THE GERMAN LIVING LAB LANDSCAPE — CONTOURS AND PROSPECTS

OpenLivingLab Days 2015, 25th August, Istanbul

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Overview

- Background
- The Living Lab landscape in Germany
- Living Labs as key elements in a Green Economy the INNOLAB project
- What prospects for the Living Lab landscape in Germany, Europe and beyond?

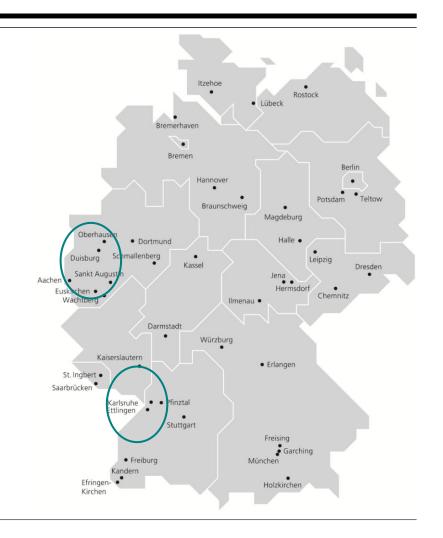
The Fraunhofer-Gesellschaft in Germany

The leading organization for applied research in Europe.

80 Research institutions, 66 Institutes

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- Fraunhofer inHaus, Duisburg
- Fraunhofer ISI, Karlsruhe





The Fraunhofer Institute for Systems and Innovation Research ISI

- studies innovations their emergence, success factors, potentials and limits
- helps industry, science, politics and society in strategy development
- handles 370 research projects per year, budget of approx. € 23 million

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Background: Living Labs in Germany

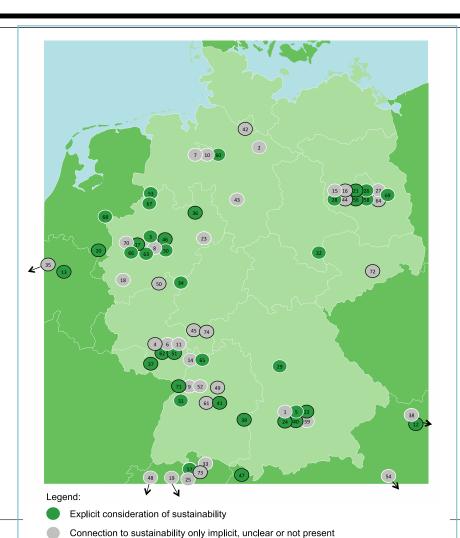
Exploration 1:

- BMBF research programm Innovation and Technology Analysis (ITA): project "Sustainability Innovations in the Living Lab"
- OA Article: Geibler, v. J.; Erdmann, L.; et al. (2014): Exploring the potential of a German Living Lab research infrastructure for the development of low resource products and services. In: Resources 3(3) 575-598; doi:10.3390/resources3030575

Exloration 2:

- German pioneer role towards a Green Economy (BMBF, BMUB, BMWi, BDI)
- BMBF framework program Research for Sustainable Development (FONA): support R&D projects to promote transformation processes towards a Green Economy
- INNOLAB project: demonstration of potential and roadmapping

Living Labs in Germany and neighbouring countries



The numbers specify the Living Labs, see appendix for their names and research fields.

High degree of institutitionalisation

Arrows indicate a location outside the map.

Characteristics:

- many fixed-term projects
- regional clusters: Ruhr, Southwest, Munich, Berlin
- no networking among Living Labs in most cases
- ➤ themes: ICT, AAL, smart home, work environment, infrastructure

Assessment:

- scant information on "closed" labs
- > data of 2012
- living labs, reality labs and model regions emerged and vanished
- untapped sustainability potentials: user acceptance / rebound effects

Source: von Geibler. Erdmann et al. 2014



SWOT of the German R&I system for the development of Sustainability Living Labs



	Strengths		Weaknesses		
le	iustainability relevant and egitimate in Germany, but letached from LL community	 Lack of capacity: Systems design and mediation capacities underdeveloped experimental research does not 			
t	existing Living Labs are complementary to the echnology-focused research andscape		necessarily yield commercially viable products in the short-term.		
• E	xisting regional clusters				
	Opportunities		Threats		
p	Realization of efficiency Potentials under consideration	•	Short-term thinking in business strategies		
	 of rebound effects on the microscale Potential to connect different strands of research, capacity development at universities Linking up to existing international networks of Living Lab 		 Data security issues due to sensitivity of data on consumption and behavioral 		
			patterns		
			Incompatibility of micro-data with macro-data on the societal system if		
iı			data interfaces and assessment conventions are not defined		

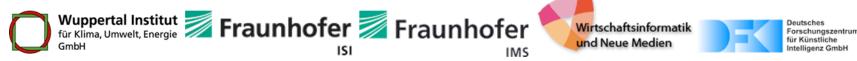


Source: von Geibler, Erdmann et al. 2014



INNOLAB — Living Labs in the Green Economy: Real-world Innovation for User-Integration and Sustainability

Core partners



Project duration: 36 Months (02.03.2015 – 28.2.2018)

Total budget: 1,34 Million Euros (external funding: 1,12 Million Euros)

Goals:

- Developing a method for user integration and sustainability innovation in real-world laboratories, e.g. concerning rebound effects and obsolescence
- **Demonstrating the performance** of Living Labs through the study of sustainability innovations in the field of assistance systems and their diffusion in the key areas of sustainable consumption "living", "retail" and "mobility"
- Strengthening of the Living Lab concept in the research and innovation system of a Green Economy by means of Roadmapping integrating knowledge and actors
- Extending the national and international network and transfer: connect LL and SD



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INNOLAB – Project plan

Conceptualisation

Space for innovation on processes for user integration and sustainability in Living Labs

WP 1: Inventory in the field of innovation

Actual, trend, and scenario analysis in the research and innovation system, baseline study (i.a. to rebound effects and obsolescence), analysis of the actors and the network

WP 2: Operationalisation of open innovation processes for sustainability

Development of methods and criteria (sustainability, Living Lab methods, roadmapping)

Realisation in practice-based projects

Innovative assistence systemes in three typical areas of obeservation of Living Labs

Methods

INHAUS

- Co-Creation
- User
- scenarios
- Development of business models
- Sustainability analysis (incl. rebound effects, obsolescence, social inclusion)

WP 3: Predictive living: Sustainable ventilation in private households Living Lab inHouse-Centre of the Fraunhofer IMS

WP 4: Sustainable Shopping: Customer guidance at the point of sale Living Lab Innovative Retail Laboratory (DFKI and Globus) and GS1

WP 5: Intermodal mobility for elderly people

Living Lab PRAXLABS of the University Siegen and infoware

WP 6: Evaluation and synthesis

Conditions of success determinants for sustainability innovations in Living Labs and integration of SME, show potentials to minimize rebound effects, workshop for synthesis

WP 9: Project management

Integration and transfer of results

WP7: Integrated roadmapping

- Mobilize actors and define search fields
- Expert dialouge
- Strategy dialouge
- Documentation

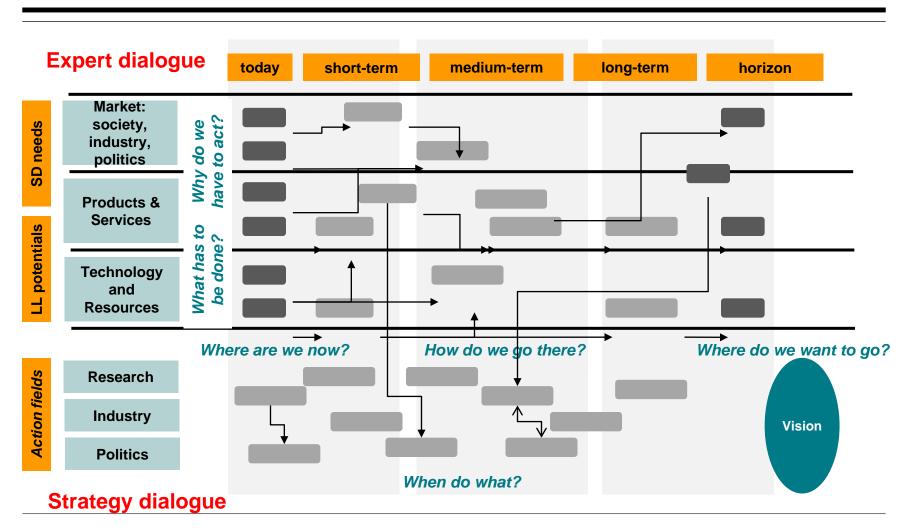
WP 8: Transfer

- Virtual platform for the actor network
- Actor specific transfer materials and manual
- Conclusion workshop for stakeholder and actors



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Roadmapping in INNOLAB



Prospects of the Living Lab landscape in Germany, Europe and beyond- Action fields

- 1) <u>Science 2.0/Open Innovation 2.0</u>: LL as nodes in open, collaborative and ICT-driven R&I
- New R&I practices: LL as <u>providers of a method</u> <u>portfolio</u> for a diversifying R&I context
- 3) LL as physical <u>platforms for societal exchange</u> between research&innovation, production&consumption
- 4) LL as <u>intermediaries in the R&I ecosystem</u>
- 5) <u>Sustainable design</u>: LL giving innovation a direction
- 6) LL as a means to foster <u>diffusion of</u> <u>sustainable innovations</u>
- 7) Reindustrialisation: LL to promote entrepreneurship and SME's ability to innovate
- 8) LL as a "sector" numbers, networks and impacts of LL
- 9) R&I policy: LL explicitly anchored in the R&I system
- 10) Market and structural policies: LL as levers <u>for the regional</u> <u>economy</u> and <u>for a new type of public market research</u>

German Green
Economy
Living Labs

German Living
Labs engage in
ENOLL

Living Labs with fluid contours

today

2030



Seite 1

Thank you for your attention!

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