

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



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	Charlotte Oldenbeuving
Student number	4784847

Studio		
Name / Theme	Game Changers	
Main mentor	Paul Chan	Design and Construction Management
Second mentor	Herman Vande Putte	Real Estate Management
Argumentation of choice of the studio	<p>I chose to collaborate with the "Game Changers" studio for my research on promoting nature-based solutions into urban development because their innovative and transformative approach aligns perfectly with the objectives of my project. The studio's commitment to redefining the status quo resonates with my goal to challenge conventional 'grey solutions' by promoting sustainable, nature-integrated urban planning.</p> <p>"Game Changers" fosters an interdisciplinary environment, which is crucial for my research that needs to engage with interdisciplinary teams and their creative practices to address complex environmental issues effectively. This synergy is vital for exploring new ways to reshape informal social norms and implement impactful, sustainable changes in urban development.</p> <p>Furthermore, the studio's focus on creating significant and impactful outcomes, aligns with my project's aim to foster a meaningful shift towards nature-inclusive urban development. By partnering with "Game Changers", I am confident that my research will not only benefit from a robust creative and innovative framework but will also contribute to pioneering advancements in nature-inclusive urban development.</p>	

Graduation project	
Title of the graduation project	Changing perspective towards Nature-inclusive Cities: The project developer as creative change agent promoting nature-based solutions in urban development

Goal	
Location:	The developer's role and power in urban development
The posed problem,	<p>The existing building industry relies on grey solutions for developing cities and this is not sustainable for the future because it will destroy nature and human-wellbeing in the process if we keep expanding cities like this. There is an upcoming interest by policy makers and research platforms for promoting the use of nature-based solutions instead of or in combination with grey solutions. The literature about promoting Nature-based solutions answers questions about how to respond to the institutions in the form of formal legal rules by suggesting more technical strategies, however it doesn't answer questions about how to respond to the institutions in the form of informal social norms that might be addressed by Institutional entrepreneurship of the project developer and organizational creativity by the project team. Therefore, more research from the social creative perspective in combination with a market party perspective is needed.</p>
research questions and	<p>Main question: How can the project developer become a creative change agent promoting Nature-based solutions within the urban development project team?</p> <p>Sub-question 1. Who is this creative change agent promoting nature-based solutions?</p> <p>Sub-question 2. How do the existing institutions for nature-based solutions affect the organizational creativity of the project team? And how do they enhance or constrain the creative behavior within the project team?</p> <p>Sub-question 3. What role does the</p>

	<p>project developer play in these effects on organizational creativity?</p> <p>Sub-question 4. How can the project developer change their own and other actors' creative behavior to re-shape the organizational creativity towards a stage where the nature-based solutions are better promoted?</p>
<p>design assignment in which these results.</p>	<p>The result will be in the form of advice towards the project developer on how they can change their creative contribution and include strategies for enhancing organizational creativity within urban development project teams in a way that promotes Nature-based solutions. This advice aims to help them empower themselves through institutional entrepreneurship focused on reshaping organizational creativity, changing the informal social norms of their work environment.</p>
<p>Process</p>	
<p>Method description</p> <p>The research will consist of an exploratory qualitative method that will be executed in 4 phases:</p> <p>In phase 1, which I am executing now, I will answer sub-question 1 temporarily by doing literature research. Based on this I will formulate hypotheses about what this creative change agent should be and why the developer still needs to become this creative change agent.</p> <p>In phase 2 I will answer sub-question 1, 2 & 3 by identifying the existing status of the developer as creative change agent. I will do this by interviewing project developers about their existing work environment within the urban development project teams, identifying the existing institutions that are affecting the organizational creativity of the project teams. I will ask them about the different creativity resources and how they recognize or do not recognize them within the project teams. Furthermore, I will ask them about how they use creativity resources to promote nature-based solutions or where they do not use these resources and why. In this way I hope to find the organizational creativity constraints in relation to promoting nature-based solutions and find where the developer has a role in these constraints and find opportunities where the developer can have a more promoting role.</p>	

In phase 3 I will answer sub-question 4 by executing a workshop with some potential creative change agents, which I will select from the developers I interviewed. I want to guide a workshop where these developers (who are excited to think along with how to become a creative change agent promoting Nature-based solutions) to collaboratively come up with strategies to tackle the constraints and address the opportunities I found in phase 2. Preferably, I want to also involve an ecologist and/or sustainability advisor who has more knowledge on managing ecosystems.

In phase 4 I will answer the main research question by forming conclusions from phase 1, 2 & 3.

I think this is an ambitious, but doable plan if I find someone who can help me with finding people to interview and organizing the workshop. I am currently in contact with a sustainability advisor who is interested in my research and is working on strategies for project development company AM.

If this will not work out, I can always expand phase 2 a bit, doing some extra interviews and make phase 3 something I design on my own including literature study or maybe I can gather some students to do the workshop with.

Literature and general practical references

Literature (mostly about Nature-based solutions, Creativity and Institutional Entrepreneurship):

Albertini, S., & Muzzi, C. (2016). Institutional entrepreneurship and organizational innovation: The start-up of a divergent new venture at the periphery of a mature field. *The International Journal of Entrepreneurship and Innovation*, 17(2), 110-119. <https://doi.org/10.1177/1465750316648578>

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Amabile, T. M., & Coon, H. (1996). Assessing the Work Environment for Creativity. *The Academy of Management Journal*, 39(5), 1158-1184. <https://www.jstor.org/stable/256995>

Battilana, J. (2006). Agency and Institutions: The Enabling Role of Individuals' Social Position. *Organization*, 13(5), 653-676. <https://doi.org/10.1177/1350508406067008>

Cohen-Shacham, E., Andrade, A., Dalton, J., Dudley, N., Jones, M., Kumar, C., Maginnis, S., Maynard, S., Nelson, C. R., Renaud, F. G., Welling, R., & Walters, G. (2019). Core principles for successfully implementing and upscaling Nature-based Solutions. *Environmental Science and Policy*, 98, 20-29. Scopus. <https://doi.org/10.1016/j.envsci.2019.04.014>

Dacin, M. T., Goodstein, J., & Scott, W. R. (2002). Institutional Theory and Institutional Change: Introduction to the Special Research Forum. *The Academy of Management Journal*, 45(1), 45-56. <https://doi.org/10.2307/3069284>

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Frantzeskaki, N. (2019). Seven lessons for planning nature-based solutions in cities. *Environmental Science & Policy*, 93, 101-111. <https://doi.org/10.1016/j.envsci.2018.12.033>

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Gould, R. K. (2023). How creativity can help research on the multiple values of nature become more innovative and inclusive. *People and Nature*, *5*(2), 244-257. <https://doi.org/10.1002/pan3.10204>

Merrey, D. J., & Cook, S. (2012). *Fostering Institutional Creativity at Multiple Levels: Towards Facilitated Institutional Bricolage*. *5*(1).

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Newman-Storen, R. (2014). Leadership in Sustainability: Creating an Interface between Creativity and Leadership Theory in Dealing with "Wicked Problems". *Sustainability*, *6*(9), 5955-5967. <https://doi.org/10.3390/su6095955>

Pham, H., & Kim, S.-Y. (2019). The effects of sustainable practices and managers' leadership competences on sustainability performance of construction firms. *Sustainable Production and Consumption*, *20*, 1-14. <https://doi.org/10.1016/j.spc.2019.05.003>

Portugal Del Pino, D., & Marquez, J. F. (2023). Complementary ideas for the implementation of nature-based solutions. *Environmental Science & Policy*, *141*, 146-157. <https://doi.org/10.1016/j.envsci.2023.01.008>

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Rhodes, M. (1961). An Analysis of Creativity. *The Phi Delta Kappan*, *42*(7), 305-310.

Runco, M. A., & Jaeger, G. J. (2012). The Standard Definition of Creativity. *Creativity Research Journal*, 24(1), 92-96.
<https://doi.org/10.1080/10400419.2012.650092>

Wehner, L., Csikszentmihalyi, M., & Magyari-Beck, I. (1991). Current approaches used in studying creativity: An exploratory investigation. *Creativity Research Journal*, 4(3), 261-271. <https://doi.org/10.1080/10400419109534398>

Woodman, R. W. (1993). Toward a Theory of Organizational Creativity. *Academy of Management Review*, Vol. 18(No. 2), 293-321.
<https://doi.org/10.5465/amr.1993.3997517>

General practical experience/precedent:

- Connected creativity minor – There I learned how to guide brainstorm sessions & deliberate creativity
- Research methods 1 & 2 course for qualitative research methods, data analyses, research ethics, data management plan.
- Urban & Infrastructure redevelopment game course – Understanding of the urban development project team and different actors, their objectives and responsibilities
- Design & Construction management course – Understanding the role of the creative design & construction manager
- Bachelor of Architecture, Urbanism and Building Technology – Basic skills and knowledge of designing the built environment

Something NEW:

- My focus on retrieving knowledge about building nature-inclusive hasn't been there before this research.

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)?

My topic is about the developer becoming a creative change agent promoting nature-based solutions. This in itself can be a game-changer that is the topic of the studio. It can become a game-changer, because it can change the way of developing with more grey solutions towards more nature-based solutions. This can shift the way of thinking of the developer and its team they work with. This can substantially shift the informal social norms of the developer's work environment away from being reliant on grey-solutions towards an environment that promotes the use of Nature-based solutions.

This is also very relevant with the master track of MBE because of its focus on the Management of Urban Development and more specifically how to change this. In design & construction management I learned about how a manager should be aware of the individual people you work with and understand their motives to be able to manage the team you work with in such a way they can achieve the best results they can be proud of (The creative construction manager).

It relates to the master program because it is in line with Architecture, Urbanism and Building Sciences. It uncovers the world of architecture, urbanism and building sciences from a creative perspective promoting nature into the architecture and urban landscape using building sciences.

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

The goal of the research is to uncover the needs for change in accordance to promote a more nature-inclusive environment from a social perspective. The world is very busy with introducing Nature-based solutions in research programs and policies, however there is still a lack in knowledge on how market parties, such as developers can respond to this need for building more nature-inclusive. They should also be part of this active transition towards building in a more nature-inclusive way and from my perspective they have also the power to push this transition forward, especially by re-shaping the informal social norms of the work environment of the build environment and I believe that re-shaping organizational creativity is an essential part of that, which is very neglected in research, even though it is often used as a marketing tool by companies. Many companies profile themselves as creative and nature-inclusive or climate adaptive. I want to become an expert on the combination of these two concepts and want to explore the concrete measures behind it.