GOVERNANCE OF COMPLEX SUSTAINABILITY CHALLENGES IN REGIONS

PROF. THOMAS HOPPE (BMS-CSTM)

TWENTE ENERGY GROUP, 28 JUNE 2024

UNIVERSITY OF TWENTE.







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Universiteit Twente de ondernemende universiteit

UNIVERSITY OF TWENTE.



PERSONAL BACKGROUND

- Background
 - Public Administration, UT
 - PhD in Public Policy, CSTM
 - Assistant Professor, CSTM
 - Associate Professor, TPM, TU Delft
 - Return to UT-BMS-CSTM as per 15 April 2024

RESEARCH AGENDA AND CHAIR

- Research
 - Governance of energy transitions
 - Energy communities
 - Smart grids / decentralised energy systems
 - Energy regions, low carbon cities
 - Circular economy / cities
 - Smart cities
 - And now: Sustainability of Rural-Urban Systems
 - Raised in empirical tradition
 - Epistemological pragmatist
 - Both qualitative and quantitative research methods
 - from participatory action research to ABM
 - Broad scope of theoretical frameworks
 - Cross- and transdisciplinary projects
 - Teamwork matters!



SMART GRID RESEARCH

- Since 2012. HTHT Smart Grids project. Collaboration with your group (Johann, Gerard, Vincent, Albert).
- PhD: Imke Lammers (UT) institutional conditions of smart grid planning en implementation, Defended: 2018. (some follow-up research at TU/D)
- PhD: Farshid Norouzi (TU/D) innovation systems encouraging smart microgrids multidisciplinary project with prof. Pavol Bauer

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RELATED RESEARCH TOPICS

- Energy Communities (REScoop Plus, SCCALE, WaterWarmth, Collectieve Kracht)
- Demand response in EC ABM
- Energy Hubs and energy collaboration in business parks
- Energy Autarky (SUPREME, SUSTENANCE)
- Role AI in ET. ELSA Lab. Research -proposal
 E.g., Arnhem's Buiten experimentation.
- Smart Cities





FLEXIBILITY & ENERGY COMMUNITY (LSE-FF)

- LSE-FF (Local smart energy systems with flexibility functionality – in community energy setting)
 - Research proposal
- To resolve multiple problems, in particular net congestion. Regional, mission-driven, experimental.
- Contributes to a more resilient and robust energy distribution system.
- How to collaboratively codesign, test, and scale community energy driven flexibility innovations?
- Living labs with smart grid applications in community energy systems.
 - Includes use of DEMKIT.
- Consortium: UT-TU/D-THUAS



ROLE OF DECENTRALIZED GOVERNMENTS IN ET

- Local government
- Region RES Energy Regions
- Province
 - Involvement with P. Overijssel (Nieuwe Energie program)
- Innovation in governing ET in regions
 RES



Regional sust. transitions and governance





Figures from: Hoppe & Miedema (2020). Sustainability **2020**, 12(3), 915; https://doi.org/10.3390/su12030915

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THANKS FOR YOUR ATTENTION!

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