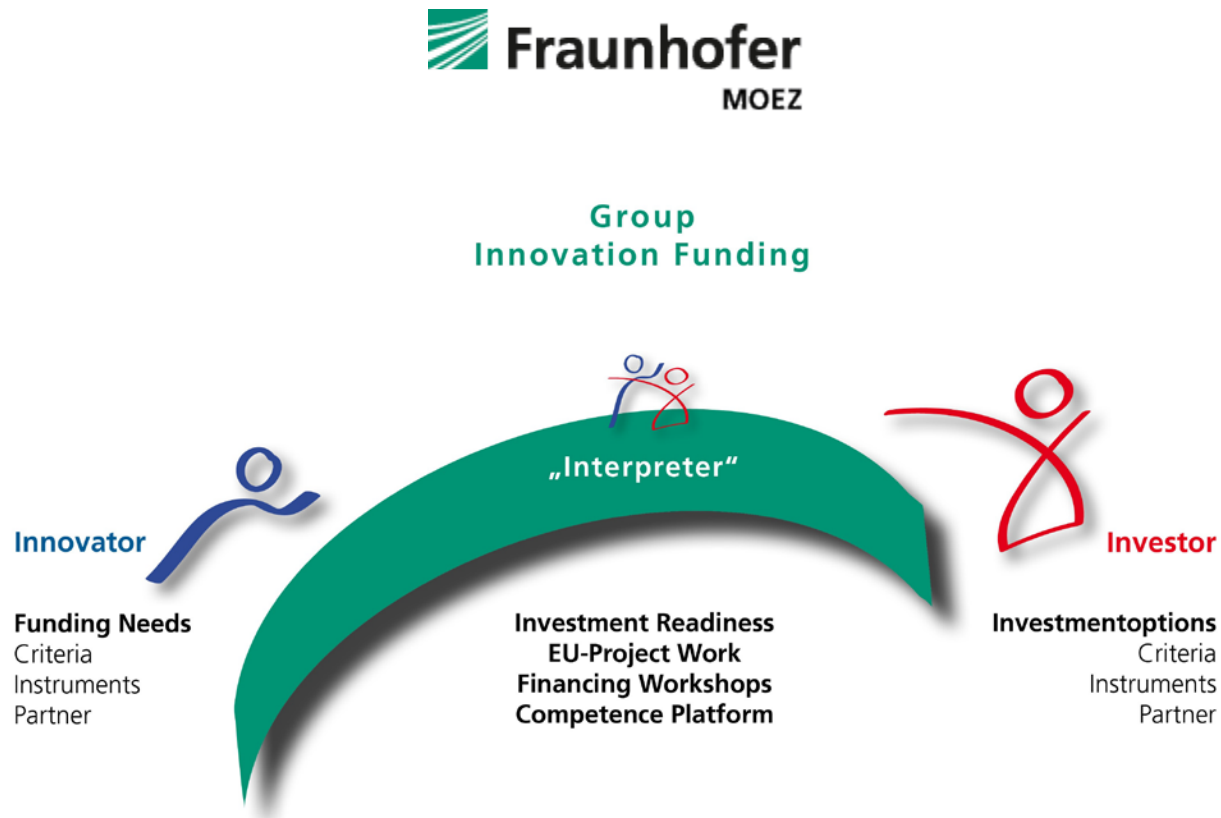
Prof. Dr. rer. pol. Thorsten Posselt

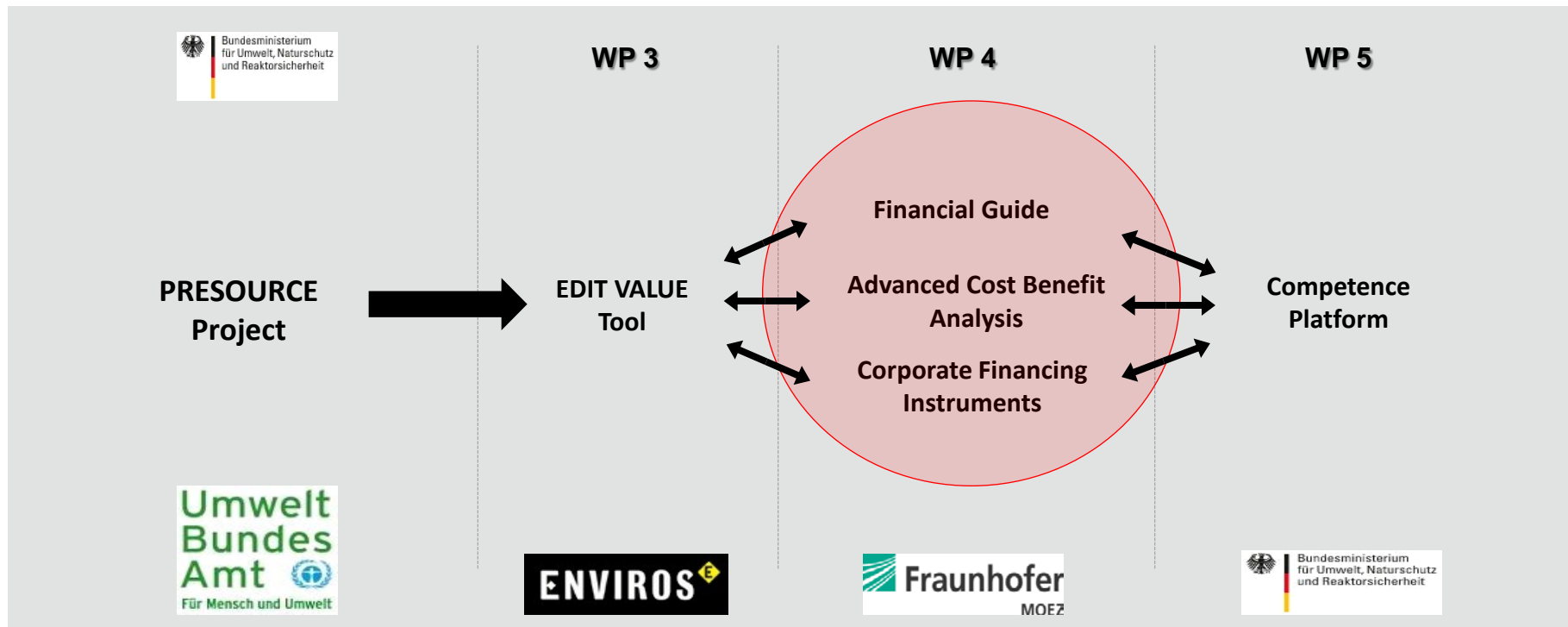
Berlin, 13 November 2014











## Financial Guide and Advanced Cost Benefit Analysis

**PRESOURCE**  
PROMOTION OF RESOURCE EFFICIENCY  
IN SMES IN CENTRAL EUROPE

**Financial Guide**  
Information and Background

The Financial Guide within the EU-project PRESOURCE is a jointly developed transnational tool to promote financing schemes that support eco-innovation and resource efficiency. The tool aims to encourage more long-term thinking in politics, business and finance. Based on over 100 interviews with experts from both public and private sectors as well as other innovative financial stakeholders, it provides a comprehensive overview of relevant financing actors and existing instruments among the six PRESOURCE partner countries, namely Austria, Czech Republic, Germany, Hungary, Italy and Poland.

PRESOURCE is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF and aims at increasing resource efficiency, especially in small- and medium-sized enterprises (SMEs) in the Central European countries by identifying innovative opportunities for improving and financing investment in resource efficiency.

Resource efficiency is understood as "reducing the use and the costs of energy, material and water in the production process and product life cycle". Even though the topic has become highly relevant in politics and business, financial instruments for resource efficiency projects are still rare, underdeveloped or not yet existent in these countries. In the context of the Financial Guide the focus on resource efficiency was broadened to eco-innovation as a whole. According to the European Commission eco-innovation is defined as "any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development [...] either by reducing the environmental impact or achieving a more efficient and responsible use of resources".

SMEs are often not aware of their resource consumption and the associated costs, real costs of non-product outputs and the related (cost) reduction potential. Furthermore, in many cases they are not sufficiently informed of possible means of improving resource efficiency. In addition, they face serious challenges in financing the necessary investments due to a lack of information about the variety of suitable financing instruments and relevant investment criteria. Hence, one of the major impulses for the Financial Guide was to help overcome these existing barriers and to introduce a set of economic incentives that stimulate SMEs to systematically measure and improve their resource efficiency/eco-innovation.

The Financial Guide is expected to improve knowledge and mechanisms for risk sharing and for financing eco-innovations in SMEs within existing framework conditions. This shall increase investments in eco-innovations by introducing new innovative financing schemes such as revolving funds, crowd investing or contracting schemes that finally enable SMEs to better finance their resource efficiency/eco-innovation projects.

**Selected financing options for innovation stages**

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For the full version of the Financial Guide and for further information please visit our Competence Platform:  
[www.resourceefficiencyatlas.eu](http://www.resourceefficiencyatlas.eu)

[www.presource.eu](http://www.presource.eu)

**PRESOURCE**  
PROMOTION OF RESOURCE EFFICIENCY  
IN SMES IN CENTRAL EUROPE

**Advanced Cost Benefit Analysis**  
Information and Background

One of the core outputs of the EU-project PRESOURCE is a transnational tool to promote and implement an Advanced Cost Benefit Analysis. It was developed to foster investment decisions in the field of eco-innovation and resource efficiency. Small and medium sized enterprises (SMEs) receive a comprehensive tool that helps them address their investment proposals to capital providers. This is expected to result in a quality increase in the eco-innovation funding process and to foster the exploitation of eco-innovation gains.

PRESOURCE is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF and aims to increase resource efficiency, especially in SMEs in the Central European countries, by identifying opportunities for improving and financing investment in eco-innovation.

Resource efficiency is understood as "reducing the use and the costs of energy, material and water in the production process and product life cycle". However, in the context of the Advanced Cost Benefit Analysis the focus was broadened to eco-innovation as a whole. According to the European Commission, eco-innovation is "any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development [...] either by reducing the environmental impact or achieving a more efficient and responsible use of resources".

Measures for eco-innovation and resource efficiency face a high level of uncertainty regarding economic feasibility. This was confirmed by over 100 transnational interviews with experts from public financial institutions, private banks, venture capitalists and innovative capital providers active in the field of eco-innovation and resource efficiency in the PRESOURCE partner countries (Austria, Czech Republic, Germany, Hungary, Italy and Poland). Furthermore, conventional cost benefit approaches are not suitable for adequately assessing environmental benefits and translating them into monetary values. Thus, important potentials for economic growth are lost due to imperfect market conditions. The Advanced Cost Benefit Analysis helps close these informational gaps through signalling economic reliability.

With regard to the lack of specific evaluation criteria, the Advanced Cost Benefit Analysis shall complement conventional financial valuation methods through managerial, economic and environmental indicators. It will provide an easy-to-use indicator system as well as a good practice calculation scheme for the better transfer of technological knowledge and environmental impact into economic terms. The Analysis is a useful tool for actors in the financial sector (public financing institutions, private investors and banks), policy makers and bodies responsible for development of public funding sources, multipliers such as engineering and business associations and SMEs.

**Scenario and Investment Analysis Tool for Eco-Innovations**

	Status Quo	Scenario 1 Energy, water and process optimisation	Scenario 2 Improved energy, water and process optimisation
<b>Energy</b>			
Amount of energy consumption (MWh / year)	300.000	400.000	380.000
Total value of energy costs (€ / year)	90.960	76.140	71.400
Optimisation potential (%)		25,00	31,58
Costs of related maintenance (€ / year)		2.000	2.000
Total cost saving potential		16.790	20.548
<b>Water</b>			
Amount of water consumption (m³ / year)	50.000	40.000	40.000
Total value of water costs (€ / year)	85.000	66.800	66.800
Optimisation potential (%)		25,00	35,00
Costs of related maintenance (€ / year)		3.000	3.000
Total cost saving potential (€ / year)		13.700	13.700
<b>Material</b>			
Value of total material input (year)	300.000	470.000	450.000
Optimisation potential (%)		6,38	11,11
Costs of related maintenance (€ / year)		3.000	4.000
Total cost saving potential (€ / year)		26.300	45.300
<b>Additional net profits</b>			
Through production optimisation (€ / year)		10.000	15.000
Through process optimisation (€ / year)		5.000	10.000
Through recycling/ reuse measures (€ / year)		0	0
Other cost savings (e.g. cost of emissions, pollution, waste management etc.) (€ / year)		0	0
<b>Investment Summary</b>			
Investment costs (€)	200.000	300.000	
Useful economic life (years)		5	7
Net present value (NPV) (€)		111.879	256.111
Pay Back Period (PBP) (years)		2,78	3,34
Internal Rate of Return (IRR) (%)		17,56	18,99
Return On Investment (ROI) (%)		58,8	72,2

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For the full version of the Advanced Cost Benefit Analysis and for further information please visit our Competence Platform:  
[www.resourceefficiencyatlas.eu](http://www.resourceefficiencyatlas.eu)

[www.presource.eu](http://www.presource.eu)



### PRESOURCE

Corporate Financing Instruments on the  
Enterprise Level

- Fraunhofer MOEZ -



#### Crowdfunding

Crowdfunding is an innovative form of raising equity capital. The volume of capital is provided by the so called "crowd" that consists of a large number of mainly private investors.<sup>1</sup> Each investor only provides a small amount of money per capita, starting with 1 Euro up to 1000 Euros minimum investment volume, depending on the restrictions of each crowdfunding platform.<sup>2</sup> In total, the collected sum of "crowd"-capital for a single investment project can be immense nonetheless. All investors join a virtual crowdfunding platform where they can choose from a set of promising pre-selected investment projects.

Before a new project goes online, it is checked by the operators of the platform in terms of (eco-) innovation potential, marketability and profitability. Once a project is opened for the funding phase, detailed project-information (e.g. business plan, investment summary or image video) will be given to interested crowd-investors. At the end, investors save time and transaction costs while finding a range of promising investment projects on a virtual platform and innovators receive the capital they need in order to develop their company.

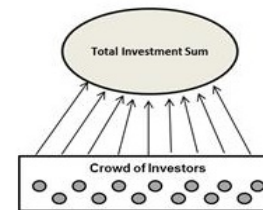


Figure 3: Crowdfunding  
(Source: Fraunhofer MOEZ)

<sup>1</sup> See <https://www.central-europe.eu/>.  
<sup>2</sup> Waple (2013), p. 101.

### COMPETENCE PLATFORM

Resource Efficiency in Central Europe

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#### THE RESOURCE EFFICIENCY ATLAS FOR CENTRAL EUROPE

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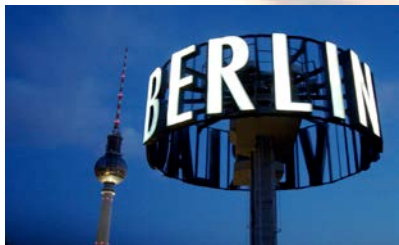
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-  Hungary →
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-  Poland →







- 08:30 - 09:00 Registration and Coffee**
- 09:00 - 09:15 Introductory Notes**  
*Birgit Schwenk - Head of Division WA III 4 - BMUB*
- 09:15 - 09:30 Innovative Financing Instruments for Eco-Innovation in SME**  
*Prof. Dr. rer. pol. Thorsten Posselt - Director - Fraunhofer MOEZ*
- 09:30 - 09:50 Equity Financing Instruments for Small and Medium-Sized Businesses**  
*Dr. Sonnfried Weber - Director - BayBG*
- 09:50 - 10:10 Fund Investments Worldwide**  
*David Schröder - Regional Sales Manager - International Business - Deutsche Leasing für Sparkassen und Mittelstand GmbH*
- 10:10 - 10:30 First Online Credit Marketplace for Medium-Sized Businesses in Germany**  
*Dr. Matthias Knecht - Managing Director - Zencap*
- 10:30 - 11:00 Coffee Break**
- 11:00 - 11:20 New Eco Innovation Financing Mechanisms in Poland**  
*Dr. Ewa Kochanska - President - Research and Innovation Centre Pro-Akademia*
- 11:20 - 11:40 First Crowdfunding-Platform for Energy Efficiency Projects**  
*Patrick Mijns - Managing Director - Bettervest GmbH*
- 11:40 - 12:00 Crowdfunding of „Green“ Projects in Austria**  
*Dr. Conny Weber - Project Leader - 1000x1000*
- 12:00 - 12:20 Crowdfunding for Small and Medium-Sized Businesses**  
*Dirk Littig - Managing Director - Bankless 24*
- 12:20 - 12:40 Outlook for SMEs - Relevance of Sustainability as Financing Indicators**  
*Gerrit Mumm - Managing Director ∞ pli-bonigo*
- 12:40 - 13:00 Conclusion and Discussion**
- 13:00 Lunch**



## Thank you for your attention!

**Prof. Dr. rer. pol. Thorsten Posselt**  
**Director**

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