# Impact of an evolving transport system on the development of European cities: Lille case study

A reciprocal evolution of a node and a place

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# ABSTRACT

This architectural history thesis looks at the interrelationship between transport, land-use and architecture. A systematic comparison of the these three systems at key time periods contributed to the collective puzzle of answering the main research question; *'How has the evolution of the transport system, with main focus on the railway system, impacted the development of the city Lille throughout time?'*.

The transport systems of major European cities have played a vital role in their economic and urban development, forming networks that facilitate the flow of energy, people, and goods. Lille, located near the French-Belgian border, has two stations from different railway eras: Lille-Flandres (since 1846) and Lille-Europe (since 1990). The transformation of these stations has been driven by capacity demands and the need to adapt to rapid growth and limited space. Lille-Europe, in particular, has acted as a catalyst for the city's economic transformation from a secondary to a tertiary sector.

The architecture of the station areas reflects the interplay between local and global contexts, with Lille-Flandres embodying a fusion of Flemish, French, and Parisian styles, while Lille-Europe represents a modern and cross-border vision. This architectural evolution sparks a debate between preserving local identity and embracing universal design principles. The station areas serve as a visual expression of Lille's dynamic evolution and the changing nature of transportation systems.

Figure 1: Aerial photo of Lille's central station area, also know as 'Triangle des Gares' (Google Earth, n.d.)

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# 1.    INTRODUCTION

Lille, a French city with a population of around 240,000, has undergone significant transformations throughout its history, with pivotal moments marked by the establishment of the railway network. Formerly an ancient Flemish city under the Holy Roman Empire, Lille experienced prosperity through trading networks before becoming an industrial textile city during Napoleon's continental blockade in the early 19th century. The advent of steam trains and railways revolutionized transportation, leading to rapid economic and urban development in many European cities including Lille.

Lille's first railway station was built in Fives in 1843, primarily serving industrial purposes. The city faced challenges in connecting the railway network to the city center due to the fortifications, which were eventually decommissioned in 1923. In 1846, Lille was linked to Paris, and the main terminal station, Gare de Lille (later renamed Lille-Flandres), was constructed intramurally in 1848. This expansion resulted in a doubling of the city's population within a decade. Gare Saint Sauveur, a freight station, was added in 1861 to alleviate pressure on the main terminal.

From the 1930s to the 1980s, the dominance of cars and the oil industry led to setbacks for the railway network, with car-centric planning taking precedence and negatively impacting urban quality. However, in the 1980s, the energy crisis and the collapse of Lille's textile industry resulted in a shift back to railway transport. Mayor Pierre Mauroy envisioned a new city center centered around a high-speed transit train station, leading to the Euralille project.

Euralille aimed to transform Lille's international reputation from a declining industrial city to a modern tertiary economy hub. The construction of the Channel Tunnel between the UK and France in 1986 and the development of the European high-speed railway network positioned Lille as a key cross-border hub within the London-Brussels-Paris triangle. The implementation of the Euralille masterplan culminated in the opening of Lille-Europe station in 1994, solidifying Lille's status as a prominent node and place in the region.

# 1.1 RESEARCH QUESTION

The main research question of this architectural history thesis is as follows:

*'How has the evolution of the transport system, with main focus on the railway system, impacted the development of the city Lille throughout time?'*

# 1.2 RELEVANT THEORIES

**Land-use and Transport Feedback Cycle**

Infrastructure systems including the transport system form the backbone of 'functional' urban settlements. The reciprocal relationship between transport and land-use patterns is used as a theoretical foundation for explaining the evolution of Lille since the arrival of its first railway station in 1843. The land-use planning and transport planning need to be aligned for an urban area to be successful as a 'node and place'. Various urban transport & planning researchers such as Bertolini (1998) and Wegener (1999) regard accessibility as a key condition and driver for urban development.

The dynamics between the two systems can be captured by the land-use & transport feedback cycle (fig. 2) by Wegener (1999), which has been adapted over recent years (Giuliano, 2004, Meyer & Miller, 2001, Bertolini, 2011). The feedback cycle can spin into two directions, as an upwards and downwards evolution spiral. A location with high accessibility (naturally or after improving its network centrality) will attract more movement, thus being more attractive for urban densification and hosting people services. Actors such as project developers are interested in purchasing land in central locations in a given transportation network (water, road, railway, etc.) due to the land's potential value for selling and renting out homes, shops and offices. Whereas governmental bodies and institutions (e.g. municipalities, universities) are interested because they want to improve the accessibility to their public services. A location that has poor accessibility will attract less (natural) movement by people, and thus will have fewer activities that can contribute to economic and social gain.

The distribution of different land-uses co-determines where activities take place (e.g. living, work, recreation) (Bertonlini & Straatemeier, 2019). Increasing number of activities will increase the demand and need for a transport system that offers people and goods the opportunity to travel or to be transported form one activity to the other.
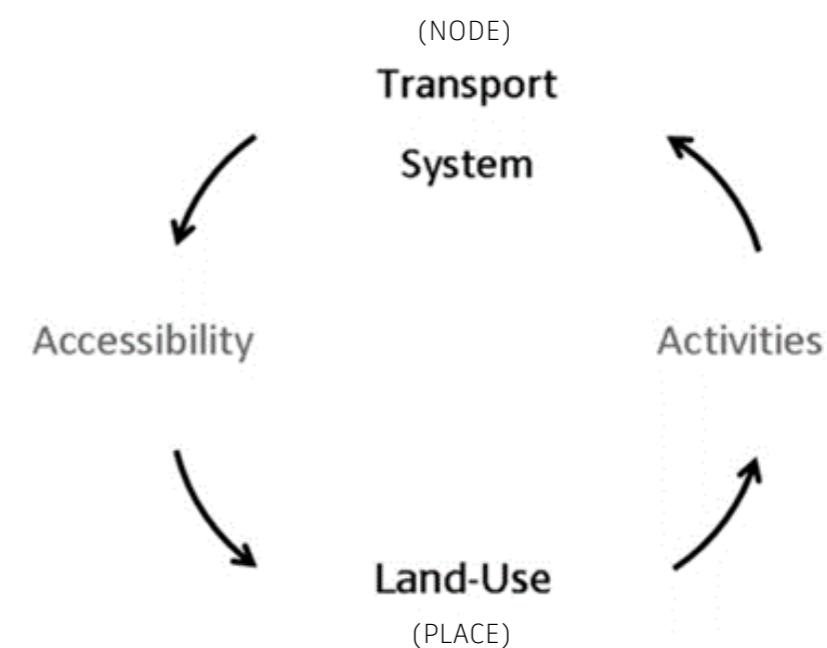
(NODE)

**Transport System**

Accessibility                    Activities

**Land-Use**

(PLACE)

*Figure 2: Transport and land-use feedback cycle (Giuliano, 2004, Meyer and Miller, 2001, Wegener and Furst, 1999)*

## Node and Place Model

Bertolini (1999) founded the node-place model to further explore the underlying relationship between transport and land use, with a focus on station areas (fig. 3). A location can be scored in terms of node and place values. These two elements are important for the 'realization of the potential for physical human interaction' (Bertolini, 1999). The node value is determined by quality of the transport provision of a location. The location's accessibility can be improved by strengthening its position in the transport network both local and global. A local node in terms of its position in the urban city grid. A global node in terms of its position in wider regional to international transport network. As explained in the transport-land use theory, accessibility creates favourable conditions for further urban development of the location. The place value can be regarded as the degree of urban development of a location. Initially railways stations, just like seaports and airports, were built as nodes in a specific transportation; waterways, railways and flight routes. Over time they developed

into places too; harbour districts, airport city and station neighbourhood (Bertolini & Spit, 1998)

The node and place are in constant dialogue. A good functioning and well-integrated station area needs a balanced node-place relationship. The relationship helps to explain why some railway stations are well-used whereas others are under-used. A station with both high local (centrality within urban city grid) and global (centrality within wider railway network) accessibility can be developed into as high-density commercially viable areas. The station has then also a positive economic effect on the existing city centre if located nearby. Less successful and underused main station areas are often located in empty areas outside the central city district with little development plans despite being well connected to a wider railway network. These locations have potential to become a sub-centre but need more time and external incentives for placemaking. A location that keeps developing as a place will experience more pressure on its existing transport system and will demand improvements to

its accessibility. If the land use is too dense and the transport provisions continues to be inadequate (e.g. insufficient space), the liveability will suffer and the place becomes less attractive for users and investors. Locations that have a high node value have a potential to develop further as a place until a balanced stable state is reached (Bertolini, 2012).

The term potential is used carefully because the development of the transport system and land-use planning area also affected by many external factors (Bertolini, 2012). The development of the transport system can be influenced by technological innovations, infrastructure investment and mobility policy. Whereas the land-use patterns are also shaped by regional demand, land availability, area attractiveness and spatial policy. Also the activities and people's choice for transportation system is affected by socio-demographic, economic and cultural factors. Improvements to the place and node values of an existing station area may not be realized, leaving the station area unbalanced and less successful.

## Cities as Movement Economies and the multiplier effect

Researcher Bill Hillier (1996) has developed the theory 'space is the machine' to explain that the city is formed through functionally shaping of its space by movement. Urban grids have been established by which cities have become 'a mechanism for generating contact'. In an urban system, every trip involves a movement from an origin to a destination, and a series of spaces that are passed though on the way from one to the other. The chosen route from a to b is determined by the structure of the transport network; the grid. The location of a place in a grid is a crucial factor in how much to- movement (as destination) and through-movement (as passage from origin to destination) it will naturally attract. Most movement is through movement.

Any network exists of a hierarchy with more integrated and less integrated areas. The level of integration also depends on how well the internal structure (local grid) is connected to the larger scale structure of the grid (super grid). The local grid can be seen as the transport network for smaller displacements by pedestrians and cyclists whereas the larger grid covers longer displacements by train and cars. More central locations in the city in the transport network tend to have more movement as a by-product and tend to have higher densities of development to take advantage of this. The multiplier effect follows, a developed place with higher density will in turn attract and cluster more new buildings and uses. In terms of station areas, the conditions for a well-used and vibrant station area are being well connected in a global railway network (regional/national/international) but simultaneously being well connected to a local grid. This means a central and well-accessible location in the urban grid and function as a multi-modal hub linking up with other local transport systems (tram, bus, cycling, etc.) (Hillier, 1998).
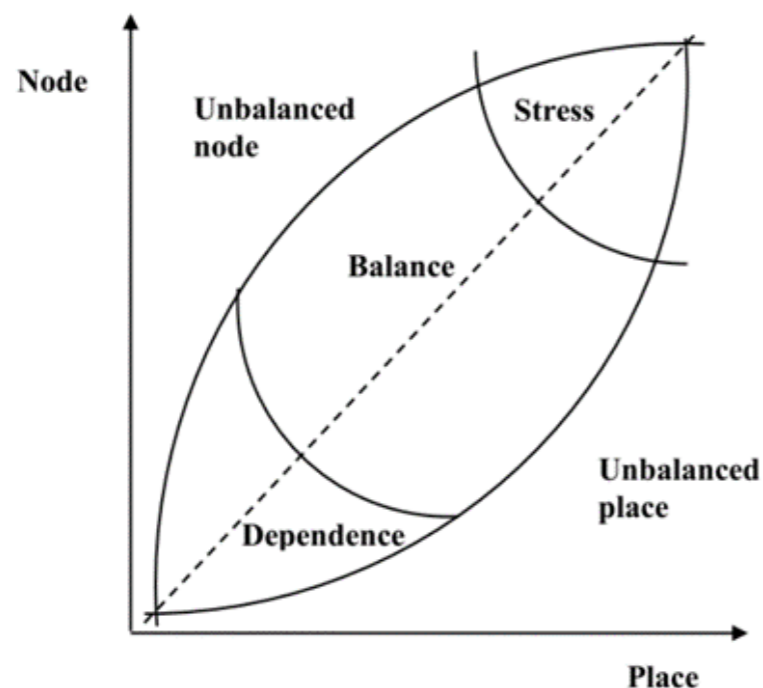
The available space in the city is used for multiple purposes – travelling, dwelling, working, leisure, tourism, etc. A vibrance space with 'urban buzz' is created when these flows and activities meet, requiting a certain density and integration of the grid. Good space equals used space, which also relates to perceived urban safety. The segregation of local flows and land-uses leads to people 'passing each other like ships at night'. Hillier highlights that the physical and spatial structure are the root source of the life of cities where movement is the by-product to maximize the multiplier effect for optimal urban development. This phenomena is called the 'movement economy' (Hillier, 1998).



*Figure 3: The node place model (Chorus and Bertolini, 2011)*

# 1.3 INTRODUCTION: METHOD

## Systems: Transport, Land-use and Architecture

The research will be structured around the interrelationship between the transport system, land-use patterns and architecture, with main focus on role and position of the railway. Each system will be studied separately and later linked together in an attempt to explain the reciprocal evolution of these three systems.

The supporting theories about the interrelationship between land use and transport system, and a station area's development as a node and place form the base and framework for this architectural history thesis. From an architectural interest, the station area's architecture will be added as an integral part to existing the land-use and transport feedback cycle. The architecture is regarded as the spatial expression of the station area as a node and place throughout time. A well designed station can lead to improved accessibility and provide an attractive environment for its users (passengers and other visitors) with various activities (fig. 4).

The analysis of Lille's the transport system will focus looking at the node value. Aspects include the level of accessibility at various network scales (local to global) and amount of movement (number of goods and passenger) is generated through the operating system. The Land-use system takes into account the place value; looking at the degree of urban development. Aspects include the densification, program and urban form (street pattern and configuration). Lastly, the architecture of the station area throughout time takes into account the typology (form and materiality) and expression.

## Context and Process

As explained in the theory, the reciprocal evolution of the city and station area as a node and place is depending on a strong external forcefield. In order to grasp how the external political, environmental, technological, economic and social factors have been driving the land-use and transport cycle, the relevant context is studied for the relevant time periods.

## Systematic representation in time

In order to study the interrelationship between the three individual systems. A systematic approach is required for comparison. Therefore five key time frames will be used to help explain and visualize how the city's transport system, land-use and architecture have been evolving in parallel to each other:

· Pre 19th-century: trading routes across water and roads
· 1840s – 1850s: first railway lines and stations
· 1860s – 1920s: first railway era
· 1930s – 1970s: car dominated era
· 1980s – present: second railway era

## Evaluation

In addition to the study of the 3 systems and the context, the status quo of Lille as a place and node have been assessed by reviewing previous evaluations and interviewing an Euralille expert Manuela Triggianese. A weekend excursion to Lille allowed me to experience both the new and old city centre, and eventually take a critical position as an architectural history researcher.
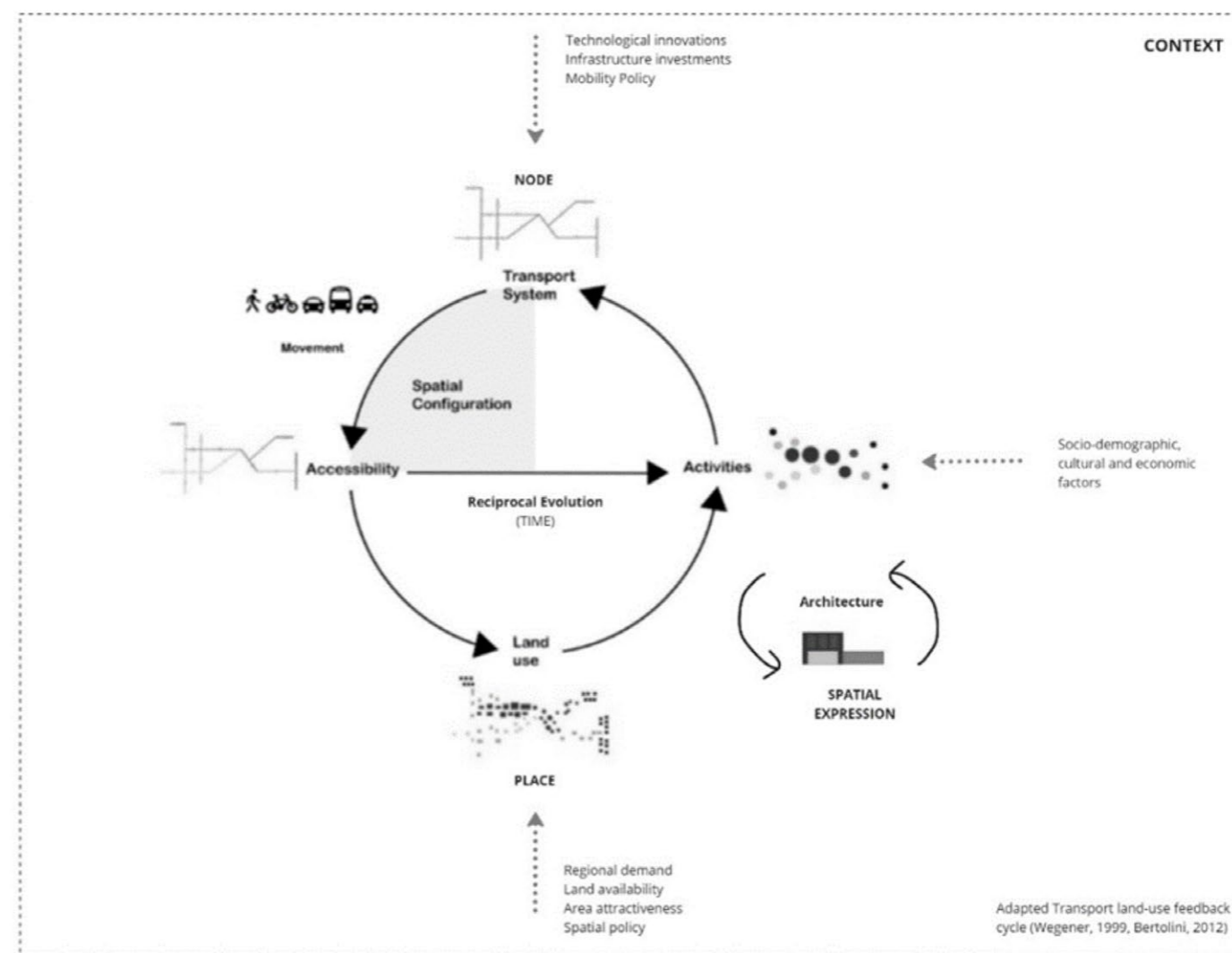


*Figure 4: : Integrated transport, land-use and architecture feedback-cycle (own work, adapted from Wegener and Furst, 1999 and Bertolini, 2012)*
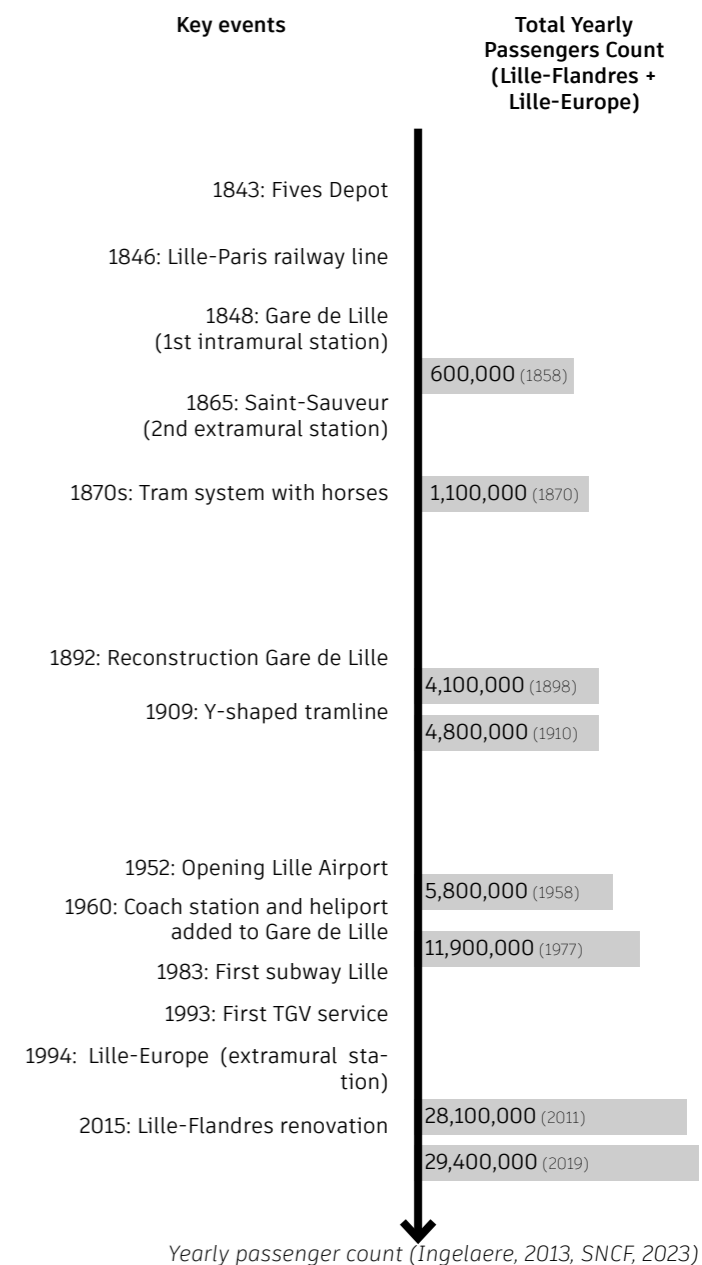
# 2. TRANSPORT

### 1.3.1. Introduction

The transport system has been the medium for creating movement and interaction on various spatial scales for the city of Lille. For people the transport system is a way of creating communication and generating contact. Whereas for goods, it is about efficient transport from the source to the consume by passing through the stages of primary (extraction of raw materials), secondary (manufacturing) and tertiary (distribution and commerce) economic sectors. The transport system consists of a network of links connecting different points of interchange (nodes) and body for movement with an engine that requires energy. Pedestrian movement and walking cars towed by horses on roads, and boats on waterways have been the oldest forms of transportation.

Pre-19th century, transportation by boats and ships across water resulted in the first major shift towards globalism. Under the industrial revolution in the 19th and early 20th century, the railway became the primary medium for faster movement and large displacements across land. The central railway station area became the centre of movement positioning itself as a central node in the network. Throughout time, the hierarchical importance of Lille's station changed from being a central node in a regional network, to national network to ultimately international railway network. Lille's strategic position as a European cross-border and an increasing level accessibility contributed to more urban development with economic and social gain. Since 1930s the increasing car-centric planning and oil dependency led to misalignment between railway transport planning and town planning.
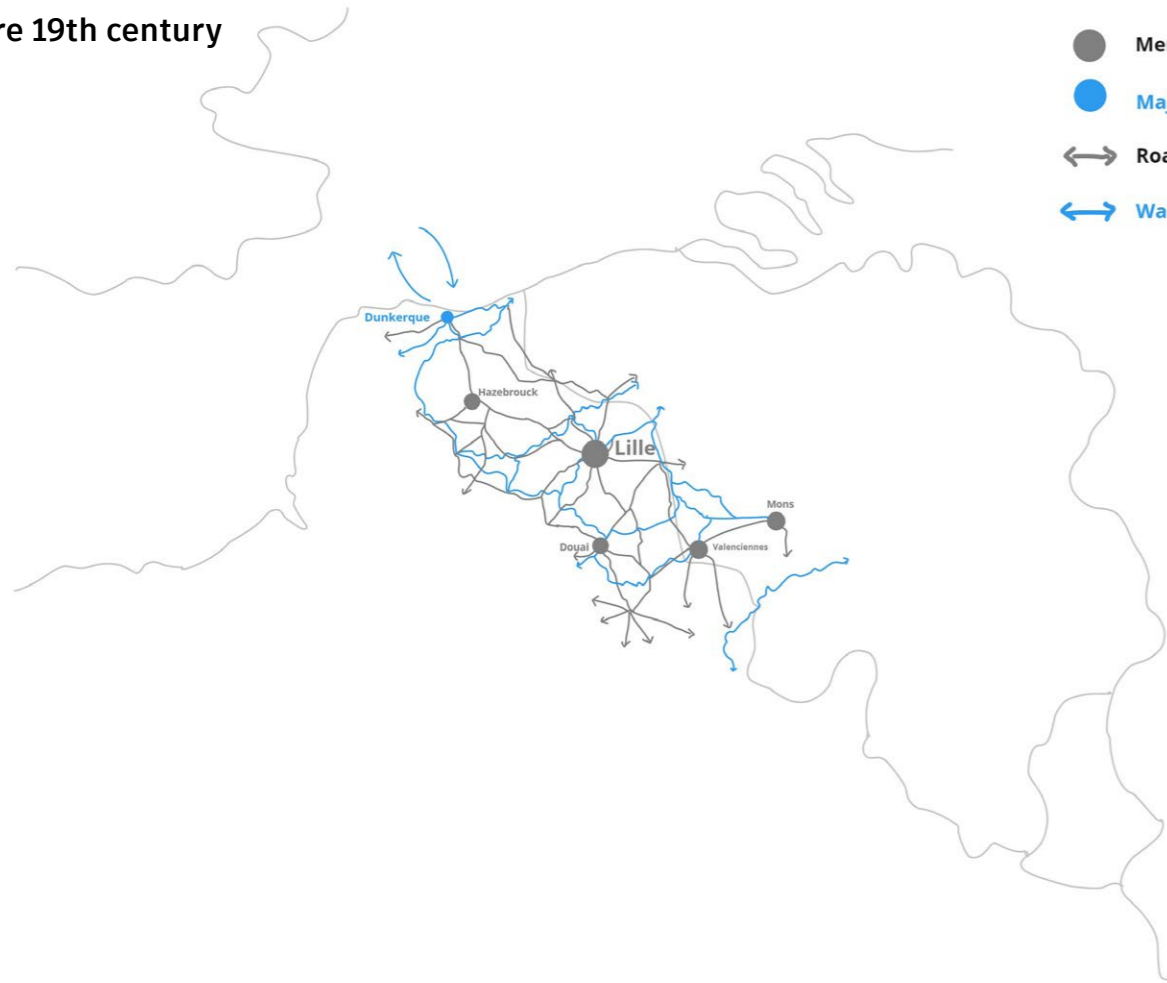
The oil crisis and environmental concerns in the 1970s gave rise to a second railway era in the 1980s. In 1994, Lille's station area became a new modern city centre with a twin station; an old regional/national terminal station and a new international high-speed transit station. The arrival of the new transit station was the engine for a large scale urban regeneration project and shift towards a service-oriented economy. Other modes of transport across land, water and air led to increasing focus on multimodal planning of transport network. Also Lille's station area functions as an interchange between multiple flows of people and goods with various modes (pedestrian, metro, bus, bike, car, etc.) with a spectrum of displacement distances ranging from local (Lille-Flandres to city centre) to global (e.g. Lille-Europe to Amsterdam Central).
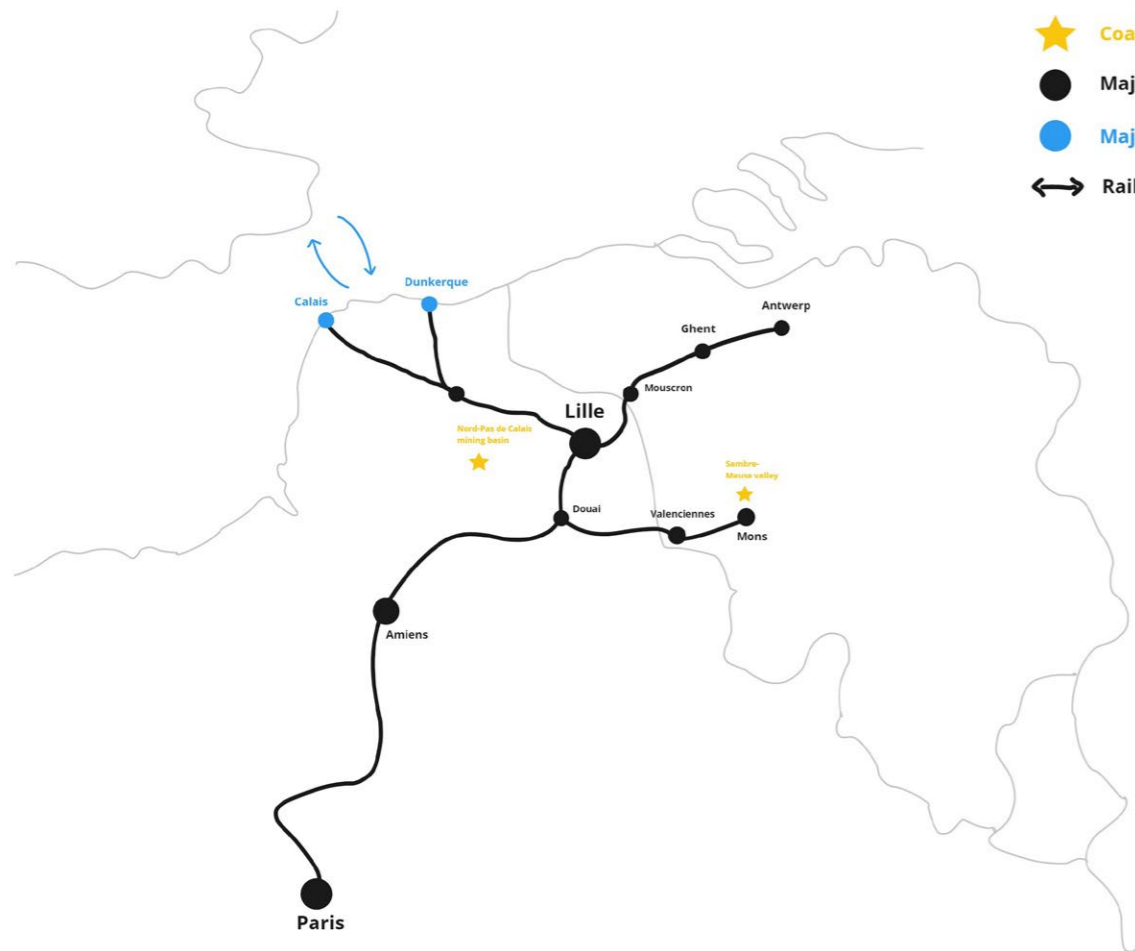
| Key events | Total Yearly Passengers Count (Lille-Flandres + Lille-Europe) |
|---|---|
| 1843: Fives Depot | |
| 1846: Lille-Paris railway line | |
| 1848: Gare de Lille (1st intramural station) | |
| | 600,000 (1858) |
| 1865: Saint-Sauveur (2nd extramural station) | |
| 1870s: Tram system with horses | 1,100,000 (1870) |
| 1892: Reconstruction Gare de Lille | 4,100,000 (1898) |
| 1909: Y-shaped tramline | 4,800,000 (1910) |
| 1952: Opening Lille Airport | 5,800,000 (1958) |
| 1960: Coach station and heliport added to Gare de Lille | 11,900,000 (1977) |
| 1983: First subway Lille | |
| 1993: First TGV service | |
| 1994: Lille-Europe (extramural station) | |
| 2015: Lille-Flandres renovation | 28,100,000 (2011) |
| | 29,400,000 (2019) |

*Yearly passenger count (Ingelaere, 2013, SNCF, 2023)*

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## Pre 19th century

Dunkerque

Hazebrouck

Lille

Douai

Valenciennes

Mons

## 1840s – 1850s

Coal mine bassin

Major Railway station

Major Harbour

Railway

Calais

Dunkerque

Ghent

Antwerp

Mouscron

Lille

Nord-Pas de Calais mining basin

Sambre-Meuse valley

Douai

Valenciennes

Mons

Amiens

**Paris**

## 1860s – 1920s

Coal mine bassin

Major Railway station

Major Harbour

Railway

Calais

Dunkerque

Boulogne

Hazebrouck

Lille

Mouscron

Ghent

Antwerp

Le Havre

Rouen

Arras

Mons

Amiens

Reims

Troyes

Metz

Nancy

**Paris**
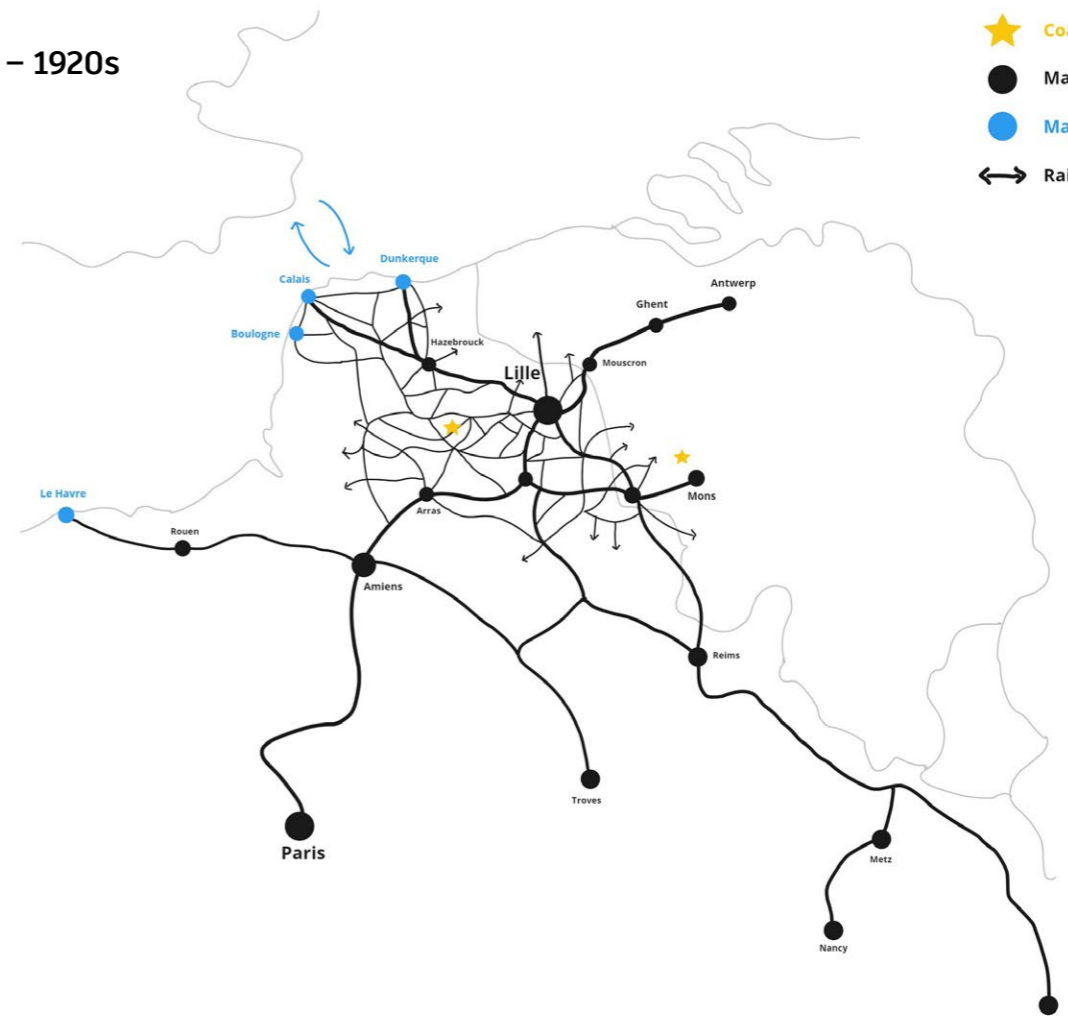
## 1930s-1970s

Coal mine bassin

Major Railway station

Major Harbour

Railway

National Motorway

Calais

Dunkerque

Hazebrouck

Lille

Mouscron

Ghent

Antwerp

Le Havre

Rouen

Arras

Mons

Amiens

Reims

Troyes

Strasbourg

**Paris**

*own work*

*own work*

## 1980s - present



- 🔴 **HST Railway station**
- ⚫ **Major Railway station**
- 🔵 **Major Harbour**
- 🟢 **Airport**
- ↔ **Railway**
- ↔ **High-Speed Railway**
- ↔ **National Motorway**
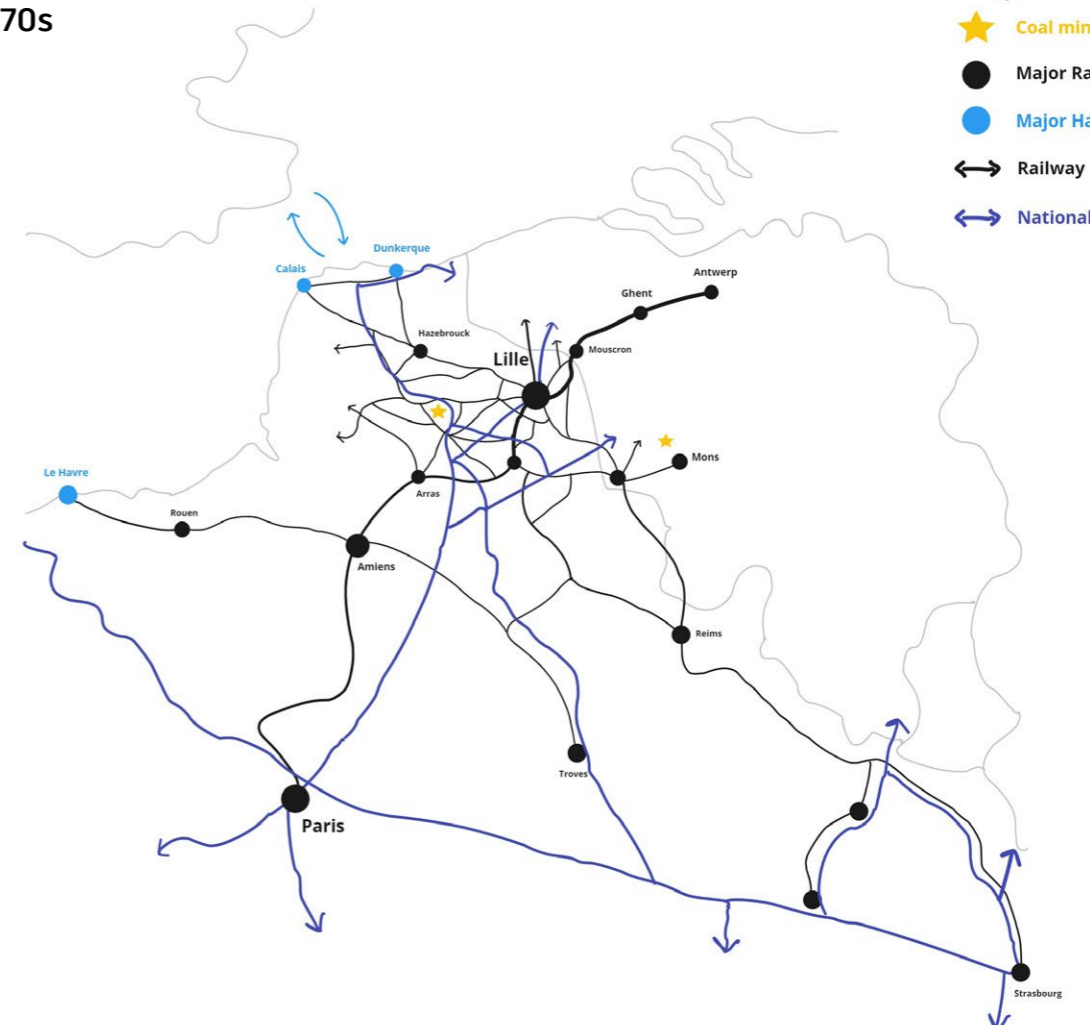
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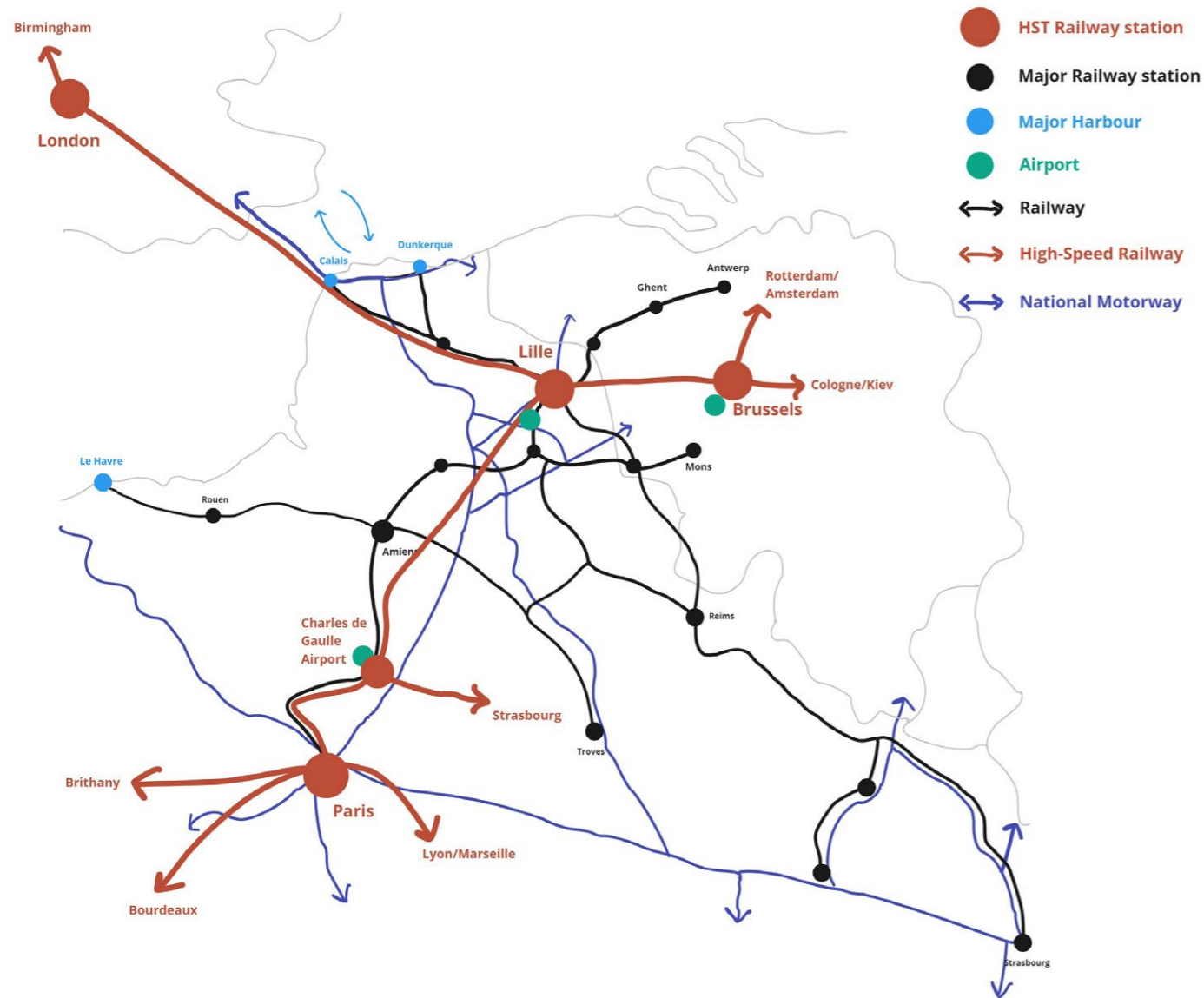
## Pre 19th century

The name Lille (L'isle) originates from being created on an island in the River Deûle. The town developed around a castle from Baudoin V, Count of Flanders, and around a port which existed on the site. For centuries Lille played a major role in commercial development of the wider region, originally harvesting and trading wheat. It had a privileged geographical location in an extensive trading network along waterways and roads (see fig. 6 & 7). In the Holy Roman empire era (pre-17th century), Lille intersected with the ancient Roman way from Boulogne to Cologne (East-West corridor). After being annexed by the French in 1667, the development of business connections between Netherlands, Flandres and the fairs of Champagne became vital to its growth. It led to the establishment of a new axis with North-South traffic.

## 1840s – 1850s

In the first half of the 19th century, Europe's trading network became revolutionized by the introduction of the railway with steam trains. In 1840, the law allowed a realization of state-funded railway leading to Lille connected with the railway network of Belgium. In 1842, Lille was linked to Ghent and Antwerp. In 1843, the first station 'Fives Depot' was built 'extra-mural'; outside the historic fortification in the nearby town of Fives (see fig. 8). It was established as 'provisional station' with a 'stopping point accessible to passengers, customs office, freight and locomotive shed and workshop for small repairs for equipment'. (Kokoreff, 2002) Shortly after, the planning of terminal station closer to the city centre became a huge political debate, resulting in intense negotiations between the railway administration, the military and other local pressure groups. The first proposals for a combined station for passengers and goods with a necessary facilities such as logistic space and personnel of customs was rejected by the municipal commission due to a lack of available space. Eventually various



*Figure 6: : One of the major city gates Porte de Paris in 1692.*



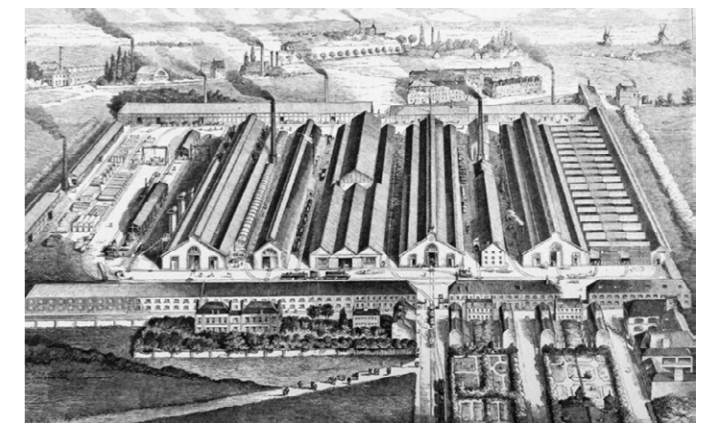*Figure 7: : Topographical map of Lille by Cassini in 18th century*



*Figure 8: Fives Depot railway station in 1861 (ANMT FranceArchives, n.d.)*

parties agreed on a compromise solution; one intramural station 'Gare du Lille' for passenger traffic mainly and the existing 'Fives Depot' for freight traffic.

The railway station became a new gateway to the city and 'disrupting both the city wall's protective function, as well as the urban layout' (Tirry, 1999). The construction of the new intramural station lasted between 1845 and 1948, and required access works through the centuries old fortification (see fig. 9 & 10). The new intramural main station was located between the enclosure of the Saint-Sauveur and Saint-Maurice parishes (12 and a 13th century respectively), along rue de l'Abiette (now known as rue de Tournai). The access to the station was very cramped, limited to a small square, created by the demolition of two houses. Fives depot changed from a terminal station to a passing station. Parallel to the planning of the stations, new railway routes were established incl. Paris-Lille in 1946 (220 km away) and benefited from its relations with Dunkirk and Calais.

Lille was perceived as a 'Northern European crossroads' which allowed the railways company to sell 'international tickets'. The Northern Railway Company, founded as a private enterprise by Rotschild family in 1845, invested in a vast railway to ensure traffic to the northern region, mainly mining areas, Belgium and Great Britain (see fig. 7). Until 1960, more openings were made to the fortification and additional tracks were added to the passenger terminal to keep up with increasing transport demand. In year 1958, the annual passenger count at the station reached 622,744 passengers (excl. season tickets). (Ingelaere, 2002 pg. 886)



*Figure 9: The regional railway network in 1853 operated by the Northern Railway Company.*
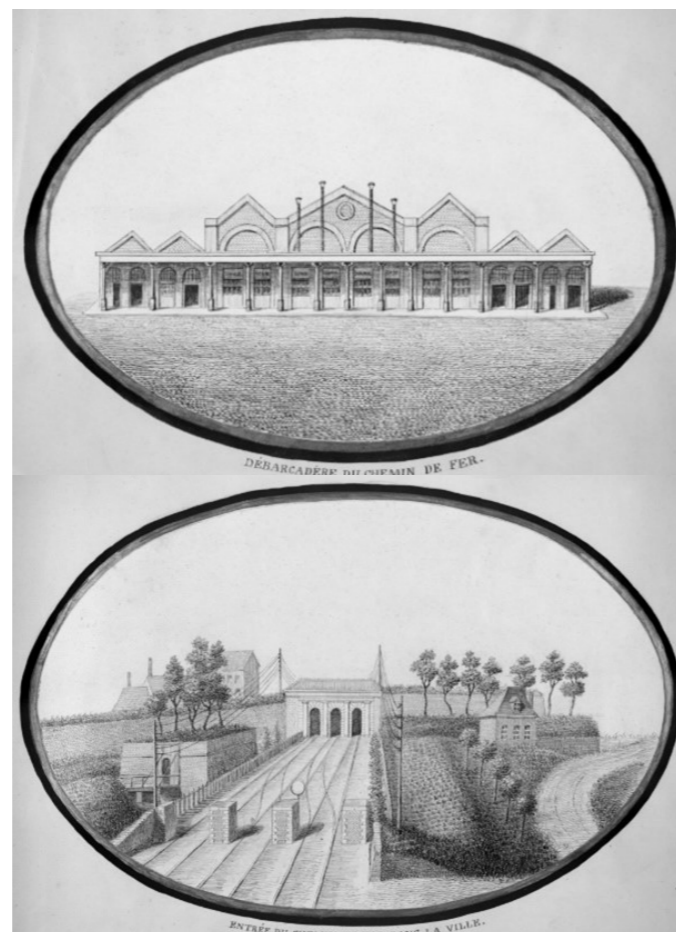


*Figure 10: Artist impression of Lille's first intramural station in 1860 by Baron*

## 1860s – 1920s

The industrial development of Lille and the region started to gain a lot of momentum. The scale of both passenger and freight traffic was underestimated and the capacity of the existing stations was soon saturated. In 1865, the Northern Railway Company opened Saint-Sauveur station, a large extramural marshalling yard to reduce pressure on Fives Depot. It was located South to the Gare du Lille, at the junction of the old city and the industrial suburbs. Gare du Lille received a new hall on available land and the municipality created a large square in front of the station to replace the cramped Place de la Gare (now known as Place des Buisses) (see fig. 11). Also a new passenger building was built in front of the hall with a vestibule, offices and waiting areas to improve the quality of service.

In the 1870's, the city became also equipped with a tram system and 'walking cars' towed by horses (fig. 12), making the main train station well connected with the wider urban fabric. In 1901, there were a total of 5,000 horses working in the city. Tram tracks where built on the new rue de la Gare leading up to the station. It improved the local accessibility and creates a sense of arrival for passengers. The authorisation of the Minister of Defence, in 1876, for drawbridge crossing the fortification allowed the tram network to be extended extra muros (Ingelaere, 2002, pg. 439). At this point, the annual passenger count of the main station (excl. season tickets) reached 1,081,538 passengers (Ingelaere, 2002, pg. 433).

In 1883, the vaults of the track passage in the fortification were demolished and replaced by trench passages. The increasing porosity of the fortification meant that the city wall and the existence of vast non-built military spaces had no real use for the defence of the city. The city was already experiencing difficulties in meeting the increasing service demands and its nature as 'intramural terminal station' was seen as

serious disadvantage to make major future changes. There were also complaints that the tracks and the junction was poorly laid out, and that the location of the penetration into the town was too narrow. The was an increasing pressure led to the removal of the north-eastern part of the fortification. Available old-military terrain could give opportunities for retrofitting the station and urban development. However the project was not realized due to budget limitation by the Northern Railway Company. Instead the existing station was once again restructured by architect Sidney Dunnett between 1887 and 1892. The passenger building was preserved but a large new hall was constructed and on the side of rue de Tournai, a hotel 'Hôtel des Voyageurs' for travellers. The passenger traffic at the station continued to grow with 4,136,853 passenger (excl. season tickets) in 1898 (Ingelaere, 2002).



*Figure 11: postcard illustration of Gare de Lille*
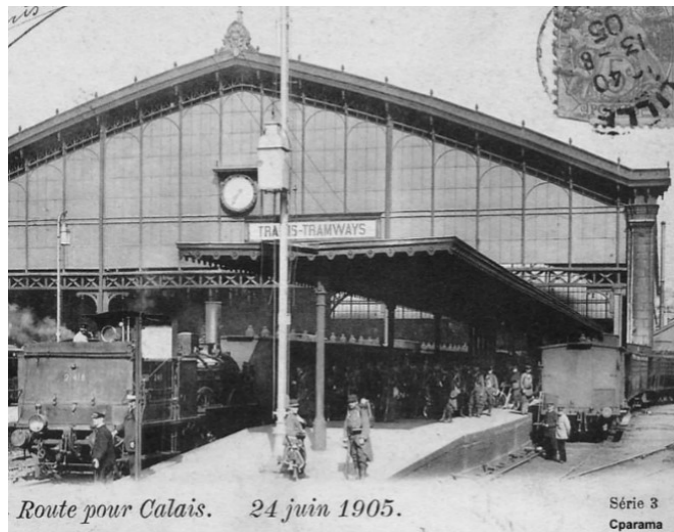


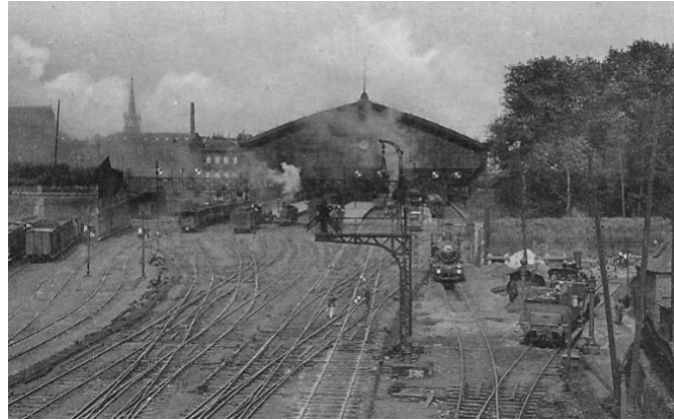*Figure 12: the walking cars towed by horses in 1874*

Figure 13: views on rear side of Gare de Lille station with trains and trams in 1905 (CPArama, n.d.)

The continuous industrialization of Lille increased the demand for more efficient rapid transportation of goods and people. The limitations of the railway system such as inflexibility and distance coverage led to development of alternative modes of transport. In 1954, the Lille airport opened its doors and the first section of Lille-Paris motorway in 1967 embarked a new era of modernity. Again, this modal shift and notion of 'speed' was part of larger paradigm shift globally. It required a different approach to city planning by looking at network and nodes on metropolitan scale. The city of Lille was no longer viewed as a single 'autonomous' city surrounded by suburbs (Tirry, 1999).

The urban transport system across Lille was revised by closing down city trolley-bus and most trams routes to make space for more efficient flow of car traffic (see fig. 14). The Y-shaped tramway line from 1909 between Lille and its industrial satellites of Roubaix and Tourcoing remained. In 1960, the city added transport facilities like a coach station and a heliport adjacent to the station. This attempt to create intermodal interchange failed due to progressive lack of use (Tirry, 1999). In the same year, a new project for a passing station, proposed by architect and urbanist Theodore Leveau failed to succeed (Menerault, 2009).

### 1930s-1970s

In the 1920's the city council and the Northern Railway company had ambitious plans to relocate the passenger station to a new site with more spatial opportunities, with a much bigger infrastructure in mind; the construction of a new railway loop in for growing national and international traffic, such as the Calais-Berlin-Warsaw corridor. The replacement of the old branch line with the new loop was completed in 1949. The passenger station's location remained unchanged (Tirry, 1999). In 1956, the historic city wall was fully demolished which allowed the station the be enlarged with six new tracks (Masboungi, 2001, pg. 46). The freed up space also allowed enlargement of its square 'Place des Buisses' to improve the station's local accessibility.



Figure 14:  The Gare de Lille station square in 1959



Figure 15: VAL metro in 1983 (jfm, n.d.)

In the late 1970's the French National Railways launched a program to renovate and improve 200 stations in a five year time span in close collaboration with local authorities incl. Lille city council. Gare du Lille was transformed into a multimodal hub with shared concourses and underground space with a new tramway terminal and the station's first subway. The first subway to connect Lille and Villeneuve d'Ascq was completed in 1983 (Tirry, 1999) (see fig. 15). Although the passenger count at Gare du Lille was still growing with 20,000 daily users in 1959, reaching 41,000 daily users in 1977, and being the largest provincial railway station in France, the station's building was no longer an integral part of large infrastructural metropolitan projects. It led to a misalignment between transport planning and land-use planning for the station area. Although SNCF started to work on the TGV network (high-speed train network) in France since 1966, Lille was not connected to its services. SNCF Chief Architect, Duthiheul was explaining that TGV was still seen as a 'disturbance to the surrounding and TGV stations were not yet regarded as potential urban planning initiators' (Tirry 1999).

### 1980s - present

In the late 1980s Lille's station area became subject of futuristic and ambitious urban renewal to re-enforce the city's economic position at metropolitan, national and European level. The strategic location as a Northern European cross-roads and large amount of preserved military land, despite periodic attempts to build new transit station on this land, facilitated the implementation of the efficient TGV line and Lille-Europe, a new high-speed transit station (see fig. 16 & 17). The new transit station was built between the motorway and the existing 19th century terminal station (only 100m north-east). The objective of the project was not only the creation of a new international 'transportation and business hub' but to be a 'launching pad' to the economic renaissance of the both the greater Lille metropolitan area (Lille-Roubaix-Tourcoing-Villeneuve d'Ascq) and the Bord Pas-de-Calais region (Koolhaas, 1999, pg. 13).
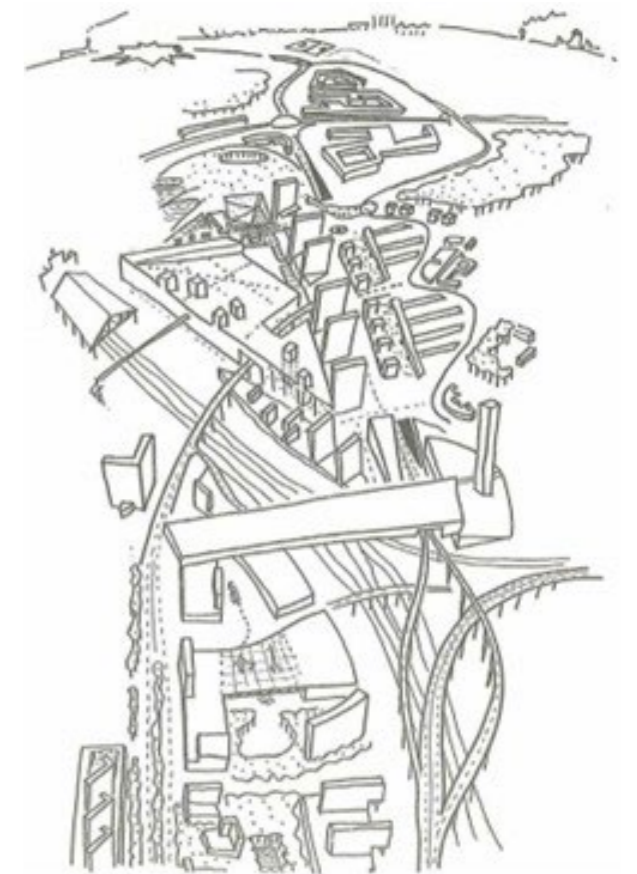


Figure 16: Sketch of Lille with modern high-rise buildings and many combined flows (OMA, 1993)
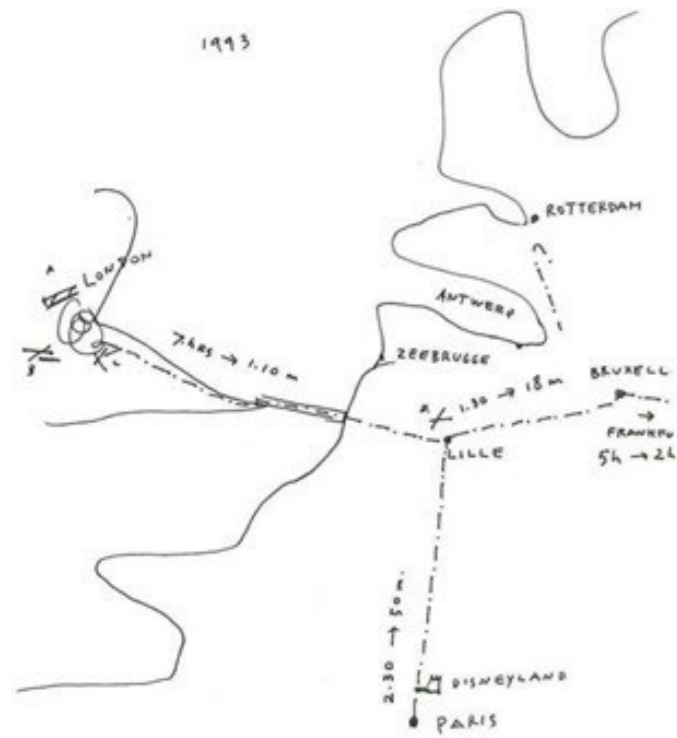
*Figure 17: Sketch showing Lille as epicentre of a high-speed railway network (OMA, 1993)*

Since the opening in 1994, Lille-Europe and Lille-Flandres (previously Gare du Lille) form together the 'triangle des gares'. Lille Europe hosts TGV, Thalys and Eurostar trains with two central platforms serving a daily flow of 8,500 passengers and annual passenger count of 7,871,976 in 2019 (Heddebaut, 2018, SNCF, 2020) (fig. 18). It provides TGV connections from Lille to Paris (1 hour) and Roissy-Charles-de-Gaulle Airport (52 min), and Eurostar connections to Brussel (38min) and London (1h 20min). In 1993, the first TGV train arrived from Paris at Lille-Flandres station. Trains that don't stop (in case of Eurostar, incl. those routes between Paris-London) pass the station with a speed up to 220 km/h (SNCF, 2020). It functions a multi-modal hub with bicycle parking, car parking, taxi rank, drop-off zone, bus stops, a underground metro station, tram station and international coach station. Nearly all carparking is accommodated underground for people that travel to the station and business district by car.

The Lille-Flandres station (fig. 19) hosts all the TER trains in the region, some TGV trains (incl. towards Paris), Corail trains and non-Thalys trains to Belgium. The station

was upgraded with a metal passerelle serving 17 platforms, which helped connecting the station with two new sideway entrances (Euralille shopping centre to the north and rue de Tournai to the south). It is the second provincial station in terms of attendance of France, after Gare de Lyon-Part-Dieu. In 2012, the annual passenger count reached 20 million passenger and 110,000 daily users of which 70,000 take the train and 40,000 travellers are only crossing (using services or going shopping). From 2014, the passenger area of the station was reorganised and refurbished with a construction of additional shops, restaurants and a supermarket (Heddebaut, 2018). The station provides good connections with the urban transport network with the metro VAL line 1 and line 2 (located underground) and two tramway lines towards Roubaix and Tourcoing.



*Figure 18: Station hall of Lille-Europe station with TGV train (own work, 2023)*



*Figure 19: Station hall of Lille-Flandres station (own work, 2023)*

## Conclusion

Lille's railway system and its station area have evolved significantly since the 19th century, with a remarkable increase in total combined yearly passenger flow. In 1858, the passenger count was 600,000, and by 2019, it had surged to 29,400,000. This growth demonstrates Lille's growing regional, national, and international importance as a transportation hub.

Over time, Lille's strategic position as a cross-border city and its accessibility contributed to its development as a central node in various railway networks. However, challenges arose with car-centric planning and oil dependency. In the 1980s, Lille addressed these issues by constructing Lille-Europe, a new high-speed transit station, and undertaking a comprehensive urban renewal project.

Today, Lille's station area, also known as 'Triangle des Gares', comprising Lille-Europe and Lille-Flandres stations, serves as a multimodal hub, connecting people and goods across different modes of transportation.

Figure 20: Lille-Europe station (previously known as Gare de Lille (own work, 2023)

# 3.    LAND USE

The land-use of Lille has been closely related to the city's prevailing economic model and the resultant demography and movement as a by-product throughout time. The railway system accommodated the mass expansion of the city under industrialization in the 19th and 20th century by improving the city's accessibility and optimizing flows and interaction. As a merchant city, production and trade of textile and mechanics have been vital for the economic prosperity. The industry was highly dependent on coal as main energy source and later shifted to oil. The economic growth was at cost of the social and environmental conditions for the common people 'the working class'. The energy crisis in the 1970s, technological innovations, social and environmental concerns, and neo-liberalism led to a change of economic model in many European cities including Lille.

Since the 1980s Lille tried to get rid of its industrial imago by the conversion to a service-oriented economic model. The Euralille project with a new European high-speed transit station became the engine of creating a new city centre, impacting the entire Lille agglomeration. The station area became the centre of movement and (transit-)destination for corporate business, tourism and shopping. Whereas in the past mostly goods and products were moved in and out of the city, now people with their knowledge, experience and skills are transferred throughout the transport system.
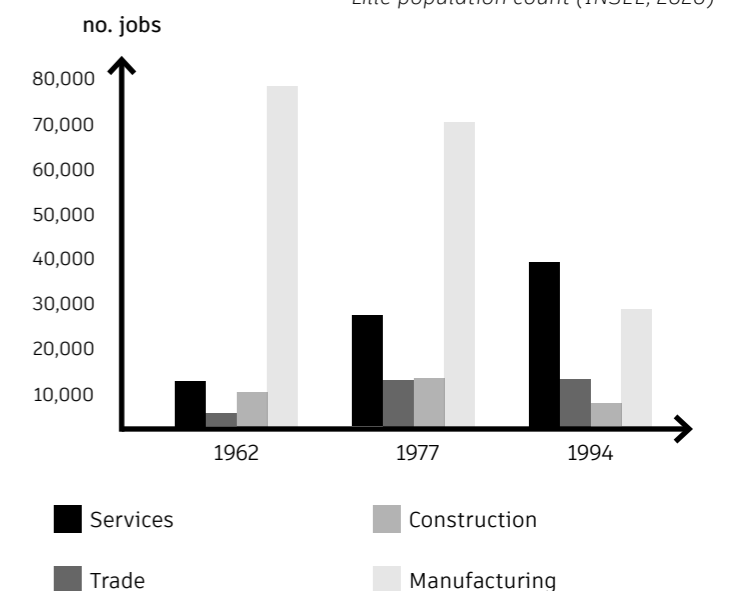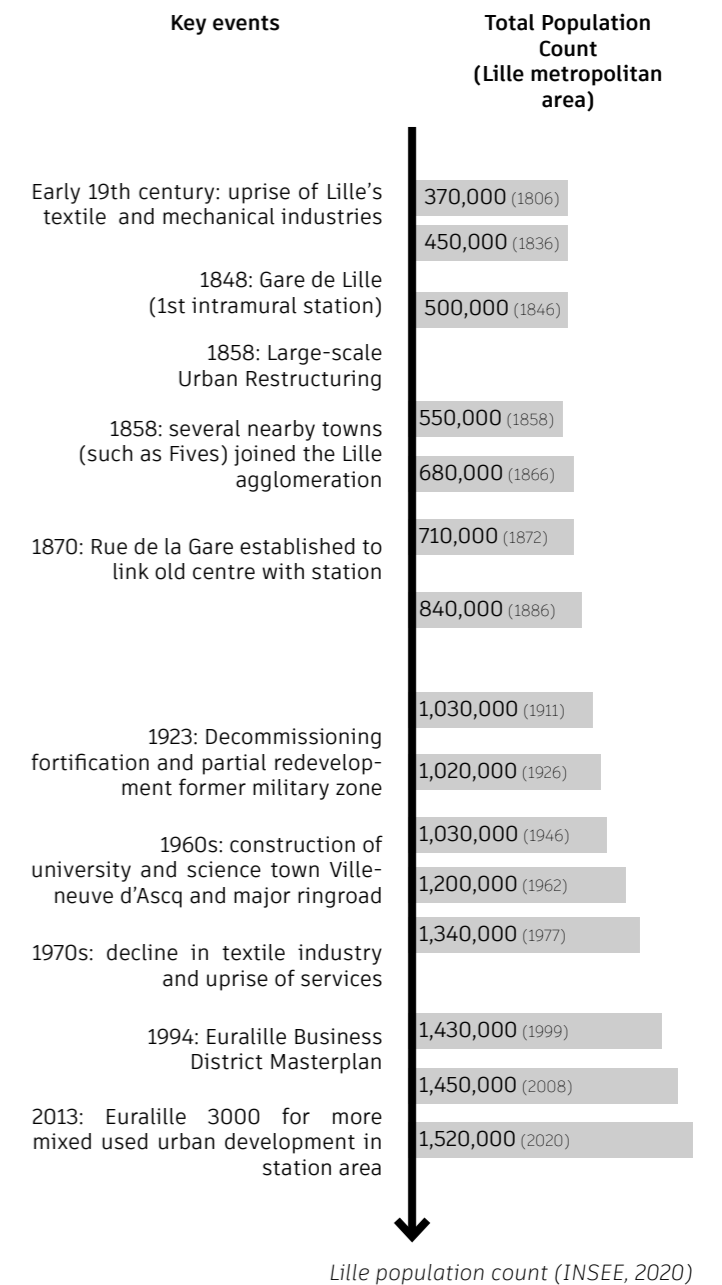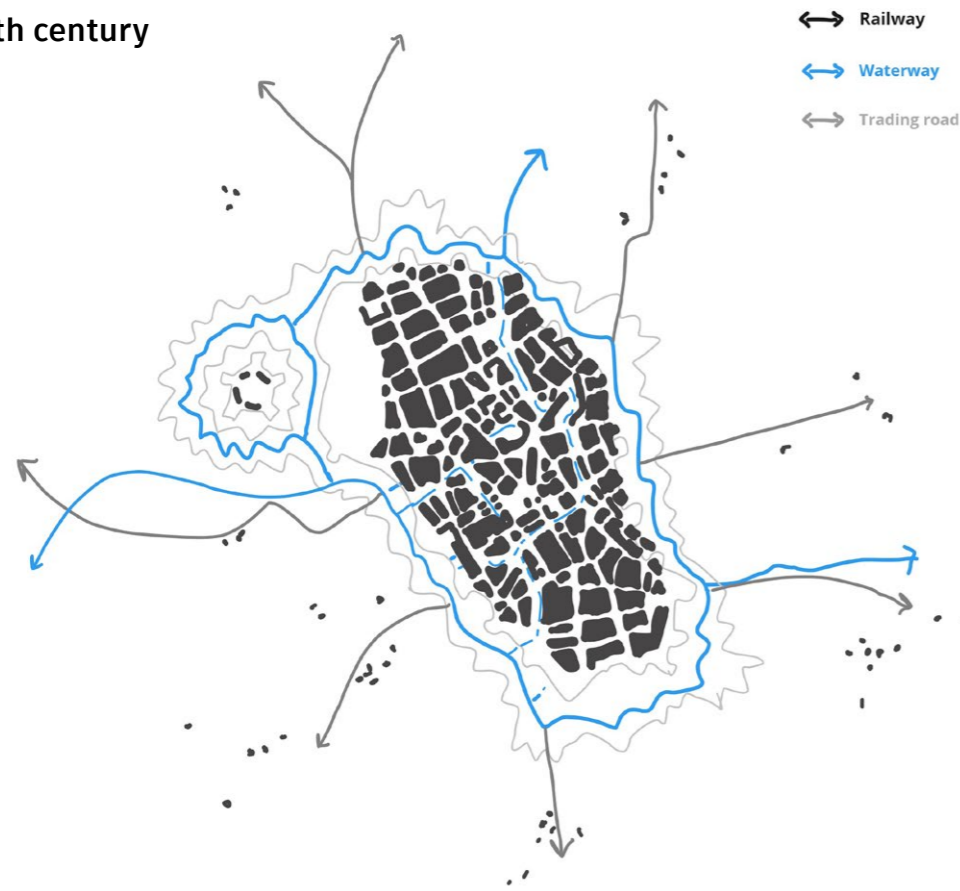
| Key events | Total Population Count (Lille metropolitan area) |
|---|---|
| Early 19th century: uprise of Lille's textile and mechanical industries | 370,000 (1806) |
| | 450,000 (1836) |
| 1848: Gare de Lille (1st intramural station) | 500,000 (1846) |
| 1858: Large-scale Urban Restructuring | |
| 1858: several nearby towns (such as Fives) joined the Lille agglomeration | 550,000 (1858) |
| | 680,000 (1866) |
| 1870: Rue de la Gare established to link old centre with station | 710,000 (1872) |
| | 840,000 (1886) |
| | 1,030,000 (1911) |
| 1923: Decommissioning fortification and partial redevelopment former military zone | 1,020,000 (1926) |
| 1960s: construction of university and science town Villeneuve d'Ascq and major ringroad | 1,030,000 (1946) |
| | 1,200,000 (1962) |
| | 1,340,000 (1977) |
| 1970s: decline in textile industry and uprise of services | |
| 1994: Euralille Business District Masterplan | 1,430,000 (1999) |
| | 1,450,000 (2008) |
| 2013: Euralille 3000 for more mixed used urban development in station area | 1,520,000 (2020) |

*Lille population count (INSEE, 2020)*



Figure 21: Salaried Emplotment in large enterprises in Lille (zone A) (Moulaert 2001, INSEE 1997)

25

**Pre 19th century**

Railway
Waterway
Trading road

**1860s – 1920s**

Railway
Waterway
Trading road
Railway station

La Magedeleinee

Gare
de Lille

Gare
St. Sauveur

Fives

Fives-Depot

Wazemmes

**1840s – 1850s**

Railway
Waterway
Trading road
Railway station

La Magedeleine

Canteleu

Gare
de Lille

Fives

Fives-Depot

Wazemmes

**1930s-1970s**

Railway
Waterway
National Motorway
Railway station

La Madeleine

Canteleu

La Fauborg-
St. Maurice

Gare
de Lille

Gare
St. Sauveur

Wazemmes

Fives
Depot

*own work*

*own work*

Railway
Waterway
National Motorway
Railway station

Triangle
des Gares

Wazemmes

Fives

*own work*

### Pre 19th century

The city of Lille evolved from a small settlement with a strategic location along the river Deûle. The borders were defined by its fortification and pushed outwards during seven successive extensions. The intramural space went from 10 to 1,000 ha over a time period of 800 years (Lilledantan, n.d.). It had a strong religion life with Catholics and Protestants, resulting in rapid multiplication of parishes; administrative districts with its own churches (Pierrard, 1979).



*Figure 22:  aerial impression of Lille's fortified city in early 19th century (J. Lacy, n.d.)*

The first demographic expansions date back to the 12th- 13th century when Lille profiled themselves as a merchant city. The Initially the city was thriving in the field of agri-food (wheat) with its mills and breweries. The population in the beginning of the 14th century was around 25,000 inhabitants (Lotting, 1898). From the 16th century, Lille started manufacturing, particularly in the field of textile with wool, linen and cotton. It contributed to the large expansion in 1617-1622 and a new defence line (currently the remaining old city wall in Euralille site). After the conquest by Louis XIV in 1670, the construction of the citadel and Vauban fortification marked the definite limit of the intramural city (see fig. 22).



*Figure 23: working class people inside the former textile spinning mills in Lille (B. Frères, n.d.).*

### 1840s – 1850s

In the early 19th century, the arrival of the steam engine and opening of coal mines (as energy source of engines) in the region allowed the textile industry to upscale rapidly. The major textile districts were in located in Wazemmes and Lille-Moulins (fig. 23), whereas the mechanical-oriented districts were located in Fives, Hellemmes and Bois Blancs (fig. 23).
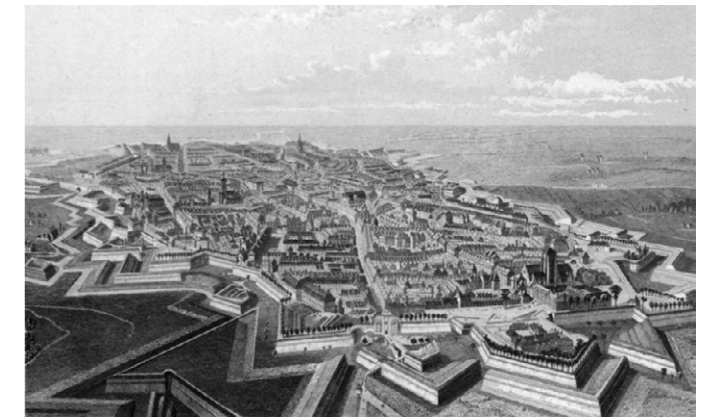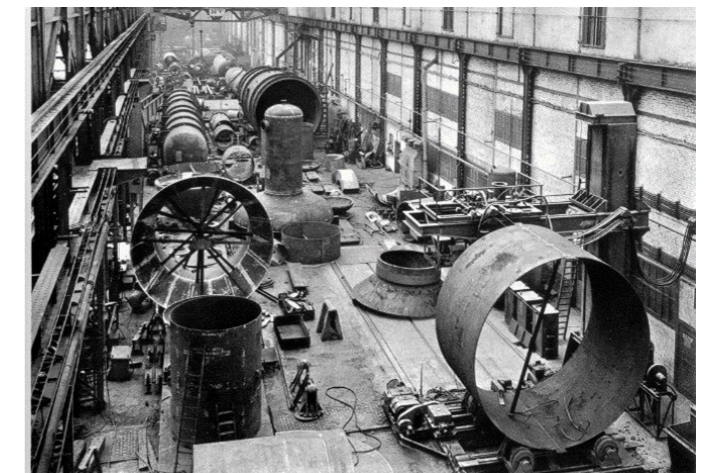


*Figure 24: working class people inside the former mechanical factory (B. Frères, n.d.).*

## 1860s – 1920s

The expansion of the railway network led to improved accessibility of the city, leading to rapid urban expansion with more housing and employment. In 1858, several nearby towns (such as Fives) joined the agglomeration of the city. It led to a sudden doubling in population size. The city with its clearly defined boundary through a medieval fortification was being forced to let its boundaries go. The removal of the wall led to a complete transformation on urban scale. The population count went from 92,000 in 1858 to 170,000 in 1868, a time span of only 10 years. The city called for a planning competition for a new city plan to accommodate this rapid growth; 'a densely populated heart of the city and former scatter suburbs' (Tirry, 1999).

The old city was metaphorically suffocating and needed to be opened up in order to breathe again. A new spatial organisation was required to primarily optimize the flows between the city's commercial and industrial sections (fig. 26). This was done by a rapid and direct connection between the newly opened Saint-Sauveur freight station and the port on the River Deule. The second focus was about restructuring the overcrowded and outdated medieval urban form of the old city, in order to keep the traditional economic centre vital and well-functioning. Local architect and winner of the competition, Vandenbergh, proposed to connect the old city and the suburbs by creating a 30-m wide tree-lined boulevard, supported by a sub network with public squares. (Tirry, 1999)

Gare du Lille station was continuously strengthening its position as the new gateway to the city, instead of the former city gates in the medieval fortification. An adjacent hotel and a new hall were added to the site for hosting more travellers in the late 1880s (Tirry, 1999). While the station was being upgraded, the urban framework around the station was also restructured. The existing urban fabric with a small overcrowded arrival square and narrow streets from the

middle-ages were a serious barrier between the economic heart of the city and the new city gateway. From 1869 to 1870, a new 20-m wide breakthrough boulevard 'rue de la Gare' (now known as rue Faidherbe), presented by architect Louis Gilquin, was created to link up this square with the theatre, to further facilitate the connection between the station and the city centre (Ingelaere, 2002) (see fig. 25). The ancient Grand-Palace and the Stock Exchange were located adjacent to the theatre. The Hausmannian design principle was applied – linking important urban poles while bring open space and light into the city (Tirry, 1999). It required the demolition of the fish market, the former mayor's hall, and some housing and workplace in the neighbourhood (Lussien-Maisonneuve, 2010). The new boulevard was enclosed with elegant and homogenous strips of five-storey Parisian building on both sides.

*Figure 25: Artist impression of Hausmannian Rue de la Gare by Louis Gilquin (1868)*

*Figure 26: Urban restructuring plan in 1858 (Hanscotte collection, n.d.).*

## 1930s – 1970s

After World War One and the Great Depression in the 1930s, European cities incl. Lille were determined to build up stronger and faster. During the interwar period, the former military zone around the inner city's perimeter and the fortification were decommissioned to the city in 1923. They were proven useless as defence during the war with German bombardments. It led to urban development on the former military land around the Gare de Lille and Gare Saint-Sauveur with the construction of new building including the Lille Trade Fair along a 250 metres long 'Boulevard du President Hoover' in 1933 (La voix du nord, 1998) (fig. 27). The university of Lille was also expanding in the area attracting more students in 1937. Around the same time, the city was preparing plans for a motorway connection between Lille and Paris.

After the Second World War (1940-1945), Lille resumed the construction work and was becoming a future metropolis adapting to the development of the automobile (Menerault, 2009). The railway was seen as a disturbance to urban projects which led to a misalignment between town planning and land-use. Around 1960s, the majority of available land along the inner city's perimeter was freed up for the construction of the eastern ring road and the extension of Pont de Flandres bridge for connecting the east and west (Saint-Maurice) side of ring road. Only a small part of the former military territory adjacent to Gare de Lille station was used to build a postal sorting building and a heliport. The failed heliport was later replaced by a bus station in 1963 (see fig. 28). In 1967, plans for a new university and a science town Villeneuve d'Ascq (6 km south-east to centre) required a total restructuring of the transport system (Tirry, 1999).

Lille followed the car-centric planning trend similar to many other European cities. The suburbs became increasingly isolated from the inner city. The traffic arteries prioritising fast-paced car movement became a barrier for slow-paced human movement and social interaction.

In 1973, Parc des Dondaines was created in the location of an evacuated slum. Until 1980s, a collection of unbuilt land around 100 ha remained unoccupied north to Gare de Lille, between the old city perimeter and the district of Saint Maurice and the ring-road. In contrast to the territory between Fives Depot and the Saint-Sauveur station which was mostly occupied with limited open spaces at the end of 1950's.

*Figure 27: Boulevard du President Hoover (n.d., 1979)*

*Figure 28: aerial photo of the station area in 1979 with large a car parking and bus station (n.d.)*

## 1980s - present

The decision for Lille as the transit station for the future TGV was approved in 1987 by the French government, SNCF and the city council (fig. 53). Shortly after in 1988, a public-private partnership was set up to launch a competition to select an architect in charge of the masterplan. Rem Koolhaas, famous Dutch architect and founder of OMA, was selected as winner to lead the new 70-ha masterplan involving both station, so called 'Euralille'. It would become the third business district of France after La Défense (Paris) and La Part-Dieu (Lyon) (Lavoixeco, 2008). The city of Lille and Euralllile are very important in serving the entire agglomeration of Lille with about 1,900,000 inhabitants. As an isolated municipality Lille has around 240,000 inhabitants, making it only the tenth largest city in France and a medium-sized European city (INSEE 2023).

The Lille-Europe transit station is the engine of a making a new city centre; Euralille. The combination of the high-speed railway, the ring road, the vast amount of undeveloped land gave the project high potential for a Metropolitan Business District (Tirry, 1999). Rem Koolhaas had the hypothesis (1993) that the 'experience of Europe was going to change drastically under the double impact of the Channel Tunnel and the extension of the TGV network'. The city of Lille became the new centre of gravity of the London-Brussels-Paris triangle. Its strategic location in this international triangle and connection to the airport makes the station area highly attractive for investors. Euralille is a predominantly 'service-oriented' urban hub that can be seen a tertiary layer of the city, sitting in between the old city centre and the periphery. It is primarily perceived as 'a place of international flows' rather than an extension of the existing city. Koolhaas his idea of a city is not directly based on context or history but rather a on a 'generic, functional modernism'. All ingredients for his generic city model are present in Euralille; high density, skyscapers for multitude of uses, and a hig-

hly commercialised shopping centre or amusement park (Trip, 2008).

For the first time in Lille's history, the railway station ruled the entire spatial layout of the new area (Tirry, 1999). Koolhaas had the concept of 'total short circuiting the awareness and experience of distancing' by manipulating the infrastructure (Koolhaas, 1999, pg. 21). The station area is seen as a place in the city and had to become the 'seat of a number of typical modern activities (Bertolini & Spit, 1998, pg. 11). The spatial organisation was the leading framework for the initial 70ha masterplan in 1988 (Koolhaas, 1999, pg. 16-17) (fig. 29 & 30). Over time, more subprojects were gradually added. Koolhaas his masterplan of the station area hinged around 4 major functions (Bertolini & Spit, 1998) (Koolhaas, 1999, pg. 14).:

- Euralille centre - Urban service centre (situated between two stations incl. offices, hotel, shopping centre, business school and other amenities)
- Cite des Affaires - Transportation service centre (Lille-Europe station incl. row of business towers above)
- The Grand Palais Congress Centre - Exchange city centre
- Parc Matissee -  City park



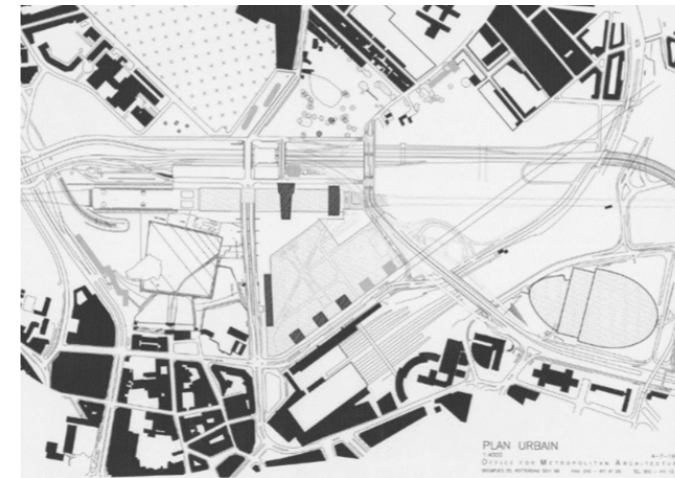*Figure 29: physical model of Euralille (NAi, 2006)*



*Figure 30:  urban plan Euralille (OMA, 1995)*

Parc Matissee was developed between 1996 and 2004, acting as the main green lung of Euralille with 8ha. It has many historic traces of the old rampart, train tracks, gateway and ditches. However, the Euralille construction works required the destruction of 17th century old Fort Sainte-Agnes and the reduction of Parc des Dondaines. The old bus station (previously heliport) was freed up for building the shopping centre.

Besides the station area itself which is called the 'central sector' of Euralllile, the project is also the incentive to catalyse the development of the wider urban area. The multiplier effect over time led to increasing attractiveness for investors. Other sectors that are part of the first development phase 'Euralille 1' are the Rosemary sector, Coubertin sector, Saunt-Maurice Sector, Metropolitan square sector, Chaud Riviere sector, Ilot Pepiniere sector. Most areas are characterised by high density mixed uses; residential and office, and quality of public space. As a result the station area becomes a true urban centre and on city scale leading to a gravitational shift the cities nuclei towards the east. Lille has now two competing city centre from two very different time periods. For the metropolitan square sector the city plans a 130-m tall high-rise building (10m taller than Tour de Lille), accompanied with other new tall buildings.

Euralille strengthened the position of Lille area on the European map of tourism and trade events. From 1980s onwards, there have been multiple successful initiatives to regenerate Old Lille and the Citadel area as well in attempt to get rid of the image of an industrial damaged city. ln 2004, Lille was awarded with the European Capital of Culture, confirming its status as an excellent destination for culture and tourism.

## Conclusion

The land-use pattern in Lille's railway station area has undergone significant transformations driven by the city's economic model. The railway system played a crucial role in facilitating Lille's expansion during industrialization, enhancing accessibility and transportation flows.

In the 1980s, Lille shifted its economic focus towards a service-oriented economy, leading to the initiation of the Euralille project. This project transformed the station area into a bustling hub for corporate businesses, tourism, and retail. The masterplan designed by Rem Koolhaas and its office OMA, Euralille became France's third business district, attracting investments and driving urban growth. The spatial layout was reimagined with high-density, mixed-use developments and high-rise buildings, aiming to create iconic landmarks and maximize economic value. Euralille's success has elevated Lille's profile as a vibrant destination for trade, tourism, and culture. It has also sparked efforts to revitalize the old city, further enhancing Lille's position as a thriving metropolis.

Figure 31: Lille-Europe station (previously known as Gare de Lille) (Own work, 2022)

# 4.   ARCHITECTURE

Lille has gained a wide diversity of heritage and traces of architectural styles dating from various time periods including Middle Ages, the Renaissance, Flemish mannerist, Baroque and classical French style. The development in the 19th century and 20th century has left the largest marks. It contained mainly specific working-class and industrial architecture in brick. There was also bourgeois architecture inspired by Parisian style (incl. train station), eclectic, neo-Flemish, neo-gothic or regionalist art deco. It represented the smaller wealthier middle-upper class society.

The conflicting ideas about the spatial expression rather than collective unity led to strong urban renewal.

Finally the contemporary modern architecture (part of society change) has again introduced new architectural differentiations. Since 1990's, areas that were neglected in the post-war received extra attention for urban regeneration.

In Lille's 170 years of railway and town planning history, the station area's architectural expression and urban role have co-evolved and shifted significantly each time the 'people required different ways to move in and around it' (Tirry, 1999). The design of the two type of stations are strongly related to the balance between architecture derived by its 'genius loci' (spirit of the place, relation with local context) and its 'zeitgeist' (spirit of the time, relationship with global context and universal language). The architecture of the old Lille-Flandres station used to driven by local 'Northern-French' urban context whereas the new Lille-Europe station and the new metropolitan business district are a product of a global vision of modernity stimulated by the cross-border European high-speed network (Tirry, 1999).

**Key events**

17th-19th: Baroque and Franco-Lille architecture

Early 19th century: (Neo-)Gothic revival

1843: Fives Depot (1st extramural station) constructed with simple platform

1848: Gare de Lille designed by Alfred Armand's architecture office with mix of Parisian and local architects (1st intramural station)

1865: Gare de Lille reconstructed in Neo-classical style by translocating and re-using former facade Gare du Nord (Paris) by architects Léonce Reynaud and Sydney Dunnett. Addition of extra floor and clock.

1887: Expansion of Gare de Lille with new Hôtel des Voyageurs and cast-iron hall

Early 20th century: Neo-Lille style flourished as mix between Parisian and Franco-Lille styles

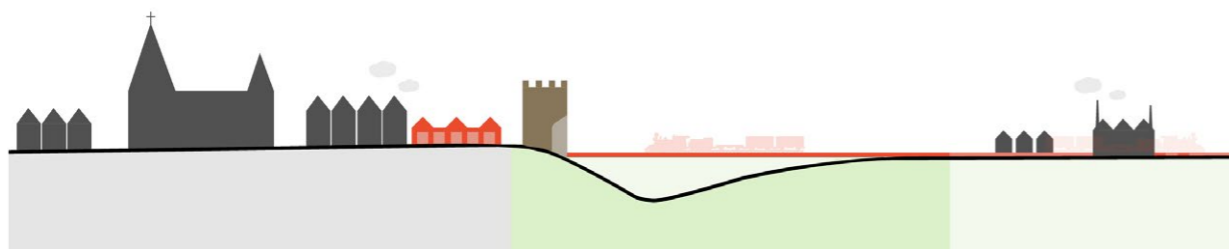1970s: Brutalist movement, decreasing local architectural influence and heritage underminded

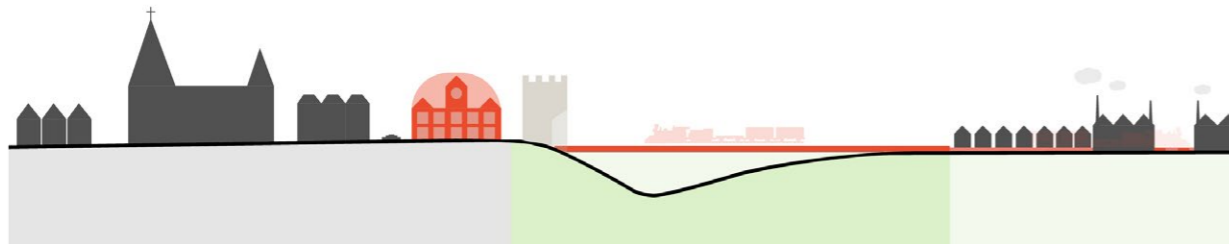1994: Euralille Masterplan by OMA and modern Lille-Europe station designed by SNCF architect Jean-Marie Duthilleul
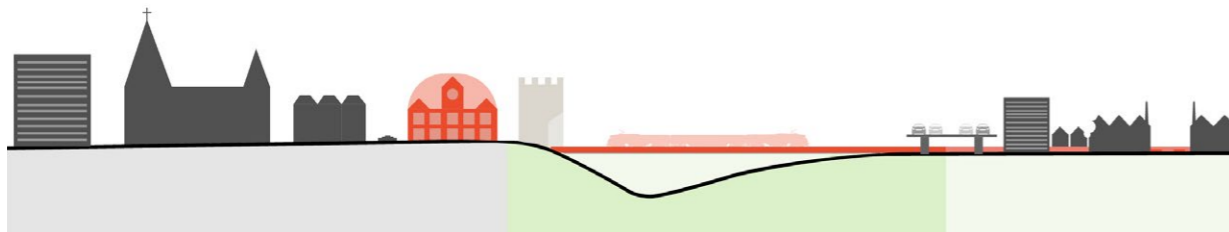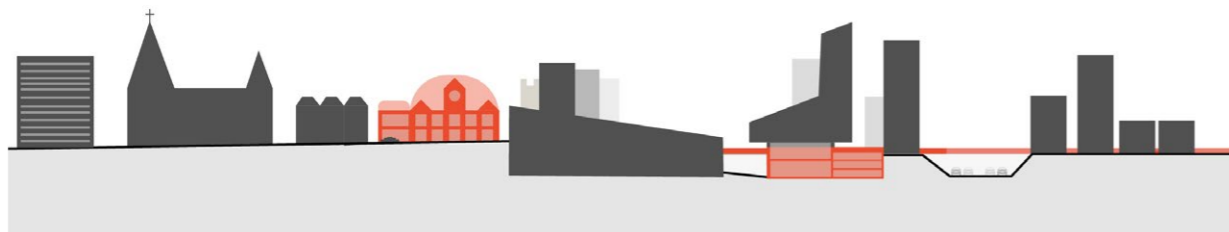
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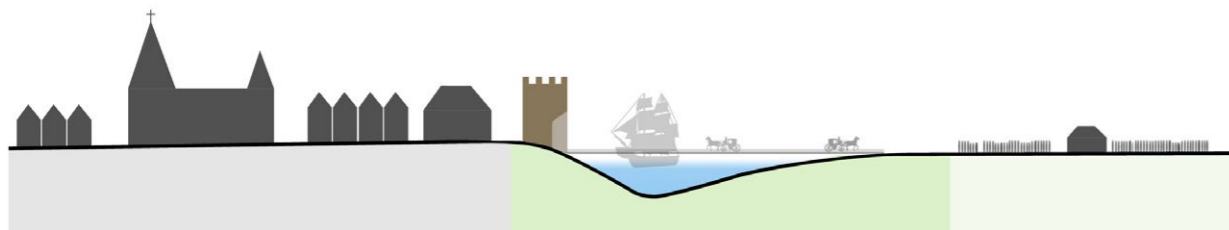
**Pre 19th century**



**1840s – 1850s**



**1860s – 1920s**



**1930s – 1970s**



**Pre 19th century**



*own work*

**Pre 19th century**

Lille's architecture before the 19th century was dictated by a strong religious life and change of rulership. Churches and chapels were the centre of the community and true landmarks in terms of height and articulation. During the Middle Ages, Lille had many religious buildings which have now all disappeared, except for church of Saint-Maurice (fig. 32). During the late Renaissance, half-timbered buildings were gradually replaced by brick and stone as a response to combating city fires (which destroyed a lot civic heritage) (fig. 33). The city had many Dutch and Flemish influences until it was seized by Louis XIV in 1667.

With the city becoming French, the king commissioned architects to fortify, enlarge and beautify the conquered cities of Flanders, including Lille; the new capital of the province French Flanders. Architect Vauban built the fortification and the citadel. The combination of local and external architects gave birth to a mix between French style and local traditions, referred to as 'Franco-Lille style'. It is defined by a particular repetitions, rich decorations and combined materials (grey sandstones for plinths, carved white chalk and red brick for upper floors). The elegant Lille style has been evolving throughout the 18th and 19th century with an upcoming French Classicism. In the ocean of 'bourgeois' architecture, the rich decorations gradually made place for a more elegant soberness.
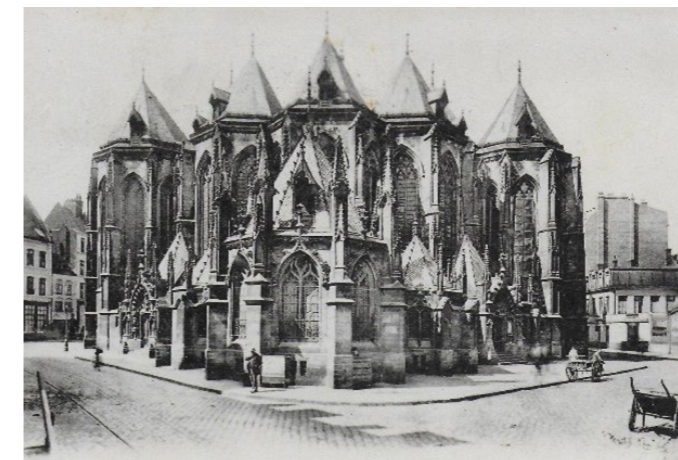


*Figure 33: The Flemish baroque Old Stock Exchange building (1653)*

**1840s – 1850s**

Mid-19th century, Lille started to see the first signs of the industrial era. The compact inner city was still bounded by the fortification and the first railway connection to Lille was primarily used for industrial purposes. Therefore the first station 'Fives Depot' was extramural with a simple platform in Fives. Soon after the first intramural station 'Gare du Lille' was built to improve the accessibility of the inner city by penetrating the fortification and freeing up limited space in the dense urban fabric. The architect Alfred Armand designed the station buildings mainly in iron, glass and brick (Leclerq, 2004). The station become a new form of the traditional city gateway (fig. 34).

**1860s – 1920s**

The acceleration of the industrialization and the large city expansion in the second half of the 19th century was a tipping point in terms of architectural expression. It started a new era of construction, mainly influenced by the Parisian model; large Hausmannian boulevard complimented by grand buildings. Gare de Lille was part of the restructured city network of strong recognizable magnets connected by links. The new buildings in Lille including civic and religious buildings



*Figure 32: (neo-)gothic St. Maurice church which required 5 centuries of construction.*

*Figure 34: artist impression of the Gare de Lille's first building designed by architect Alfred Armand (Baron 1960)*

were less decorative and more monumental architectural forms with neo-Renaissance, neo-classical, neo-gothic styles.

In the 1860's the reconstruction of Gare du Lille became an architectural debate about choosing between English and French examples of railway architecture. The façade had to embody the sense of arrival; a 'gateway with arcades, portico and monumental arch elements, expressing the grandeur of the city' (Tirry, 1999). Eventually, the Northern Railway Company decided to build the new façade by recycling the 1846 stone façade

of the real "embarcadère" building at the Gare du Nord in Paris, whose architect was Léonce Reynaud (Viguier, 2009). The railway company's architects Léonce Reynaud and Sidney Dunnett were responsible for the architectural integration in neo-classical style (Leonore, 2014). There was a lot of initial public resistance because it did not embody the mayor's mission of creating an autonomous 'big city' image (Tirry, 1999). As a form of compromise, the plans included an additional floor and a pediment with a clock in addition to the former Parisian façade (fig. 35).

Later in 1880, the station expanded with an adjacent hotel and a cast-iron hall at the rear. The large hall was constructed with a newly invented 'de Dion trois points' latticework frame model covering a surface area of 4200 m2 (Delebecque, 2015). The structure was very impressive with a 65 m span (Kanai, 2004), which was the largest so far in France. In the beginning of the 20th century, 'neo-Lille' style started to flourish which was a mixture between the Franco-Lille from the 17th century (Flemish and French combined with brick and stone) with the Parisian style. Local architect Louis Cordonnier was a symbolic leader to the neo-Lille style with buildings such as the Chambe of Commerce in 1921 (Baert et. al, 2018). In the inter-war period, Art Deco style of Flemish neo-Renaissance inspiration style buildings such as Hôtel de ville de Lille (built between 1924 and 1931) (see fig. 36) were built in parallel with a mixture of brick and reinforced, adapting also some neo-Lille characteristics.



*Figure 37: The neo-classical Opéra de Lille (1923)*

## 1930s – 1970s

The neo-Lille style and identity sustained itself throughout the first half of the 20th century by being merged with modern buildings in a simplified way. The post-WII reconstruction and especially in the urban renewal 1970s were disastrous in Lille-specific architectural continuation. For example the new courthouse in the old city centre (fig. 38). While Lille tried to reform its traditional industries (e.g. textile), the city faced several industrial crises. With lack of financial resources and unconditional desire for economic growth, the architectural heritage was abused.
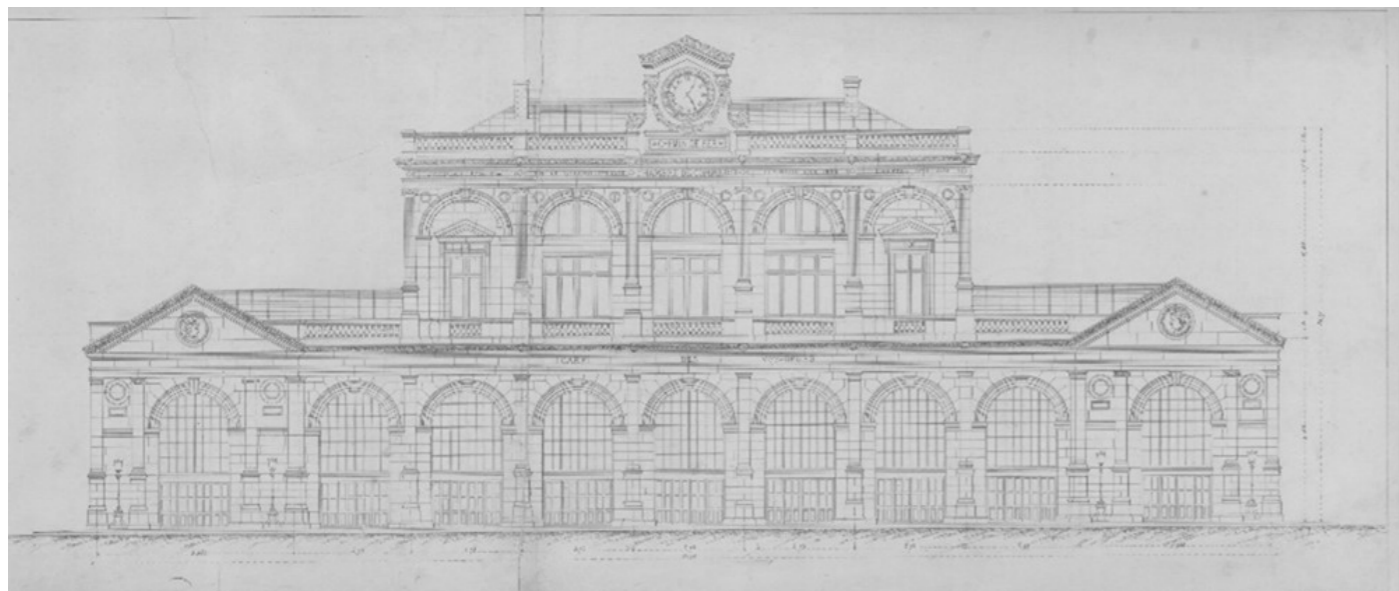


*Figure 35: drawing of Gare de Lille reconstruction that re-used the previous Paris Gare du Nord station's façade, redesigned by architects Léonce Reynaud and Sidney Dunnett (SNCF archive 1865)*



*Figure 36: Art-Deco Hôtel de ville de Lille (1932)*



*Figure 38: the brutalist Palais de justice de Lille constructed in 1968.*

*Figure 39: Gare de Lille station perceived as a collage of architectural styles in the 1950s*

At the time Gare de Lille was looking more like 'a collage rather than an homogenous and powerful building' after numerous modifications were made over time (Tirry, 1999) (fig. 39). The station had to be gradually transformed in a modern multi-modal hub, sharing the concourses and underground space with a new tramway terminal and a subway stop.

### 1980s – present

The new concept of Euralille became symbolic for a modernist and dynamic international city centre based on 'exemplary and thoroughly modern design concept' (Koolhaas, 1999, pg. 14) . Rem Koolhaas (fig. 41) from OMA was appointed as the lead architect-urbanist for Euralille; a symbolic name for its European dimension. The architecture had to express this status. Koolhaas describes himself as the 'fuck context syndrome' by introducing of new urban forms and models which are rarely expressed and which have no architectural relation with one another (Koolhaas, 1996, pg. 9). The project allowed an ensemble of innovative contemporary architects such as Jean Nouvel, Claude Vasconi and Christian De Portzamparc to express themselves with individual buildings. The twin-station area gave Lille a new 'modern' identity to the inhabitants and visitors. When the first phase of Euralille project 'Euralille 1' was complete, people had to get slowly used to the radical

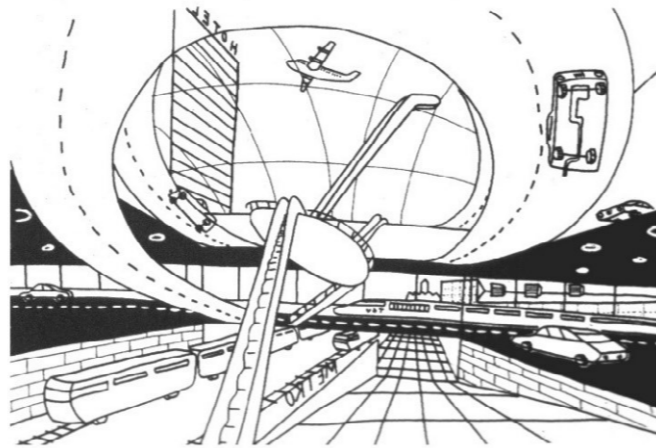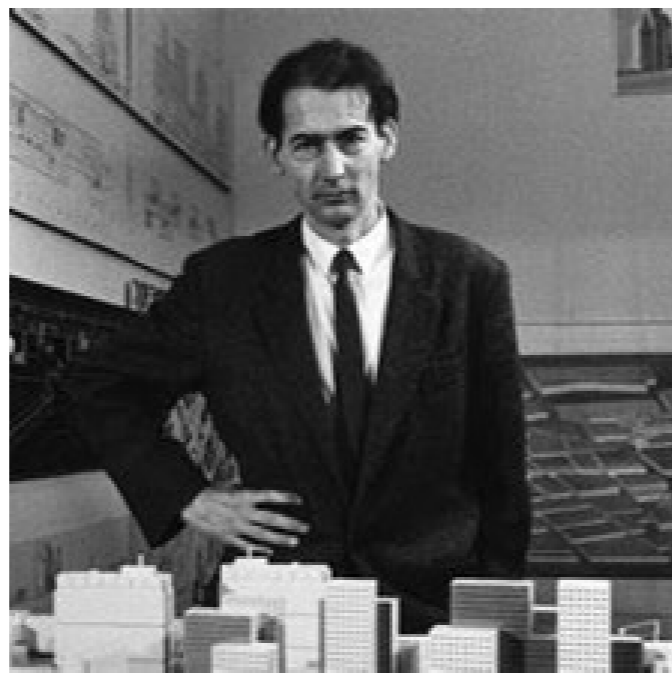changes with the bold contemporary architecture and its juxtaposition with the historical city centre. (Tirry, 1999).



*Figure 40: OMA's artist impression of Euralille with rational flows (1994)*



*Figure 41: Euralille's Lead architect and masterplanner Figure 42: Rem Koolhaas (1994)*

The lead architect for the new Lille-Europe station (fig. 43 & 45) was Jean-Marie Duthilleul. The renowned panoramic 'TGV window' frames the arrival experience of the passengers. It creates a stronger relationship between the train station and the city. The transparent 400m long glazed Lille-Europe station links two different ground levels; an upper level on suburban side and lower side facing the city centre. The terrain difference

breaks the flat topography and reduces the (visual) impact the railway as a barrier (Tirry, 1999). There is a subtle interplay between light, volume, materials and form. The nickname the 'gare aux courants d'air' is derived from the significant opening between the façade and roof to provide sufficient natural air ventilation and release air pressure from passing high-speed trains (Da Silva-Dubuis, 2019). The glazed structure creates intentional confusion between what is interior and exterior, giving passenger an ultimate feeling of freedom instead of containment. The transparency is created by having an open internal space with glass façade on both sides. It can also be regarded as the embodying of a transparent and democratic society.

The two stations are connected with a light bridge, the 'Le Corbusier viaduct' hovering above a large square and urban green park. It also functions as a connector between the city centre and the suburban area on the other side of the motorway. Passengers exiting the station and walking on bridge are drawn to the spire of the St Maurice Church, one of Lille's main vertical landmarks. Two outspoken office towers (third tower is planned), Lilleeurope tower and Tour de Lille, that rest on top of the linear station structure are new landmarks of Lille modernity. The characteristic curved 'wave-like' roof acts as a firewall protecting the towers in event of fire inside of the station (Da Silva-Dubuis, 2019). Tour de Lille with the nickname 'ski boot' is the tallest sckyscraper designed by Christian de Portzamparc with height of 120m (5th tallest tower outside Paris France). The Lilleurope Tower is designed by architects Claude Vasconi and Jean-Claude Burdese with a height of 110 m. Both buildings have a mixed structure with metal frame and concrete, and are a symbol of urban renewal.

Euralille shopping centre (fig. 44) sits on triangular site between the new station adjoining the existing SNCF station. As a consumer society, the shopping centre is the beating heart of Euralille. The architect, Jean Nouvel, tried to minimize the building costs to achie-



*Figure 43: The Lille-Europe tower siting on top of the Lille-Europe station designed by architects C. Vasconi and J. Burdese*



*Figure 44: Euralille shopping centre designed by architect Jean Nouvel (1994)*

ve affordability for the ordinary people living in and visiting Lille: 'The virtual community can only work if the new Lille remain less expensive than the city that surrounds it ... the project has become very beautiful, and for Nouvel, very Japanese'. The building slopes towards the station, partly following the terrain. The full buildings program consists of two floors of stores, affordable housing and five tower units on top of the roof with two for Lille business school, two for sport centre, one cultural centre (Nouvel, 1999). The floor plan functions through linking the two railway stations, a link between the centre and the periphery. The triangle has become a new competitive subcentre, attracting predominantly younger people.
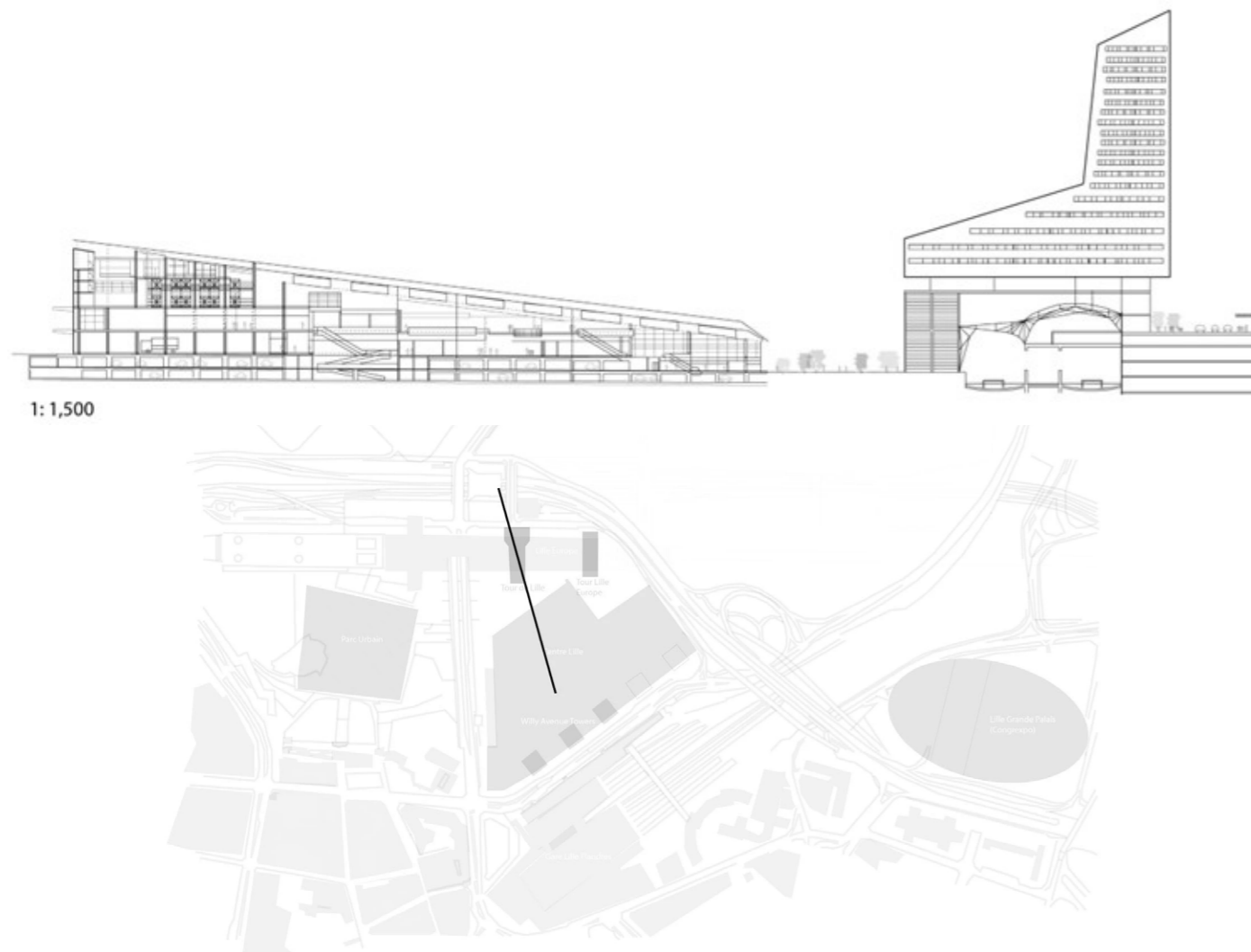
1: 1,500

*Figure 45: Cross-section of Lille-Europe station and Euralille shopping centre (SuburbiaStudioUVA, 2012)*

The second phase of the project 'Euralille II' focused on the redevelopment of the area around the former Saint-Sauveur station. Abandoned buildings have been demolished and re-purposed such as the Trade Fair site (1933) that was converted into a hotel and event centre 'The Grand Palais' by OMA. The Grand Palais contains an exhibition space, congress centre and a performance hall Zenith.

### Conclusion

Lille's expanding railway network played a pivotal role in this cross-pollination of architectural ideas, acting as a communication medium for architectural language from local to global scale. From medieval to Renaissance, Flemish, Baroque, and classical French styles, Lille's architecture reflects a rich diversity of influences. The old Lille-Flandres station represented the local urban context, while the new Lille-Europe station and the metropolitan business district embraced a global vision of modernity. The Euralille project, initiated in the 1980s, introduced innovative designs by renowned architects such as Rem Koolhaas, Jean Nouvel, Claude Vasconi, and Christian De Portzamparc. These bold contemporary structures coexist with Lille's historic core, creating a unique architectural identity.

## 5. CONTEXT & PROCESS

The evolution of Lille's transport system, land-use system and architecture cannot be understood independently without grasping the influence of the external forcefield 'the context'. The development of the transport system has been influenced by factors such as the technological innovations, infrastructural investment, and mobility policy. The invention of the steam engine and train have been the major driver of the first railway era mid-19th century. The European high-speed trains have contributed to the revival of the railway since the 1980s. The city's economic models have been the key incentive for expanding the transport network. The railway station's typology, dimension and location are mainly the strategic product of economists and engineers trying to match the supply and demand side. Initially the first train station in Lille was purely for industrial purposes, whereas over time the passenger transport has become more important. The development of the station and railway lines to and from Lille was heavily depending on financial resources. Initially by state funding until the 1980s with more public-private investments.

The land-use development is impacted by the regional demand, land availability, area attractiveness and spatial policy (Bertolini, 2012). For Lille, the spatial constraints of the intramural and military zones have contributed to an ongoing debate for expanding the railway station. Over time, Lille has consciously strengthened its position as the economic heart of the regional agglomeration. The activities and effect use of the transport system is also dependent on socio-economic, cultural and economic factors (e.g. income). The architectural expression of the city and station area is strongly dependent on the spatial dimension of the transport system and diversification of places. As the city Lille has grown from a node in a local to global network, the architectural styles have become increasingly cross-pollinated. The industrial revolution has contributed to an growing disbalance between the spirit of the place and the spirit of the age.

**Key events**

**1845:** Northern Railway Company established by Rothschild family to become main investor and operator of railway network in North France

**mid-19th century:** Lille strengtens its position as merchant city. However very poor social and environmental conditions

**1850s:** Lille with second largest stock exchange after Paris, hosting many shares in coal mines

**1914-1918:** WWI. Large destruction and inner city population cut by 40%

**1919:** Cordnudet law stimulates urban renewal competitions in French cities incl. Lille

**1923:** decommissioning fortification and military zones available for redevelopment

**1937:** Nationalisation of railway companies to form Société nationale des chemins de fer français (SNCF)

**1940-1945:** WWII

**1950s-1960s:** Peri-urbanisation as main strategy to tackle post-war housing crisis in France. Increased car-centric planning.

**1970's:** Energy crisis and collapse of Lille's textile industry

**1980s:** Neo-liberal planning and increase of public-private partnerships. Lille's Mayor presents Euralille as the anchor of five 'service-oriented' sites of excellence

**1992:** Establishment of European Union

**1994:** Opening of Lille-Europe station to match timeline completion of High-speed train network and Eurotunnel between France and UK

## Pre 19th century

Lille has benefited a lot from its central geographical position through trading, leading multiple city extension (fig. 47). The downside is that the city has been an important target by rival empires. It experienced many sieges but always managed to rebuilt (Pierrard, 1979). The largest in the pre-19th century era were the Revolution and the Siege of Lille in 1792 (fig. 46). After the attack of Lille by the Habsburg army in 1792, the military authorities declared a strategic unbuildable zone around the fortification (Dessaux, 2019). In the beginning of the 19th century, the city started to industrialize and the textile industry was stimulated as a result of Napoleon's continental blockade (preventing trade with UK).



*Figure 46:  impression of Siege of Lille in 1792.*



*Figure 47:  evolution map showing expansion of intramural zone until 1858 (Deschodt, 2006)*

## 1840s – 1850s

Since the mid-19th century, multiple European cities started to evolve around the railway station as the centre of movement and interchange for goods and people. After some years of state funding shortages, people in Lille had to wait until 1940 when a law ensured 10 million francs to realize a railway line leading to the city and connected with the Belgian network. For Lille, the fortification was major constraint for location of new train station and expansion possibilities. The inconvenient location of Gare du Lille was debated periodically between the city council, the Northern Railway Company (established by the prominent Rothschild family in 1845), the state and Lille's most prominent citizens. This collection of actors were influential in both the transport and town planning, sparking many urban projects around and nearby the station area. (Tirry, 1999)

As a merchant city, the social conditions of the working class, the craftsmen and common people working in the textile industry, were very poor (see fig. 48 & 49). Despite the poverty, the overcrowded city kept expanding by annexation of nearby municipalities such as Wazemmes, Esquermes, Moulins and Fives in 1858 (Cortet, 2012). The upcoming bourgeoisie; industrialist, merchant, owners and liberal professions represented 8% population of Lille and held 90% of the city's fortune. Lille became the largest French stock exchange outside Paris by hosting many shares in coal mines. This was in contrast to the working class, two-third of the population, who only controlled less than 1% of the wealth (Codaccioni, 1979) .



*Figure 48:  deprived industrial neighbourhoods in Lille in 1850 (L. Chamonin).*



*Figure 49:  deprived industrial neighbourhoods in Lille in 1850 (L. Chamonin).*

## 1860s – 1920s

In 1858, the city authority planned a large restructuring program to accommodate the city's mass expansion which continued for 50 years (Cortet, 2012). The overlooked urban spatial grid led to an overcrowded inner city and raising many environmental concerns. In the 1860's, the hygienist movement tried to push for a policy to increase the amount of green spaces. Plans to beauty (or greenify) the city by landscape architect Barillet-Deschamps were only partially implemented. The military opposed his ideas of dismantling parts of the old fortification (Pierrard, 1979). In 1896, Lille's people elected a socialist mayor Gustave Delory. He represented a large workforce in the textile and clothing industry (20 spinning mills with 15,000 workers

and another 5,000 weavers), mechanical industry (15,000 metallurgy workers) and the chemistry industry (Marchand, 2003). Despite a socialist mayor, the living conditions of the mass population kept deteriorating with an infant mortality rate around 30% in 1900 (Duhamel, 2004).

The First World War (1914-1918) partially destroyed several main French cities which led to a major turning point in terms of town planning. Lille's road and rail infrastructure was seriously damaged and the population was cut by 40% and reduced to 130,000 inhabitants (Duhamel, 2004) (fig. 50). Many French cities were still constrained with medieval old fortifications. In 1919, the French 'Cordnudet law' (also occurred in other European countries) required local city authorities to organise town planning competitions to allow a wide range of studies and impetus to improve the urban structure and solve extension problems. These competitions led to more radical and utopian ideas that fitted with the modern society shift (Tirry, 1999). The 'Cordnudet law' initiated to the decommissioning of the old ramparts and the military land to the city in 1923. The bombardments of the Germans during the war showed the uselessness of the fortified enclosure. The partial demolition of the fortification started in the mid-1920's until late 1930's. Some city gates (including Roubaix and Ghent) were classified as historical mo-



*Figure 50:  WWI destruction around Gare de Lille after German bombardments (1914)*

numents whereas others such as Porte de Tournai in 1924 were destroyed to free up space.

The town planning competition for Lille led to radical ideas such as building a large freight station next to the existing Port Vauban along the River Deule to from a competitive industrial complex (fig. 51). In 1919, there were also concrete proposal by architect E. Dubuisson to demolish and transfer Gare du Lille, the passenger station, into the heart of the new extended city, similar to Lyon Central Station. It would have been on a site 500m behind the existing station, free from the fortification with more spatial possibilities. However it would be moved further away from the traditional economic centre. Despite agreement between the city council and the Northern Railway Company, there was large resistance from the Chamber-of-Commerce and prominent local traders and the decision was overturned. (Tirry, 1999) The local authorities their decisions to develop the city in relation with its infrastructure was primarily based on economic arguments. In a growing modern society, the station was adopting a new monumental and symbolic role by 'expressing the city's status, power, and dimensions and controlling its spatial structure' (Tiry, 1999).



*Figure 51: Port Vauban as potential new location for main train station (E. Le Deley, 1914)*

Despite the large scale reconstruction, the interwar period was mainly marked by the impact of development of machinery impact on local employment by replacing human labour. Also The Great Depression in the 1930s also had a devastating effect on the social conditions with one third of Lille's population living in poverty in 1935.

## 1930s – 1970s

While Lille was trying to revive from the Great Depression economic recession, the Second World War hit in 1939 . The war resulted in major destruction of the city and another demographic shock. The population was reduced from around 200,000 to 168,000 (Pierrard, 1979). Many people did not return to Lille due to the ravage, large unemployment and housing crisis (fig. 52). In the WII aftermath, the state designated Lille as a 'métropole d'équilibre' (metropolis of balance) in the 1960's in attempt to recover the French national economy and encourage development of agglomerations outside Paris (Newman & Thornley, 2002). Peri-urbanisation was the key national strategy to resolve the widespread housing crisis. With the creation of a new adjacent university and science-town Villeneuve-d'Ascq in the periphery in 1972, the city of Lille lost more than 18,000 inhabitants (20% reduction).

The town-planning and transport-planning was strongly ruled by the defenders of mono-industry who resisted attempts of diversifications until the oil-crisis in 1973 (Giblin-Delvallet, 1990). The oil-dependent car-centric planning left a large imprint on the European cities including Lille with implementation large rigid road infrastructure and construction of factories requiring the removal historic urban fabric (fig. 53). The traditional industries (mechanical and textile) were inadequately prepared for the oil crisis, resulting in major economic recession and unemployment. There were no sufficient alternative energy sources due to an additional regional coal crisis. It led to a disappearance of the French textile in Lille's economic

landscape and resulting in wastelands with abandoned factories.



*Figure 52: abandoned neighbourhood Le Vieux-Lille in 1975*



*Figure 53: new motorway Boulevard du Breucq in 1974 (Archives municipales de Villeneuve-d'Ascq)*

## 1980s-present

In the 1980's, the European political playing field changed with redefined roles of state and local authorities. In France, laws passed to promote decentralizing decision-making and neo-liberal planning. City authorities make more entrepreneurial with less state involvement in planning applications (Kreukels & spit, 1990). It led to much more urban development and experimentation. The redevelopment of station areas through Europe was a key strategy for urban restructuring and tackling the emerging sustainability issues (Bertolini & Spit, 1998, pg. 3). 'Corporate culture' and 'urban marketing' strategies were applied to attract city-dwellers and potential investors. (Koolhaas, 1996). Lack of

state control also led to growing capitalism with more competition and great differences between the periphery and the city centre, the suburbs and the major urban areas. Socio-economic status became more closely related to level of accessibility to high-earning jobs and public services.

After decades of declining textile and mining industry, a new service-oriented industry could re-strengthen the economic position of Lille and the wider region (Bertolini & Spit, 1998). In the early 1980, Lille's mayor Pierre Mauroy, who also served as the Prime Minister of France had the idea of bringing the TGV to the centre of Lille and use It as 'the anchor of a cluster of high-valued service of industries, commerce and leisure' (Trip, 2008). The city authorities marked Euralille as the centre of a total of five 'sites of excellence' in the metropolitan region that should boost a diverse service-economy with some financial backing from the state (fig. 54). Whereas Euralille focused on business, other designated areas included Eurasante (Health & Biotech), Eurotechnologies (Digital Startups & Accelerator), L'union (Eco, Textiles & Multimedia) and Haute Borne (High-Tech). All developments have been built in a greenfield or former industrial sites (Goddard, 2014).



*Figure 54: overview map with the five sites of excellence (Goddard, 2014)*

The debate about the location of Gare du Lille re-emerged again in the 1980's when the plans for the European high-speed railway network become concrete. Lille was dependent on several external factors. Firstly, they had to wait until the construction of the Channel Tunnel was agreed in 1982 between France and UK (fig. 54). Secondly, the London-Paris-Brussels high speed train had to stop in Lille instead of the alternatives Amiens or next to the airport in the countryside which was SNCF's first preference (Carreras, 1993).

The project name 'Euralille' is symbolic for the European dimension of the project (Tiry, 1999). The empty former military site allowed Koolhaas to start nearly from scratch. Koolhaas his urban framework for the physical development played an important role in attracting private investors and boosting Lille's self-confidence as a modern city with a positive image (Tilman, 1994). The public-private partnership was crucial for funding the ambitious urban project because Lille was financially exhausted at the time. Politicians Peyrelevade and Patrick Marnot were leading figures by proposing a scheme consisting of selling vacant land and building rights to large developers backed by banks (Trip, 2007). The approach was innovative as it involved shared risks from 'the defining process of the project right up to its realization' (Koolhaas, 1996). The planning and design process was very high-paced with SNCF design team studying the station's architecture and engineering. The phasing of Euralille is currently divided into four major operation: Euralille 1 (central sector), Eurallile, ZAC Port de Valenciennes and latest extension ZAC Saint-Sauveur. The first phase involved the TGV station plus an additional 300,000 m2 program to be completed in 1993-4, only 5 years after launching the masterplan competition. Timin was crucial to match the completion of the Channel Tunnel and start of the Lille-Paris-London TGV and Eurostar services (Tirry, 1999).

With the establishment of the European Union in 1992, borders have become more mobile, giving rise to new (economic) relationship and rivalries. Europe received a new face with Euro-regions and Euro-cities (Koolhaas, 1996, pg. 13). It generated new distributions, flows and networks where 'large cities, motors of development have become poles with magnetic attraction around which smaller and less-wealthy local areas gravitate'. Station areas are potential nodes in emerging transport and information networks (Bertolini, 1996).

## Conclusion

Lille's transport system, land-use development, and architecture have been shaped by external forces and factors, emphasizing the significance of understanding the context. Technological innovations, infrastructural investments, and mobility policies have influenced the city's transport system. Spatial constraints, regional demands, and economic models have played crucial roles in shaping land-use development. The architectural expression of Lille and its station area is closely tied to the spatial dimension of the transport system and the city's growth as a global network.

Lille has demonstrated resilience in rebuilding and adapting to challenges throughout its history. In recent decades, the city has embraced urban redevelopment and experimentation, with a focus on station areas as key strategies for urban restructuring. The establishment of Euralille symbolizes Lille's aspirations for a modern city. As borders have become more mobile, Lille has emerged as a key node in evolving transport and information networks. The city's transformation reflects the changing dynamics of European cities.


*Figure 55: Porte de Roubaix, one of the city gates (own work, 2023)*

# 6. EURALILLE 30 YEAR ON

Gare Lille-Europe was inaugurated in 1994. For the purpose of the architectural history thesis, it is a suitable moment to re-evaluate the success of the Euralille station area nearly 30 years on. The station area's success as a node and place and the role of architecture is examined by reviewing previous evaluations, interviewing an Euralille expert Manuela Triggianese and sharing my personal experience from excursion to Lille in March 2023.

There is a spectrum of views from urban planning and transport researchers regarding Euralille's success as a node and place, making it a controversial project. The new station area is mostly described as a success (Trip, 1999, Tiry 1999) and is frequently used as an exemplary case-study of how a railway development can positively impact the urban development (Dollevoet, 2017). However, others are more reserved about the project (Bertolini, 1998) or even call it a fiasco (de Jong, 2009).

## Success by positive image

The high-speed transit station in Lille, known as Lille-Europe, has provided an economic boost to the city and the wider region by facilitating the transformation of Lille's economy from industrial to service-based activities and promoting knowledge-based industries and tourism. Lille is now home to the third largest business district in France (Frick, 2023) and the largest university hospital campus in Europe (MEL, 2021).

However, there are observations of a misalignment between the station area's place value and its node value. The success of creating an international service-oriented place in Lille-Europe has not been fully realized, with under-utilized office spaces, unpopularity of housing areas, and low visitor numbers to the Euralille shopping center (de Jong, 2009). This could be influenced by the global financial crisis of 2007-2008.

In terms of node value, Lille-Europe attracts fewer passengers compared to Lille-Flandres, primarily due to its limited international high-speed connections and fewer direct connections to major cities like Paris (Trainline, 2023). Lille-Flandres, on the other hand, operates successful regional and national connections and serves as a major interchange for the Lille metro. The lack of pedestrian movement and human interaction in and around Lille-Europe can be attributed to its weaker accessibility compared to Lille-Flandres, which hampers its potential to become the epicenter of the London-Paris-Brussels triangle.

In terms of place value, the Euralille project has created a mixed-use station area with contemporary architecture, but there is a lack of coherence and local activity between the separated elements. The shopping center feels introverted and the four-lane road between the shopping center and Lille-Flandres acts as a barrier. The lack of gravitational force and spatial integration in the new station area limits local movement and human interaction. The vibrant city life and local economy are centered around Lille-Flandres and the old city center. The absence of activity in the evening and at night contributes to a feeling of unsafety and hinders social control (de Jong, 2009).

While the high-speed transit station has brought economic benefits to Lille, there are challenges in achieving the desired place and node values. The station area's lack of coherence, limited international connections, and spatial segregation hinder its ability to attract local movement, generate vibrancy, and foster informal interactions.

## A new city centre in progress

According to Manuela Triggianese, the success of Euralille as a new city center is a long-term process that started in the 1970s-80s and will continue to evolve (Triggianese, 2015). The project has contributed significantly to the economic development of the surrounding areas, particularly across the east ring-road. The concepts of genericity and emptiness in Rem Koolhaas' urban framework allow for future flexibility and expansion, ensuring that the station area can adapt to societal needs over time. Plans for future extensions include adding a third tower above Lille-Europe station and redeveloping Saint-Sauveur.

To become a successful place, the station area needs densification and a high concentration of urban activities, functioning as a 24/7 living area (Jacobs, 1961; Majoor, 2006; de Jong, 2009). The twin stations, Lille-Europe and Lille-Flandres, should be considered together as the "Triangle des Gares" to provide both international and regional/national accessibility, complementing each other rather than competing (Triggianese, 2023; Bertolini, 1998).

Triggianese appreciated the contemporary architecture of the Euralille buildings, particularly the Lille-Europe station by Duthileul. The panoramic window facing old Lille creates a visual relationship between the modern station and the existing city, enhancing the sense of arrival and spatial orientation for passengers. The design intervention has also been applied at other stations, such as Rotterdam Central Station, to create a similar experience (Triggianese, 2015).

The development of Euralille and the station area is an ongoing process, and the alignment between transport, land-use, and architecture is crucial to generate local movement, human interaction, and urban vibrancy. The stations should work together as interconnected nodes to provide accessibility and contribute to the overall urban grid and development (Triggianese, 2023).



*Figure 57: Euralille 3000 aerial (ma-geo)*



*Figure 56:  Euralille 3000 project attempts to improve city life by densification and mixed-used programming of station area (ma-geo)*

## Excursion to Lille

The proof of the pudding is in the eating. Therefore I planned a weekend excursion to Lille while working on my architectural history thesis in March 2023. Together with my girlfriend I experienced both the new city centre Euralille and old city centre in Old Lille. With limited student budget, the Flixbus was the mode of transport from Amsterdam Sloterdijk station to Lille-Europe station. The station area felt as a different world with spectacular modern architecture. The new built office towers, residential buildings and cranes in the horizon indicated the ongoing metamorphosis of the urban fringes. The row of European flags on viaduct le Corbusier marked the celebration of Europe.

While walking through the station building, I experienced an open and transparent hall that connects two ground levels with in-between a split-level promenade with shops, café and food courts. The flows and spatial organisation became instantly legible as a passenger. While strolling on the split-level I experienced the high-speed trains passing underneath. However, it was remarkably quiet and a couple of stores were vacant. The reality does not meet the expectation of OMA's animated artist impressions. Many exterior walls were victim of vandalism with graffiti and stickers. The safety nets above the rails were covered with trash. The entrance to carpark and metro stop are located at the motorway side. Whereas on the city side, my attention was drawn towards the panoramic TGV window. The glass facade framed the views on the urban square, the Euralille shopping centre, the viaduct, traces of the fortification, the urban park. In the background I noticed glimpses of the historic city centre. When exiting to the urban square and walking on the viaduct, the view axis is directed to the tall spiral of the St. Maurice church. It was satisfying in terms of wayfinding.

The arrival square 'Place François Mitterrand' and urban park 'Henri Matisse Parc' felt desolate and oversized. The place was empty apart from a couple of international travellers, some youngsters in the park, a homeless, an old lady feeding a flog of pigeons. I understood that offices were shut during the weekend. The closer we moved towards the Lille-Flandres station the more people appeared. The Euralille shopping was overcrowded and resembled an American mall with chains and cheap restaurants. However, the activity inside the shopping centre was not noticeable from the streets. Avenue Willy Brandt parallel between the shopping centre and Lille-Flandres station was grim with a vandalised dead plinth of the old postal office, groups of smoking youngsters and smelling trash containers. The connecting footbridge between the shopping centre and the Lille-Flandres railway platforms was closed off. The accessible part of the bridge at the station side was infused by bad smells and covered with security cameras from all angles.

The Lille-Flandres station had a true monumental appearance with its 19th century old Parisian façade and large station clock. The atmosphere inside the station was lively and crowded, functioning as an effective multi-modal hub. The different flows of train passengers, tourists, students, shoppers, metro-users, cyclists … they were all meeting each other at the Lille's true centre of movement. The station square Place de la Gare provided a spacious and welcoming transition towards Rue de Faidherbe and the old city centre. Walking around the old city, we experienced the local economy, 24/7 city life and primary mixed used areas with old Flemish cuisines with special beers and stews, local art and gift shops in narrow coble stone streets, artisan bakeries, museums, the Grande theatre, etc. On the Grand Place diverse people gathered outside around the fountain and terraces to interact with each other, drink a coffee and eat lunch.

In contrary, the experience at Lille-Europe was all about speed and being part of transport machine. The Euralille shopping centre is superficial with zero association with the historic Lille. Euralille seems strongly shaped by top-down planning with clear separated programmatic elements and a large corridor towards Lille-Flandres  Euralille has great architectural quality but poor urban design and sense of placemaking. The new station area distances itself from the Old Lille by a lack of local spatial integration and informal interaction between local Lille people and strangers; the sidewalk ballet as Jane Jacobs described it (1961). The juxtaposition between the old city and the new city centre could not be any bigger. I experienced several dualities such as modern-historical, extramural-intramural, local identity-generic, intimate-desolate, monumental-superficial, slow-fast and modest-megalomaniac.











*Figure 58: Place Gilleson in front of Cathédrale Nôtre-Dame-de-la-Treille (own work, 2023)*

# 7. CONCLUSION

The conclusion gives a formulated answer to the main research question of this architectural history thesis: *'How has the evolution of the transport system, with main focus on the railway system, impacted the development of the city Lille throughout time?.*

The study examined the evolution of Lille's transport system, including the railway system, the land-use system, and the architecture of the city. Through cross-correlation and evaluation of the status quo, the research has provided insights into the success of Lille's station area as both a node and a place.

The findings reveal that these three systems have co-evolved periodically over time, with the transport system enhancing accessibility and potential for urban development in the land-use system. Urban development, in turn, has increased human activity and movement by creating new urban origins and destinations. The station area of Lille has reciprocally evolved as a node and place, influenced by external factors such as land availability, transport system investments, and land-use policies.

The central railway station area has transformed from a simple industrial platform to a densely populated, mixed-use urban neighborhood, and eventually into the modern cross-border city center of Euralille. The railway system has adapted to Lille's changing economic models, transitioning from the transportation of goods to the transportation of people in a service-based economy.

The architecture of Lille has been shaped by the city's growing global vision and the expanding transport network, attracting attention and generating economic growth. The Euralille project, with its contemporary architecture by renowned architects such as Rem Koolhaas and Jean Nouvel, has contributed to the positive image and economic impulse of the city. However, for the new city center to thrive, it needs to develop into a well-integrated place with a high density and a concentration of mixed-use activities.

Currently, the mixed-use aspect of the masterplan has resulted in segregated programmatic elements and a lack of coherence and local activity between buildings. The flexible urban framework allows for future adaptability and expansion to meet the changing needs of society.



*Figure 59: Avenue Le Corbusier with view to Eglise Saint-Maurice de Lille (own work, 2023)*

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