**Keynote speech**

# Development and crisis of European cities during the 20th century

Pierre **LACONTE**
President, Foundation for the Urban Environment - FFUE
Honorary Secretary General, International Association of Public Transport - UITP
Past-President, International Society of City and Regional Planners – ISOCARP
Co-designer of the Louvain new university town

# Summary

I. Place-making in urban planning history: Four examples

II. From the railway to the automobile age

III. Finding a compromise between urban sprawl and urban place-making: Four examples

# I. Place-making in urban planning history: Four examples

# 1. Rome : Sixtus V Plan (1586)



The plan embodied a long term vision through its strong framework combining a radial linear and grid pattern of development.  The starting point was the present Piazza del Popolo.  The urban expansion followed the Via del Corso, Via Ripetta and Via del Babuino. The filling-in of the framework was flexible, allowing for changes in style and function through the following centuries.
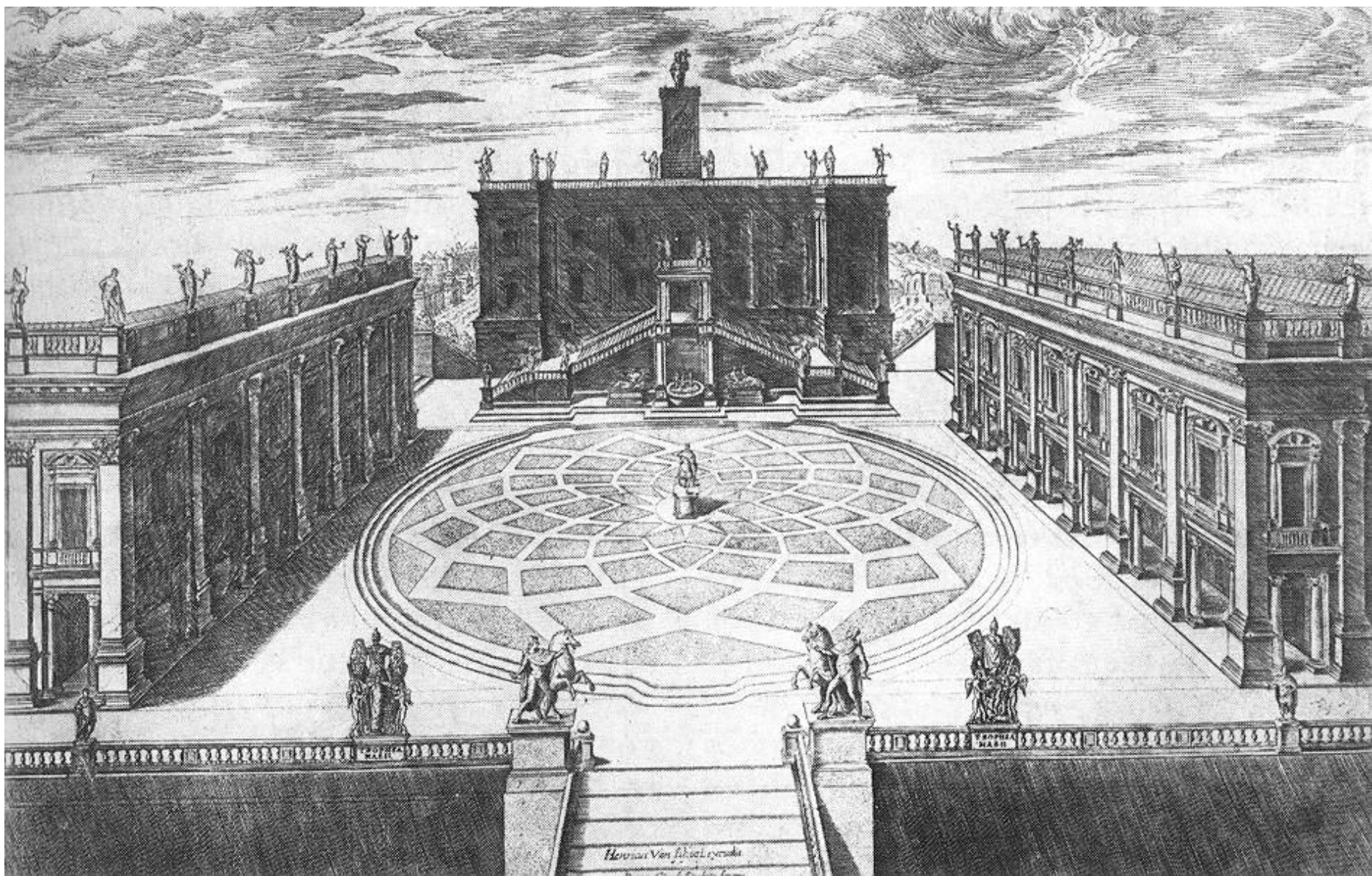
The Sixtus V Plan integrated the celebrated Capital Square, which had been commissioned from Michelangelo by Pope Paul III in 1536, in order to impress Charles V who would be visiting Rome in 1538. The two side-facades were designed to hide a mix of existing buildings.

# 2. Friedrichstadt Berlin: an inversion of the Sixtus V Plan



The  urban framework starts from the present Mehringenplatz (Hallessches Gate) and develops northwards along the Friedrichstrasse towards the Oranienburger Gate.  Once divided by the Berlin wall, today it is once again the central part of the capital ("Mitte"). The east-west Axis is Unter den Linden.  Its « anchors » are Pariserplatz in the west and the Schlossplatz in the east.
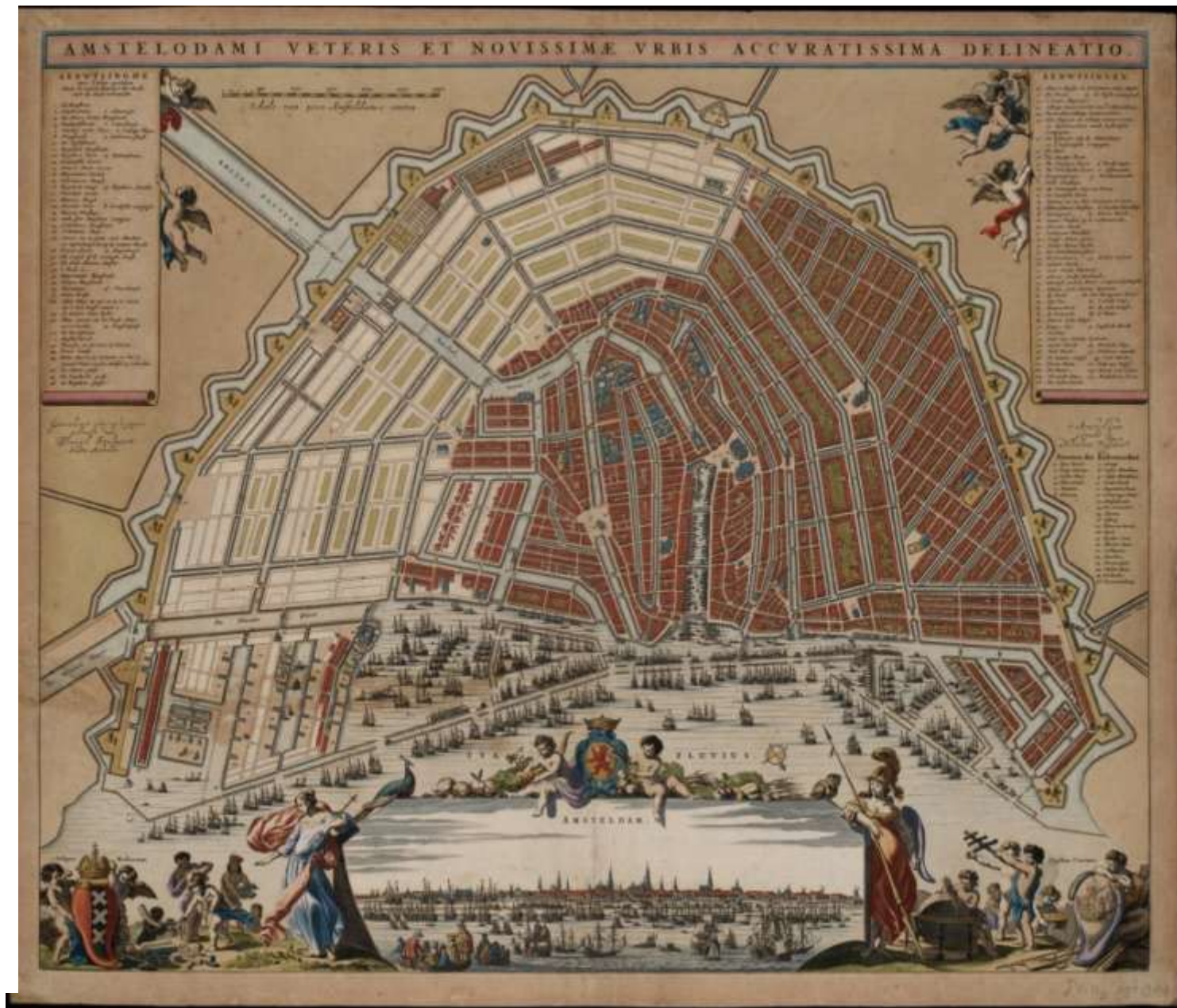
# 3. Amsterdam's curvilinear extension: The Singel



The medieval town developed southwards from the port along a main waterway and parallel canals but was confronted in the early 17th century by the need to accommodate major population growth.
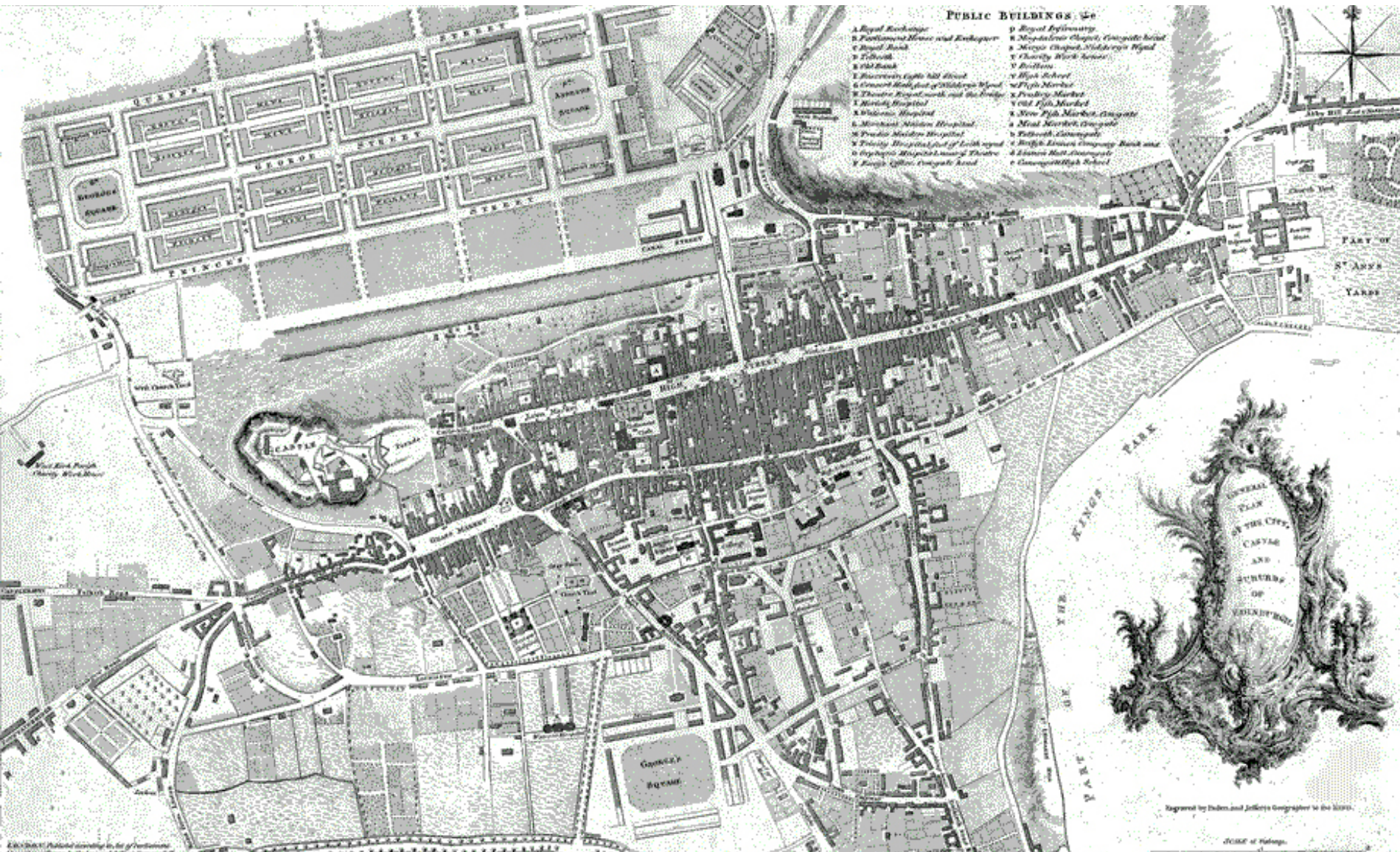
The city adopted a place-making curvilinear development framework, surrounding the old town by a triple circle of canals and a grid of streets. This plan was implemented over some 400 years and has become a World Heritage site (http://www.ffue.org/?s=singel )



AMSTELODAMI VETERIS ET NOVISSIMÆ VRBIS ACCVRATISSIMA DELINEATIO.

The Royal Mile started from the Castle and framed the urban development. In the 18th century the city took the historic decision to create a "New Town" on the northern side of the valley instead of extending the urban development southwards.

The new grid framework was gradually implemented by filling the space between the two "anchors" (St George's and St Andrew's squares).

# II. From the railway to the automobile age

The railway age generated squares to magnify the monumental stations, accommodate pedestrian movement and make space for tram lines.

The development of tramways over half a century came to a halt in the US when the automobile was allowed to use the road network free of charge (except for a few turnpikes) while the tramways had to pay for their infrastructure and its maintenance and enjoyed no right-of-way.
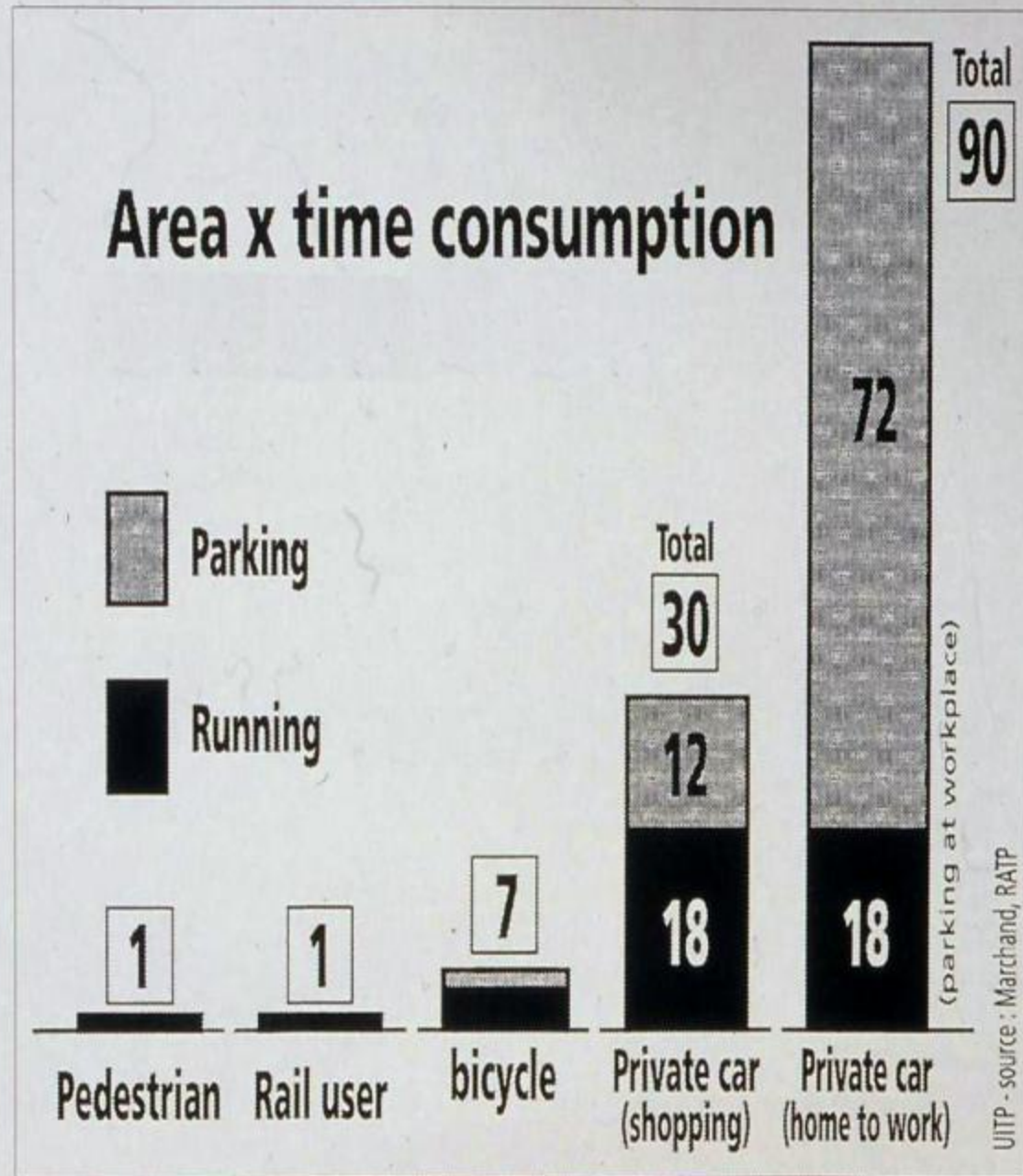
Most of the public space became occupied by the parking of automobiles. The difference in space occupancy between man and motor was much larger than commonly perceived, as can be seen from the area x time space consumption diagram.

Indeed, since cars consume space not only when they are running but also when they are parked, urban sprawl was an inevitable consequence of their successful proliferation in the US and, later, in Europe.

## Area x time consumption

Parking

Running

Pedestrian: 1

Rail user: 1

bicycle: 7

Private car (shopping): Total 30 — Parking 12, Running 18

Private car (home to work): Total 90 — Parking 72, Running 18
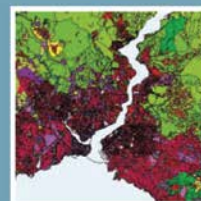
(parking at workplace)

UITP - source : Marrchand, RATP

The UK SACTRA Report (1995) showed that traffic generated by new roads increased congestion and reduced mobility instead of increasing it.



TRUNK ROADS AND THE GENERATION OF TRAFFIC

The Standing Advisory Committee on Trunk Road Assessment

Chairman : Mr D A Wood QC
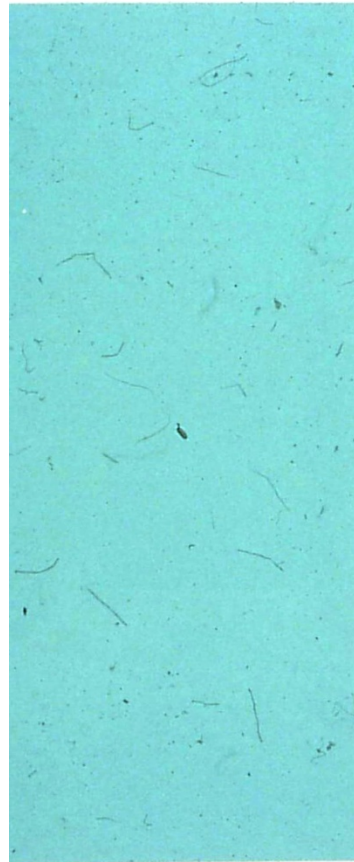
# Urban sprawl in Europe

The ignored challenge

# III. Finding a compromise between urban sprawl and urban place-making: Four examples

# 1. ZÜRICH

Planning for smart mobility:
the case of Zürich 1985-

The city of Zurich has a long term policy of giving priority to surface public transport (rail and tram, but no metro) and to spaces and places for pedestrians.

Bahnhofstrasse © Zürich Tourismus/Bruno Macor

In Zurich, trams and buses enjoy absolute priority on street. The sensor shown on the lower left ensures that they have a green light when approaching a traffic light at any time of the day. The city's modal split is around 80% in favour of public transport (1985). Source: City of Zurich Police Department.

Motorised traffic was calmed by controlling traffic light cycles.

The control system for traffic lights has a much shorter cycle which favours pedestrians, cyclists and public transport.

Source: City of Zurich Police Department.
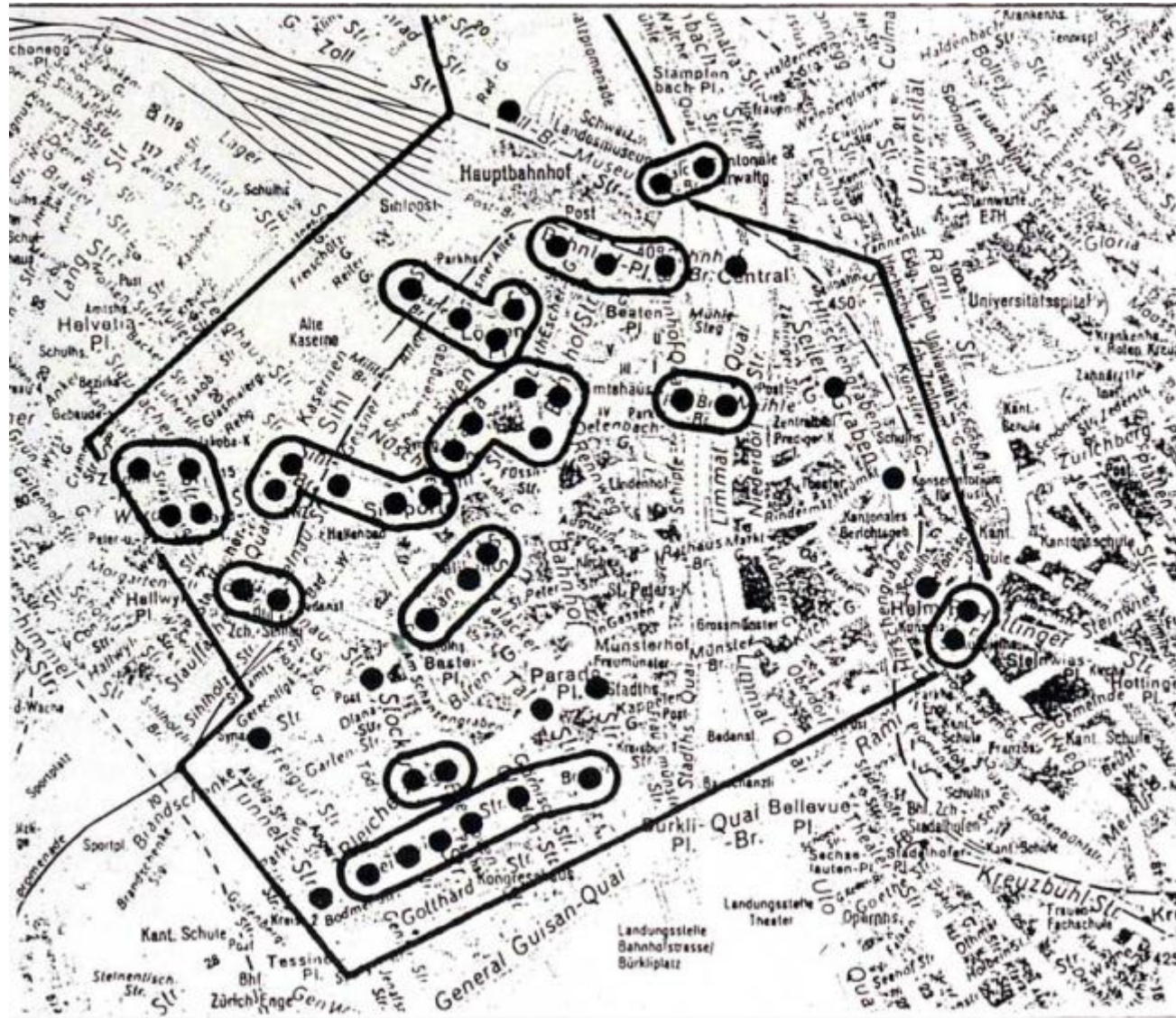
Unrestricted on-street parking is exclusively reserved for Zurich-registered residents, while car commuters entering the city from other municipalities are subject to limits on their parking time. Conversely, rail commuters have benefited from an increased service. The parking measure has brought a return of inhabitants to the city (who are able to park), and has been politically rewarding for the city fathers, while suburban rail travel (S-Bahn) has been constantly improved.
Source: City of Zurich Police Department.

# S-Bahnen, Busse und Schiffe
## S-Bahn trains, buses and boats

# 2. COPENHAGEN

The Copenhagen "streetscape" is characterized by narrow streets, small building plots and the mixed use of different modes of transport.

# THE SCALE OF THE CITY CENTER: SMALL UNITS AND MANY DOORS





The edge effect: Most people prefer to stand and sit along the edges of public spaces. Copenhagen has splendid edges.



Fine cities for standing and sitting have richly detailed facades with many niches. Copenhagen is rich in such detail.

With its medieval city structure, Copenhagen is blessed by a fine scale to which people can relate directly. Streets are narrow and squares relatively small, providing attractive relationships between building heights and ground floor areas. When space is limited, it brings everyone closer to each other and to building facades, resulting in an environment rich in sensory stimulation.

Narrow buildings have the fine effect of making streets more interesting, because narrow units mean many doors and many different functions to look at, even on a short walk through town.

The many narrow buildings also have a predominately vertical facade structure, which has the important visual effect of making distances feel shorter. This makes it more pleasant and comfortable to walk around in the city.

In addition, Copenhagen buildings have many niches, stairs, stones and recesses. These small places give people opportunities to sit and stand.

In conclusion, Copenhagen is built on a fine scale for people to walk in, as well as to stop walking and settle in a while, standing about or sitting. A splendid human scale.

Other fine attributes resulting from the scale and structure are the attractive ground floor facades that dominate the city center of Copenhagen.
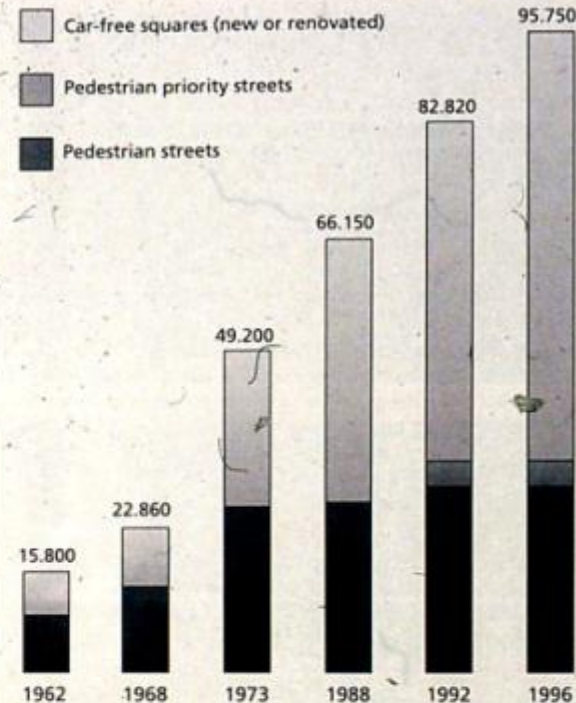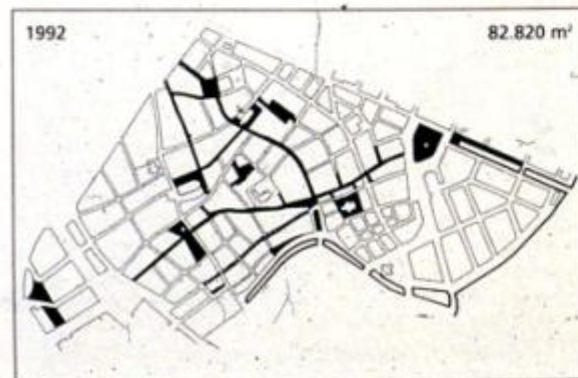
Good ground floor facades are an important city feature. They make the city interesting to walk through, interesting to look at, to touch and to stand next to. Activities inside buildings and those on the street can enrich each other. In the evenings, friendly light shines out through the windows of shops and other ground floor activities, contributing to a feeling of security as well as to genuine safety. Interesting ground floor facades also provide good reasons for walking around in the city in the evenings and on Sunday, engaging in the age-old pastime of window-shopping. In contrast, blank walls underline the futility of visiting the city outside working hours.

Copenhagen is lucky to be blessed with a fine scale, and interesting ground floor facades in nearly all parts of the city center. A few streets and buildings break seriously with this overall pattern, making certain parts of the city rather unattractive, boring and – at night – even scary.

A closer study of problem areas and problem buildings are presented on the following page.

# DEVELOPMENT OF CAR-FREE STREETS AND SQUARES 1962-1996



1962 — 15.800 m²

1968 — 22.860 m²

1973 — 49.200 m²

1988 — 66.150 m²

1992 — 82.820 m²

1996 — 95.750 m²

Legend:
- Car-free squares (new or renovated)
- Pedestrian priority streets
- Pedestrian streets

Bar graph values: 15.800 (1962), 22.860 (1968), 49.200 (1973), 66.150 (1988), 82.820 (1992), 95.750 (1996)

*Development of pedestrian areas in Copenhagen city center from 1962 to 1996 (in square meters)*

Illustrated on this page are 34 years of gradual transformation of Copenhagen city center.

By 1996, the city center had some 96.000 m² set aside for people activities, a six-fold increase from the first stage in 1962. The bar graph above shows that the creation of pedestrian streets was actually finished by 1973. Effort has been concentrated subsequently on reclaiming and improving the city squares – the potential oases of the city.

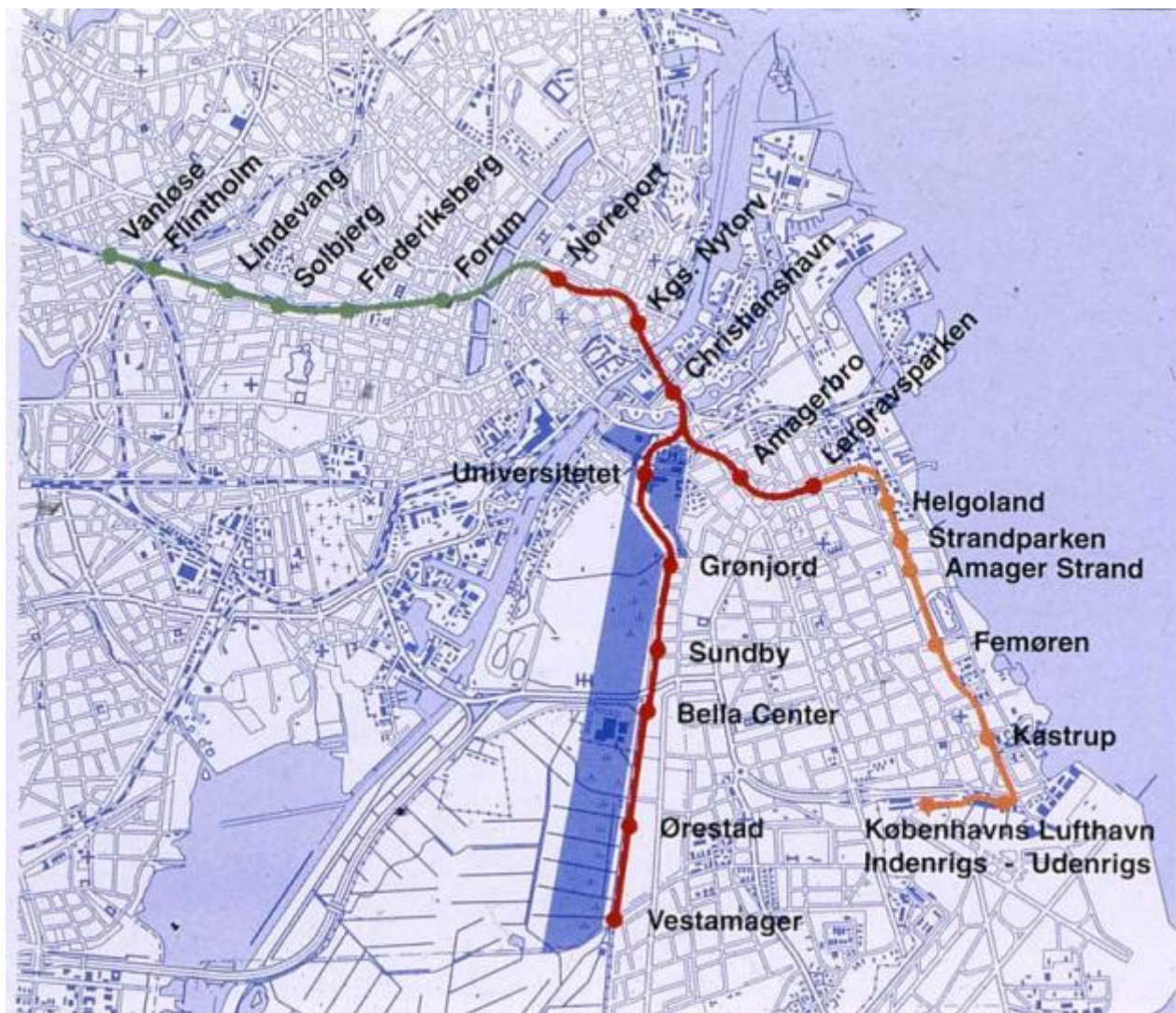Canals and waterways are an essential feature of place-making.
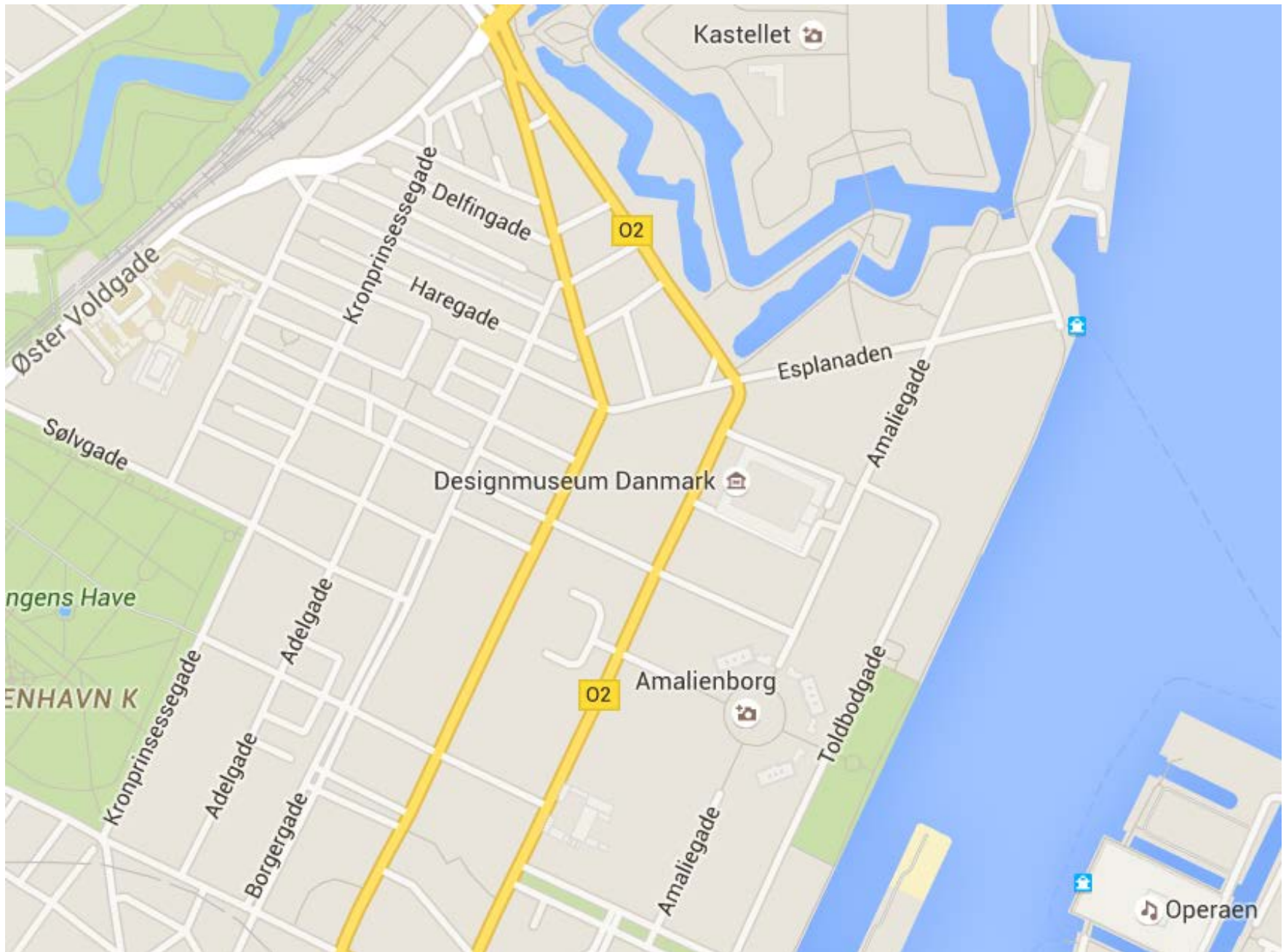
PLAN COPENHAGEN

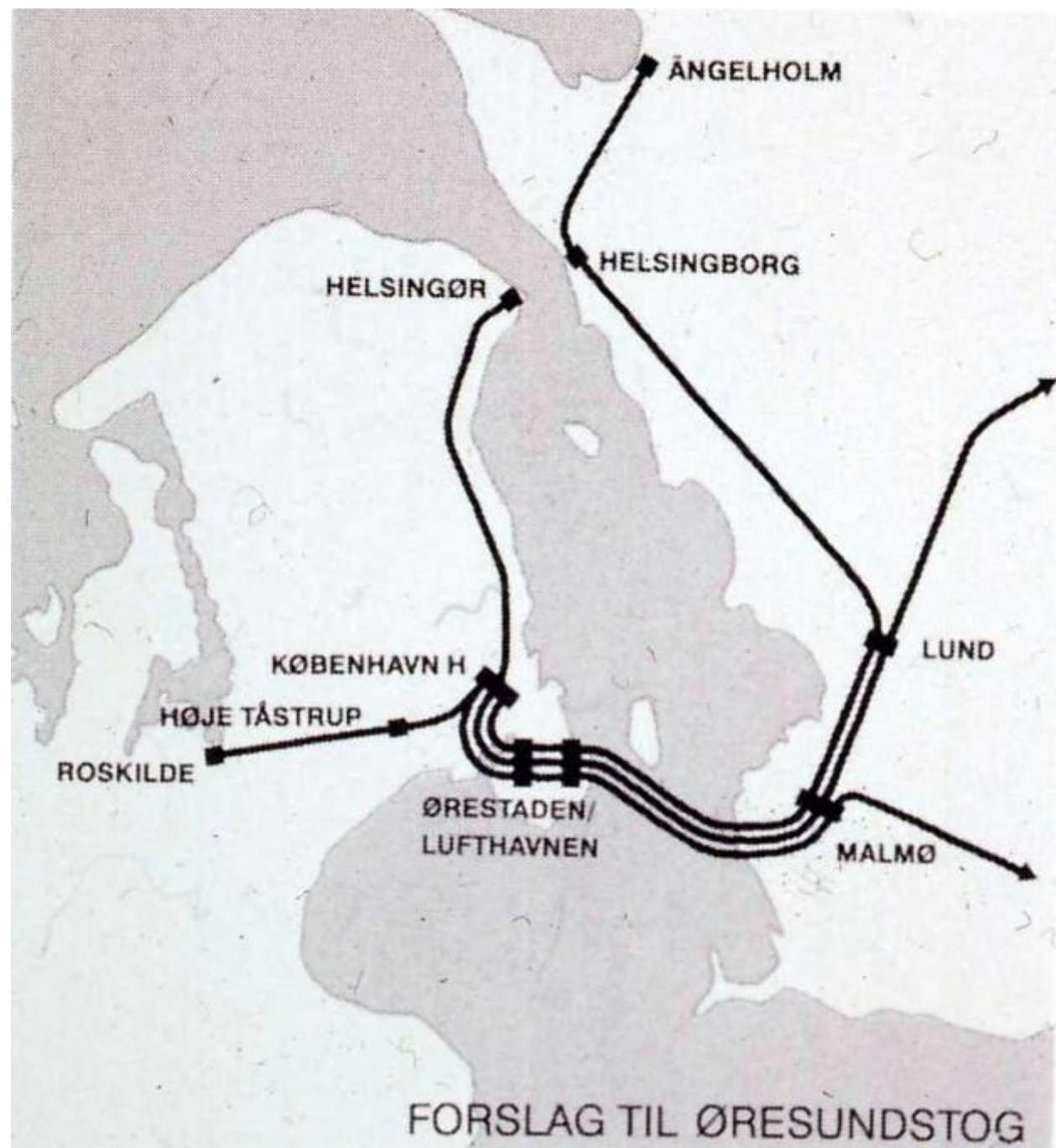The Copenhagen opera is a good example of "water shaped" place-making.

**Suburban place-making: the Copenhagen finger-plan extensions.**
Copenhagen's high-density low-rise urban planning, its pedestrian streets introduced from 1962, its bicycle network (36% of commuters use bicycles, notwithstanding the Scandinavian climate), and its expanding driverless urban metro network have enhanced livability. The Copenhagen metro lines also reinforce the "finger-plan", which concentrates development along radial public transport corridors. Source: City of Copenhagen.

A cross-border metropolis: In addition to the intra urban metro, the commuter rail line linking Copenhagen, Kastrup airport and Malmo has created an integrated urban agglomeration served by a common public transport network.



ÄNGELHOLM

HELSINGBORG

HELSINGØR

LUND

KØBENHAVN H

HØJE TÅSTRUP

ROSKILDE

ØRESTADEN/ LUFTHAVNEN

MALMØ

FORSLAG TIL ØRESUNDSTOG

# 3. LOUVAIN-LA-NEUVE

Planning for low energy - growth: the case of the Louvain-la-Neuve new university town (Brussels) 1972-

# SUBURBAN BRUSSELS: LOUVAIN-LA-NEUVE.

The Louvain university bought ca 1000 ha of agricultural and forest land in a rural area close to the Brussels-Namur road: only the central part was set aside for urban development. The overall master plan and architectural coordination was entrusted to the Groupe Urbanisme-architecture (R. Lemaire, J-P. Blondel and P. Laconte).
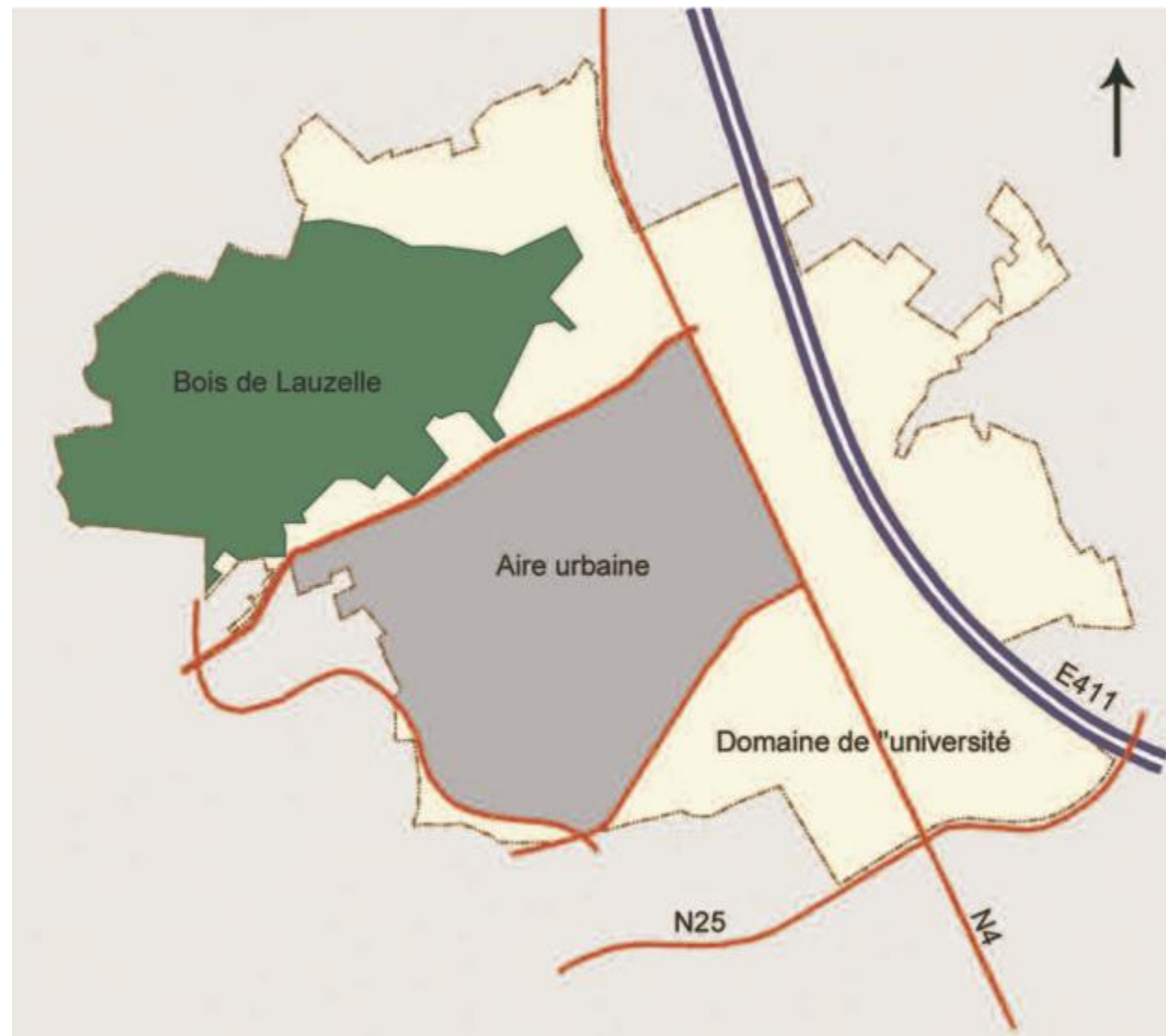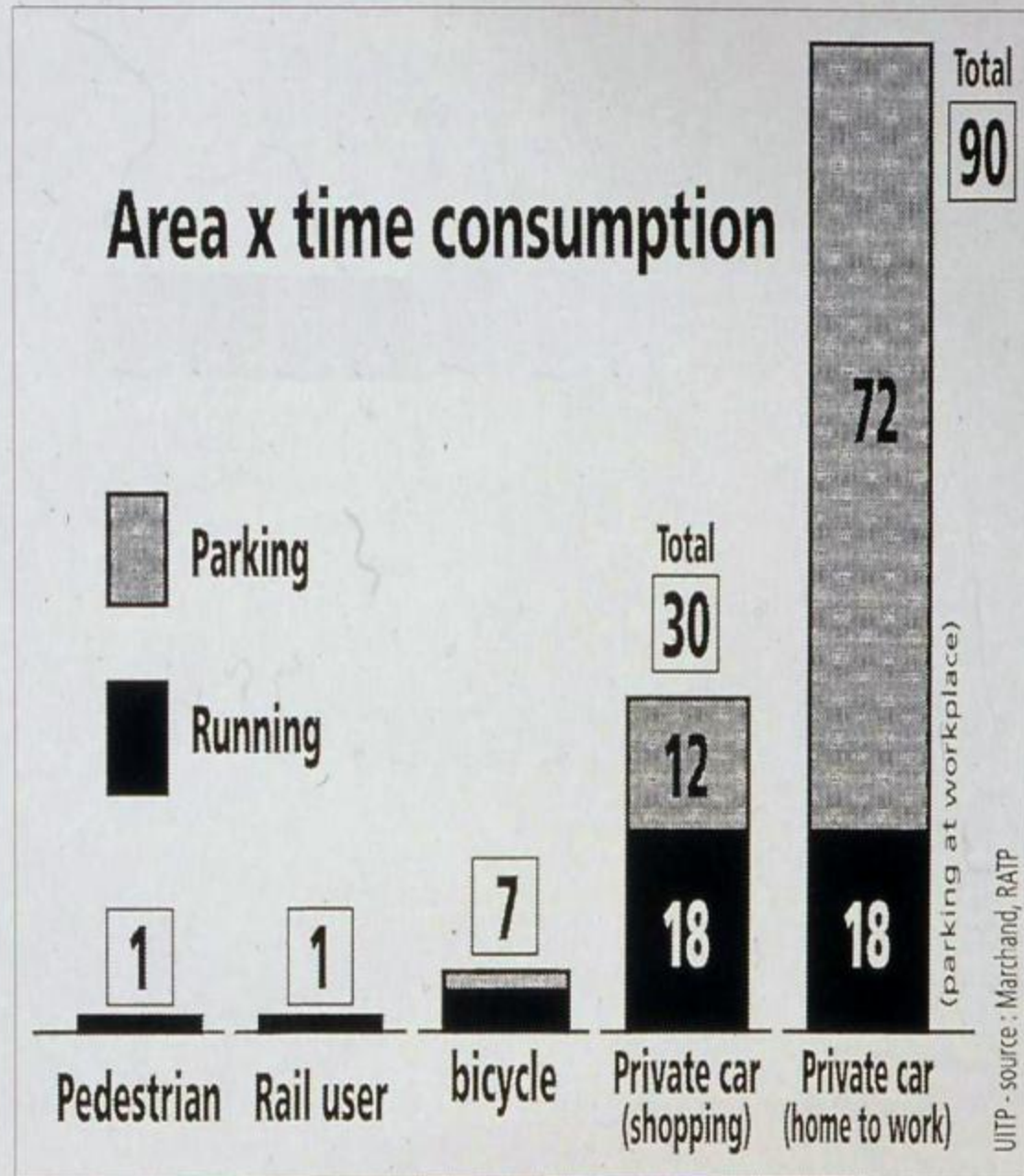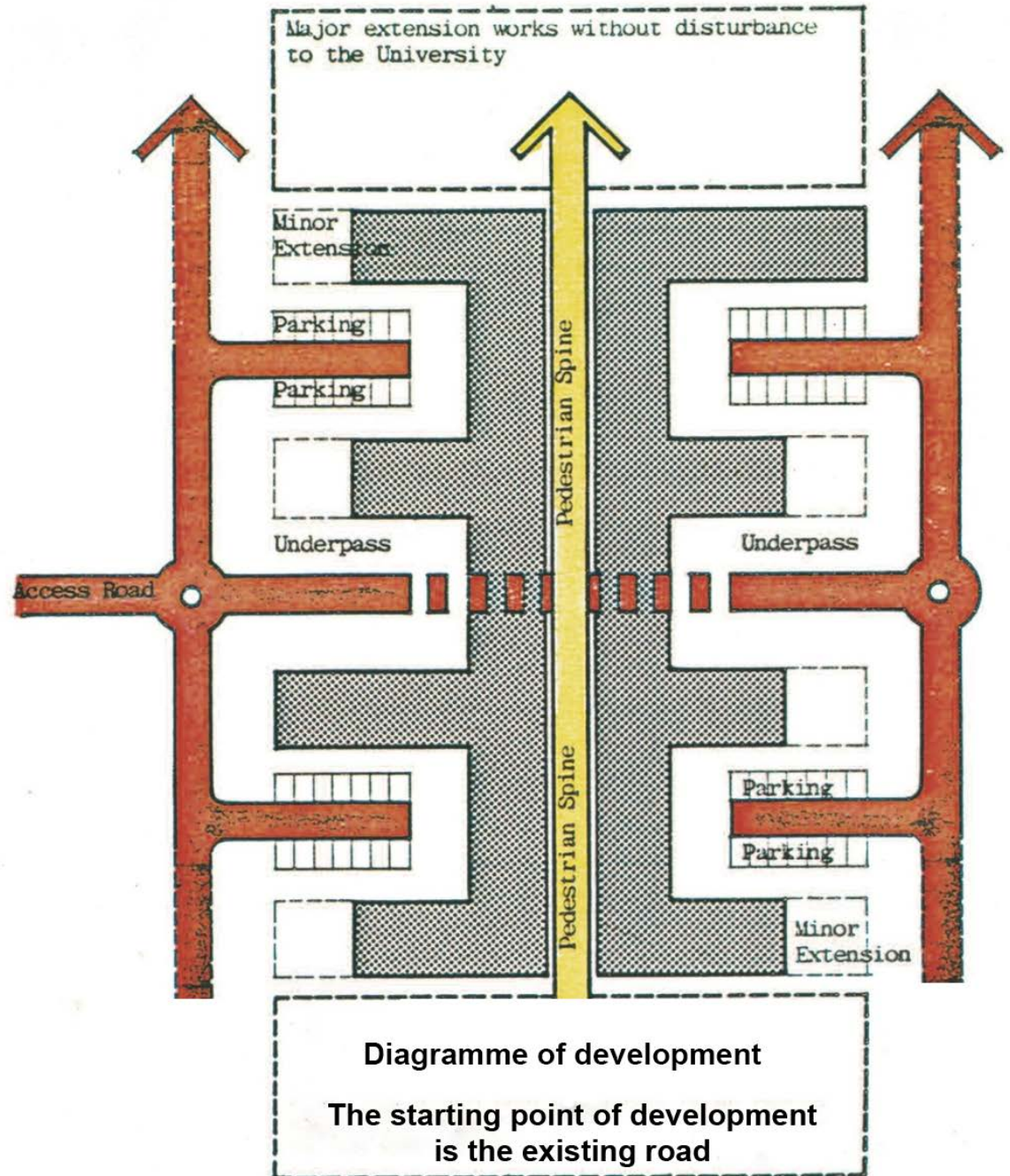
# Planning for land saving.

The pedestrian option allowed to save land and advance transport infrastructure investment.
The diagram shows the multiplier of land consumption generated by automobile transport and related parking.



Area x time consumption

Parking

Running

Total 90

72

Total 30

12

7

1    1    18    18

Pedestrian    Rail user    bicycle    Private car (shopping)    Private car (home to work)

(parking at workplace)

UITP - source : Marrchand, RATP

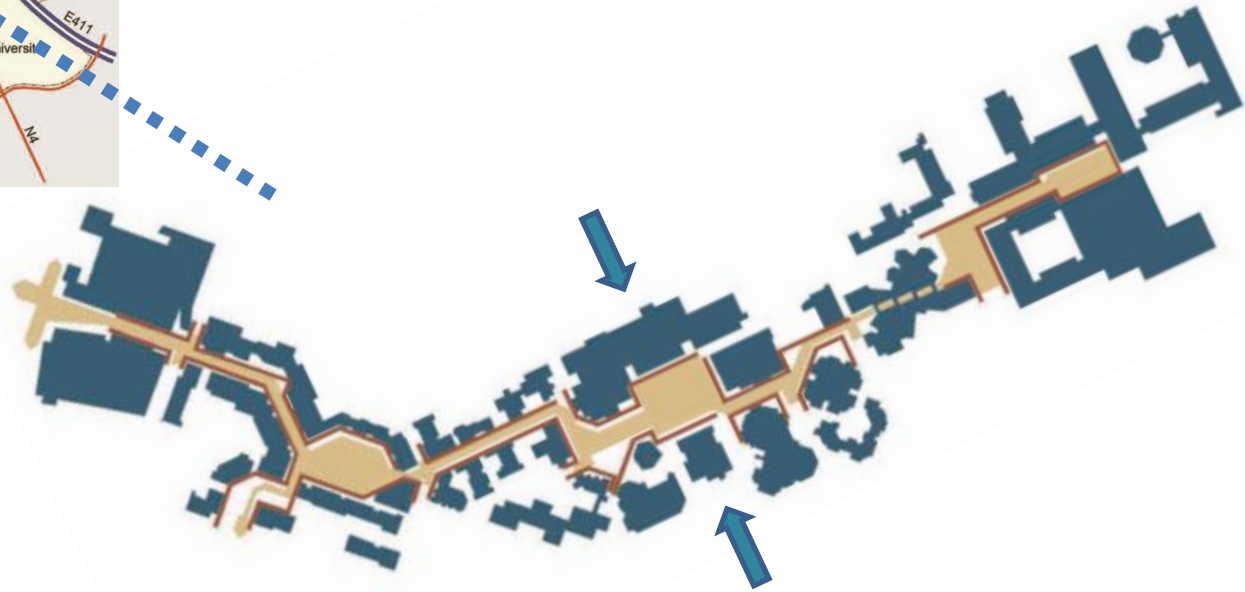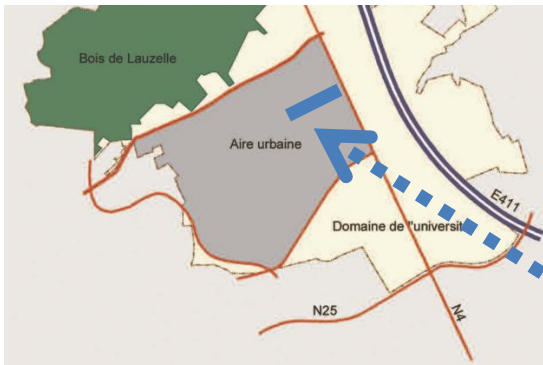8/11/99-5:37 PM    Public Private Partnership    Page: 43
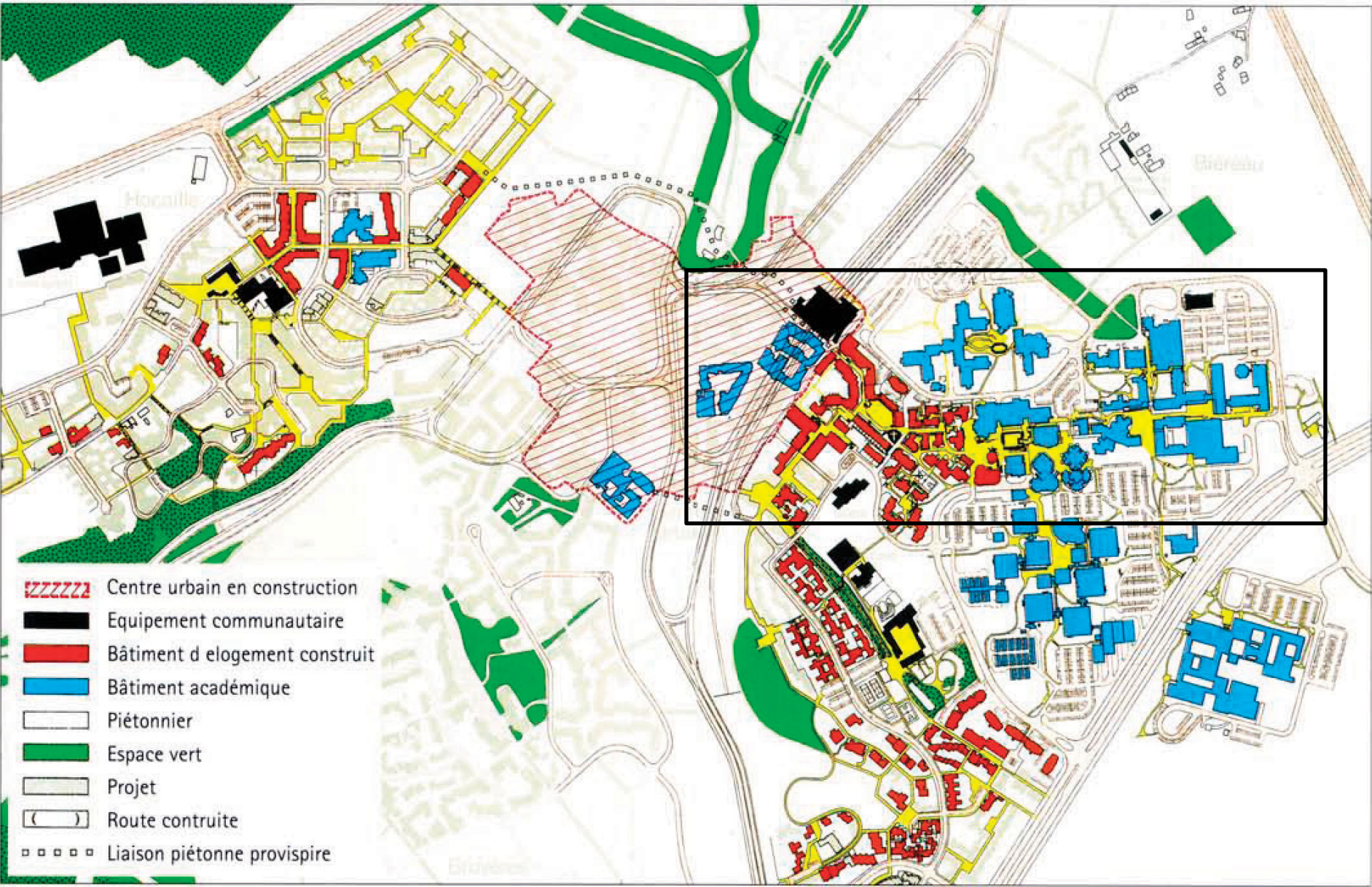
# Planning for uncertainty.

A linear pedestrian central spine – in this case the University of Lancaster - allows a step by step mixed urban development, automobile access to buildings and parking being placed outside of the spine, with occasional underpasses.



Major extension works without disturbance to the University

Minor Extension

Parking

Parking

Pedestrian Spine

Underpass

Underpass

Access Road

Parking

Parking

Pedestrian Spine

Minor Extension

**Diagramme of development**

**The starting point of development is the existing road**

This place-making was implemented in the main pedestrian street in the first phase, starting from the existing road east of the site, in 1972 (lower part of the picture), and later extended to the railway station opened in 1976 (upper part), the centre of the city, and the extension towards the western part of the site. Car access to buildings and parking is placed outside the spine, with some underpasses. Property development of the whole university-owned site (1000 ha) is by long term leases (75 to 99 years).

**Légende:**

- Centre urbain en construction
- Equipement communautaire
- Bâtiment d elogement construit
- Bâtiment académique
- Piétonnier
- Espace vert
- Projet
- Route contruite
- Liaison piétonne provispire

**A string a public spaces for movement of leisure.** The centre of the first phase was the Science Library, a huge concrete building seen as the cathedral of a university town with its plaza (parvis), above an automobile underpass. It is a social gathering place with university buildings, shops and restaurants (arch. A. Jacqmain).

Trees are planted on the space next to it, in contrast to the concrete and wood library plaza.

Parking. All parking spaces are planted with different tree species in order to attract different kinds of birds. They have become an ornithological reserve.

The new railway station (1976). It is entirely underground, with a view to being covered at a later stage.

The station square. The arcaded entrance of the station (arch. Y. Lepere) opens onto the pedestrian spine.

Voirie piétonne

Promoteurs et académique

Promoteurs et académique

Promoteurs et académique

Parking public

RER

Terrain propriété de l'université

Underground space and slab. The diagram shows how the sub-surface area remains the property of the university while the infrastructure and buildings are leased (for up to 99 years) to public and private investors.

Courtyards are open passages wherever needed for access to university buildings.

The slab
supports
numerous small
public spaces
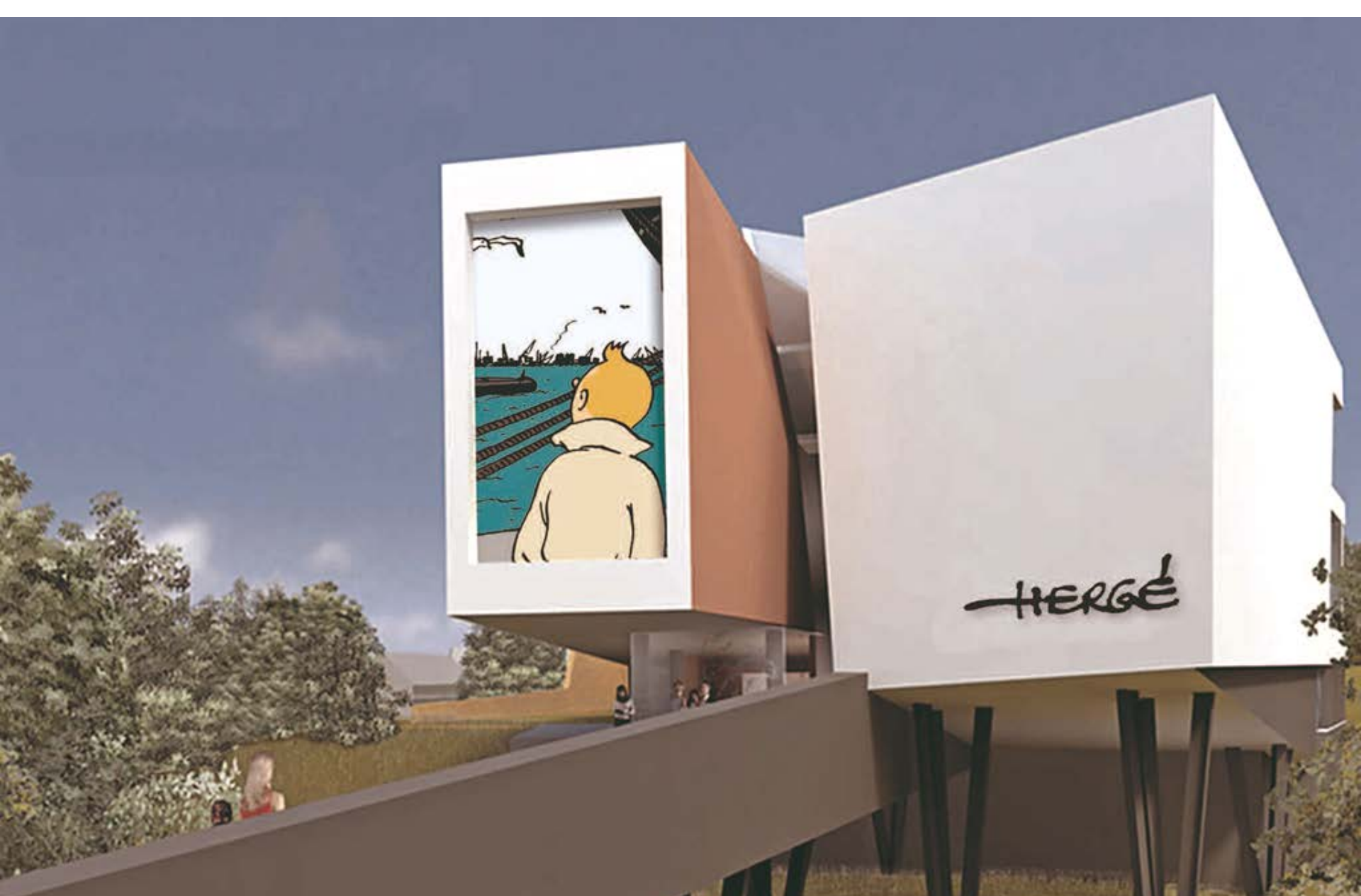planted with
trees and
pavement cafés.
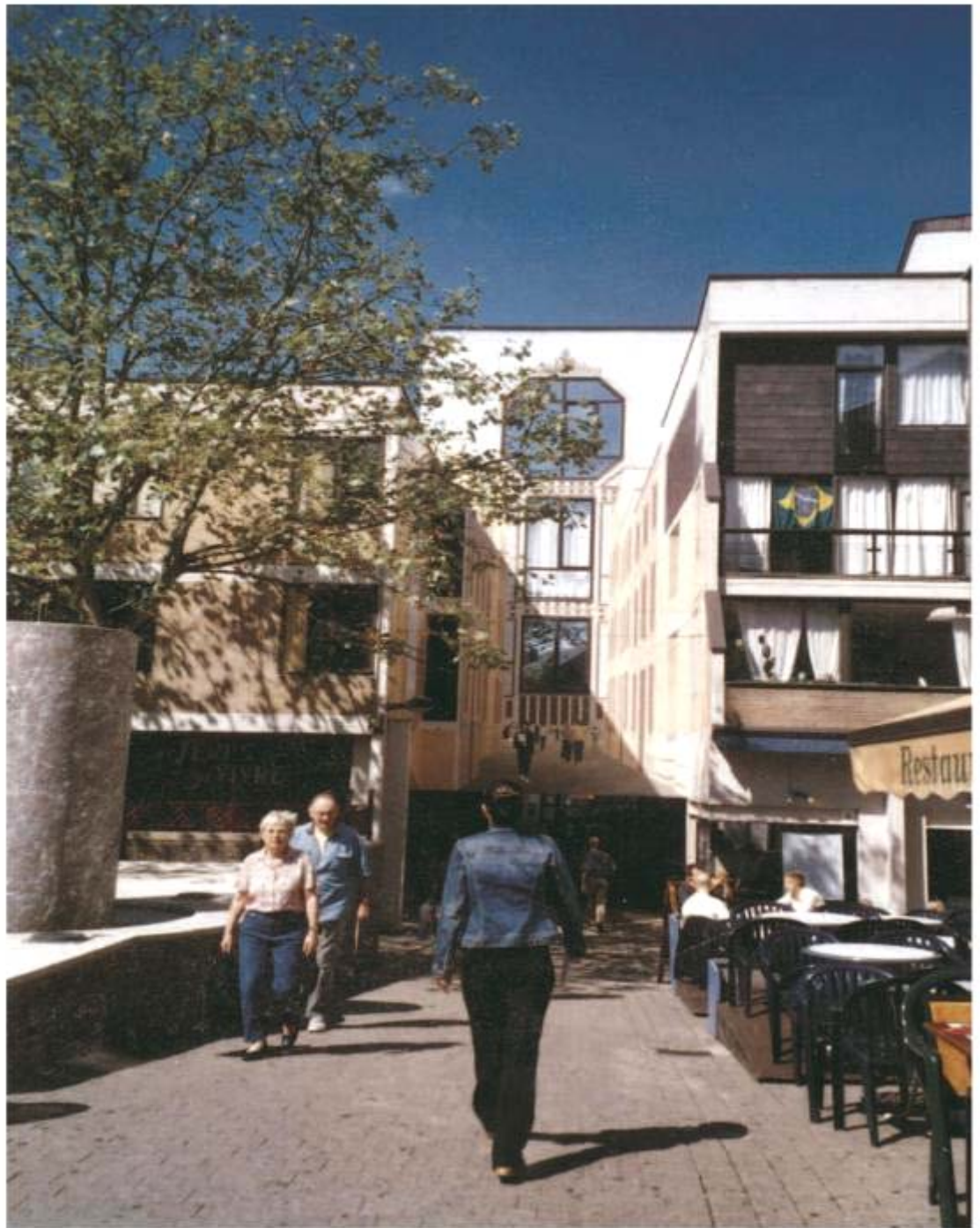
Cafés and restaurants occupy pedestrian spaces while vehicle access and parking is under ground.

"L'Esplanade".
In 2005 a large
shopping mall
was opened,
next to the
station, together
with a new
residential
street, on the
slab. It was an
immediate
success (8
million visitors
per year) and is
to be extended
above the rail
tracks.

The private Hergé museum (arch. de Portzamparc) adds to the regional visibility of Louvain-la-Neuve.

All storm water is collected in a lake that serves as reservoir and amenity. The level varies according to the seasons, combining landscape  and waterscape .

Pre-monitoring of inflowing water and oxygen levels allows the fishing water quality of the lake to be checked.

An aerial view of the city taken in 2003 shows the generally high-density low-rise development and the potential for further extensions close to the lake.

Mixing landscape and waterscape: The new "park/lake" of Billancourt-Trapèze (in suburban **Paris**) collects storm water from a high density mixed development. It is mostly green in the summer, blue in the winter.

# 4. BILBAO

Planning urban regeneration through smart public-public partnerships:

the case of Bilbao 1989-2012

# Redevelopment of a brownfield area into an urban place

A derelict area of around 40 hectares owned by several public bodies was developed along a unified linear grid, framed with two development anchors: a new museum (Guggenheim Bilbao) in the south and a concert and conference complex in the north.  The actual urban development was entrusted  to an autonomous  publicly owned private company: RIA 2000.

http://www.ffue.org/?p=1301



Smart growth in
PIERRE LACONTE.
SPAIN
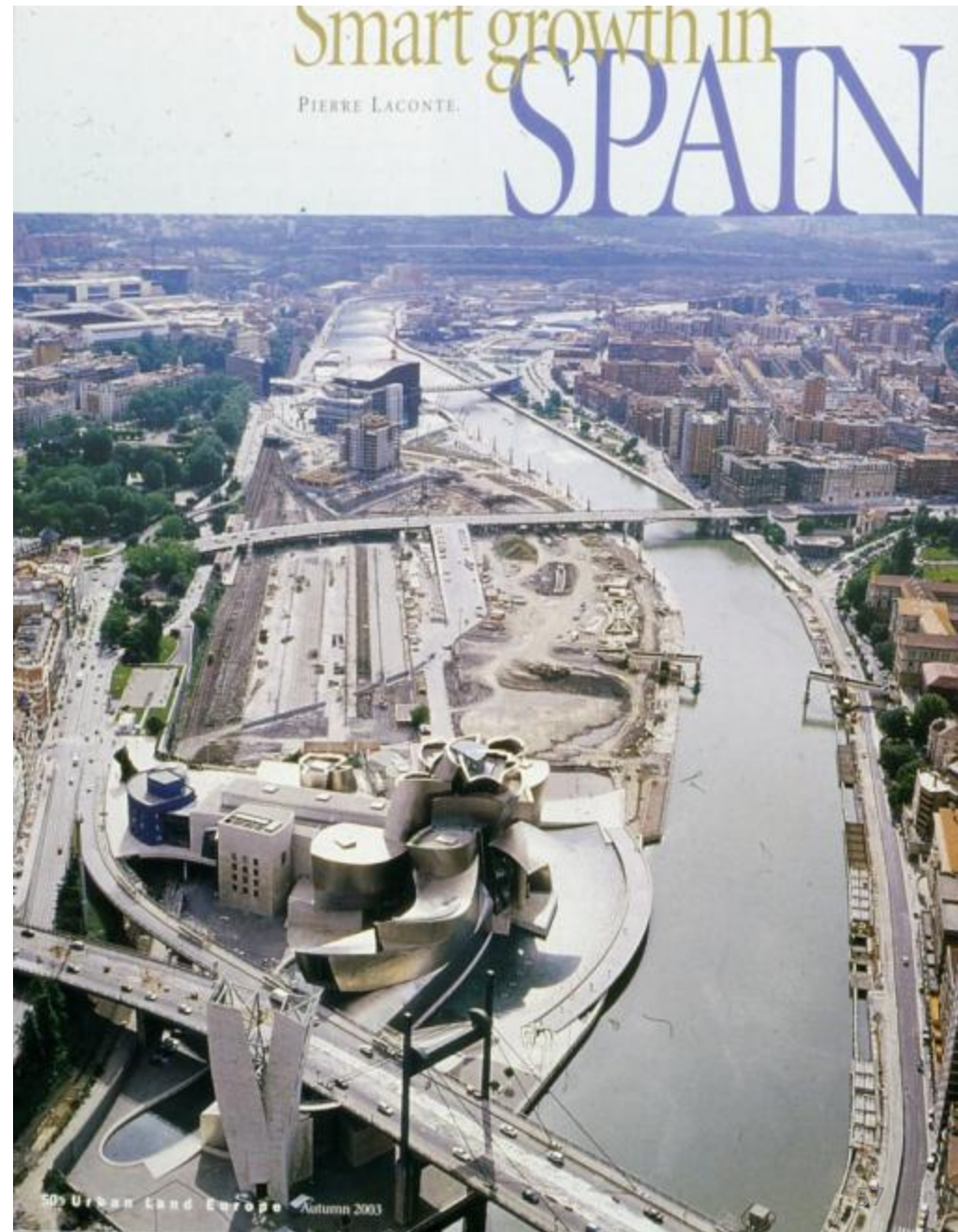
A view of the industrial zone before clearance.

The valuable land situated between the two anchors, very close to the central business district, was developed by Rià 2000 with an obligation to invest the whole of the surplus in new public infrastructure along the canal.

The
implementation
of the plan took
some 20 years.
Its focal points
are an office
tower (C. Pelli
2011) and public
gardens.

➤ A new tram line serves the canal bank in the urban centre, saving traffic and parking space and adding to the quality of urban life.
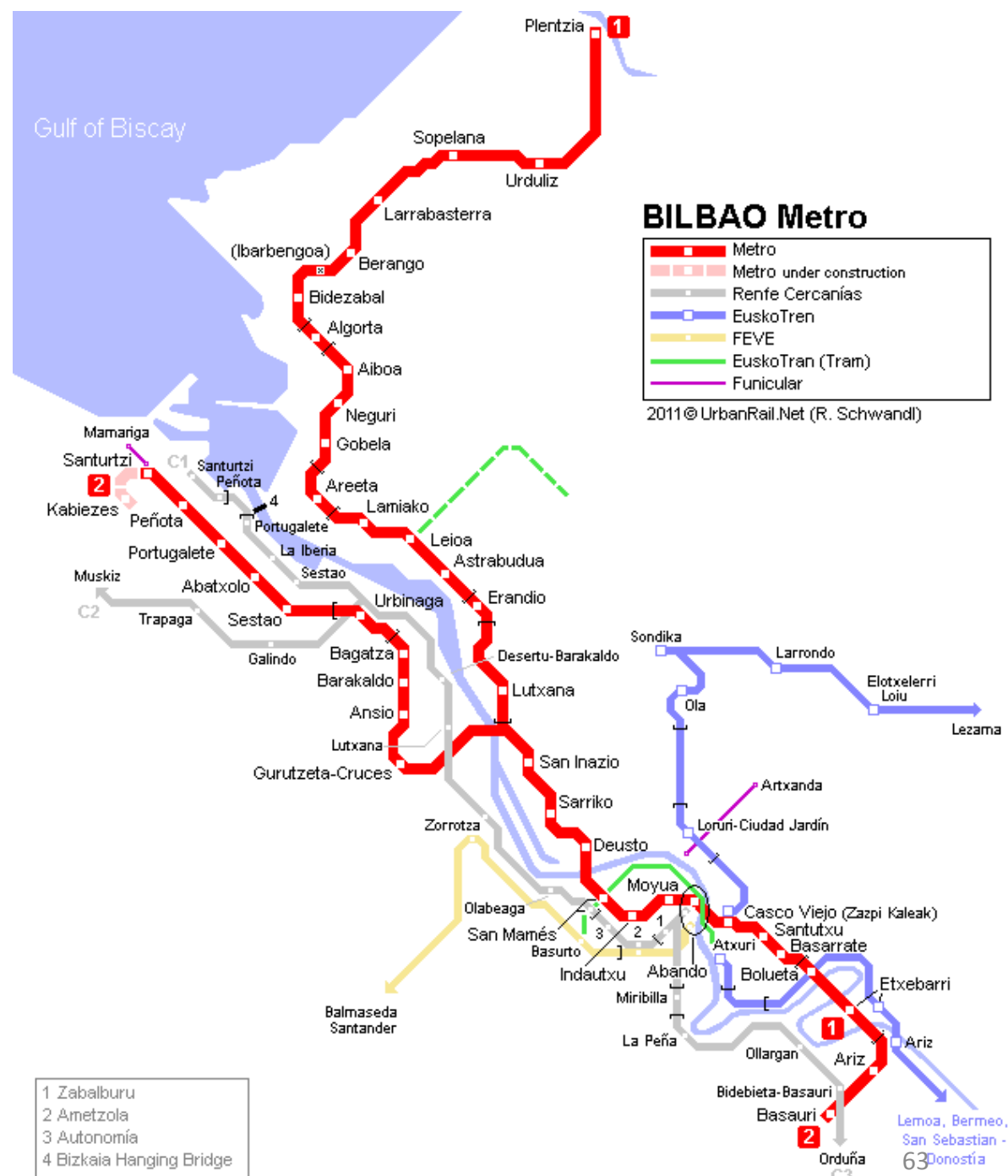


Image 02. Tram stop

The proceeds generated by the Rià 2000 development contributed to the rehabilitation of Bilbao La Vieja further along the same canal.
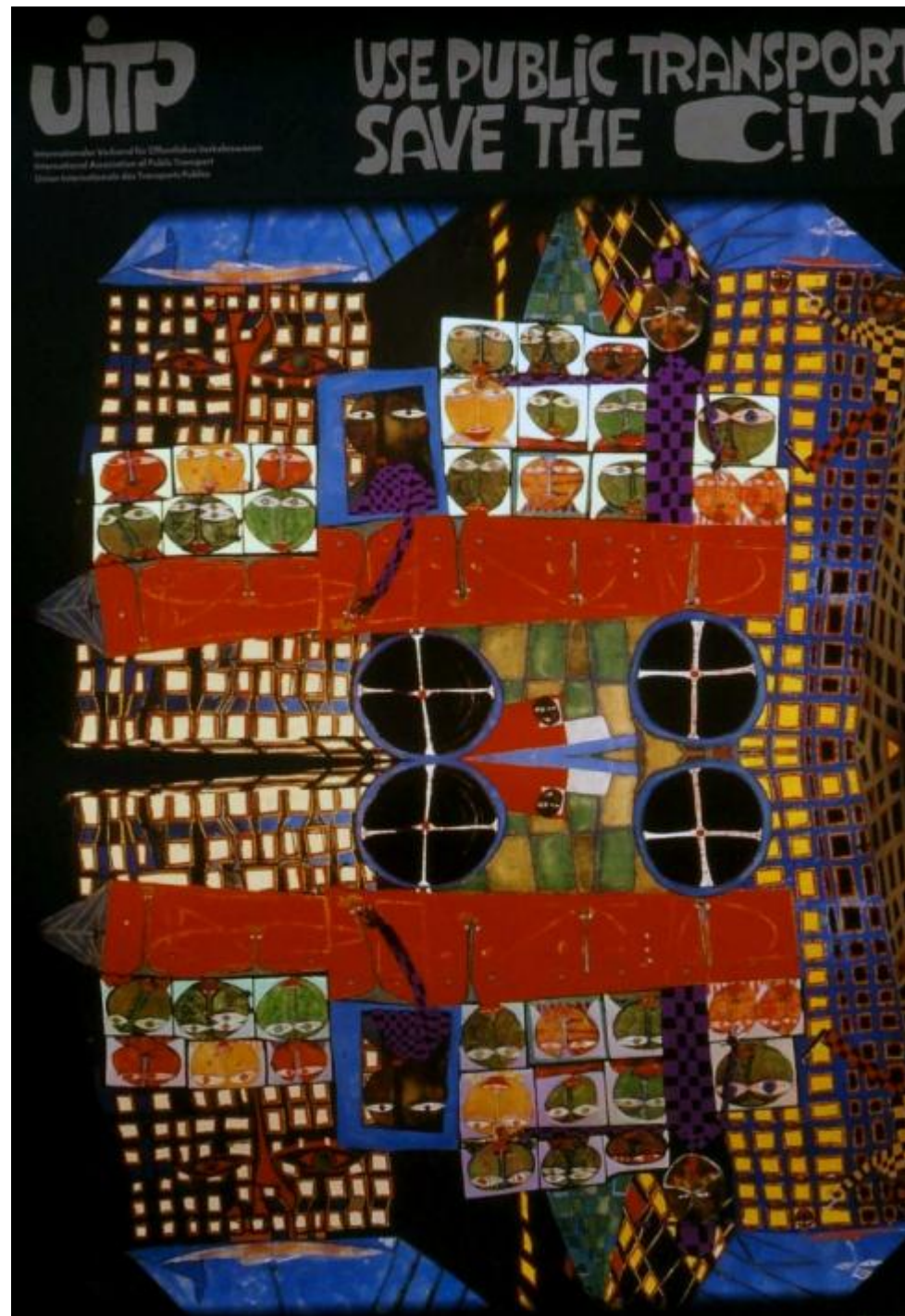http://www.ffue.org/?p=1301

The Bilbao Metro is made partially of new stations, designed by Norman Foster, and partially by reusing old industrial railways.

It enhanced connectivity throughout the city and its region and improved the balance between transport modes.



**BILBAO Metro**

| | |
|---|---|
| ▬ | Metro |
| ▬ | Metro under construction |
| ▬ | Renfe Cercanías |
| ▬ | EuskoTren |
| ▬ | FEVE |
| ▬ | EuskoTran (Tram) |
| — | Funicular |

2011 © UrbanRail.Net (R. Schwandl)

Gulf of Biscay

1 Zabalburu
2 Ametzola
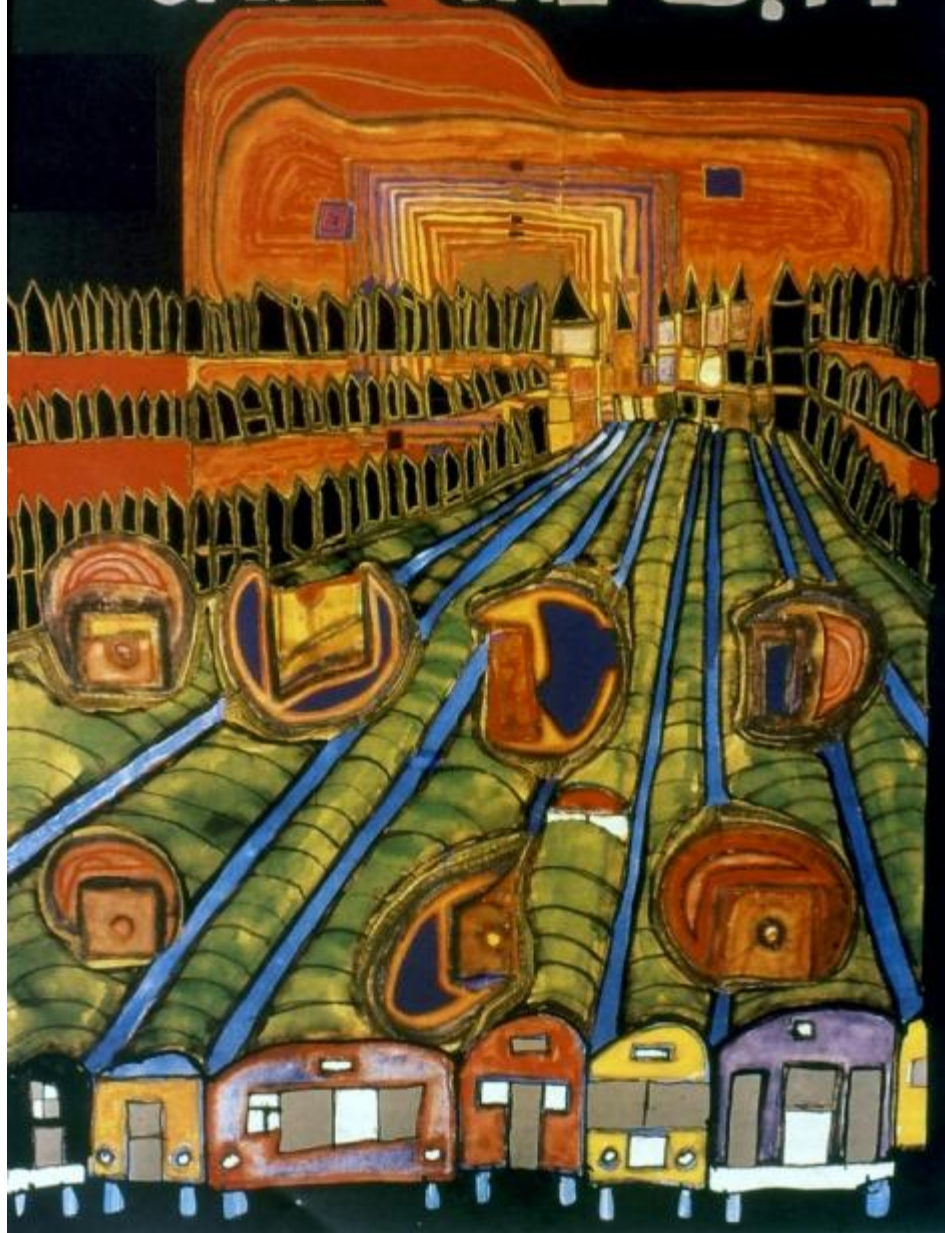3 Autonomía
4 Bizkaia Hanging Bridge

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## AN ARTIST'S PERSPECTIVE

Three posters by Hundertwasser illustrate the planning vision of a sustainable city : high-density compactness, transport corridors served by public transport, and amenities making the city enjoyable.