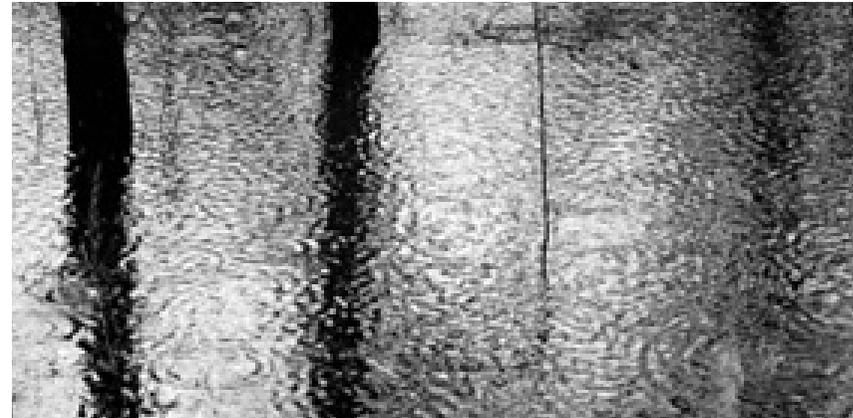


THE CLIMATE RESILIENT CITY



City & organisation	Amsterdam, Amsterdam University of Applied Sciences
Urban challenge(s) addressed	Urban climate, heat, drought, flood risk management, flooding and design of urban areas
Name/title of learning practice	AUAS Minor 'The Climate Resilient City' processed into a learning trajectory for civil servants of the municipality of Amsterdam
Type of case study	Extracurricular
Programme level learning practice/ case study	Local (city level)

BACKGROUND AND HISTORY

Years of establishment: 2021

Motivation behind intervention

In the past ten years, AUAS has been conducting research into how we can design the urban area in a climate-adaptive way. There have been several RAAK projects on this. These projects are always carried out in collaboration with municipalities and engineering firms: professionals working in the field of climate adaptation. These contacts were already there, and at some point a new need for knowledge around climate-adaptation arose at the municipality of Amsterdam.

1,5 years ago, the municipality started developing the Climate Adaptation Handbook, which has been published recently. Climate adaptation is a task the municipality has to work on: every area in the Netherlands must act climate-proof since 2020 and be climate-proof by 2050. The question then arises: how do we train our own civil servants, who have not received this knowledge in their training or education, and can we cooperate with the university of applied sciences on this topic?

The municipality of Amsterdam has drawn up a working method, which is fed by the knowledge AUAS has developed in recent years and the municipality's own experts. Together, AUAS and the municipality came up with the idea that in this learning trajectory AUAS can provide the background knowledge necessary to understand what one needs to do. The municipality applies its own approach to this. AUAS does not explain what the procedures are, but can explain, however: what is the problem with heat, flooding, what are effective measures and why.

General content of intervention

The original minor focuses on dealing with climate developments in relation to the design of the urban area on both a large and small scale. In the minor, students learn to design areas, cities and buildings in a climate-proof manner, so that it is not only possible to live pleasantly in cities now but also in the future.

In the first part of the minor, through the execution of assignments, the theoretical background of the climate-proof city is mainly discussed. In the second part of the minor, the students start working as a consultancy firm and have to apply the knowledge gained to an external client, such as a municipality, water board or project developer in a current project, on both a large and small scale.

The AUAS team took the background knowledge from the minor and put it into this learning process.

Target group

All officials of the municipality of Amsterdam, mainly from the Spatial Planning and Sustainability Department, VNOR, Waternet (including Rainproof officials), but also people from the Amsterdam engineering firm.

They all work in the field of climate adaptation, and they have to do something with it, in work preparation or policy. They are not yet as expert in it as other colleagues, who are the frontrunners in the organization.

Length of the course: The learning trajectory consisted of five days, a morning and afternoon program.

Average number of students attending: 30 to 40, hopefully a second trajectory will take place in autumn.

URBAN CHALLENGES ADDRESSED AND THE CONTEXT

Which urban challenge: Urban climate, heat, drought, flood risk management, flooding and design of urban areas.

Why was it addressed

Climate change means more extremes: more and more intense precipitation and more heat. This leads to flooding with damage and we suffer from that. Heat causes health problems and puts pressure on the liveability of cities. Drought is also an issue. Drought leads to falling groundwater levels and problems with wooden foundations and damage to urban greenery.

To prevent these adverse effects of climate change and to be able to live comfortably in cities in the future, the urban area must be designed to be water-robust and climate-proof. This does not only apply to the Netherlands. It is a worldwide necessity. Climate resilience is highly topical and part of the Dutch Delta Programme. Climate-proofing must therefore be the starting point for every urban design.

How is it addressed

Originally in a minor aimed at AUAS-students. This knowledge is now being made available to civil servants who work in various departments in the municipalities of Amsterdam, all of which deal with spatial planning in the city and climate adaptation.

ORGANISATIONAL DESIGN

Stakeholders involved:

The participants, these are the municipal officials.

The professionals in the organization who occasionally gave explanations, did a mini-lecture or organized an excursion.

Lecturers from AUAS who provide the background information, the basic knowledge and provided the didactic input/methods, which were partly taken from the minor.

And sometimes there was a guest lecture from an engineering firm. A KNMI employee explained the climate scenarios.

Resources required (human, capital, physical)

Human: lecturers and guest-lecturers

Capital: fee for guest lecturers

Physical: due to covid, this was an online course, usually a location should be made available. For the excursions and execution of the main assignment, it is important that there are physical places in the city on which the participants can develop a climate advice.

LEARNING DESIGN

ECTS: N/A

Learning objectives

During the learning trajectory, civil servants learn about climate change and its consequences for the city. It concerns climate change, urban climate, heat, drought, flood risk management, flooding and the design of urban areas.

How can cities be designed to be climate-adaptive, taking into account climate threats such as flooding, extreme rainfall, sea level rise and rising temperatures? What does a climate-proof urban design look like? What are the costs and benefits of a climate-proof design?

After completing the learning trajectory, participants have insight into the effects of climate change on the urban area, will have gained knowledge about its technical and spatial occurrence, about how to develop a climate-proof design. Also practical calculation skills about urban design will have been brushed up.

Training methodologies: The learning trajectory consisted of five full days, a morning and afternoon program.

Format

For the learning trajectory, subjects that are discussed separately in the minor have been combined. In terms of knowledge, the same information was passed along as in the minor, but the structure was a bit different.

Every day had the same structure:

First there were two hours of background knowledge

Then two hours of 'The Amsterdam practice': which knowledge is available in the municipality, in maps and methods; as interactive as possible because it was online.

In the afternoon, participants often went on a virtual excursion, or walked through an area together. This was organized by municipal officials, fed by the AUAS (for example: which assignment do you link to this area), or people gave a presentation about a project that will allow you to view an area from a certain perspective.

This also happens in the minor: part theory and part 'going outside', the link to practice.

As homework, participants can study the presentation and background information, and there were weekly assignments. A group of 3 participants investigate a specific area in Amsterdam: what is the climate in this area, how does the built environment determine the microclimate, what are the vulnerabilities. Slowly you start peeling off all those themes: what is the problem here with regard to flooding, heat, et cetera. This will give you advice on how to make that area climate-proof.

- Each group processes these ongoing assignments in an advisory presentation on how to make that area climate-proof. During the last contact moment, participants present that advice to each other.

Student support systems: In between there were feedback moments: participants could visit teachers and ask questions.

Assessment methods: After giving the advice presentation, every participant received a certificate of attendance.

Integration into curricula (if applicable): N/A

HINDERS

In relation to urban challenges: N/A

In relation to delivery of intervention

Online teaching does not promote interaction, but has not actively hindered the participants from making the right contacts and finding each other.

ENABLERS

In relation to urban challenges: It is no longer a choice not to work, design and organize in a climate-adaptive way.

In relation to delivery of intervention

The fact that AUAS has had good contacts with the organizers and has been working together for a long time, in different places within the municipality. This large network helps to understand each other.

REFLECTION

Success factors: N/A

Outputs, outcomes and impact

Participants now have improved their knowledge on how to find each other within the organization. Many people from many departments decide on spatial projects, and they all work on this in separate phases. Climate adaptation must be included from the start and requires information from people from other departments, which they originally did not know. "Now I know more people in the organization and I know where to find them." And: they've established that you can't do this on your own.

Another important outcome: this type of training within the organization is necessary to keep making progress in this topic. The professionals that already work in this field need to be constantly retrained on this theme. You have to adapt to the climate, and that is changing very quickly, do you have to constantly work on 'keeping up'. You have to train them to make climate adaptation into a new habit.

Lessons learned and recommendations

In this course, contact moments are important, there must be space for that. Hopefully the organizers have been able to offer that sufficiently in an online learning trajectory.

The program was actually too full. The AUAS lecturer-researchers must realize: we are the experts ourselves, we can provide the background knowledge. They are constantly working on this theme, with all kinds of stakeholders from the field. Then you are already expert enough, you do not necessarily have to invite external experts.

Other: N/A

Note: The information contained on this description was extracted from the "Case Study report" (published by the Urban GoodCamp consortium in March 2022), available at: https://www.urbangoodcamp.eu/uploads/1/6/2/1/16214540/ucamp_-_case_study_report_1.pdf

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