TRAPESES: TRAnsition Patterns Enabling Smart Energy Systems

with Plus Project in Amsterdam*

Team

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Partners

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Period

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*** Full title:**

ABC – Amsterdam Builds the Coalition towards a zero emission built environment

Applying the transition approach for the transition to SES

The over-all goal was to develop a better insight into the dynamics and mechanisms of accelerating energy transitions. Sustainability transitions research defines transitions as non-linear, long-term processes of systemic change from one dynamic equilibrium (regime) to another. This disruptive system reconfiguration results from unsustainable path-dependencies, accumulating external changes and pressures and maturing competitive alternatives. Transitions cannot be planned top-down as they are structurally uncertain and often cause deep political tensions and societal crises. The least destructive pathway to move through this phase of chaotic systems change hypothetically is by interlinking emerging new ideas, practices, technologies and organizational models from the niche to transformative actors, instruments and incentives at the level of the so-called regime. The project has explored this hybrid transition pathway theoretically as well as empirically through action research and has produced scientific as well as societal results.

* Better analytical, conceptual and empirical understanding

TRAPESES has developed a better analytical, conceptual and empirical understanding of this 'hybrid' niche-regime pathway. Experiments have been conducted with the new ideas developed through transdisciplinary research. Some 40-50 individuals representing a large variety of niches (cooperatives, entrepreneurs, change agents) and regime actors (incumbents, banks, ministries) were involved in this. The results are now finalized and have been shared through conferences, policy briefs and applied projects. These results have also provided the basis for the Plus Project Amsterdam Builds the Coalition towards a zero emission built environment.

Read more

1 R. Bosman, D. Loorbach, J. Rotmans, R. van Raak (2018), *Carbon Lock-Out: Leading the Fossil Port of Rotterdam into Transition, Sustainability*

2 A. Proka, M. Hisschemöller, D. Loorbach (2018), *Transition without Conflict? Renewable Energy Initiatives in the Dutch Energy Transition, Sustainability*

3 A. Proka, D. Loorbach, M. Hisschemöller (2018), *Leading from the Niche: Insights from a strategic dialogue of renewable energy cooperatives in the Netherlands, Sustainability*

4 D. Scholten, R. Bosman (2016), *The geopolitics of renewables; exploring the political implications of renewable energy systems, Technological Forecasting and Social Change*

5 A. Proka, P.J. Beers, D. Loorbach (2018), *Transformative Business Models for Sustainability Transitions, Sustainable Business Models*

6 M. Hisschemöller, I. Marselis (2018), *Het moet niet te avontuurlijk worden*

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The research programme Uncertainty Reduction in Smart Energy Systems (**URSES**) aims to make a quick transition to a reliable, affordable and sustainable energy system possible. It is a joint initiative of several departments of NWO, Shell, AMS and the TKI Urban Energy.

Insights & recommendations

[1] The concept of 'transition space' was developed by one of the PhD researchers as a broader term unpacking the process of destabilization in which actors embedded in a regime context start to diverge, face increasing pressures for transformation and are forced to reposition and reorient. This has implications for internal culture, capacities, as well as business strategy and investments. Which tensions and responses arise with a proactive incumbent entering this transition space was explored through embedded case study within Alliander and an internal transition management process within the Port Authority of Rotterdam.

[2] The other PhD candidate has explored the strategic challenges and potential of the emerging cooperative renewable energy movement. Analysis identified both the mechanisms of development as well as the competition amongst initiatives, the difficult relationships with subsidizing governments and inabilities to move beyond a certain scale. This has led to the insight that cooperatives should seek to strategize across niches and develop shared agency to be able to engage more evenly with incumbents.

[3] This collective empowerment and strategizing was explored through action research by creating a 'strategic dialogue' with leading actors from the Dutch energy cooperative movement in which they identified shared values, developed a shared narrative and quantitative contribution to the energy transition (1 million members and 25 PJ renewable production in 2025). This linked up to the transition dialogue facilitated with the 40-50 actors from niches and regime to develop a shared narrative around the hybrid pathway. It has shown the value of bringing together individuals to discuss collective futures rather than representatives to discuss agreements when it comes to creating shared discourse and understanding.

[4] A transdisciplinary approach was used to understand the transformative challenges in moving towards sustainable heating in the built environment in Amsterdam, in a context of policy ambitions but also fossil-based industrial heat transition. One hundred citizens were mobilized to create public pressure and support for sustainable heat transitions in new area developments (without actual inhabitants). The research uncovered the dynamics that support fossil-based heat and put this issue on the political agenda. It showed institutional lock-in mechanisms and the challenges of introducing more transformative and radical new technologies in new area developments, but also highlighted the need for citizens to work together with professionals to claim influence on technological, economic choice and decision-making.

NWO Netherlands Organisation for Scientific Research

AMS AMSTERDAM INSTITUTE FOR ADVANCED METROPOLITAN SOLUTIONS

TKI URBAN ENERGY Topsector Energie