

## **Toekomstvisie Amsterdam 2120: Concept voor de stad van de 22e eeuw**

Nathan Scanlan (6891896), Bio-Inspired Innovation

Dr. ir. Gerben Mol ([gerben.mol@ams-institute.org](mailto:gerben.mol@ams-institute.org)), AMS Institute

### **Layman's Summary**

In the Netherlands the increasing urbanisation will in the coming century be accompanied by several problems of social and ecological nature. These problems are interrelated and are therefore able to influence one another. Thinking of the future can become depressive due to the occurrence of these problems. In order to excite people for the future instead, I have developed the dossier "Amsterdam 2120: concept of a 22<sup>nd</sup> century city". This dossier sketches a vision of a city that is able to resolve such problems by adapting to these changing conditions and associated problems. This dossier is in line with the reports "A nature-based future for the Netherlands in 2120" and "De stad van 2120: natuurlijk!", developed by Wageningen University & Research. These reports describe possible developments in the fields of energy, water, biodiversity and other fields up until the year 2120.

I combined the methodology of these reports with that of nature inspired design to develop a similar vision for Amsterdam. In order to create a comprehensive view, I divided the vision into a written report and a visual design. The written report describes all the steps of the design process including the reasoning for the made assumptions, while the visual design shows the maps and concepts that were developed during this process.

Since cities can be seen as ecosystems, the futureproof Amsterdam that I wanted to visualise is vital, diverse, economical, and connective. When a city shows all four characteristics, this will offer the resilience through which adaptiveness can be achieved. In order to identify to which degree Amsterdam shows these characteristics, I first assembled information using literature and interviews with experts. On the basis of this information, I specified the themes of the study to climate adaptation and mobility, after which I performed a systems analysis of Amsterdam for these two and other themes. I used satellite imagery in order to assess the degree of water storage and the cooling effect of each neighbourhood of the city. This assessment indicated that the districts Centrum and Haven-Stad scored the least when looking at these ecosystem services, which is why I decided to further analyse these districts.

For the assessment of climate adaptation, I investigated the distribution and connections of the vegetation and water within the city, while for mobility I looked at the separate networks for bicycles, cars, and public transport. For the city as a whole and the two districts I then developed separate concepts as schematic maps containing visualisations of the associated climatological and mobility networks. These concepts were then shaped into several designs in the form of renderings and schematic drawings of floating neighbourhoods, paludiculture, and rigorous greening of the public space. I conclude this vision by emphasising the importance of systemic change to ensure the continued existence of the city of Amsterdam.