

# Processes of Urban Transformation



**Influent Urban plans concept**

**The Second Half of the Twentieth Century**

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# Introduction

- ▶ this Part focuses on the **different processes of planned transformation** of the **physical form of the city**: from:
- ▶ plans to planning processes regarding the second half of twentieth century including:
- ▶ **plan implementation**
- ▶ **development control** framing a number of **different contributions**.



# Definition and Concept

## ► Urban Transformation

Urban transformation is a concept used to renew, modernize and make urban areas livable.

It means a set of planning measures and requirements which significantly change the features of built-up part of a building area by changing the urban network of public areas, purpose and shape of construction works and/or arrangement, shape and size of building plots.

### Why do we need urban transformation?

1. unplanned urbanization,
2. population growth,
3. disasters,
4. buildings about to breakdown and other problems.

These problems present significant risks in terms of **livability, security and economic development.**



# The urban Plan

- The most **comprehensive views of cities** are condensed in **urban plans**.
- Based on the analysis of the **existing situation** in a particular moment in time, a plan tries to prepare the **future of a city** in many different dimensions,
- from physical (including urban form, transports and environment)
- to social and economic dimensions.
- Due to the nature of this part, a **greater emphasis** is given to the **physical dimension**.

# The urban Plan

- The urban history of each and every city includes a combination of
  - ❖ Comprehensive actions
  - ❖ Individual actions.
- How much of the physical form of a city is the result of planned or individual actions varies greatly?
- In addition, and focusing now on a single city, we can say that there are:
  - ❖ some plans which have a deep and lasting impact on the city.
  - ❖ There are some other plans that have no impact at all.

# The urban Plan

- Table [below](#) presents a list of 20 plans that had, and still have, a deep impact on 20 different cities in four different continents.
- The main purpose of this list is, not to offer an unmistakable selection of 20 plans
- but, to give an illustration of **the main directions in plan making** over the last two centuries.
- Yet, we should highlight that, even in each of these cases, **the plan is only one part of the process of city-making.**
- In many cases, the plan focuses only **on one part of the selected city,**
- the other parts having come about through **other plans**
- **or in a more unplanned manner.**
- The **process of city formation** is generally a combination of:

**1. large plans**

**2. and small interventions on streets, plots and buildings**

## A list of influent plans in planning history in the nineteenth and twentieth centuries

| <b>Year<sup>a</sup></b> | <b>Plan/City</b>              | <b>Authors(s)</b>                            |
|-------------------------|-------------------------------|--|
| <b>1811</b>             | <b>New York</b>               | <b>John Randel/The Commissioners</b>         |
| <b>1814</b>             | <b>London (Regent Street)</b> | <b>John Nash</b>                             |
| <b>1853</b>             | <b>Paris</b>                  | <b>Georges-Eugène Haussmann</b>              |
| <b>1856</b>             | <b>Vienna</b>                 | <b>Franz Joseph I</b>                        |
| <b>1859</b>             | <b>Barcelona</b>              | <b>Ildefons Cerdá</b>                        |
| <b>1879</b>             | <b>Lisbon</b>                 | <b>Ressano Garcia</b>                        |
| <b>1903</b>             | <b>Letchworth Garden City</b> | <b>Raymond Unwin, Barry Parker</b>           |
| <b>1912</b>             | <b>New Delhi</b>              | <b>Edwin Lutyens</b>                         |
| <b>1912</b>             | <b>Canberra</b>               | <b>Walter Griffin, Marion Mahony Griffin</b> |
| <b>1913</b>             | <b>Amsterdam (South)</b>      | <b>Hendrik Petrus Berlage</b>                |
| <b>1920</b>             | <b>Lyon (Estats-Unis)</b>     | <b>Tony Garnier</b>                          |
| <b>1925</b>             | <b>Frankfurt</b>              | <b>Ernst May</b>                             |
| <b>1925</b>             | <b>Berlin-Britz</b>           | <b>Bruno Taut, Martin Wagner</b>             |
| <b>1945</b>             | <b>Le Havre</b>               | <b>Auguste Perret</b>                        |
| <b>1948</b>             | <b>Copenhagen</b>             | <b>Peter Bredsdorff</b>                      |
| <b>1952</b>             | <b>Chandigarh</b>             | <b>Le Corbusier</b>                          |
| <b>1957</b>             | <b>Brasília</b>               | <b>Lúcio Costa</b>                           |
| <b>1967</b>             | <b>Milton Keynes</b>          | <b>Llewelyn-Davies</b>                       |
| <b>1969</b>             | <b>Bologna</b>                | <b>Pier Luigi Cervellati</b>                 |
| <b>1981</b>             | <b>Seaside</b>                | <b>Andres Duany, Elizabeth Plater-Zyberk</b> |

<sup>a</sup> This date corresponds to the beginning of plan preparation

# The Second Half of the Twentieth Century

- This last set of documents, prepared in a time period of three decades, includes:
- Group A : New Cities
- 1. Approach of modernist planning ( Four plans for **new cities**, **(Chandigarh, Brasilia and Milton Keynes)**)
- 2. Approach of the New Urbanism (**Seaside- Florida**),
- Group B: conservation of a city centre One plan (**Bologna city - Italy**).



# Modernist Model

- **What is the modernist model?**
- The modernist model, involving wholesale demolition and reconstruction under the direction of planning officials isolated from public opinion, came under violent attack both intellectually and on the ground. Most important in weakening support for the modernist approach was urbanologist Jane Jacobs.
- **The modernist movement**, born out of the shock of WWI and technological innovation, was one of them. It was characterized by the search of new ways of taking experience and claiming identity, all while rejecting traditional structures of 19th century realism including religion, state, and collective culture. With this rejection of classist ideals and ornamentation, modernist projects focus on simplicity, minimalism, and the application of basic geometries. Innovations in materials and technology enabled the construction of taller and lighter structures using glass, steel, and concrete.
- **What is modernism planning?**
- In North and South, modernist planning required to impose order and rationality on the perceived disorder of industrial cities to bring about social improvement.

# Modernist Urban Planning and New Urbanism

- What are the principles of modernist urban planning?
- Urban plans and architecture were developed according to the ideological principles of the Modernist era that were based on promoting health, social security, sufficient space, sunlight, and clean air for the city's key functions: housing, work, and recreation.
- What is modern urban planning?
- Urban planning concerns itself with both the development of open land (“greenfields sites”) and the revitalization of existing parts of the city, thereby involving goal setting, data collection and analysis, forecasting, design, strategic thinking, and public consultation.
- New Urbanism Definition
- New Urbanism is a movement of practices and principles that promote walkable, mixed-use, diverse, and highly dense neighborhoods. The goal of New Urbanism design is to create places where communities can meet and interact in public spaces or on the street. Through reduced car use, walking and cycling to destinations can foster interaction while reducing negative environmental and traffic effects.

# New Urbanism Principles

- **1. Mixed-Use Development and Walkability** As a solution, mixed land use or mixed-use development zones for multiple destinations in a building, street, or neighborhood. The proximity of different locations to each other, with safe pedestrian infrastructure, encourages walking and reduces car use.
- **2. Transit oriented development** is the planning of new construction within a 10-minute walk of public transit stations, usually with higher density and mixed land use. This ensures public transit is used frequently and can compete with cars on shorter trips.
- **3. Inclusion and Diversity**
- A diversity of incomes, housing types, races, and ethnicities should also be planned. To do this, affordable housing options should be considered.
- **4. Avoiding Placelessness**
- The rise of placelessness is also concerning for new urbanists. The rise of these places in cities and suburbs reduces the inherent value of the location. Some examples include strip malls, shopping malls, gas stations, fast food restaurants, etc.

## Group A: New cities- Modernist planning Approach

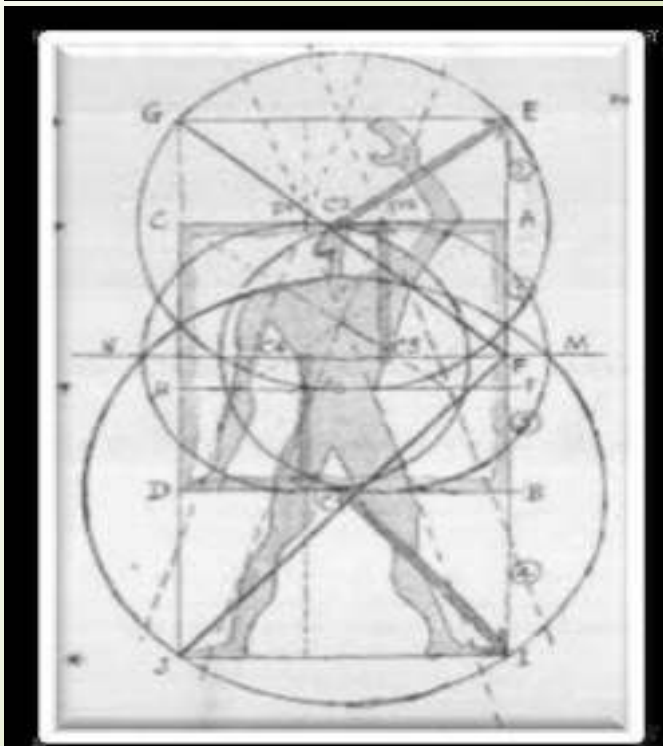
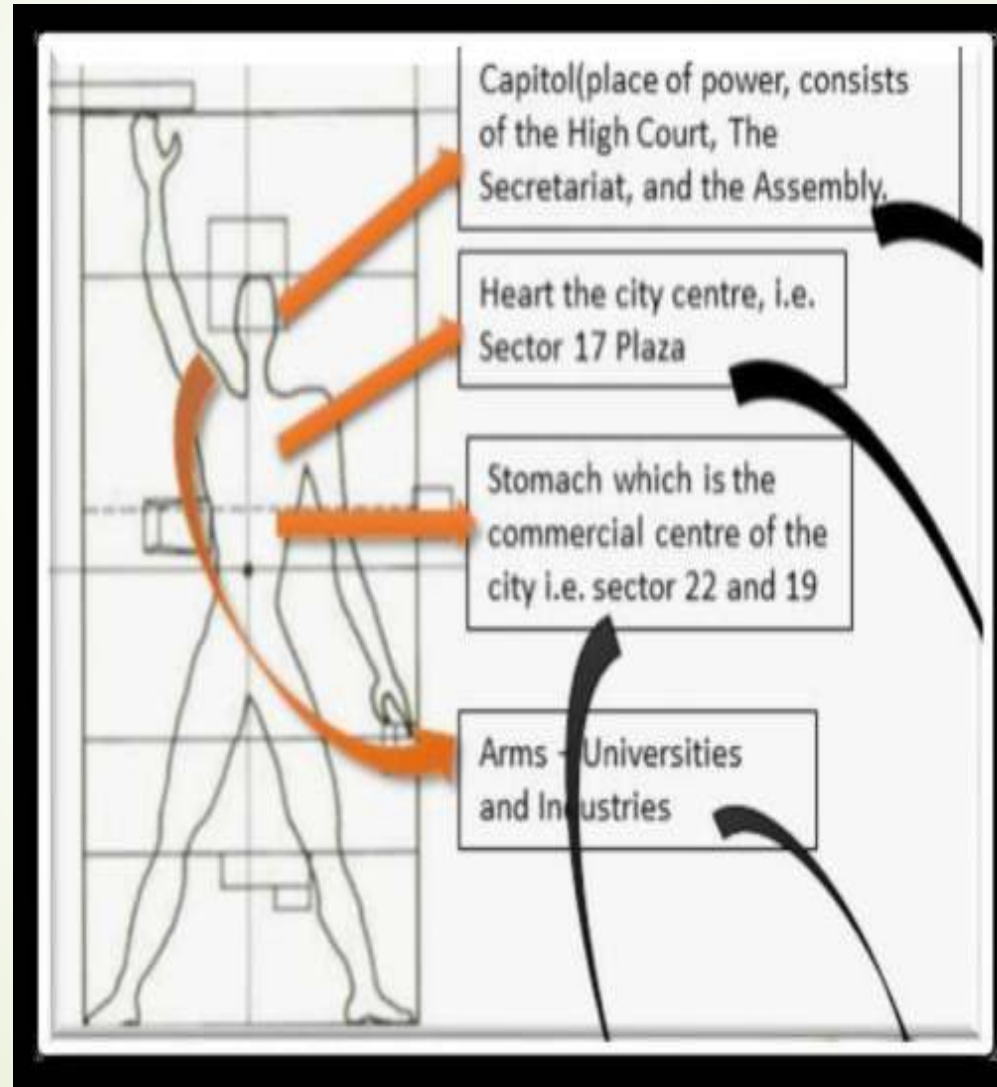
### 1. New city in Chandigarh

- After a number of theoretical proposals developed since the early 1920s, Le Corbusier had the first opportunity to design **a whole new city in Chandigarh**, the new capital of Punjab, India.
- The plan of Chandigarh is composed of:
  - 1. A regular grid of streets rotated about  $45^\circ$  in relation to the cardinal points dividing the city in: different sectors of about  $1200 \times 800$  m;
  - 2. A constant presence of green areas;
  - 3. A very low density of buildings—
    - A) residential buildings of about two story
    - B) institutional or commercial buildings of about five story;
  - And the Capitol, in Sector 1, at the northeast of the grid

# 1. New city in Chandigarh

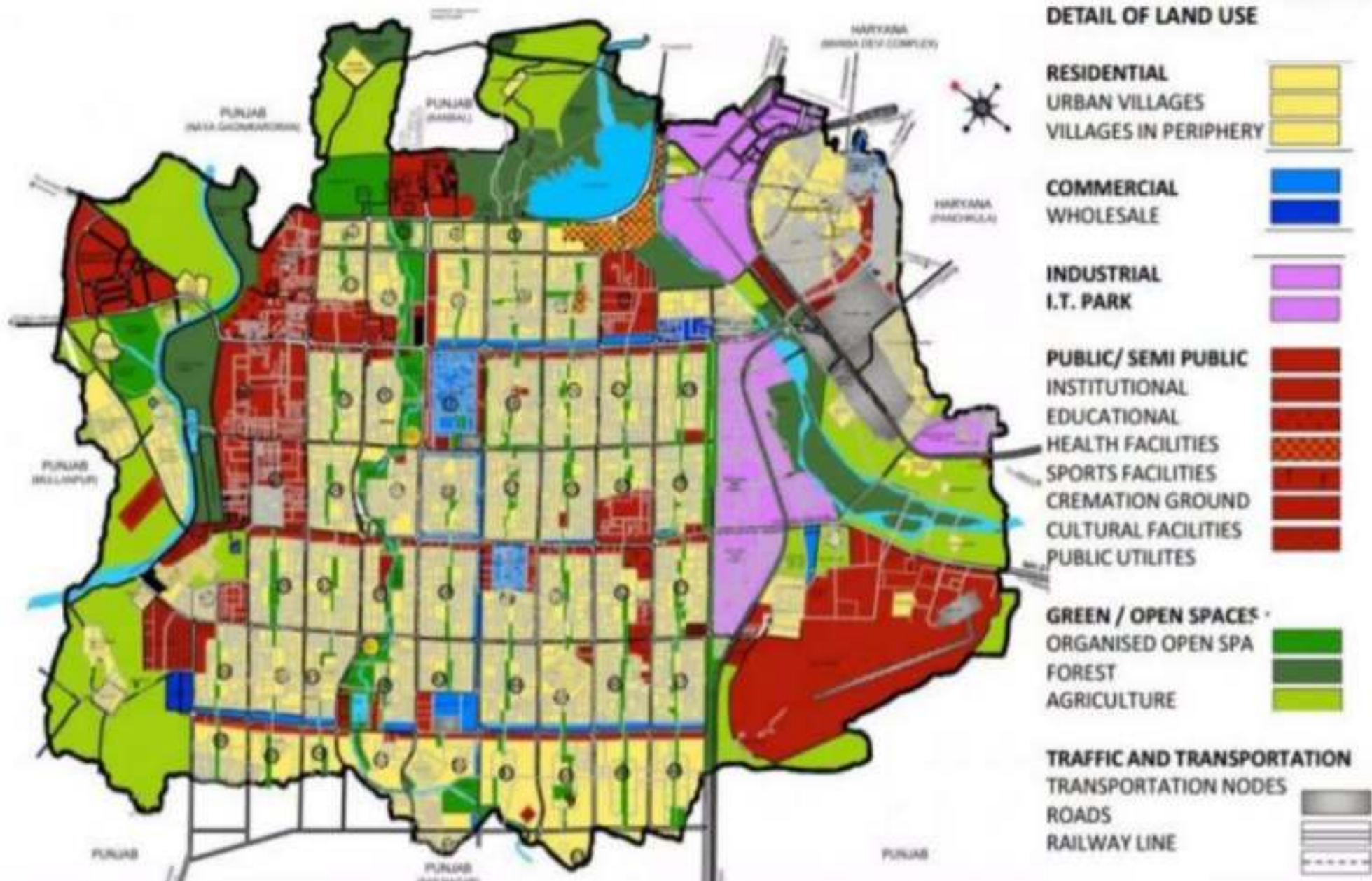
The City of Chandigarh is planned to human scale.

- Head – Capitol Complex (Administration) [Sector 1].
- Heart – The City Centre [Sector 17].
- Stomach – The Commercial Area.
- Arms – University and Industrial Zone.
- Lungs – Leisure valley and Open spaces.
- Arteries – Network of roads [7 Vs].



# PLAN L-3 EXISTING LAND USE

Chandigarh Master Plan – 2031 Draft



## 2. Brasilia new city Plan

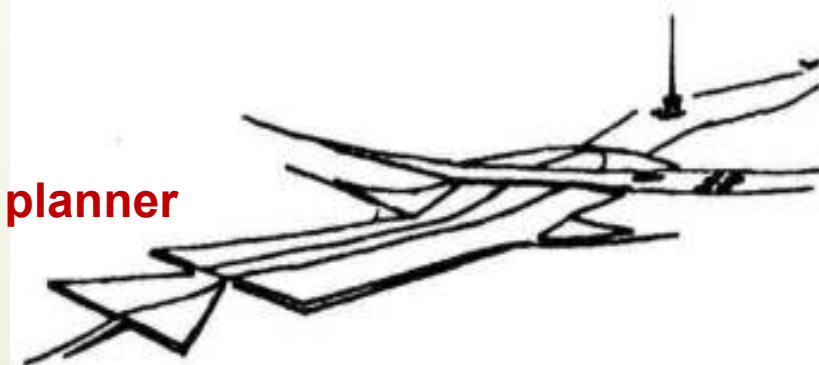
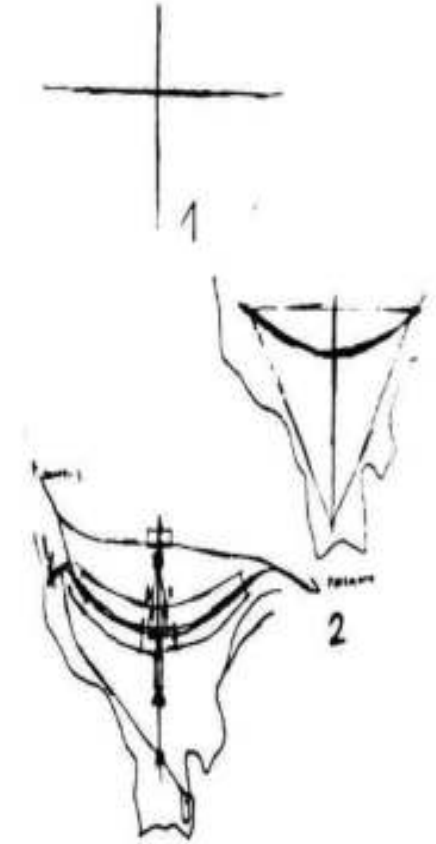
- In the mid 1950s the Brazilian government decided to change the status of the capital city from Rio de Janeiro to a new city that would be built in the interior of the country, Brasília.
- Lucio Costa plan proposed a general organization of the city based on two crossed axes:
- The north-south axis,
- The Residential Axis,, is a fast-circulation street supporting the location of residential areas, the superblocks, constituted by sets of six storey buildings on a continuous green space.
- Each set of four superblocks is a neighbourhood unit and it includes some non-residential buildings for commerce, services and facilities.
- The east-west axis,
- the Monumental Axis, includes from east to west:
- the Square of the Three Powers gathering the executive, legislative and judicial powers;
- the Esplanade of Ministries, a wide rectangular green area surrounded by government buildings;
- the Road Platform, in the junction of the north-south and east-west axes, gathering transport facilities, and commerce and services areas;
- finally, the railway station.

# LAYOUT PLAN of Brasilia

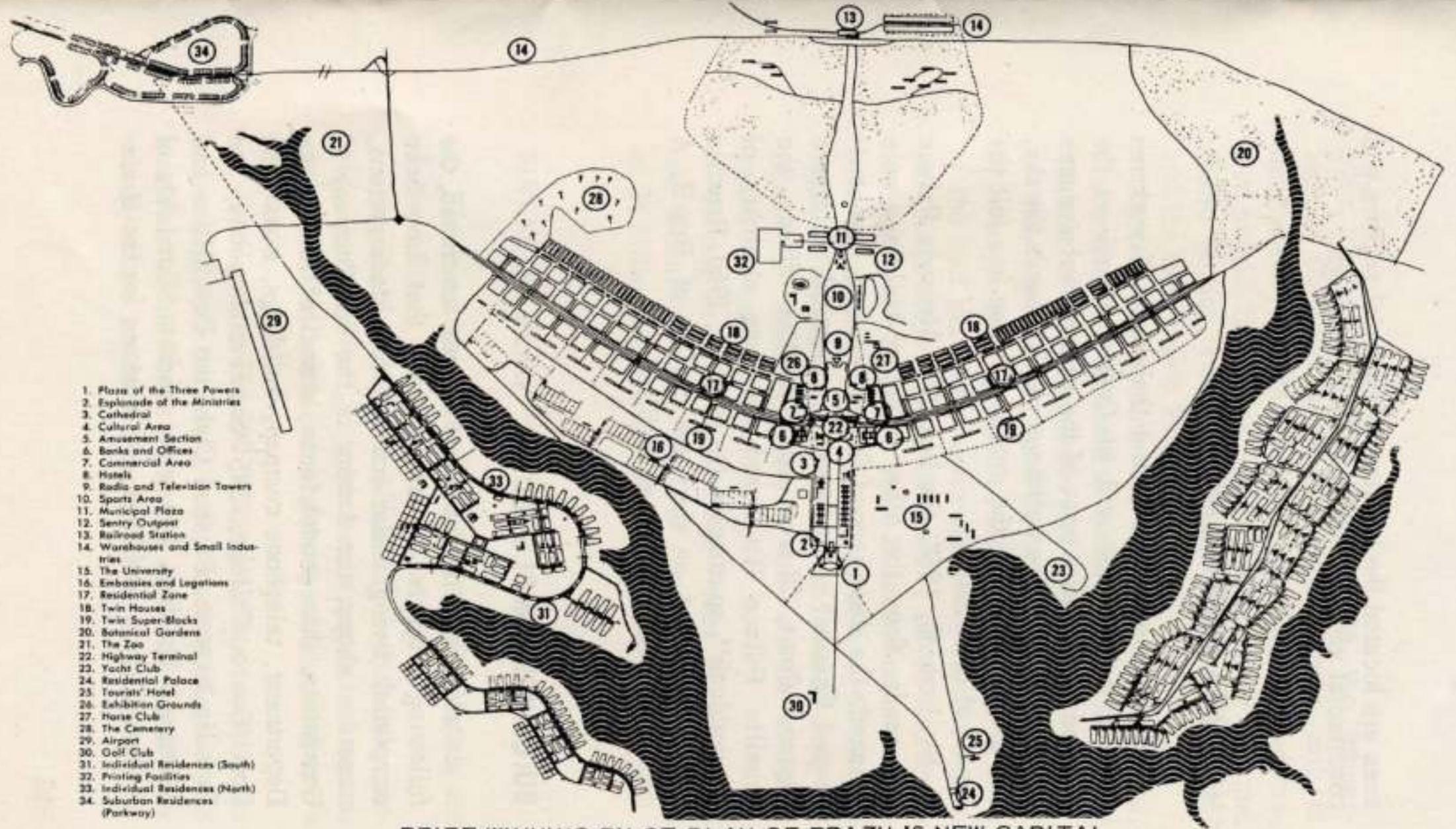
- Lucio Costa's plan
- The plan consisted of three structural elements:
  - The crossing of two axes,
  - Two terraced embankments and a platform
  - The equilateral triangle is the area called '*Plano Piloto*' and forms the core of the capital
- The basic plan –simple cross.
- The city gained the shape of an aero plane symbolizing the fastest way out of town
- Two interesting access
  - Monumental axis
  - Residential axis



**Lúcio Costa**  
**Brazilian architect and urban planner**



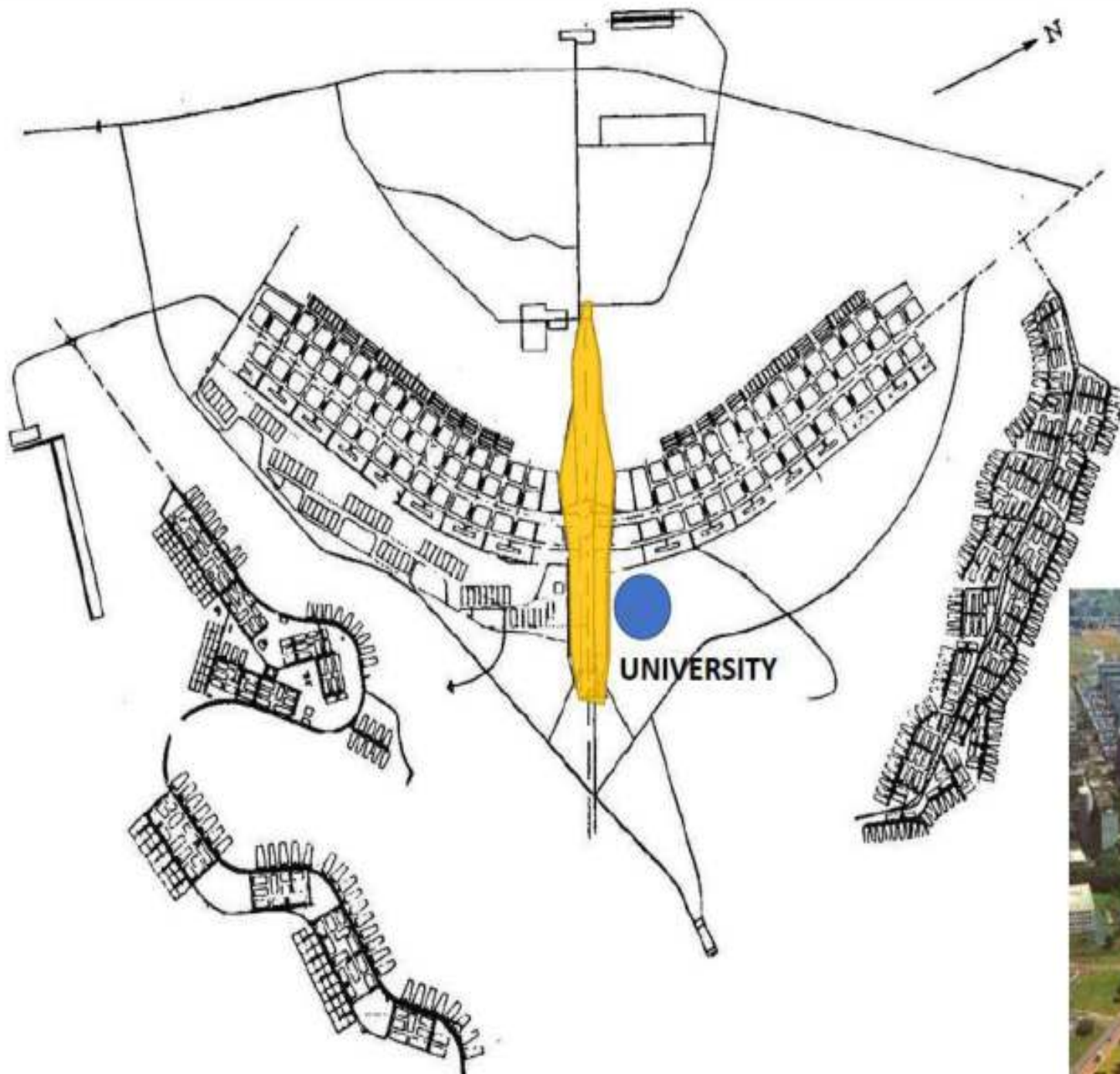




1. Plaza of the Three Powers
2. Esplanade of the Ministries
3. Cathedral
4. Cultural Area
5. Amusement Section
6. Banks and Offices
7. Commercial Area
8. Hotels
9. Radio and Television Towers
10. Sports Area
11. Municipal Plaza
12. Sentry Outpost
13. Railroad Station
14. Warehouses and Small Industries
15. The University
16. Embassies and Legations
17. Residential Zone
18. Twin Houses
19. Twin Super-Blocks
20. Botanical Gardens
21. The Zoo
22. Highway Terminal
23. Yacht Club
24. Residential Palace
25. Tourists' Hotel
26. Exhibition Grounds
27. Horse Club
28. The Cemetery
29. Airport
30. Golf Club
31. Individual Residences (South)
32. Printing Facilities
33. Individual Residences (North)
34. Suburban Residences (Parkway)

### PRIZE-WINNING PILOT PLAN OF BRAZIL'S NEW CAPITAL

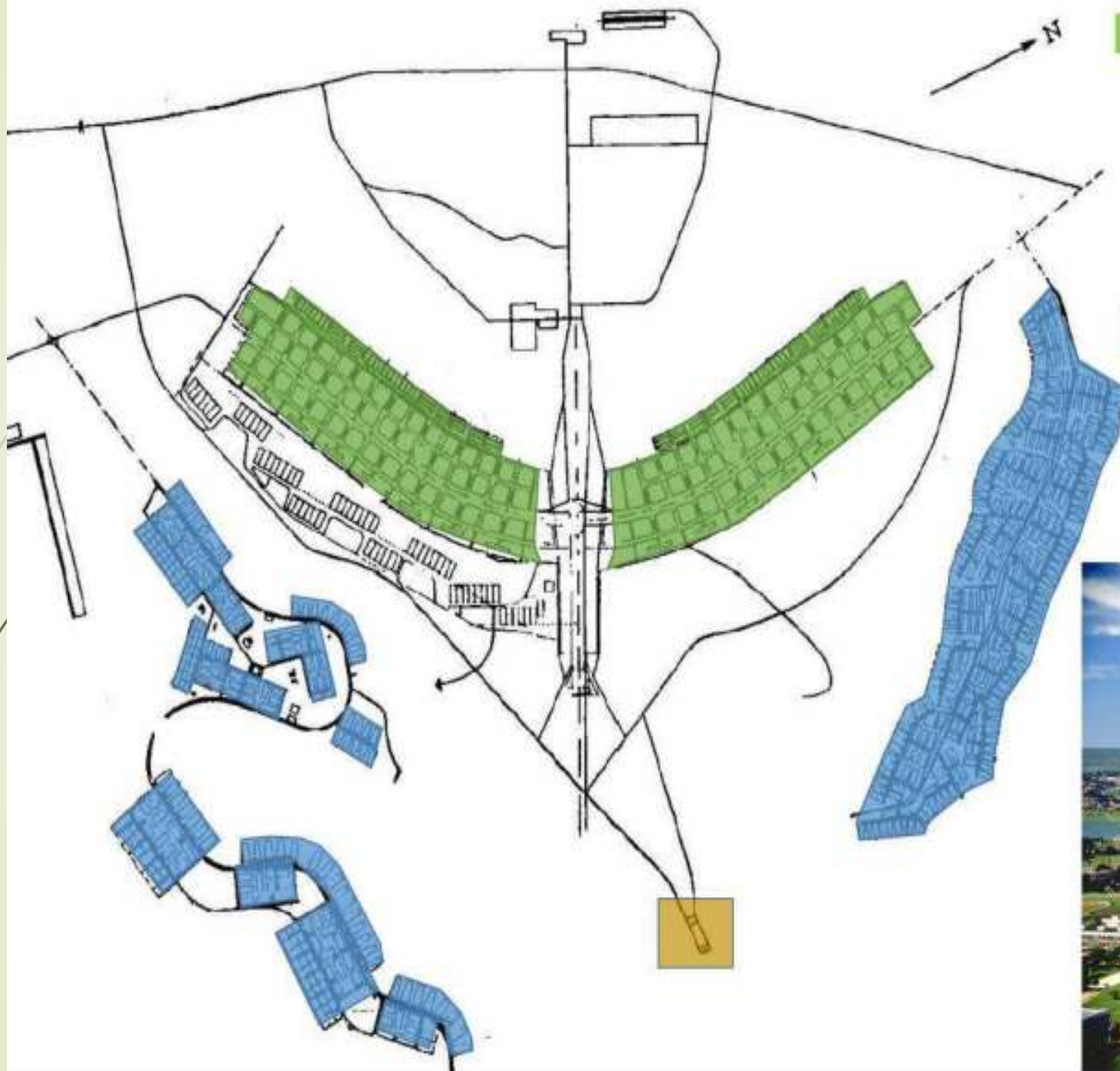
This is the prize-winning sketch of the lay-out of Brasília, which earned for Sr. Lúcio Costa Cr\$1,000,000. The resemblance to an airplane is noticeable at once and has already given rise to the remark that the plan befits a capital in the air age. The shaded area forming a rough triangle at the base is the artificial lake, which will be a feature of the landscape. Other sections may be identified by the above numbers.



## MONUMENTAL AXIS:

- plaza of 3 powers
- Esplanade of the ministers
- Cathedral
- Cultural area
- Amusement section
- Banks n offices
- Commercial areas
- Hotels
- Radio and tv towers
- Sports
- Municipal plaza





## **RESIDENTIAL AXIS:**

- Twin houses
- Super blocks
- Residential zone
- Embassies and legations

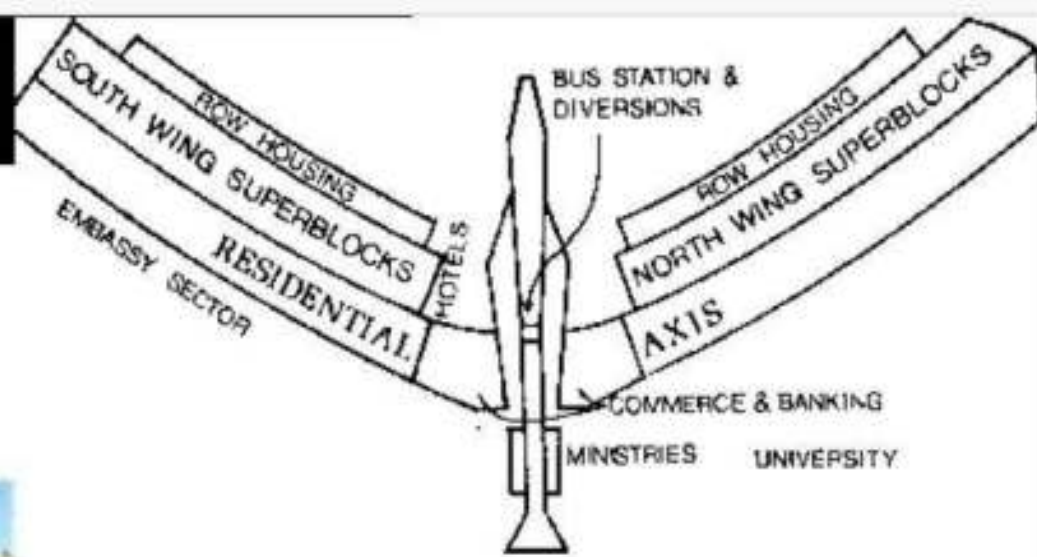


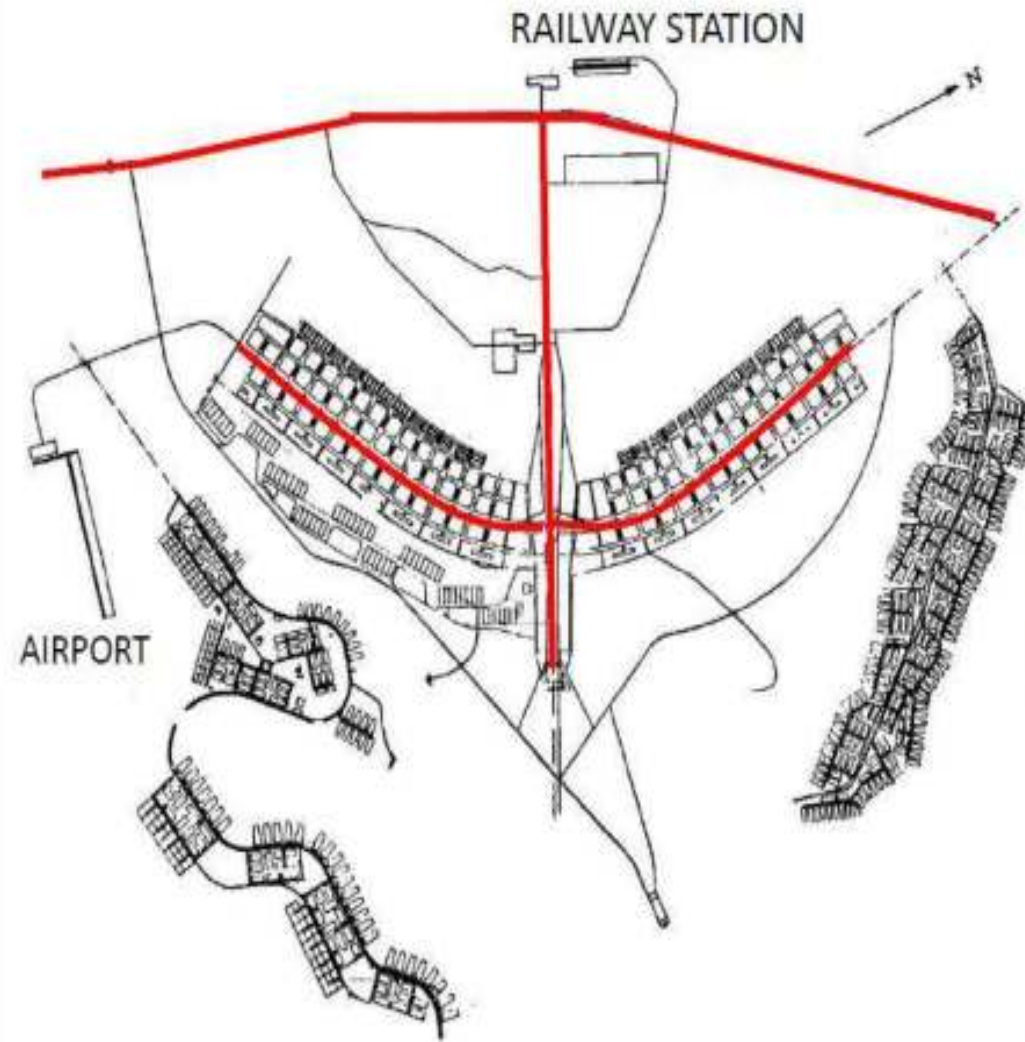
- Individual residence north
- Individual residence south
- Sub-urban residences




# SETTLEMENT PATTERNS

- Row houses
- Super blocks
- Satellite towns



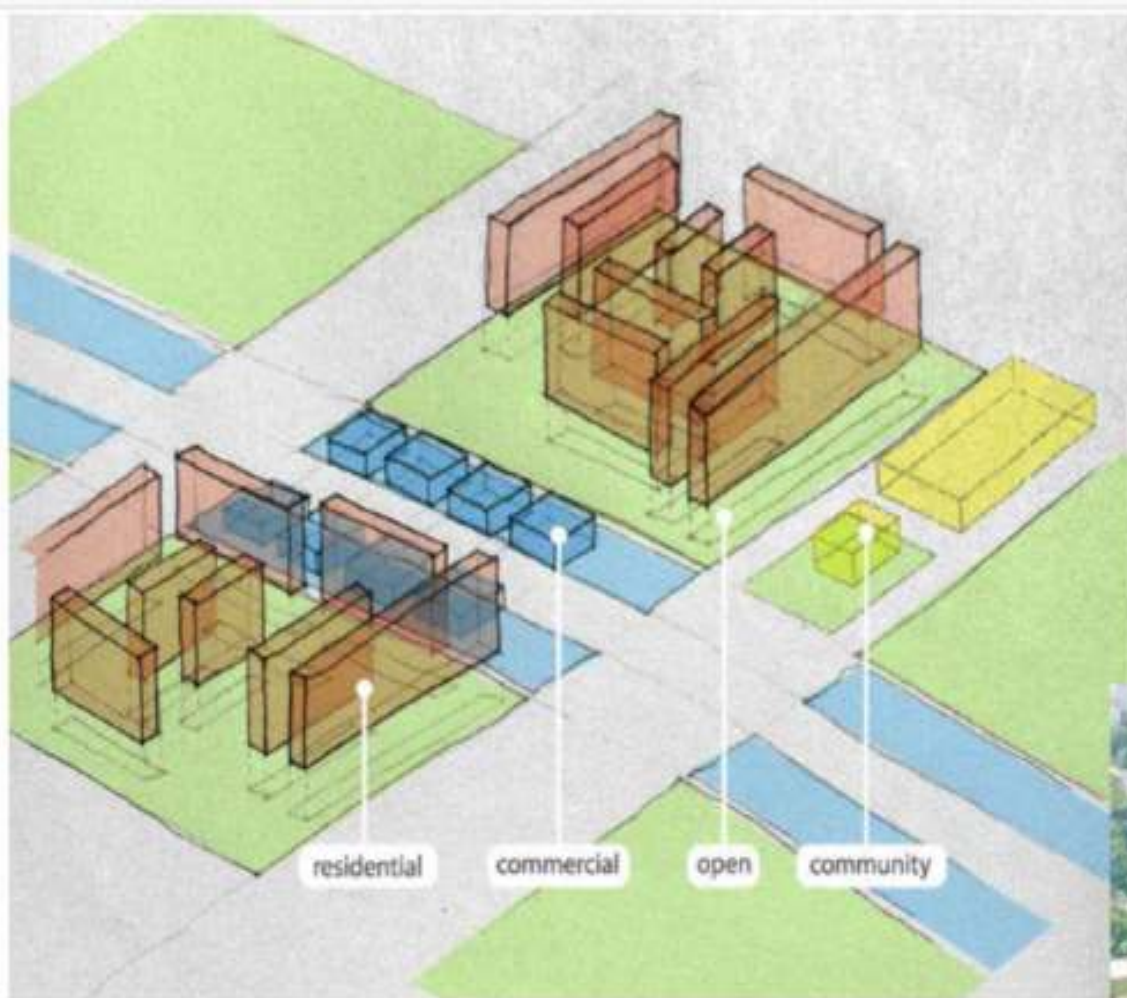


 PRIMARY ROAD NETWORK

- ❑ Vast highway network -access to Brasília from practically everywhere in Brazil.
- ❑ Application of *principles of highway engineering*
  - elimination of intersections
  - Fast central lanes
  - Side lanes for local traffic



- ❑ This is the most important expressway in Brasília is called as EIXAO
- ❑ Pair of roads in the middle
- ❑ Parallel to the eixao ,at both sides, there are the small axes which give access to the residential blocks.



- housing for 600,000 people;
- grouped in a very orderly manner;
- Between the superblocks commercial businesses;



### 3. Milton Keynes city Plan

- Ten years after, the plan for Milton Keynes is developed as part of a programme launched in the 1950s—with the towns of Cumbernauld and Hook—promoting the construction of ‘new towns’ in England.
- The plan designs a city for about 250,000 inhabitants located 70 km from London, with two different circulation networks—
  - **1. One for pedestrians**
  - **2. The other for vehicles.**
- **The layout of the town center** is developed in a symmetrical way with the central station as a key element.
- As in the case of Chandigarh and Brasilia, **Milton Keynes** is a town that is completely different, in urban form matters, from a traditional city built until the end of the nineteenth century.



# Planning Milton Keynes

- **MK Plan is holistic** – covered:
  - planning and transport;
  - population growth;
  - social development;
  - education;
  - health;
  - social services;
  - leisure;
  - agriculture;
  - housing;
  - employment and industry;
  - shopping;
  - water supply;
  - engineering.
- Strongly modernist design to buildings.
- Idea of a city in the forest – green space, trees and low rise buildings.
- Grid layout for streets with roundabouts integrating existing villages within the system –
- mix of old and new



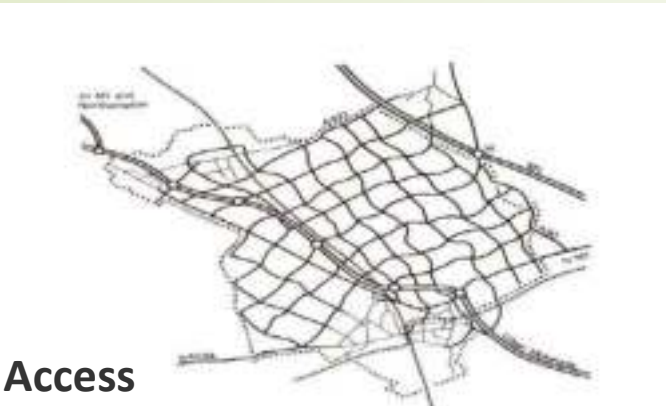
# Milton Keynes compared with other post war new towns

1969 community consultations: Walter Bor compared the plans with Stevenage:

“the idea is to have a flexible framework to try and provide for the unrestricted use of the car, with public transport service as well, small buses with easy access. We will not as in the old new towns have interlinking neighbourhoods but Activity Centre at the crossing points for the development of the community. Market demands will be largely responsible for the siting of shops, schools, etc.”

Clapson, ed., *The Plan for Milton Keynes*, p. 10.

Aimed for ‘balance and variety’ of social class, whereas the earlier new towns were predominantly working-class ‘excess’ from slum clearance



### 1. Movement and Access

The network of grid roads, spaced roughly 1 kilometre apart, were to provide for smooth and easy movement of traffic and an efficient public transport system.

### 2. Local Environment

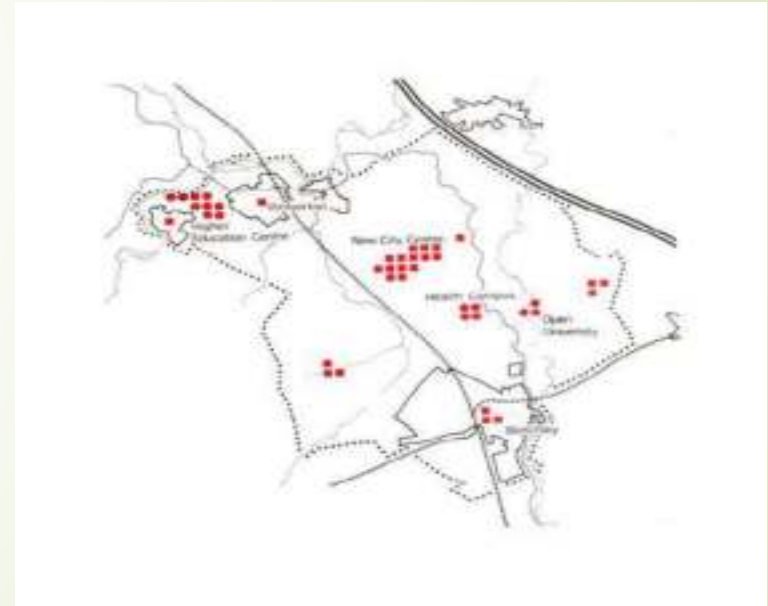
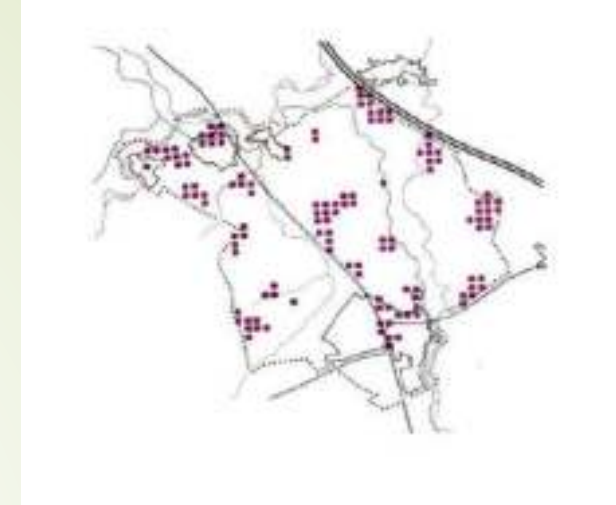
Activity centres placed at strategic points were to be very important in providing community spaces such as schools, local centres, shops and health centres

### 3. Employment

Attracting businesses for employment opportunities was considered key to the success of the new city. Employment areas would be dispersed and mainly towards the edges of the city in order to spread traffic.

### 4. City Centre

The new city would need a centre and it was planned for the highest point in the designated area for prominence and ease of access. It was to contain shopping facilities, cultural and recreational activities, housing, and offices.



## 5. Housing

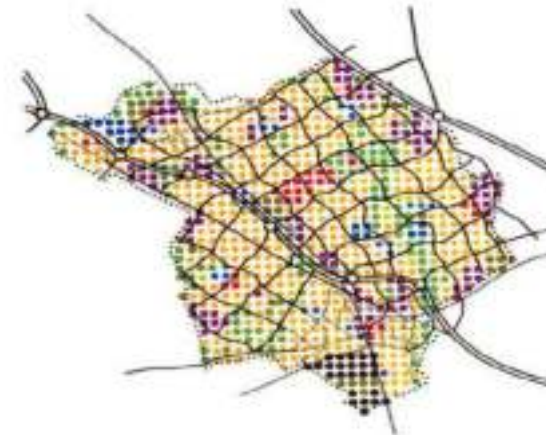
This was the primary reason for the creation of the new city. The plan is based on the government's initial request for a mixture of 50% private ownership and 50% public rental housing, but this quickly changed during the early 1970s to 75% public and 25% private.

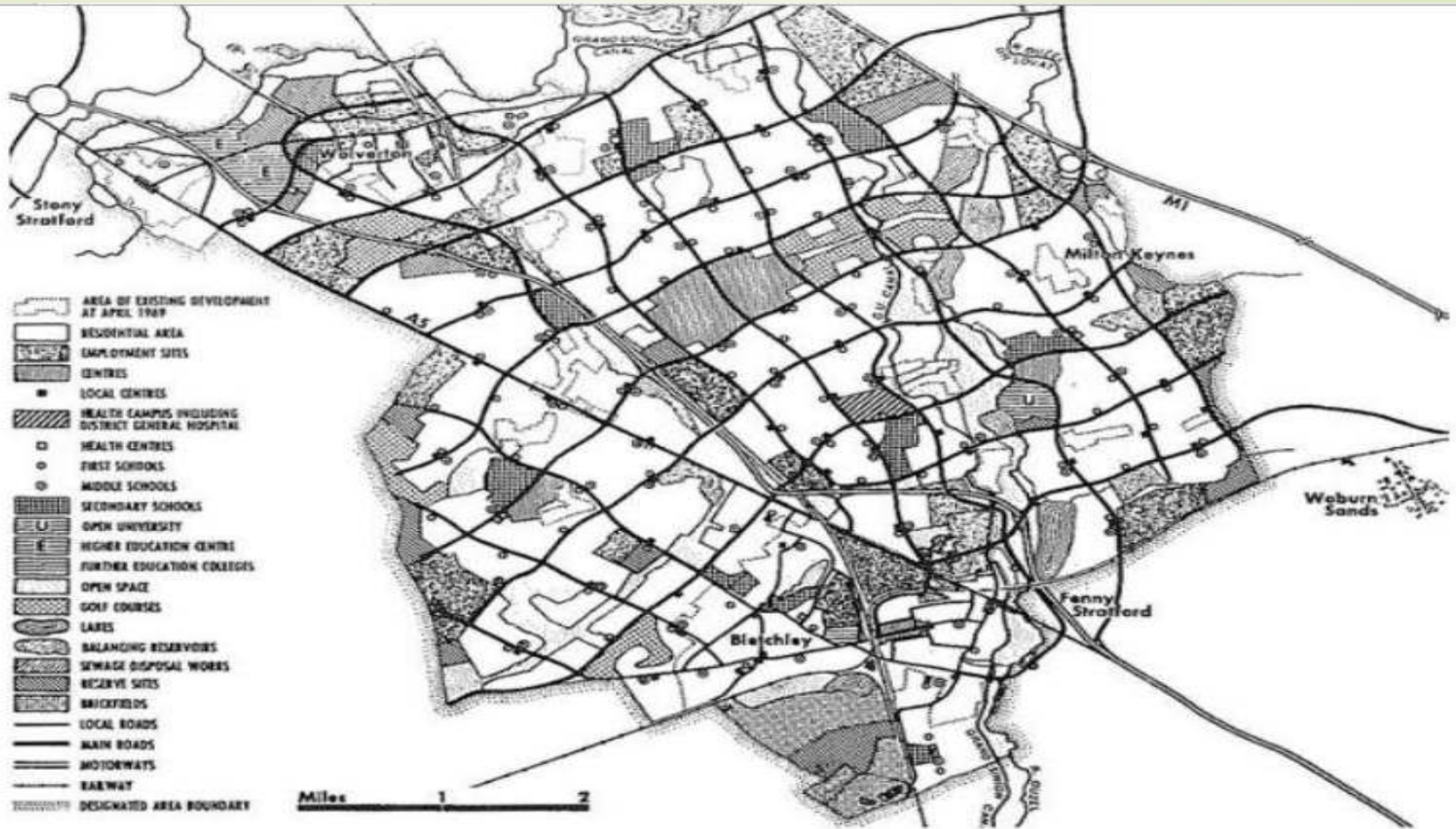
## 6. Social Development and Leisure

The network of community services should be available to and understood by residents. Plans for recreational activities needed to be timely with the growing population. The existing landscape features such as rivers, lakes and the canal were incorporated into leisure routes and the creation of linear parks for recreation.

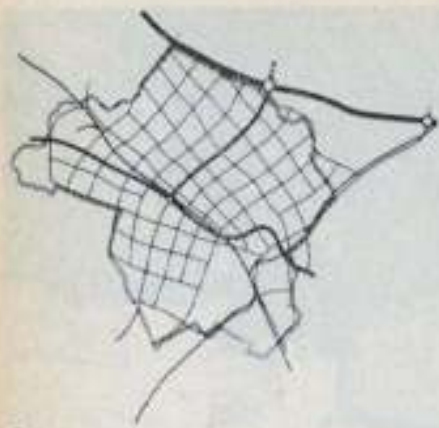
## 7. Strategic Plan

The goals of the city would be realised through its strategic plan, which gave a framework for development. A first ten year plan was created to guide development in the initial stages and to ensure flexibility after construction had started.





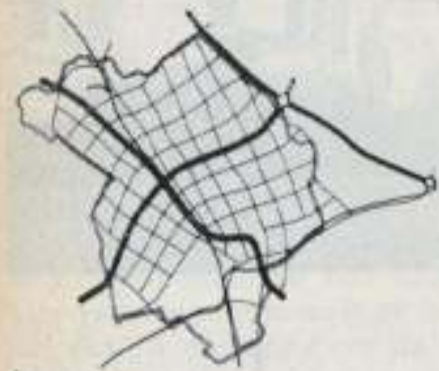
5.1. The master plan for Milton Keynes, England, by Richard Llewelyn-Davies and Walter Bor. Commissioned by the Milton Keynes Development Corporation. 1970. Courtesy of Llewelyn Davies, London, and Llewelyn-Davies Sahni, Houston.



G



H



I



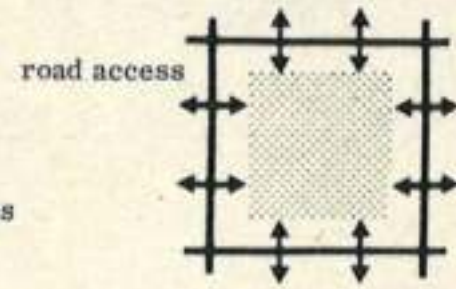
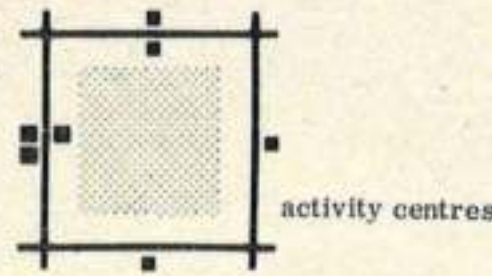
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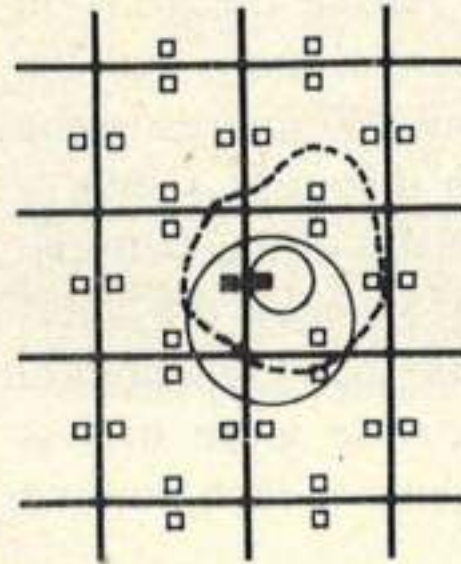
K

**G** Proposed road pattern, showing major roads, linking up with motorway and network through residential areas  
**H** Proposed first stage road network and its possible extent by 1976-79  
**I, J, K** Provision for possible future public transport systems for using fixed track and possible automated fixed track systems

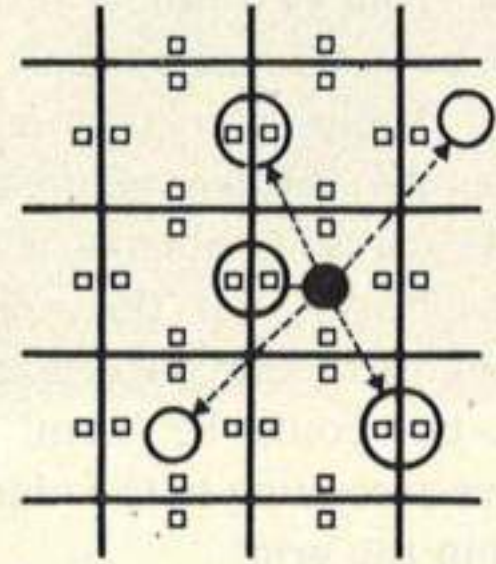
Stony Stratford, Wolverton and New Bradwell in the north; by the presence of the M1 on its eastern boundary and the existing road and rail links of the three main



*Residential area catchments and activities:*  
**D Residential area planning principles**



E



F

**E** Different facilities at an activity centre serve different catchment areas

**F** Members of a family living in one residential area will use different facilities in different areas

# New Urbanism Approach

## New Small town in the coast of Florida, **Seaside**

- In 1980, after being gifted an 80 acre plot, Robert Davis appointed Andrés Duany and Elizabeth Plater-Zyberk to prepare a plan for a small town (2000 people) in the coast of Florida, Seaside.
- The town that has become a leading of the **New Urbanism movement**—
- The plan for Seaside stands out as a reaction to the dominant model of urban development in the United States,
- The plan is proposing
  - 1. The return to the qualities of a small town (based on a reinterpretation of local vernacular)
  - 2. A connected system of streets, which keeps pedestrians and traffic together but privilege the former.
- The plan is perfected by a form-based code, notably condensed in one single-sheet.
- After dividing the town in eight types of urban tissue, the code establishes the rules for transformation in each of these tissues offering guidance on the **location and scale of yards and porches, outbuildings and parking, and finally on building height.**

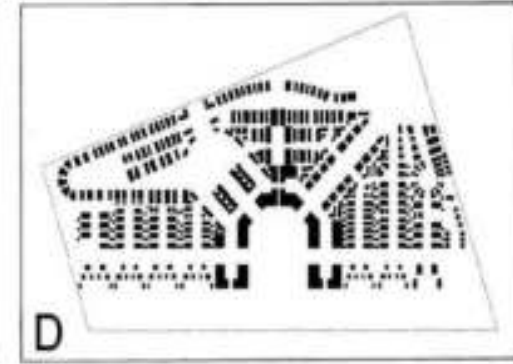
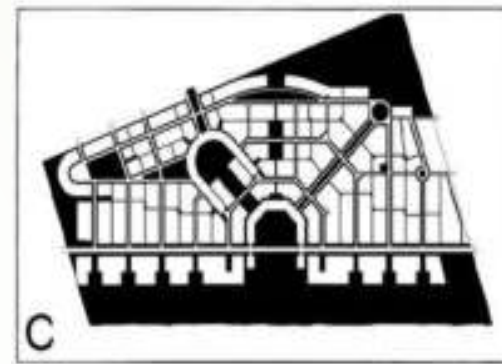
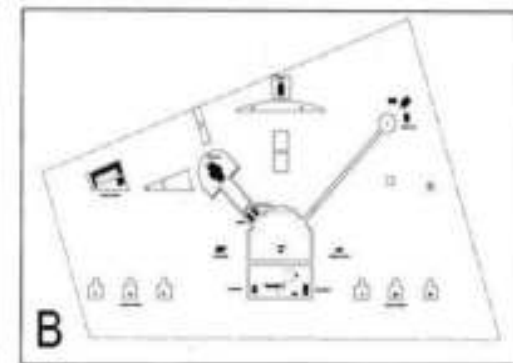
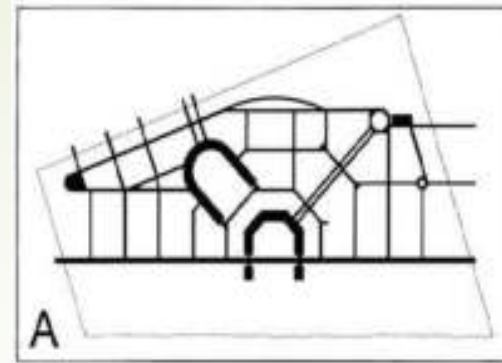








The master plan



The urban pattern.

Seaside and Watercolor boundaries



**Typical urban block arrangement and a mixed use of Inn and housing.**



**Central Square according to the Krier - Opticos proposition.**

## Group B: conserving the existing city

### Bologna city Plan- Italy

- **In the end of the 1960s** a plan was prepared for the **city of Bologna** introducing a particular concern in the planning and architectural debate that was quite opposite from those of the three former plans.
- **The goal of the Cervellati plan** was not to think of a new city, or even to expand an existing settlement, **but to conserve the existing city.**
- One of the main ideas of the plan was that the historical identity of the city does not exist in only in the unique sixteenth century buildings,
- but it is also inherent in the ordinary buildings, in this case founded in the seventeenth and eighteenth centuries.
- **A typological approach was developed** establishing four categories of building types all related in a unified urban landscape.
- **What is a typological approach to planning?**
- It reveals that the forms created in one period are different from those created in another.
- Ranked over time, similar types thereby generate distinct urban tissues.
- Traditionally, the dominant urban-tissue types in a new period of urban development are formed from the dominant types of an earlier period.

# Bologna city Plan



Bologna, 1969. Urban conservation Plan.  
Bologna, 1969.



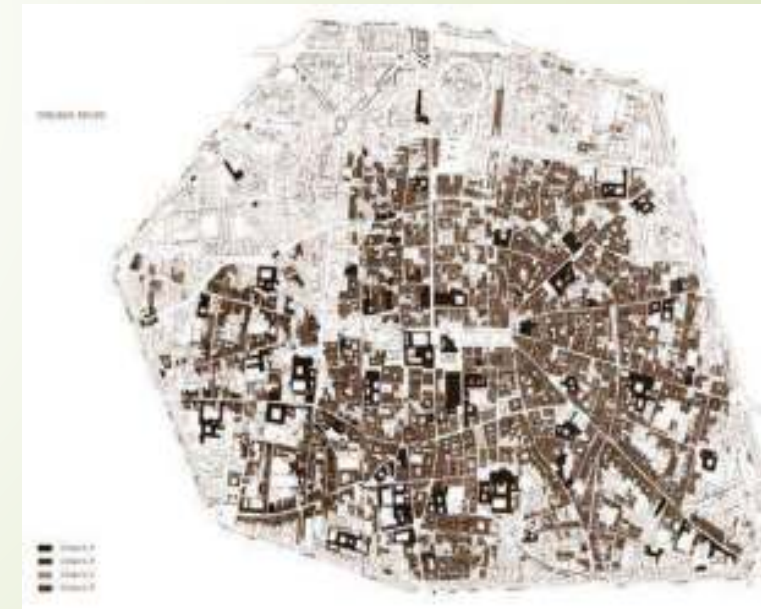
Bologna, 1955. General Town Plan.



Bologna, 1969. Urban conservation Plan.  
Architectural categories of historical containers.



Bologna, 1969. Historical centre and  
urban growth of suburbs.



Urban conservation Plan. Building  
typologies



**Thank You**

**Any  
Questions?**

