UNIVERSITEIT TWENTE.

TOWARDS A TYPOLOGY TO ANALYZE THE SUCCESSFUL IMPLEMENTATION OF CLIMATE MITIGATION POLICIES IN URBAN AREAS

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PRESENTATION OUTLINE

- Welcome
- Environmental energy policy implementation in cities
- Research aim
- Typology
- Research design
- Four case studies
- Results
- Discussion

RELEVANCE

- 34% of domestically CO_2-emissions caused by built environment. 56% of this figure caused by housing.
- Existing stock large potential to reduce GHG emissions.
- Opportunities in large-scale urban renewal and district revitalization projects.
- Stakeholders: national government, local governments, house owners (owner-occupiers and housing associations), tenants.
- Benefits occupiers/tenants: lower energy costs -> lower living costs.
- Benefits owner: qualitative improvement dwelling -> longer usage of dwelling.
- However, many barriers in perceptions stakeholders -> lack of market demand.
- No restrictive policies (standards). Only small incentives and information.
- Energy impact assessments on voluntary base.
- Study on decision-making processes in local projects to adopt innovative energy systems (IES.

RESEARCH AIM

To further understanding in factors that influence the adoption of innovative energy systems (IES) in urban areas.

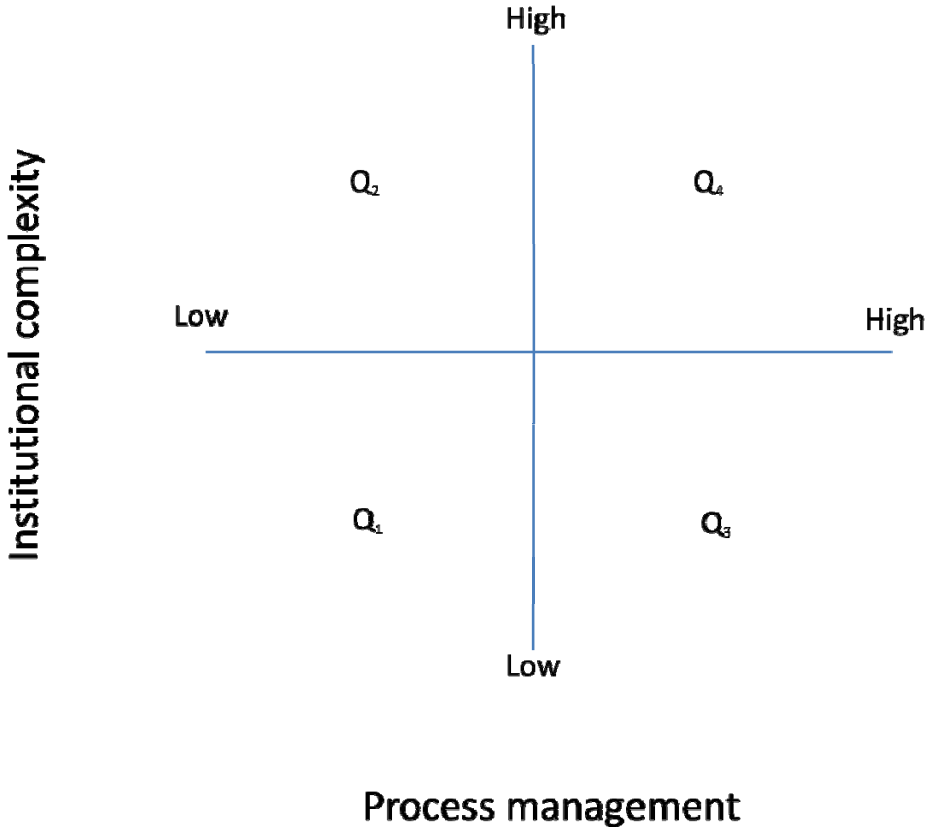
To present a typology that supports the analysis and understanding of processes concerning the implementation of policies that stimulate the adoption of climate mitigation measures in urban areas.

THEORY

- Theories deriving from the discipline of Policy Studies.
- Institutional complexity.
- Environmental policy integration (EPI).
- Governance of complex networks.
- Project management.

TYPOLOGY

- Two dimensions
- Institutional complexity
- Project management



RESEARCH DESIGN AND METHODOLOGY

- Research design: comparative analysis of case studies
- Data collection: 27 interviews, project documents
- Data treatment: case histories, coding on indicators
- Data analysis: scores on scales, and locate cases in 2x2 matrix typology.
- Aim: to test test hypotheses in search of confirmation.

CASE STUDY 1: TANNHAUSER

- City: Apeldoorn
- Number of apartments: 100
- Initial objective: city heating from biomass plant
- Realization: conventional measures taken (insulation, individual high yield condensation boilers).

From: www.1pro.nl

CASE STUDY 2: Hogewey

- City: Weesp
- Number of apartments: 258
- Initial objective: Several options considered
- Realization: Fleece wall and HRe-condensation boilers (decentral cogeneration).

CASE STUDY 3: PRINSENHOF

- City: Leidschendam
- Number of apartments: 1628
- Initial objective: Several options considered; 40% reduction in energy consumption.
- Realization: conventional measures taken (insulation, individual high yield condensation boilers).

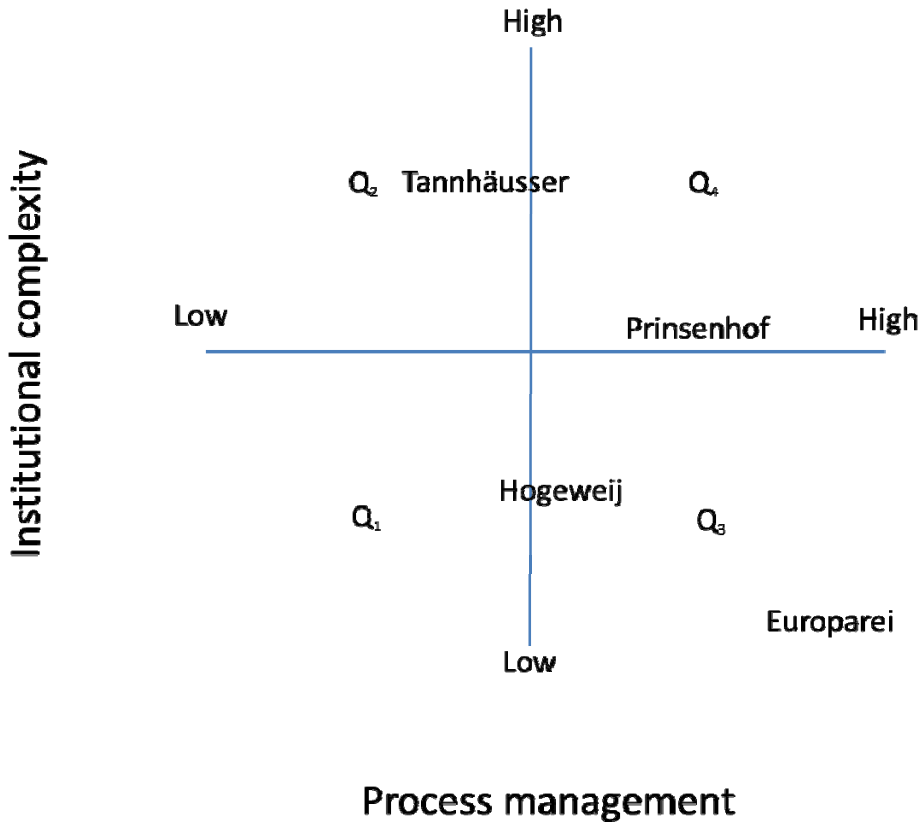
From: www.dhv-bouw.nl

CASE STUDY 4: EUROPAREI

- City: Uithoorn
- Number of apartments: 635
- Initial objective: Solar heating system (thermal)
- Realization: Solar heating system (thermal) and air heat pump, solar PV (on the long run)

RESULTS

- Location cases in graphical chart typology.



RESULTS

- Hypothesis confirmed.
- Goal achievement of IES in urban areas remains difficult.
- External events may destroy constructive process
- Energy impact assessments: although voluntarily, effective to a certain extent; IES put on the agenda, sometimes to the end, and influential on outcome of project (IES adoption).
- Identification of necessary conditions.

NECESSARY CONDITIONS TO SUCCESSFUL PROJECT OUTCOMES

- Clever project management.
- Professional leadership.
- Learning capacity
- Motivated, experiental, large actor-network.
- Subsidies (and supporting comm. instruments).
- Low degree of competing (urban renewal policy) project plans.
- Assessment of alternative energy packages (report) to initiate process.

DISCUSSION

THANKS FOR YOUR ATTENTION

FOR MORE INFORMATION:
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