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Modernist urbanism under automated mobility scenarios
Transforming modernist areas for spatial quality in Amsterdam city

Reflection

The project 'Modernist urbanism under automated mobility scenarios' aims to explore the possibilities of transformation and valorization of the -usually problematic- public space of areas designed under the modern urban paradigm. The model, 'adopts science to build an understanding of urban problems,' based on statements on future mobility networks' and using the mobility system as a 'unit of scientific measurement'. building a vision of great impact on urban development, planning and the resulting urban fabric, which still today influences the dynamics of urbanization around the world, contributing to the creation of a universal model.

The modern urban model establishes a "deterministic construction of a completely planned urban environment" (Aquilué & Ardura, 2017), where the technocratic approach manages to construct a city model where 'traffic flows and their underlying principles are the primary determinant of the urban form', and where a radical separation with the traditional urban model is established, breaking the basic structure of the urban block, eliminating the street as a social space, and separating motorized traffic and the rest of urban functions, creating an urban space considered over rationalized and unsuccessful.

The current scenario raises possibilities for new relationships between the physical environment and digital systems, where technology plays an increasingly important role in the configuration, understanding and transformation of the urban fabric. Among the different technological variables with a possible disruptive power in the city, Automated mobility, is expected to deeply impact, not only mobility, but also the relationship between the urban fabric and car infrastructure; Considered a 'structuring element of the modern city' (Calabrese, 2004).

In this sense, the project tries to establish parallelisms between the rationalist and highly technocratic vision at the base of the 'failed' modern model, and the new 'seductive' vision of autonomous mobility, presented by companies and international organizations in order to build a more critical vision of urban transformation processes in relation to technological approaches. Allowing for the construction of future scenarios, in which the conjunction between autonomous mobility and the existing territory, presents possibilities for a more optimized use of the territory, and the improvement or revaluation of the existing public space. Therefore, the following question is posed:

How can modern urban areas be transformed to enhance spatial quality under future automated scenarios?

To answer this question, the Nieuw West area of Amsterdam, developed with modernist guidelines under the General Expansion Plan (AUP), has been chosen as a contextual scenario for the project. Moreover, the city is

planning to ban diesel and gasoline cars by the year 2030, and automated mobility is expected to be fully available by the year 2045. This framework allows the creation and implementation of a possible automated mobility a scenario.

To do this, the project develops a method that combines:

• A critical dimension of modern urbanism (Literature);
• A vision of automated mobility; (Literature & spatial analysis)
• Possible solutions established in theories about spatial quality (Literature)
• Development of possible intervention strategies, (Pattern method)
• Tested in the Nieuw West area in Amsterdam (Mapping - Testing pattern method)

To do this, the project is divided into 5 operational phases:

I.   Conceptual framework
That serves as a base for the creation of the following ones. In this we study the three structuring concepts of the project, trying to focus on the possible links that exist between them.
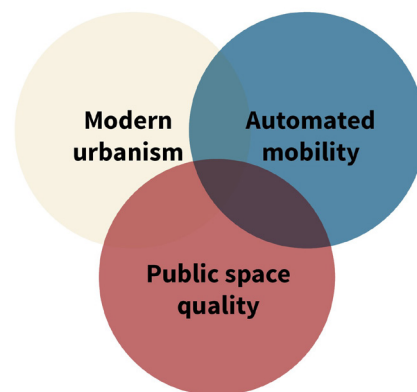
II.   Atlas of modernism as an universal model

In the second phase, an exploration of the 'universal character' of modern urbanism, is made, studying modern representative projects, in different scales and contexts; going from the implementation of the plan, elements of adaptation to the particular context, the critical aspects of the project after implementation, and the possible approaches to urban regeneration implemented in the area.

III.   Toolbox

The Toolbox is the central outcome of the project. it has as a method that makes it possible to operationalize the theoretical dimension of spatial quality, and the merely speculative dimension of the autonomous mobility scenario for Amsterdam, creating a database that structures and operationalize the different concepts about public space quality, studied in the conceptual framework. Problems and solutions are classified in relation to their field of influence throughout key words, that allows to create a first attempt of connection between problems and solutions. Following this process, a pattern system is used to create a more defined connection between the problems and solutions,

adding the spatial-design dimension; each pattern represents a design intervention, for cluster of diverse problems and solutions.

The toolbox is composed of 4 basic elements:

1- A database of problems and solutions;
2- The hashtags, connecting problems and solutions;
3- Systematized version of the Av scenario;
4- The patterns, connecting problems – solutions and the automated mobility scenario through design.

The system of knowledge systemization elaborated in this project, allows to process and use complex concepts and large amounts of information related to them; in this case creating relationships between problems and solutions related to the quality of public space, and making it operational for the design process, and the their subsequent application of design alternatives in the territory. The system is virtually applicable to urban projects in any context, and the design solutions – references obtained will depend on the conceptual framework used and the specific scenario utilized to create the patterns.

However, the current system works on the basis of a relatively limited number of concepts and patterns, limiting the field of action only to the issue of automated mobility, spatial quality and modern urbanism. However, publishing this database Online would increase the potentiality of the tool, becoming more flexible and managed as an open source tool, increasing the possibilities of integration of knowledge, theory, patterns and solutions, referenced to a variety of problems and territories. This way, the tool could become more complex, integrate the knowledge of professionals around the world, and become a useful tool for designers, who seek to develop the first guidelines for a site intervention. Starting from the definition of a problem, one could have access to large amounts of information regarding that problem and the possible existing solutions contained in a network that is constantly being fed by professionals in the area of urbanism and architecture in a collaborative way.

This information obtained using the tool could provide insights for design interventions according to specific issues, and could be the base for the integration of other collaborative systems like, participation processes, bottom up initiatives, or the incorporation of stakeholders or local experts, to further test the applicability of certain solutions in a specific territory.