



Users' experience in the redevelopment of the Groningen railway station area



Bachelor's thesis Spatial Planning and Design

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05-07-2024

Colophon

Title: Users' experience in the redevelopment of the Groningen railway station area
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Date: 05-07-2024
Word count: 6141

Abstract

This report aims to study to what extent the users' experience in the redevelopment of the Groningen railway station area are being considered in the new project plans. Currently, the municipality of Groningen is developing the railway station area and aims to enhance this area in terms of vibrancy and increase the overall user experience for all kinds of users. However, the project is of large size making it a complex matter. By conducting on-site observations, policy analyses, and semi-structured interviews, the research paper provides an analysis of the users' experiences that have been considered in these plans. This, together with a literature review and theoretical framework, results in the fact that users are often addressed in general and not group specific. In addition, the current method of participation attracts residents but may not be representative for the users. Planners need to recognize that residents are not the only users of the area.

Key words:

User experience, train station areas, Transit-Oriented Development, participation

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1. Introduction

1.1. Background

In recent decades, there has been a significant shift from car-centric transportation planning towards more sustainable modes of transportation (Banister, 2008). This transition has involved substantial efforts to promote public transportation and develop mobility hubs (Bertolini & Spit, 1998). Key concepts such as transit-oriented development (TOD) and intermodal transportation hubs have been implemented in various locations, emphasizing the integration of different transport modes to improve connectivity and accessibility (Cervero et al., 2004).

Governments at multiple levels are actively promoting public transport, leading to substantial investments in rail and other public transport infrastructure projects (Pojani & Stead, 2015). In Western Europe, these efforts have resulted in a significant increase in public transport passenger kilometers and numbers over the years (Eurostat, 2022). Extensive research has been conducted on travel mode choice (Shiftan et al., 2008), travel satisfaction (Friman et al., 2017), and travel behavior (Gärling et al., 1998), particularly in relation to railway connections and traffic. These factors are crucial when planning investments in new trains, connections, and services, as well as when renewing railway stations to accommodate growing user numbers.

Railway stations serve as critical nodes within the transportation network, facilitating passenger movement between different transport modes and acting as gateways to urban centers (Bertolini, 1999). Understanding the dynamics within railway station zones and the satisfaction levels of passengers using these facilities could help enhance the overall functioning of the transportation system and influencing travel behavior. This understanding is vital for advancing the shift towards a higher proportion of sustainable transportation modes (Banister, 2008).

The renewal of the Groningen railway station exemplifies broader transportation trends. The project aims to enhance the city's transportation infrastructure and promote sustainable mobility. It includes the physical reconstruction of the station and the revitalization of the surrounding area to create a more integrated and user-friendly environment for commuters and other users.

As Groningen undergoes this transformation, important questions arise regarding how user experiences have been considered in the planning and execution of the renewal project. It is of importance to investigate how the needs and preferences of commuters and other users are being addressed in the design of the new station and its surrounding area, and how user feedback has been incorporated into the decision-making process.

1.2. Research problem

This research aims to find out to what extent users' experiences have been considered in the renewal of the Groningen railway zone, what has been taken into account and what has been disregarded.

1.2.1. Research questions

This research adopts the following research question:

“To what extent have users' experiences been considered in the renewal of the Groningen railway zone?”

Consequently, the questions that follow from the main research question are:

1. What are key components of user experience in the context of railway stations and transportation hubs?
2. How do improvements in user experience influence usage patterns of public transportation and travel behavior?
3. What specific aspects of the Groningen railway zone renewal project are intended to enhance user experience?
4. To what extent do the users' experiences meet the considerations of the renewal of the Groningen railway station?

1.2.2. Structure

In this study, the first and second sub-question are answered by means of a review of the existing literature. They aim to distinguish the different components of user experience in the context of the railway zone and how they influence usage of public transportation and travel behavior. Firstly, it is important to define the railway zone. Secondly, a list of different users of this zone can be created. Thirdly, the influence of improved user experience on travel behavior and the use of public transport is assessed. Lastly, the complexity of spatial projects of this kind are explained.

Based on these results, a conceptual model will be developed that serves a tool for the data inquiry and analysis. With this data, the third and fourth sub-question will be answered by means of observations, document analysis and in-depth interview.

By delving into these questions, we can gain valuable insights into the effectiveness of the renewal project in meeting the needs of its users. Therefore, the renewal of the Groningen railway station zone serves as a typical case study to gain valuable lessons for similar projects.

2. Theoretical framework

Before we elaborate about the plans for the railway station area, it is important to delineate a definition about the railway station zone and its users. This will be defined with help of existing literature.

2.1. Definition Railway Zone

The railway zone is more than just the platform area where passengers wait for their trains. The Dutch Railways (NS) distinguishes the railway zone into different zones (Kuenen, 2008):

1) Station complex / Transfer area

This area includes the railway tracks, platforms, canopies, and station building. It is mostly being used by passengers who are changing trains. This concept is the most concrete of its own.

2) Station location & Intermodal facilities

This area consists of the station complex together with all the direct surrounding facilities that are being used for train travel-related functions. These are functions for the transportation before and after train travels. This includes:

- Station complex
- The area in front of the station building
- Facilities for other modes of transport (bus station, bicycle parking, bicycle renting, car parking, taxi stands)
- Other amenities (restaurants, shops, information desk)

3) Station area

This area has not been specified with concrete boundaries but defined where the station complex is the dominant center with everything surrounding this as a logically coherent whole. The station area is at least equal to the station location but often greater. The area is often taken into account in new area development projects.

- Infrastructure improving the station's accessibility
- The area influences the quality of the station location (architecture, greenery, sightlines, open spaces, etc.)
- The area is characterized by its multifunctional purposes (housing, shopping, leisure, offices, etc.)
- This area is often not owned by the railway services and developments require more (political) support

4) Surrounding real estate

This area is often not included in the railway station zone because it does not directly influence the user experience and is located too far away for a logical connection with the railway station. However, this area can be influenced unintentionally as a result of major developments in the station area.

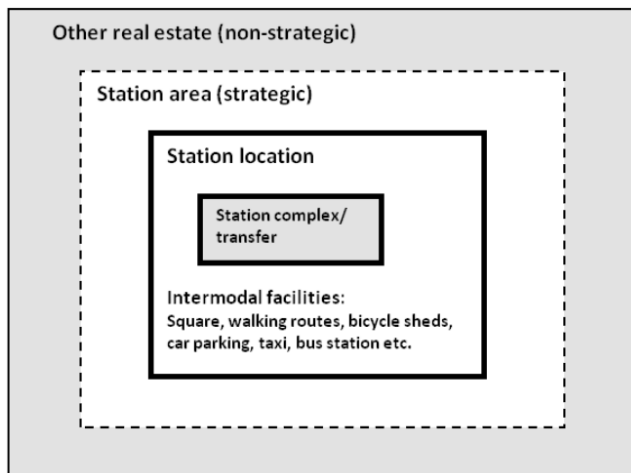


Figure: Spatial definition of railway station zones; source: Adapted from Kuenen (2008)

Bertolini and Spit (1998) define the station area as ‘all the built and open spaces, together with the activities they host, contained within the perimeter designed by a “walkable radius” centered on the railway station building, as amended to take account of case-specific physical-psychological, functional-historical and development features. This area matters and influences the perceived quality of space and its users’ experiences. Therefore, this thesis focuses on the station area as a railway zone.

2.2. Various types of users of railway stations

Users of railway stations include all individuals who utilize the services provided at the transport hub. According to Di Ciommo, Monzon, and Barberan (2016), there is a distinction between traveling and non-traveling users, although these categories can overlap as different forms of use may be combined. Traveling users primarily engage with the transport hub for transportation purposes, such as connecting to the transport system or switching modes of transport. In contrast, non-traveling users utilize the hub for various activities that are either commercial, like shopping, or non-commercial, such as using public spaces or engaging in activities that contribute to the hub's social and cultural functions.

Further differentiation among the users of railway stations reveals a spectrum of needs and behaviors that shape their interactions with the transport hub. Traveling users, as identified by Di Ciommo, Monzon, and Barberan (2016), primarily focus on the functionality of the station for transportation purposes, valuing efficient navigation, timely information, and connectivity to various modes of transport (Bertolini & Spit, 1998). This group includes daily commuters, long-distance travelers, and tourists, who prioritize aspects such as punctuality, safety, and accessibility (Givoni & Rietveld, 2007).

In contrast, non-traveling users often interact with railway stations as destinations in themselves. This category includes individuals engaging in commercial activities, such as shopping and dining, and those participating in non-commercial activities like socializing or enjoying cultural and recreational amenities (Pitsiava-Latinopoulou et al., 2012). Railway stations, particularly in urban areas, are increasingly designed to cater to these diverse needs, transforming into multifunctional spaces that blend transport with retail and public services (Bertolini, 1999). Additionally, railway station zones often function as public spaces and serve as gateways to the city, offering a welcoming point of entry and enhancing the urban

experience (Loukaitou-Sideris, 2013; Peters & Novy, 2012). Furthermore, the integration of residential and office spaces within or near railway stations promotes a live-work environment, providing convenience and enhancing the quality of life for those who live and work in the area (Dittmar & Ohland, 2004; Curtis et al., 2009).

The overlapping nature of these user categories is evident in the modern transport hub's role as both a transit point and a community space. For instance, while a commuter might primarily use the station for travel, they may also engage in shopping or dining during their journey, blurring the lines between traveling and non-traveling use (Martínez & Viegas, 2013). This multifunctionality necessitates a holistic approach to station design and management, ensuring that the infrastructure meets the varied expectations of all users (Carmona et al., 2003).

2.3. Increased user experience and usage of public transport

Increased user experience at railway stations significantly influences the usage of public transportation and overall travel behavior. A well-designed and efficiently managed station can enhance the convenience and attractiveness of using public transport, thereby encouraging more people to choose trains over other modes of transport. Improved amenities, better accessibility, and enhanced safety features contribute to a more positive perception of public transportation, making it a preferred choice for daily commuters, tourists, and other travelers (Givoni & Rietveld, 2007; Loukaitou-Sideris, 2013).

When users find railway stations easy to navigate, with clear signage and seamless connections to other transport modes, their willingness to use public transport increases. Studies have shown that factors such as reduced waiting times, reliable schedules, and the availability of amenities like shops and cafes can significantly impact passengers' satisfaction and their decision to use public transportation regularly (Van Hagen, 2011; Ettema et al., 2012). Moreover, stations that function as vibrant public spaces and offer various services can foster a sense of community and place-making, further incentivizing people to use public transport not just for travel, but also for social and recreational purposes (Peters & Novy, 2012; Bertolini, 1999).

Additionally, integrating residential and commercial spaces within or near railway stations can promote sustainable urban development by reducing the need for car travel and encouraging public transport usage. This aligns with transit-oriented development principles, which have been shown to reduce car dependency and promote more sustainable travel behavior (Dittmar & Ohland, 2004; Curtis et al., 2009). Thus, enhancing user experience at railway stations not only improves individual travel satisfaction but also supports broader goals of increasing public transport usage and fostering sustainable urban mobility (Carmona et al., 2003).

2.4. Complexity in spatial projects

Spatial projects, particularly those involving railway stations, are inherently complex due to their size and the diverse range of stakeholders, actors, and users involved. According to Kuenen (2008), the Dutch Railways (NS) divide the railway zone into several areas (see section 4.1), where each of these areas brings unique challenges and demands careful coordination among numerous parties.

The station complex or transfer area primarily serves passengers in transit, focusing on efficient navigation, safety, and timely information (Bertolini & Spit, 1998). This area is characterized by its high concentration of travelers, necessitating streamlined design and operations to handle large volumes of passengers effectively.

The station location and intermodal facilities extend the focus to include other modes of transport such as buses, bicycles, and taxis, as well as amenities like shops and restaurants (Kuenen, 2008). This zone requires collaboration between transport operators, local businesses, and urban planners to ensure smooth intermodal transitions and a pleasant user experience.

The broader station area, often encompassing surrounding infrastructure and public spaces, plays a multifunctional role, blending transport functions with residential, commercial, and leisure activities (Curtis et al., 2009). This area is typically larger and more fluid in its boundaries, involving more stakeholders such as municipal authorities, real estate developers, and community groups. The development and management of this zone are complex, requiring a holistic approach to urban planning and significant political support (Carmona et al., 2003).

Surrounding real estate, while not directly part of the railway station zone, can have an impact on the overall user experience and functionality of the station area. Development in this zone needs to be integrated with the transport hub to support sustainable urban growth and avoid congestion (Bertolini, 1999).

As the area expands, it attracts more users and stakeholders, further increasing the complexity of the project. The multiplicity of stakeholders – from government agencies and transport operators to private businesses and local communities – necessitates extensive coordination and collaboration. Each group has its own interests and priorities, making consensus-building and effective communication crucial for the successful implementation of spatial projects (Kuenen, 2008; Bertolini & Spit, 1998).

This complexity underscores the importance of inclusive planning processes that consider the needs and inputs of all users, stimulating a comprehensive approach to developing efficient, accessible, and vibrant railway zones.

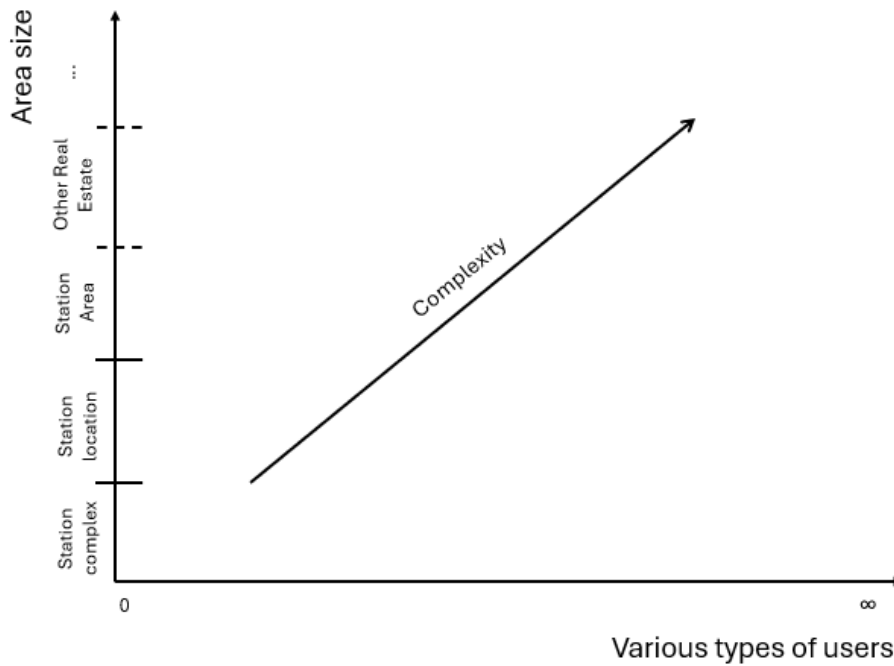


Figure 1: Larger area size and variety of users increase the level of complexity; source made by author

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2.5. Conceptual model

To investigate the perceived quality in alignment with the new plans for the railway station zone, the conceptual model builds on existing literature, indicating that the demarcation of the railway station zone affects the number and types of users. These users can be broadly categorized into travelers and non-travelers, each engaging in different or overlapping activities and having different experiences within the area (Di Ciommo et al., 2016; Bertolini & Spit, 1998).

Renewal plans for railway stations, regardless of whether they target specific user groups, inevitably impact the perceived quality for all users. This influence comes from changes in infrastructure, amenities, and services that affect both functional needs and experiential aspects of the zone (Carmona et al., 2003; Curtis et al., 2009). Understanding these dynamics is important for ensuring that the redevelopment meets the needs of its users and enhances the overall perceived quality of the area (Friman et al., 2017).

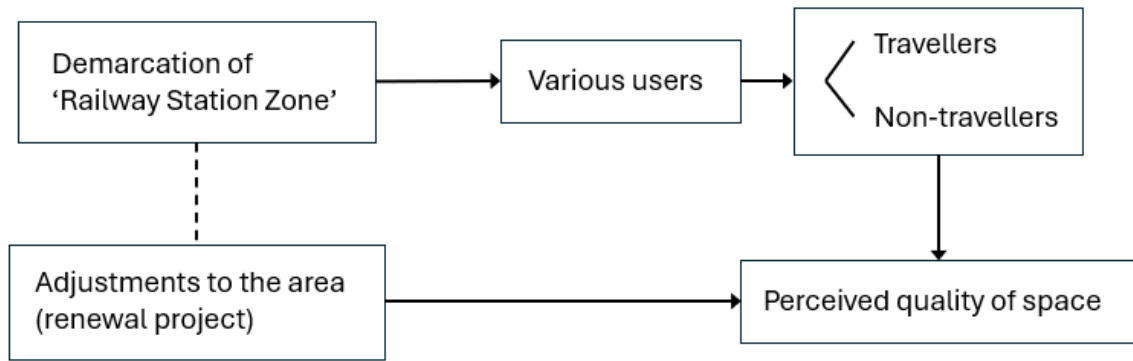


Figure 2: Conceptual model explaining how perceived quality of the railway station zone can be investigated. Source: made by author

The conceptual model serves as a tool for empirical research, helps to structure data acquired in this research and delineates the study that is done in this thesis.

3. Methodology

In the following section, the chosen method for this research will be discussed, including an explanation of the choice of the case study. In addition, this section elaborates on the importance of ethics in qualitative research.

3.1. Research strategy

This research is structured around multiple methods, primarily studying a typical case focusing on the interaction of the open public space and its users. The renewal of the railway station zone of Groningen is chosen as single-case study. One single case offers room to focus on depth rather than breadth. The Groningen railway station zone is currently under construction and data is available for the researcher. Groningen is a medium-large railway station with likely a variety zones within the railway area as defined in section 3.1 and a larger number of users as defined in section 3.2.

The renewal project of the Groningen railway station zone has major impact on the city, but also on national level. In addition, the Groningen railway station zone serves as a typical case and is likely useful for other similar projects in medium-large sized cities and beyond. Therefore, the renewal of the Groningen railway station serves as a suitable case-study.

3.2. Data collection & analysis

To arrive at an answer for the research question, three different qualitative research methods are used in this study: on-site observations, an expert interview, and document analysis. Qualitative research methods are used to gain in-depth and holistic understanding of the matter.

Firstly, these qualitative methods provide rich and detailed data which enables investigating narratives and descriptions that quantitative methods might miss (Denzin & Lincoln, 2018). Furthermore, they are flexible and can be adapted as the study progresses. This allows researchers to explore new areas of interest that might emerge during the research process, making it possible to follow leads and gather data that might be missed otherwise with other methodologies (Merriam & Tisdell, 2016). In addition, using multiple qualitative data sources allows for triangulation, which can enhance credibility and validity of the research findings. Information can be cross verified between the various methods and provides a more comprehensive understanding of the research problem (Denzin & Lincoln, 2018).

On-site observations of the case study have been conducted in the form of a tour and thorough explanation of the project on the construction site by the environmental manager of the construction company (Strukton). This project visit has been important to comprehend the concrete developments regarding the new railway station. An in-depth expert interview has been organized with the Project-Secretary of the renewal project from the municipality of Groningen. This interview was semi-structured with a set of open questions with keeping the opportunity for the researcher to explore particular themes or responses further. This conversation contributed to a better understanding of the objectives and the role of the municipality. Additionally, various policy documents and strategic agendas have been researched to further understand the municipality's objectives and strategy.

The data that has been collected will be assessed in the results. Conversations are recorded, transcribed and elaborated in this research. In the elaboration, there has been a focus on terms like 'users', 'travelers', 'experience' and description of the current and new place. Quotes from the conversations are used to underline the data that is being presented.

3.3. Research ethics

Understanding research ethics of big importance. When conducting research that involves semi-structured interviews and external participation, it is essential to adhere to ethical guidelines and requirement to ensure the protection and welfare of the participants (Kang & Hwang, 2021). All participants involved in this research have participate voluntarily which should be appreciated and respected well.

The participants in this research are communicated their personal rights during and after the interview. At any time, they have the option to withdraw from the inquiry without an explicit reason. Moreover, they have explicitly been asked to give permission for recording the interview, which are only used for the purpose of this research and only accessible by the researcher and supervisor. In consultation with the participants, interview reports can be read back on request. In addition, they have been interested in the results and the final version of this report, which they will receive after the supervisor's assessment.

4. Results

4.1. Introduction to the case study

In this study, the renewal plans of the Groningen railway station zone will be taken as a case study. The municipality of Groningen has the ambition to redevelop and improve its main railway station and the surrounding area to become an urban center of the city. They recognize that the previous spatial arrangement and structure does not fit the city they envisage and therefore see the urgent need for redevelopment.

The railway station serves as the busiest transportation hub in the Northern-Netherlands with more than 600 trains, 1800 buses and 95.000 travelers every day that stay (either short or longer time of period) around the railway station. Since the city is still growing, expected is that these numbers will continue to grow as well.

According to the municipality of Groningen, the railway station zone, prior to its renewal plans, faces several spatial and functional challenges:

- 1) Terminal station: Groningen railway station serves as a terminal station, meaning trains could not pass through and must reverse direction. This setup limited the operational efficiency and flexibility of the station. In addition, this arrangement restricts the potential for through services and reduces regional connectivity within the province of Groningen and decreases overall passenger experience.
- 2) Fragmented spaces: The spatial layout around the station is disjointed with various parts of the area serving different functions without a cohesive design. The railway emplacement functioned unintentionally as a barrier between the southern side of the city and the city center. Moreover, the roads connecting the railway station are heavily dominated by motorized traffic which forms another spatial barrier between the railway station and the city center. The fragmentation of spaces makes it difficult for pedestrians and cyclists to navigate through the space efficiently.
- 3) Traffic congestions: The station area is primarily designed to facilitate vehicle movement. Over the years, the number of passengers has increased, resulting in traffic congestion. In particular, the north side of the station is overwhelmed by cars and buses, making it less accessible and pedestrian friendly.
- 4) Limited accessibility: With a shattered design of the place, the existing infrastructure of the railway station zone fails to provide sufficiently accessible paths for disabled and elderly people. This lack of cohesive planning hinders mobility for these groups and decreases their safety and independence.
- 5) Underutilized public spaces: Public spaces around the station are underutilized and lack vibrancy that is needed to make the area a more dynamic urban hub. The presence of traffic congestion, large office buildings, the concrete 'Stadsbalkon' and the lack of green contribute to the sterile and uninviting atmosphere. This negative atmosphere

discourages people from gathering, having social interaction and decreases the quality of urban life.

4.2. Renewal plans – Demarcation of the Railway Station Zone

The renewal plans of the municipality of Groningen have been split up in different sections and timeframes. While some parts are already under construction, other areas are still in the design phase. The municipality has delineated the railway station zone and divided it into various sections and separate projects.

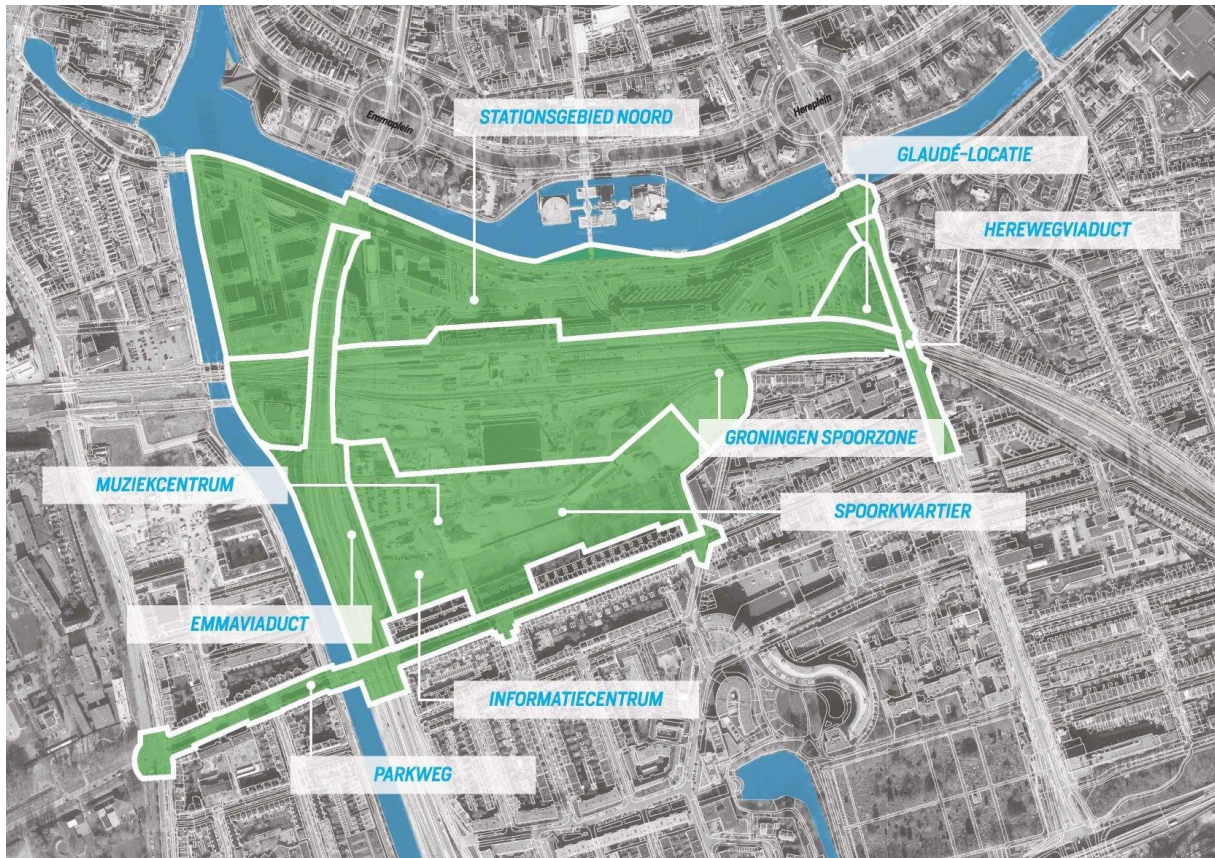


Figure 3: Demarcation of the railway station zone in the renewal project, Source: Gemeente Groningen

The 'Groningen Spoorzone' encompasses the station building, platforms, and rails where trains arrive and depart. This area corresponds to the *station complex/transfer* area as defined by Kuenen (2008) and is primarily designated for travel purposes.

Surrounding areas such as 'Stationsgebied Noord' and 'Spoorkwartier' include the station location area, featuring squares, shops, walking and cycling routes into the station, and facilities for taxis and buses. These areas facilitate the users' needs in the transition to and from the station.

The municipality of Groningen considers all these zones together as the station area, incorporating infrastructure for the station's accessibility and public spaces that enhance the quality of the station location. However, parts of the surrounding real estate, such as the

'Parkweg' area, are also included in this broader station area. These parts may not directly influence the immediate experience of the railway station but are integral to the overall urban context.

The extensive size of the area and the different zones result in a high number of users and a wide variety of user groups. Consequently, more stakeholders are involved in the project, thereby increasing its complexity.

4.3. Renewal plans – Identifying the users

In the context of the Groningen railway station renewal, the municipality believes it has a solid understanding of the area's users, their needs and their preferences. However, the municipality's approach to identify users has generally been broad and no differentiation has been made among various user groups.

The primary method of gathering user input has been through participative strategies. The municipality has opened an on-site information center open to inform visitors interested and want to gain a better understanding of the project. Additionally, various brainstorm evenings have been organized on specific topics, such as open spaces, accessibility, and connectivity. These events provide citizens with the opportunity to share their experiences and provide feedback on the proposed plans. Especially public space, green and accessibility are topics that can be well-discussed with citizens.

Despite these efforts, the influence of participants is limited. The municipality sets clear boundaries on which aspects are open to public input and which decisions are predetermined and not open to suggestion. Predominantly residents from the immediate neighborhood have engaged in these opportunities, often older men sharing their personal situations and how the municipality's plans could affect these.

'Participatie draait heel erg om dat zij (burgers) weten wat hun rol is. Je kunt niet van hun verwachten dat ze bij het ontwikkelen van kantoren erg kunnen meepraten over de winstgevendheid ervan is, hoe de parkeernormen zijn, [...]. Dat wil niet en daar zijn andere specialisten full-time mee bezig.'

'Participation is very much about them (citizens) knowing what their role is. You cannot expect them to have a significant say in the development of offices regarding their profitability, how the parking standards are, [...]. That is not possible and other specialists are working on that full-time.'

There has been little variety in the types of people that have been informed through these methods and who have participated in brainstorm sessions and discussions. This narrow engagement suggests that other means of participation and communication may be necessary to capture a broader and more diverse range of perspectives.

4.4. Renewal plans – Adjustments to the area

The Groningen railway station is undergoing a significant transformation aimed at addressing its spatial challenges and enhancing the user experience for both travelers and non-travelers. The renewal plans are comprehensive, focusing on creating a more integrated, accessible, and vibrant station area that serves as a multimodal transportation hub and a lively urban center.

Firstly, the train station will undergo aesthetic enhancements to create a more welcoming and visually pleasing environment. These improvements will include modern architectural elements and the restoration of historic features, ensuring that the station is both functional and beautiful. The old station building will be used as main entrance again and utilized by travelers that need to reach the platforms.

Secondly, the station will transition from a terminal station to a run-through station which will enhance the flow of train traffic and improving efficiency of the rail network. This will also be beneficial for regional passenger and can eliminate transfer between various train connections. In addition, this opens the possibility and capacity for new connections, both regional, national and international.

'Ik denk dat het voor de reiziger zelf prettiger wordt; sporen worden efficiënter ingedeeld, kunnen meer treinen gaan rijden in de toekomst, men kan van Winschoten naar Leeuwarden rijden. Dat kun nu niet omdat Groningen een kopstation is. Dat is voor de reiziger ook echt een pluspunt'

"I think it will be more pleasant for the traveler themselves; tracks will be allocated more efficiently, more trains can run in the future, one can travel from Winschoten to Leeuwarden. That is not possible now because Groningen is a terminus. That is really a plus for the traveler."

Thirdly, the connection to other modes of transport (bus transport, cycling, walking) will be improved where the new bus station will become part of the new railway station design and it will be possible to directly access the bus platform from the passenger tunnel under the station. Also, the new bus station design will create less chaos and congestion, faster bus connections and result in lower costs for bus companies. In addition, a new bicycle parking will be situated underneath the passenger tunnel, closely connected to the trains.

All these components will enhance the quality of the transportation function of the railway station.

The plans of the municipality of Groningen do not only redevelop the train station but will also result in major changes for the surrounding area, the railway station zone. These changes will not only affect the experience of travelers, but also those of non-travelers or travelers that have finished traveling.

The renewal plans will include entrances from both the north and south side of the station. An underpass for both pedestrians and cyclists will be created which provides easier access. This integrates both sides of the station more into an urban environment and eliminates the station as a barrier between different parts of the city. Instead, it will serve as a central, open hub that connects various parts of Groningen, enhancing urban cohesion and accessibility.

'Ik denk dat de beleving van het station erop vooruitgaat. Straks heb je de tunnel waarmee je het perron op komt en wordt de route van de mensen heel anders, dat je door het stationsgebouw heen gaat, maar dat je ook onder het gebouw door kan fietsen en je weg naar het zuiden kan vervolgen. Hierdoor wordt het een boel bereikbaar, zeker het zuiden van het station. Ik denk dat bereikbaarheid erop vooruit gaat.'

"I think the experience of the station will improve. Soon you will have the tunnel that takes you to the platform and the route of the people will be very different, going through the station building, but also being able to cycle under the building and continue your way to the south. This will make it much more accessible, especially the south of the station. I think accessibility will improve."

The surrounding area will be transformed into a vibrant part of the city. At both entry points, there will be large, pedestrian-friendly open spaces providing pleasant environments for people to gather and socialize. The northern side of the station will no longer accommodate through car traffic, and the concrete 'Stadsbalkon' and the bus station will be replaced with a green walking area with climate-friendly features. The historic station building will become the main entrance again. This emphasis on pedestrians, greenery and reusing older buildings will create enjoyable environment for walking and spending time. The southern side of the station will include a new cultural center (Nieuwe Poort) offering cultural and recreational activities to both locals and visitors.

'Integraal bekijken, zo veel mogelijk ruimte pakken om het mooi te maken, zonder de functie ervan te verminderen. Dat kan, maar dat is vaak erg moeilijk. Je hebt te maken met een bestaande situatie waar je niet altijd grip hebt en je niet opnieuw kunt beginnen'

"Look at it integrally, take as much space as possible to make it beautiful, without diminishing its function. That is possible, but it is often very difficult. You are dealing with an existing situation that you do not always have control over, and you cannot start from scratch."

Furthermore, the municipality aims to develop the station area according to Transit Oriented Development (TOD) principles, including a mix of functions that attract people and high-frequent transportation that serve them. The area will include a variety of residential, commercial, recreational, cultural and social spaces, creating a lively and dynamic environment where people like to spend time. The different modes of transportation will encourage the use of public transport and cycling and reduce reliance on cars.

Besides, the changes within the railway station zone will impact the whole city. The municipality mentions how the developments will influence cycle routes and walking routes from and towards the railway station, for example in the case of bigger events in the city. The 'Parkweg' will be redesigned to provide more space for pedestrian and walking and reduce car traffic in this street and create a more peaceful environment for its residents and other users.

'...er wordt een nieuw stuk binnenstad gemaakt [...] een stationsgebied is iets wat de hele stad aangaat...'

"...a new piece of city center is being created [...] a station area is something that concerns the whole city..."

5. Conclusion

This research investigates the extent to which user experiences are being considered in the renewal of the Groningen railway zone. Enhancing user involvement and their experiences in the planning processes of such projects is important for their success and relevance.

The theoretical framework defined the concept of the railway station zone, building on the work of Bertolini and Spit (1998). It identified that users of the area are not limited to travelers but include individuals engaging in various functions such as working, shopping, socializing, meeting others, experiencing culture, accessing the city, and simply enjoying the space itself. The integration of these functions within one area contributes to the vibrancy and overall user experience. However, this multifunctionality also increases the complexity of project development due to the diverse types of users involved. This complexity underscores the importance of inclusive planning and consideration of user experiences.

The municipality of Groningen is currently redeveloping its railway station zone to address several existing challenges: limited regional connectivity, fragmentation of functions and spaces, the station acting as a barrier between the south and the city center, traffic congestion on the north side, and underutilized public spaces leading to a lack of vibrancy. The project team has spatially defined the project area and the different purposes and corresponding functions. The new plans present a range of developments that will benefit both travelers and non-travelers, aiming to improve the overall user experience while maintaining the station's core functions. The municipality envisions the railway station zone as an integral part of the city center.

However, there has been little differentiation between various user groups, with users often being addressed as a general group and predominantly as passengers or travelers. The municipality's participation strategy includes an open information center and organized brainstorm sessions. Yet, participation has been largely limited to local neighborhood residents, who may not represent the broader spectrum of users.

The redevelopment of the Groningen train station zone will impact not just the immediate area but the entire Northern Netherlands. The current method of participation may not represent all users who will utilize the redeveloped area. While stakeholder analyses and resident consultations have been conducted, the needs and experiences of non-resident users should also be considered for future improvements. It is essential to recognize that residents are not the only users of the area, and a more inclusive approach to user engagement is necessary to ensure the success and relevance of the redevelopment.

5.1. Reflection & limitation

The Groningen railway station renewal is still in development, which means that many aspects of the project are subject to change. Therefore, it is difficult to compare experiences from the past situation with future plans. In addition, this research has investigated the policy plans from the municipality and the narratives of project developers. With the insights from this

research, future studies can investigate whether users' experiences are equal to the municipality's view on this.

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