Definition of the Research Question and the Objectives

This research aims to understand the historical transformation of the Leeds tram system and its implications for contemporary transport policy. The research analyses the development of the tram system that operated in the city between 1891 and 1951 and was later abolished due to political changes. Using document analysis, the first phase of the study examines the social, economic and political factors that influenced the creation and abolition of the tram system (Green, 2018). In particular, the impact of demographic change, economic structure and political climate on the tram system in Leeds will be highlighted. The digital dimension of the research explored public perceptions and debates about the proposed rebuilding of the Leeds tramway through analysis of new media platforms. These analyses provided an important insight into the public's thoughts on transport infrastructure. In this context, the research can be seen as an attempt to understand the transformation of the Leeds tramway from past to present and how society responds to this transformation.

This study aims to analyse the impact of transport policies from the past to the present by integrating historical data with digital methods. The importance of this methodology is that it allows past events to be linked to current policy choices and societal changes (Loyola et al., 2023). In addition, the use of digital methods provides a more comprehensive perspective for analysing large data sets and understanding society's current views. In this way, research emphasises the relevance of the past to the present, contributing to a more robust basis for future policy decisions (Sivarajah et al., 2017).

Research questions:

1. What are the social, economic and political factors that influenced the historical transformation and subsequent abolition of the Leeds tramway?
2. How have debates about the rebuilding of the tramway and factors such as congestion and carbon emissions caused by the absence of the tramway shaped public attitudes and the social, economic and environmental implications of these attitudes?

The Leeds tram system has made a significant contribution to the transport history and social fabric of the city. Each item in the collection bears traces of Leeds' past and reflects both an objective and subjective perspective, depending on the nature of the academic research. Collection items such as tram maps and photographs provide a visual history of public transport and urban life in Leeds. They also represent the experiences of the group members during their time in Leeds. The research will examine in detail how the tram items in the collection reflect memories of the city and the past, and how these experiences have influenced Leeds society today.

Determination of Relevance Literature

The tram system in Leeds has long been an essential element of urban transport. It increased social interaction and contributed to the city's economy, particularly by providing access to low-income groups (Crisp et al., 2020). However, factors such as political decisions and the encouragement of private car use have led to the removal of trams, resulting in significant changes to the city's transport infrastructure (Mattioli et al., 2020).

The removal of the tram in Leeds and the encouragement of private car use has had a significant impact on the dynamics of traffic in the city. The increased use of private cars has reduced the efficiency of transport, leading to congestion and safety concerns. This situation has had a particularly negative impact on low-income groups and has deepened social inequalities by limiting society's access to transport services (Buchanan, 2015). In terms of carbon emissions, the proliferation of private vehicles has exacerbated environmental problems and made it more difficult to combat climate change (World Health Organization, 2011). Therefore, city managers and policy makers need to move towards more sustainable and accessible transport systems.

The impact of the lack of public transport on population mobility and carbon emissions is examined in studies such as *"The Impact of Public Transportation on Carbon Emissions - From the Perspective of Energy Consumption"* and *"The Association between Urban Public Transport Infrastructure and Social Equity and Spatial Accessibility within the Urban Environment: An Investigation of Tramlink in London"*. These studies show that the inadequacy of public transport systems increases population density in cities and encourages

the use of private cars. This is supported by other studies such as *"Urban Mobility and Public Transport: Future Perspectives and Review"* and *"Public Transport and Sustainability: A Review"*.

Notes

The findings of the study, "The Impact of Public Transportation on Carbon Emissions - From the Perspective of Energy Consumption", are as follows:

- The use of public transport systems leads to lower carbon emissions than the use of individual cars.
- The energy consumption of public transport systems is generally more efficient than that of individual cars, which contributes to lower carbon emissions.
- Widespread use of public transport systems can reduce the carbon footprint of cities and play an important role in environmental sustainability (Jing et al., 2022).

The findings of the research, entitled "The Association between Urban Public Transport Infrastructure and Social Equity and Spatial Accessibility within the Urban Environment: An Investigation of Tramlink in London", are as follows:

- The development of urban public transport infrastructure has a significant impact on social equity and spatial accessibility.
- Improving public transport systems can provide equal access to transport for different social groups living in the city.
- Public transport systems such as Tramlink, which improve connectivity between residential areas within the city, can reduce social inequalities and increase social inclusion (Cuthill et al., 2019).

The results of the study "Urban Mobility and Public Transport: Future Perspectives and Review" are as follows:

- Urban mobility and public transport play a critical role in future transport perspectives.
- The sustainability and efficiency of public transport systems are important in shaping the transport infrastructure of cities.

- The integration of new technologies (e.g. electric and autonomous vehicles) and public transport should be considered when designing future transport policies.
- Critical to the sustainability and liveability of cities is the development of public transport systems and the improvement of existing systems (Ceder, 2021).

The findings of the study "Public Transport and Sustainability: A Review" are as follows:

- Public transport systems play an important role in environmental, economic and social sustainability.
- The use of public transport systems leads to lower carbon emissions compared to individual car use and improves air quality in cities.
- Economically, the operation and maintenance of public transport systems provide jobs and support economic activity in cities.
- Socially, public transport systems can reduce social inequalities and strengthen social cohesion in cities by improving access to transport services (Miller et al., 2016).

Understanding and Analysing Context

The second research, which aims to understand the transport debates and responses of city residents to the presence and removal of the Leeds tram, aims to assess the current impacts. This will involve data visualisation using two different datasets to understand the current impacts of the tram's removal, such as carbon emissions and population mobility. User comments collected from online platforms such as Reddit will also be analysed to assess the public's views on the proposed new tram system in Leeds. The final phase of the research will use conceptual gamification to engage participants and raise awareness of the issue. This digital method will enrich the process of achieving the research objectives and enable a more comprehensive evaluation of the results obtained (Riar et al., 2022).

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