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The Transforming Dutch City seen through the Infrastructural Changes

Railways and the Case of Amsterdam

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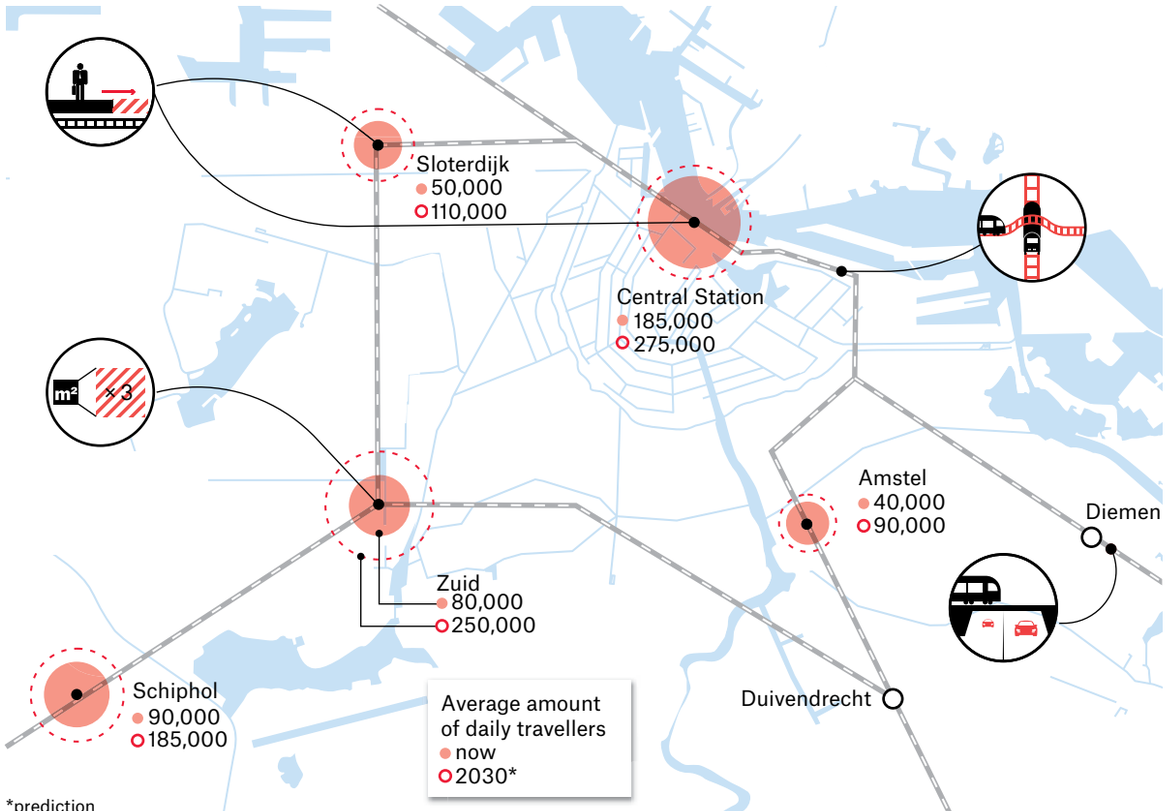
The relation between infrastructures and urban transformations is a complex matter. When we look at the Randstad, this part of the Netherlands is characterized by not only its urban development in the last 150 years, but also by the fact that the territory changed; herein geomorphology, waterways, and railroads play an important role. Since the Middle Ages, a well-developed system of canals is ordering landscape and cities, while roads had shallow relevance. Therefore, it is not a coincidence that the first Dutch railroads were positioned parallel to the canals. Land expropriation was easier there and the railway layout could be kept as straight as possible, saving resources.

Railways and cityscape

The first railroads approached the Dutch cities by different starting and ending points. The relatively small cities were all walled at that time and the railway lines ended outside, near the city gates, avoiding direct confrontation between the historical city and the new means of transportation. The very first Dutch railroad, opened in 1839, was positioned parallel to the existing canal connecting Amsterdam to Haarlem (dating 1631). Next to the railway to Haarlem, the construction of another railway to Utrecht started in 1843. This resulted in two terminus stations, Willemspoort (west) and Weesperpoort (east). The presence of two terminus stations in the capital city caused problems in the following years, especially logistic ones. The main concern was the connection between these lines and the link with the harbor. Discussions went on for years and only with the realization of Amsterdam Central in the 1880s, railways and port had finally interconnected one another. However, this project had a remarkable impact on the cityscape, changing the visual link between the historical center and the IJ water. Yet, among other issues, and next to the station, the realization of long dikes, viaducts, high and partly moveable bridges also created new physical barriers between city and water. Making a jump in time, the rise of vehicular traffic in the 20th century brought along the construction of extra viaducts and bridges parallel to the train tracks, this time needed for the accessibility to the central area of the city by road. Within this context, one drawback to mention is the ever increasing barrier effect between city and water.

Metropolitan railway projects

Meanwhile, from mid 19th century onwards, the railway proved to be a reliable solution for the growing mass transportation demand in expanding cities. In addition, particularly underground railways became good alternatives for an overcrowded, congested city-fabric where land prices were too high to consider building an overland rail network. While London, Paris, Vienna, and Berlin were busy with the realization of metropolitan railway systems, this discussion did not even become an issue in The Netherlands up to almost 1930. Due to their size and relatively small population, the Dutch cities, including Amsterdam, did not urge the introduction of metropolitan railway lines. The only exception worth mentioning is the Plan Zuid project by Berlage, proposing as early as 1915 an additional railway station on the southern edge of the extension of the city, implicitly suggesting the possibility of a bipolar transportation system in the city with central and south stations. Although the realization of Plan Zuid rolled out relatively soon after the project, the Amsterdam South station was only to be realized in 1978.



*prediction
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The average amount of travelers using the Amsterdam train network

The 1935 AUP (Amsterdam General Plan of Expansion) of Van Eesteren clearly pointed out the necessity of connecting the planned outskirts of the city with the center of Amsterdam, including plans for metropolitan railway lines. Due to the Second World War, this topic shifted in time and only in the 1960s the discussion was picked up again. Despite the city had grown considerably, rather than in Amsterdam the plans for metropolitan railway lines became more concrete In Rotterdam. Here the Second World War bombings had destroyed almost the entire city and the framework of reconstruction works opened the opportunity for all kinds of interventions. Therefore, the project and construction of the first metropolitan railway in Rotterdam runs relatively easy as part of the re-building developments of the city; the first metropolitan line, Erasmus line, opened in 1968. In Amsterdam things went differently; not without setbacks in social as well as in economic terms, the first two metropolitan lines opened in 1977. Nevertheless, also due to the many problems caused by the previous metropolitan railway projects, the plan to connect north and south of Amsterdam remained for many years only a wish. In 1999 the central government approved the realization of this line, a decision ratified only in 2002 by the municipality. After many years of political discussions, difficult as well as challenging works and financial setbacks, in July 2018 the new Noord/Zuid line finally opened. This line functions as the link between the north, central station and the new Zuidas business district.

Stations in transition

Amsterdam stations are getting overcrowded. Train passengers' figures are constantly rising and the projections for the next years are indicating a further increase. Central Station, right now counting about 200,000 passengers per day, will grow to 275,000, maybe even 300,000 in 2030. Station Zuid will have an unbelievable increase, from the current 80,000 to 250,000 in 2028. Sloterdijk station will increase from around 50,000 to about 110,000 people per day in 2030. Also in other stations the number of passengers will grow significantly in the next decade. Therefore accessibility, safety, and passenger flow measures are a priority and substantial funding is reserved for transforming and updating the stations. In addition, the new Amsterdam-Zuid station is yet to be realized. Above all these developments, the next years will be crucial for Amsterdam stations. As the city has reached its limits in terms of expansion, and the population will keep growing, the municipality is planning a number of densification projects in the so-called Ring Zone, basically the area between pre- and post-war Amsterdam. For obvious reasons, the most pivotal projects are located in the vicinity of infrastructural nodes and all railway stations will have to be the carriers of these urban transformations. In fact, next to the Zuidas, new mixed-use projects are already being realized at Sloterdijk and Amstel stations. The big question here is whether the spatial interaction between these stations and their neighborhoods will be accompanied by a proper transformation of the public space which is now usually lacking quality. The combination of the increasing number of passengers and the future densifications will require versatile stations in spatial quality tune with their context.

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