

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Sophie van Hal - 5648394



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Sophie van Hal
Student number	5648394

Studio		
Name / Theme	Planning Complex Cities	
Main mentor	Roberto Rocco	Spatial planning and strategy
Second mentor	Geertje Slingerland	Urban studies
Argumentation of choice of the studio	<p>During the previous year, I had the chance to work full-time for a governmental institution. Amongst the several projects, I had the opportunity to engage in citizen participation. The complexity of urban questions and the growing frustration within communities, which I experienced firsthand, were eye-opening.</p> <p>Institutional rules and regulations are deeply rooted into how our urban environment are shaped and how we, as citizens, experience them. What I observed last year is the interesting interplay between our physical environment, people and power that is often "broken" in rather politically driven decision making processes in governmental institutions.</p> <p>What sparked my interest for this studio is that planning and design can be multi-faceted tools in order to tackle spatial, social and institutional problems cities may/will face. This aspect is what I missed during my work in a governmental institution. I have built a small network, which I would like to build upon further through a graduation project in this studio.</p>	

Graduation project	
Title of the graduation project	emPOWERed: transitioning towards cleaner energy futures in vulnerable neighborhoods in Rotterdam South.
Goal	
Location:	Hillesluis, Rotterdam
The posed problem,	Spatial injustices and the lack of proper citizen engagement in the energy transition.

<p>research questions and</p>	<p>MRQ: How can participatory planning practices facilitate multi-actor collaborations between people, policy and innovation towards a spatially just energy transition in Hillesluis?</p> <p>SRQ1: What is the current governance in the energy transition discourse in Rotterdam?</p> <p>SRQ2: Which stakeholders are leading the current energy transition and what are their relations?</p> <p>SRQ3: How can the role of civil society be redefined and strengthened in the energy transition in Hillesluis?</p> <p>SRQ4: Which participatory planning practices are needed for a more just energy transition?</p> <p>SRQ5: What are the spatial and socio-economic barriers that hinder the energy transition in Hillesluis?</p> <p>SRQ6: What are local energy injustices in Hillesluis and where are they located?</p>
<p>design assignment in which these result.</p>	
<p>The concrete outcome of this project will take shape as a future vision for the neighborhood of Hillesluis. This vision will be achieved through participatory methods, critical revision of existing sustainability policy documents and socio-spatial analysis of the neighborhood. This vision will become the foundation for design principles of both public and private spaces.</p> <p>To enable and legitimize these design principles, policy recommendations are given that support these principles. Through a critical revision of existing sustainable energy policies of Rotterdam, policy recommendations are formulated.</p> <p>Through a socio-economic and spatial analysis, combined with the problematization and theoretical background, public and private places of priority are appointed on</p>	

maps. These maps contain information from households that pose the greatest risks of energy poverty, to public spaces with great potential for either decentralized energy measures or social interaction that could lead to diffusion of information.

As this process will be done through and with members of the neighborhood, new ways of participating and citizen engagement can be tested, evaluated and deduced in order to inform policy making processes.

Altogether, these results alongside the analysis of existing governance structures and relations, new and more just form(s) of multi-actor collaborations for socio-technical transitions can be explored.

Process

Method description

A mixed method approach (quantitative + qualitative) is used in this graduation project.

Context analysis

To identify local injustices, spatial and socio-economic barriers

Methods:

- Mapping
- Media analysis
- Historic maps

Data sources:

- Geodata
- Municipal data and maps
- Neighborhood statistics

Discourse analysis

To summarize current (energy) transition contexts and incentives underpinning them.

Methods:

- Policy analysis
- Expert interviews
- Case studies
- Governance mapping
- Literature review

Data sources:

- Municipal data and policy documents
- Policy makes and advisors (municipality)
- NGO's
- Neighbourhood initiatives
- Housing corporations
- Researchers in energy transition and justice fields

Literature and general practical references

Spatial justice→

Campbell, S.D. (2013). Sustainable development and social justice: Conflicting urgencies and the search for common ground in urban and regional planning. *Michigan Journal of Sustainability*, 1(1), 75-91.

Drozd, M. (2014). Spatial inequalities, "neoliberal " urban policy and the geography of injustice in London. *Justice Spatiale / Spatial Justice*, 6. <https://halshs.archives-ouvertes.fr/halshs-01232566>

Hughes, S., & Hoffmann, M. J. (2020). Just urban transitions: Toward a research agenda. *WIREs Climate Change*, 11(3). <https://doi.org/10.1002/wcc.640>

Rocco, R. (2022). Spatial Justice: A crucial dimension of sustainability. In R. Rocco, G. Bracken, C. Newton, & M. Dabrowski (Eds.), *Teaching, Learning & Researching Spatial Planning* (pp. 276-287). TU Delft OPEN Publishing.

Soja, E. (2009). The City and Spatial Justice. *Justice Spatiale/ Spatial Justice*, 1 (September 2009).

Energy justice→

Jenkins, K., McCauley, D., Heffron, R. J., Stephan, H. R., & Rehner, R. W. M. (2016). Energy justice: A conceptual review. *Energy Research & Social Science*, 11, 174–182. <https://doi.org/10.1016/j.erss.2015.10.004>

Transition theories→

Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy*, 31(8–9), 1257–1274. [https://doi.org/10.1016/s0048-7333\(02\)00062-8](https://doi.org/10.1016/s0048-7333(02)00062-8)

Geels, F. W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), 24–40. <https://doi.org/10.1016/j.eist.2011.02.002>

Pierick, E. T., & Van Mil, E. (2009). *Multi-level perspective nader beschouwd: aangrijpingspunten voor transitie richting biobased economy?*

Transition management→

Kemp, R., Loorbach, D., & Rotmans, J. (2007). Transition management as a model for managing processes of co-evolution towards sustainable development. *International Journal of Sustainable Development and World Ecology*, 14(1), 78–91. <https://doi.org/10.1080/13504500709469709>

Rotmans, J., & Loorbach, D. (2008). Transition management: reflexive governance of societal complexity through searching, learning and experimenting. *Erasmus Research Institute of Management*. https://repub.eur.nl/pub/37236/Metis_133337_B.pdf

Rotmans, J., Kemp, R., & Van Asselt, M. (2001). More evolution than revolution: transition management in public policy. *Foresight*, 3(1), 15–31.
<https://doi.org/10.1108/14636680110803003>

Multi-level governance→

Laes, E., Gorissen, L., & Nevens, F. (2014). A comparison of energy transition governance in Germany, the Netherlands and the United Kingdom. *Sustainability*, 6(3), 1129–1152. <https://doi.org/10.3390/su6031129>

Meuleman, L. (2019). *Metagovernance for sustainability: A Framework for Implementing the Sustainable Development Goals*.

Nieminen, J., Salomaa, A., & Juhola, S. (2020). Governing urban sustainability transitions: urban planning regime and modes of governance. *Journal of Environmental Planning and Management*, 64(4), 559–580.
<https://doi.org/10.1080/09640568.2020.1776690>

Tenbenschel, T. (2005). Multiple modes of governance. *Public Management Review*, 7(2), 267–288. <https://doi.org/10.1080/14719030500091566>

The importance of citizen participation and multi-actor networks→

Buijs, A., De Koning, S., Mattijssen, T., Smeding, I., Smits, M., & Steins, N. A. (2023). Civil society for sustainable change: strategies of NGOs and active citizens to contribute to sustainability transitions. *Journal of Environmental Planning and Management*, 1–22.
<https://doi.org/10.1080/09640568.2023.2205571>

Lennon, B., Dunphy, N., & Sanvicente, E. (2019). Community acceptability and the energy transition: a citizens' perspective. *Energy, Sustainability and Society*, 9(1).
<https://doi.org/10.1186/s13705-019-0218-z>

Wierling, A., Schwanitz, V. J., Zeiß, J. P., Bout, C., Candelise, C., Gilcrease, W., & Gregg, J. S. (2018). Statistical evidence on the role of energy cooperatives for the energy transition in European countries. *Sustainability*, 10(9), 3339.
<https://doi.org/10.3390/su10093339>

Participatory planning→

Nyamadzawo, L. & The Wagner Planner. (2020, December 14). The paradox of participatory planning in urban planning – *The Wagner Planner*.
<https://wp.nyu.edu/wagnerplanner/2020/12/14/the-paradox-of-participatory-planning-in-urban-planning/>

Richard Warren Smith. (1973). A Theoretical Basis for Participatory Planning. *Policy Sciences*, 4(3), 275–295. <http://www.jstor.org/stable/4531532>

Practical references:

Climate policies of the city of Rotterdam→

Gemeente Rotterdam. (2021). Rotterdamse Energiesysteemvisie. In *duurzaam010.nl*. Retrieved November 25, 2023, from https://rotterdam.raadsinformatie.nl/document/10928786/1/s21bb012776_3_62826_tds

Ministerie van Economische Zaken en Klimaat. (2019). Klimaatakkoord. Rijksoverheid. Retrieved November 5, 2023, from <https://www.rijksoverheid.nl/documenten/rapporten/2019/06/28/klimaatakkoord>

Stadsontwikkeling, deelgemeente Feijenoord en Woonstad Rotterdam. (2013). Handelingsperspectief wijk Hillesluis. In *Nationaal Programma Rotterdam Zuid*. <https://www.nprz.nl/over-nprz/onze-documenten/handelingsperspectieven>

Rotterdams Klimaat Alliantie. (2019). Rotterdams Klimaatakkoord. In *rotterdamsklimaatakkoord.nl*. Retrieved November 26, 2023, from <https://www.rotterdamsklimaatakkoord.nl/klimaataanpak/het-akkoord>

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

Studio topic – Complex Cities

My topic tackles the urgent topic of the energy transition and spatial justice principles. The broader scheme of sustainability transitions are of highly complex nature and combined with the pressure of global climate goals, could pose great risks for our most vulnerable groups. With this, I mean risks of the unfair distribution of the costs and benefits of the energy transition. The performances of spatial planning could aid in the search to spatially just solutions towards cleaner energy futures for all.

Master track Urbanism

The master track Urbanism aims for students to explore and combine social, spatial, political and cultural phenomena with the built environment (TU Delft, n.d). In my thesis plan I have taken up a position where I identify that the energy transition is not just a technical or economical one, which in current practical discourse is still dominant. My topic aims to explore the perspectives that are thus lacking in current discourse, namely social and political ones. What I have discovered so far is that the social perspective, and thus the accompanying social changes needed for the energy transition, are lacking the most. Transitions towards sustainability are inherently political, but this aspect is usually not known in society. Meaning people will not think of the political system behind the energy transition in the first place. This creates a lack in critical view of political instruments steering the energy transition. My topic aims to do just that by uncovering socio-spatial injustices that have risen from the underlying and deeply rooted political systems of the energy transition.

Master program

The master program puts its emphasis on the multi-disciplinary nature of modern urban challenges. My project topic and research methods aim for a multi-disciplinary approach, even when the focus is put on spatial justice. The project recognizes different scale level and aims to establish multi-actor networks that are involved, and needed, in order to propel our built environment towards sustainable futures.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

The graduation work and expected results will not be the only solution to the issues related to injustice in the energy transition. There is no one solution to the complex challenge. However, the challenges at stake ask for more experimentation and innovation scientifically, in institutions and society (Krlev and Terstriep, 2022). Currently, this exploration of empirical, especially human-centred, cases of sustainable energy transitions is lacking (Garvey et al., 2022; Adil & Ko, 2016). Sector specific innovations towards sustainability and cleaner energy futures may be present, which are positive changes, but the co-evolution of all sectors is under researched (ibid.). My project aims to combine co-creation of future visions by and for citizens with accompanying policy recommendations. New perspectives on socio-technical transitions are needed and through experimenting with a more human approach in socio-technical transitions, my project can aid to this (Torrens et al., 2021; Sovacool, 2014).

Time planning

