

Contemporary Urban Planning – Urban Regeneration, Rotterdam Case Study



D. Sc.

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The article briefly explores the recent, contemporary urban planning history, as well as current urban regeneration practices, in the city of Rotterdam, Netherlands. The main goal of the case study is to gain understanding about contemporary urban planning practices in the city development, particularly finding positive practices, as well as understanding possible shortcomings and failures in order to eliminate them in the future city planning. The research was based on analyses of existing literature and archive materials, as well as in-situ, through observation and photo-documentation, during the research visit in Rotterdam.

Rotterdam, the second city in Netherlands by population size, is located on three rivers Rhine, Meuse and Scheldt, in the vicinity of the North Sea. Therefore, it is the largest and busiest European seaport [1]. Nowadays, it is a multicultural city, home to more than 180 nationalities, with population about 650 thousand people [2]. Although the city has formally been established in the 14th century, its population

started to rise in 19th century, when in 1849 the city counted for about 90 thousand people. In the next hundred years, due to growth of industry the city reached the peak in terms of population, when in 1965 it was inhabited by 731 thousand people. Over the following 20 years the population declined to 555 thousand people, and since then, up to 2020, it has been showing small but steady growth, reaching 650 thousand [3]. Rotterdam is the city well known amongst architects and urban planners, recognizable for its unique and innovative approach to architecture and planning. Life improvements could be considered as part of the tradition, if observed for example Oud's Kiefhoek neighbourhood. Although it was neighbourhood planned and designed as social housing for lower income residents, it offers exemplary humane approach to design, striving to offer residents as much living space with minimal costs. Furthermore, the city is the home for NAI - Netherlands Architecture Institute, which even further cements its status as one of the architecture capitals of the country, but also of the world.

Rotterdam is the city which has undergone massive changes throughout the 19th and 20th century, rapid industrialization and increase in population called for quick action from the professionals in architecture and planning field, but by far the biggest challenge the city has faced was bombing in 1940, during the World War II, when one third of the city was destroyed with just a few historic buildings surviving the

bombing, including the city hall and the main post office [4].

Beginnings of urban renewal and urban regeneration in Rotterdam

Although the reconstruction and regeneration plans were completed already in 1941, it was impossible to immediately carry out everything what had been planned, due to the shortages of building materials, labour, and fuel [5]. In 1946 the "Basic Plan" has been formed, to create new and better city, and has relied on zoning – similar functions would be put together in the groups, it would expand the city infrastructure and networks, but also the plan heavily restricted the housing in the city centre, as it was considered people would have preferred living in the suburbs [6].

However, the government prioritized reconstructing the port and delayed all the other plans [5], which is why many postulates from the plan have not been implemented. After the 1950s, as government announced new industrialization policy, which has brought many immigrants to the city, and considering that statistics estimate that around 80 thousand people have fled the city and lost their homes [4], there was the need for new housing which would solve the population boom which happened. By 1955, therefore, some 30 thousand new homes had been built and economic prosperity and construction activity continued into the 1960s [6]. Due to solving the ongoing problems with the growth of the city, old residential neighbourhoods were going into further decline,



Fig. 1. Kiefhoek housing estate, designed by J.J.P. Oud in 1925 and built between 1928 and 1930. Residential units were intended for less prosperous workers' families. The plan is based on elongated rows of standardized two-storey units. Both urban design and residential unit floorplans have been justifiably greeted with international acclaim; source: author



Fig. 2, fig. 3. Van Nelle Factory, designed by Leendert van der Vlugt of the architectural firm Brinkman & Van der Vlugt in collaboration with constructor Jan Wiebenga, built in 1930. Example of modernist factory complex, now adapted to new functions and UNESCO World Heritage Site since June 2014; source: author



Fig. 4. Community gardens on the roof of the modernist skyscrapers, in the view modernized residential buildings; source: author

suffering from negligence in the 1970s. This was when the urban renewal organization has been formed, and it included local residents, which were to solve the urban problems in their own neighbourhoods, together with the professionals [6, 8]. This indicates that government officials and professionals recognized the importance of citizen participation, in the process of urban change, early on, which resulted in the renovation of more than 25 thousand homes by the end of the 1980s [6]. It is important to notice that since the time of after the bombing, and adopting the new policies for upcoming growth of the cities, Netherlands put a big importance on social housing. Even today Netherlands stands as the leader in the European Union when it comes to proportion of social housing, putting it in the first place with social housing being around 36% of the whole housing stock, and in the bigger cities reaching up to 50% [8]. According to Stouten, Rotterdam, more than other European cities, took measures to combat decay, with high level of citizen participation. The actions taken were decentralized, and priority to modernized or new housing was given to lower income citizens, with unique approach of “building the neighbourhood” techniques.

In relation to the problem of the housing, in the 1980s, the 1985 Inner City Plan was developed, which was supposed to shift direction from tackling economic growth of the city, to making city more liveable, to attract commercial activity and also to attract people to live in the inner city. The plan assumed that there is to be at least 500 new homes per year, but also the urgent need for office floor space for upcoming companies [7]. Thanks to this plan the waterfront area, known as Waterstad, was defined and designated for large scale development. However, perhaps

the most important part of this plan was its proposal for expanding cultural facilities largely to enhance the city’s image [5, 7]. At the same time, the city recognized that realization of the previous Basic Plan had resulted in prioritized infrastructure, which was planned for taking more car traffic, stimulating further growth of the car ownership, exceeding previous estimates. As a result, the city was becoming less functional and congested. Therefore, the local authorities invested in improvement of existing metro system, but also added the new lines, which did solve this problem and with completion of the project in the 1980s, Rotterdam was one of the cities with best public transportation network. In the 1993, there was an extension to the plan, now called 1993–2000 Inner City Plan, and it’s 1993 when Stouten argues that there was an end to urban renewal which started in 1970s, as he writes that this was the end of ‘building for neighbourhood’ idea [8]. However, the main objective of the Inner-City Plan seemed to remain the same – increasing the urban density, creating what was called ‘the compact city’ by encouraging housing and incorporating an integrated mix of uses [5]. The focus shifted to Kop van Zuid area, which was located South of the river, on the opposite side on newly developed Waterstad area, and had been home for port-related uses that had become obsolete since [5]. It was the key project which was supposed to connect two sides of the river and aiming at the increased inner-city density. The area was planned to provide 60 thousand square meters of new office space, together with 5.5 thousand apartments, 60 thousand square meters of retail space, hotels and a convention centre [9]. Although it mainly developed with new architecture, in form of contemporary skyscrapers, some of the original

structures were kept, with the aim to preserve the part of the historical significance of the place and genius loci.

The area was connected with the city via the Erasmus bridge, designed by Ben Van Berkel, and nowadays recognised as an important landmark. What is more, a metro station was provided to improve accessibility. Moreover, the project aimed to provide social benefits for the residents of surrounding districts in line with the City’s “social renewal” approach to regeneration [7, 10], which attempted to link the economic and social welfare benefits of redevelopment projects [5, 6].

In addition to aspiring to being liveable city, it is important to remember that many of the spaces in Rotterdam, while providing the public (or in some cases semi-public) space, still function as industrial places and economical hubs, the Rotterdam port, unlike for example London port, is still extremely significant for the city economy, where the London port for example holds just one quarter of the containers that Rotterdam does [10]. Although the city puts importance on industrial and economic growth, it still does recognize the importance of the public spaces in the city. The 1985 plan did aspire to create the compact city for people to work and live and introduced many changes to public spaces in the city, however, these changes proved to be inadequate [12]. Therefore, the 1993 plan introduced yet another change to public space, opting to make it better, to invite the new investments and showcase Rotterdam as international centre, which put high importance on public spaces being clean, safe and high quality. As the society continuously changes and learns from the past, the ongoing need for upgrading city spaces continues, the city continued working on the new plan 2008–2020, aiming to





Fig. 5. Contrast between historical structures and new layer of contemporary architecture at Kop van Zuid area; source: author

create a city lounge: a city centre that functions as a place for inhabitants, companies, and visitors to meet, spend time, and be entertained. However, while some of the projects from the city plan were completed, the inner city centre area is still under construction. One of the finished projects in the city centre area is Beurstraverse, 300-metre-long sunken retail passage, contains 60 thousand square meters of retail space divided among 95 shops, as well as 450 parking spaces and 106 apartments. The project, opened in 1996, is an example of a far-reaching cooperation between the local government and private parties including ING Bank and Focas, a pension fund of the Dutch retail conglomerate C&A [12]. The decision to split the funds, city taking the private investment, but staying in the project proved to be crucial, as it had been recognized that leaving the whole



Fig. 8., fig. 9. Beurstraverse, Pedestrian zone on two levels, Rotterdam City Centre; source: author



Fig. 6., fig. 7. Waterfront development, on image O6 Erasmus Bridge, on both images visible new landmark, called De Rotterdam, designed by Rem Koolhaas' OMA; source: author

decision to the private sector could damage the city and life of its residents, instead of creating the better space.

Therefore, the importance of city continuing to be the main stakeholder in the project was crucial as Bergenhenegouwen, G. and Van Weesep state: "Thus, the argument ran, the city would have to play an important and permanent role in this project; only then could the area's envisioned contribution to the regeneration of the downtown commercial centre be safeguarded..." [13]. The local authorities even opened the metro station there, which would be available for everybody. However, they were aware of the lack of funds it would have in order to fully execute this project, therefore explaining the decision behind public-private partnership. The aspect of housing was also vital for success, as well as bringing real estate



developers as investors. The idea was that residents living there would take care of the space, and the area would stay lively also outside of retail working hours. For developers, creating a properly functioning public space was vital, as they also recognized that good spaces could increase their revenue [12]. However, inviting the private investors as a party in public space regeneration and development does have risks. In some cases, it can create an access restriction, turning public space into semi-public space, with controlling of the itinerary when the space is opened for public, restricting different sorts of citizen freedoms etc. Some of this did occur with Beurstraverse, as its users were put under some restrictions: no alcoholic beverages, no street vendors, no bicycles, no loitering etc. [12]. However, the space was received well by local residents as well as tourists, which explains appearance of the similar type of spaces later on in the rest of the city. According to McCarthy [5], this type of entrepreneurialism appears also in the other parts of the city, with big importance in the public-private partnership, which opens more possibilities for regeneration. However, Lawton and Van Melik [12] argue that example of Rotterdam, comparing to other Dutch cities is exceptional, as private sector usually plays more limited role in the redevelopment, but they praise the role of public private partnerships in Rotterdam.

The reinventing the image of the city was another important decision in revitalisation of Rotterdam. Although the city is commonly perceived as an industrial hub, nowadays in general opinion much more can be said about Rotterdam, where most of the people would probably recognize the city based on the images of its particular architecture, Erasmus Bridge being certainly one of the wide-known



Fig. 10. View at Kop van Zuid district; source: author



Fig. 11., fig. 12. Regeneration of brownfield areas at Kop van Zuid. IMG 11 shows the adaptation and redevelopment of post-industrial object to new, mixed use – both commercial and residential function, project design by MEI architects. IMG 12 and 13 show construction sites and new developments in the area at the moment of photography, August 2023; source: author



landmarks. However, the bridge is not the only landmark. The city has consciously created the canvas for landmark architecture structures, and has invited art, festivals and culture in many other forms, both for brining tourists but also for upgrading the life of the residents. Kop van Zuid area can also serve as an example of this approach.

Once a brownfield, it was redeveloped with the high-tech architecture. Although many scholars suggest that flagship and landmark architecture may have a negative impact on cities, some of the research shows opposite outcomes. The latter has been proved with the case of Kop van Zuid, where residents from different neighbourhoods of Rotterdam, have had a positive response to this sort of development [14].

Rotterdam, however, did not have an easy job reinventing the image of the city. It was lacking in offering attractive activities such as museums, events etc., as compared with the capital city of Amsterdam. Rotterdam therefore decided to project an image of a modern art city, with its contemporary architecture as the main tool [15]. The strategy, in relation to cultural tourism also included the opening of the National Architecture Museum, as well as the Kunsthall. The development of the Museum Quarter was supported with artistic activities in the nearby area of Witte de With street [16]. In their survey, on 12 thousand participants, Hitters and Richards prove that Rotterdammers, in percentage of 84.9% gave city of Rotterdam an attribute of city of modern architecture, Dutch visitors did it with percentage of 88%, while tourists primarily remembered water in the city (68%), and 66.4% of them remembered the modern architecture. The city continues its regeneration efforts, with

introducing more of the landmark architecture, other unexpected, experimental and sometimes controversial solutions, while at the same time aiming at sustainability as the main future approach. For example, for all new buildings in Rotterdam, sustainability has become, from demand, a standard. With improvements in public transport infrastructure, the city succeeded in eliminating so much car traffic, that one part of the city highway became so obsolete, that it has been decided to turn it into bicycle park [17].

Conclusion

Success of Rotterdam's efforts in urban regeneration has been based on a number of co-existing mutually supportive strategies and approaches, such as: learning from the history, introducing citizen participation early on in the process and often aiming for experimental and sometimes extreme solutions, while carefully introducing private sector funds in the process, all of this while understanding that the essence of the city are its public spaces. The introduction of high quality new layer of contemporary architecture, which serves not only as tourist attraction, but is beneficial for the residents, not only eliminates the possibility of having it becoming white elephant, but is also important both for creating the image of the city, but also for wider scale urban regeneration. Investment in social and affordable housing, as well as controlling the private investments, proves to be valuable for the success of urban regeneration and attempt of eliminating negative social phenomena. This however does not mean that side effects of urban regeneration haven't appeared in the process of urban regeneration of Rotterdam. However, the unique approach to city governance, high

level of public participation and carefully crafted public-private partnerships clearly lead to success in Rotterdam urban regeneration, providing valuable lesson and model for many other cities dealing with regeneration and city change.

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Fig. 13. Newest addition to Museum Island architecture, unconventional museum DEPOT, designed by MVRDV, surely to become one of the city landmarks; source: author



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DOI: 10.5604/01.3001.0054.0128

PRAWIDŁOWY SPOSÓB CYTOWANIA

Nevescanin Antonio, 2023, *Contemporary Urban Planning – Urban Regeneration, Rotterdam Case Study*, „Builder” 12 (317).

DOI: 10.5604/01.3001.0054.0128

Abstract: The article briefly explores the recent, contemporary urban planning history, as well as current urban regeneration practices, in the city of Rotterdam, Netherlands. The main goal of the case study is to gain understanding about contemporary urban planning practices in the city development, particularly finding positive practices in the process of urban regeneration which could be adapted to the other cities. The research was based on analyses of existing literature and archive materials, as well as in-situ, through observation and photo-documentation, during the research visit in Rotterdam. The article finds that success of urban regeneration practices in Rotterdam is based on a number of co-existing mutually supportive strategies, holistic and interdisciplinary approach to the city planning, which is focused not only on the architectural cityscape, but also involves the residents and other stakeholders.

Keywords: urban regeneration, Rotterdam, urban planning, architecture

Streszczenie: NOWOCZESNA URBANISTYKA – STUDIUM PRZYPADKU REWITALIZACJI W ROTTERDAMIE. W artykule pokrótce omówiono współczesną historię planowania urbanistycznego, a także obecne praktyki rewitalizacji w Rotterdamie, w Holandii. Głównym celem studium przypadku jest uzyskanie zrozumienia współczesnych praktyk urbanistycznych w rozwoju miasta, w szczególności odnalezienie praktyk pozytywnych, które mogłyby być adaptowane do innych miast. Badania przeprowadzono w oparciu o analizy istniejącej literatury i materiałów archiwalnych, a także in situ, poprzez obserwację i fotodokumentację, podczas pobytu badawczego w Rotterdamie. W artykule stwierdzono, że sukces praktyk rewitalizacji miast w Rotterdamie opiera się na szeregu współistniejących, wzajemnie wspierających się strategii, holistycznym i interdyscyplinarnym podejściu do planowania miasta, które koncentruje się nie tylko na architektonicznym krajobrazie miejskim, ale także angażuje mieszkańców i innych interesariuszy. **Słowa kluczowe:** rewitalizacja, Rotterdam, urbanistyka, architektura