

Housing/Dwelling

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**GDAŃSK UNIVERSITY
OF TECHNOLOGY**



Introduction



Health & recreation



The Commons



Mobility



Energy



Retail



Production & logistics



Housing Dwelling



Forestry



Agriculture



Tourism



Landscape system presentations



Scenario / Visioning presentations



Social Business modelling



Impact evaluation

**WARM_UP
QUIZ**

#1

For what are you ready to pay extra while renting or buying your flat or house?

KEY CONCEPTS

2

question no. 1:
How topic of Housing applies to the field of landscape economy?

CORE RESEARCH QUESTIONS

question no. 2:
What are the main economic dimensions in Housing_Landscape relation?

question no. 3:
What kind of urban landscape form arises in what kind of social process?

SUMMING UP

#3

question no. 4:
How to govern urban development to increase the value of the landscape?

CASE STUDY TEST

#4

Case Study test
Comparison of two housing areas in Gdańsk in lenses of landscape economy and ecosystem services

References:

#5

LAND USE & DEVELOPMENT FORM

FUNCTIONAL & SPATIAL PROGRAM

URBAN LANDSCAPE as a FORM of a CITY understood as a living organism

URBAN TISSUE

URBAN MORPHOLOGY & METHABOLISM

ECOSYSTEM SERVICES

HOUSE _ APARTMENT _ CONDOMINIUM _ FLAT

HOME _ **LIVING** _ **DWELLING**

HOUSING ESTATES or DISTRICTS _ RESIDENTIAL AREAS _ **LIVING QUARTERS**

question no. 1:

How topic of Housing/Dwelling applies to the field of landscape economy?

CONCEPT OF URBAN LANDSCAPE _ large scope of various relations between build-up, open and green areas

Relations in diffusion of build-up and open landscape.

Spatial urban form, urban design, urban composition.

For what are you ready to pay extra while renting or buying your flat / house?



QUIZ

**Choose five reasons that are most important to you.
Arrange them in order of their importance:**

- proximity to the city center
- a place in the countryside-
- proximity to services (stores, administration, etc.)
- close to nature (park, forest, beach, meadow, etc.)
- with a nice view
- away from sources of pollution (air pollution, noise, unpleasant odors, etc.)
- good daylighting conditions- more square metres
- close to your place of work
- with parking lot
- close to recreational areas
- with good transportation links- good access to public spaces
- in a building with innovative solutions- in a building with high aesthetic qualities

you will find these answers in the chat

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Menti.com
Cod: 18989804

THREEFOLD NATURE OF HOUSING/DWELLING:

Commercial Profile: market asset_value_good: house _ apartment_condominium_flat

Social Profile: community creation

Ecological Profile: active

question no. 2:

What are the main economic dimensions in Housing - Landscape relation?

LOCATION PROFILE

VALUES & PROFITS

IMAGE versus STATUS

PROCEDURES & MENAGEMENTPROCESS

MORPHOLOGICAL URBAN INDICATORS_PARAMETERS

ECOSYSTEM SERVICES

HOUSING | DWELLING | URBAN LIVING | CITY

LANDSCAPE _ NATURE versus BUILD_UP
form&function social process

ECONOMY _ COMMODITY versus OPERATING SYSTEM profits&values management&procedures

**Is landscape a formal expression of relation
between open and build-up spaces ?**

What character this interaction represents? How to evaluate it?

**What features of this interaction
are tangible and measurable (objective)
and which of them are elusive (relative)?**



tangible and measurable (objective) features
CITY AS AN URBAN STRUCTURE

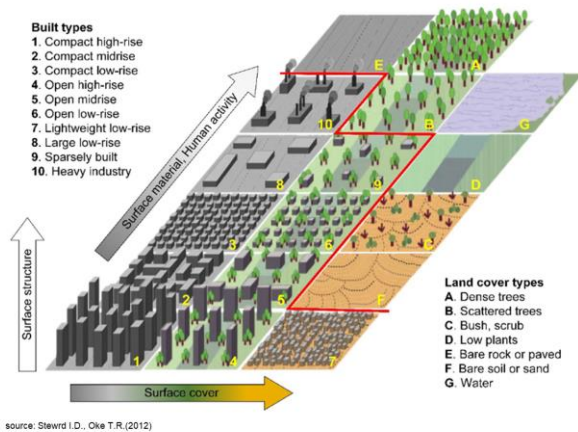
unmeasurable intangible elusive (relative) features
CITY AS AN URBAN LANDSCAPE

Physic-Morphological Urban Features

23

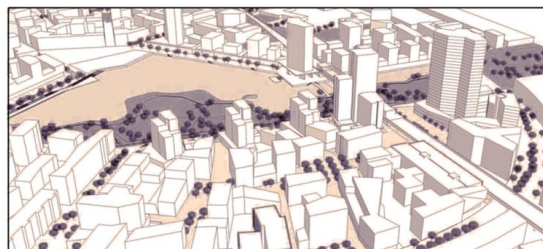
Local Climate Zones Typology

LCZ are defined as the regions that possess similar characteristics like surface cover, material, structure, and population activity, extending from several hundred meters to kilometers



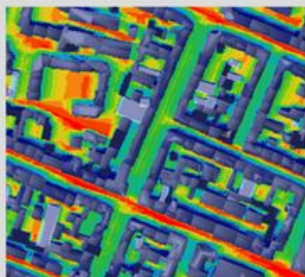
Mapping Local Climate Zones: A Bibliometric Meta-Analysis and Systematic Review

Urban design

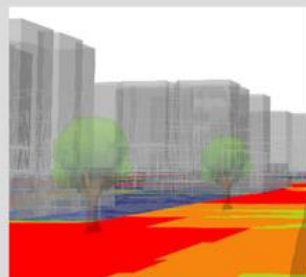


Genius loci, culture, heritage

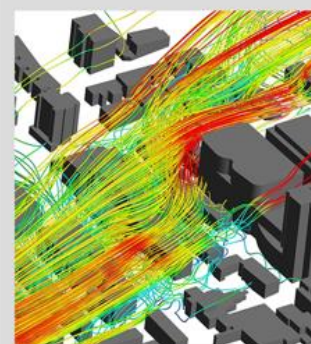
Urban Methabolism



MICROCLIMATE



TEMPERATURE



WIND

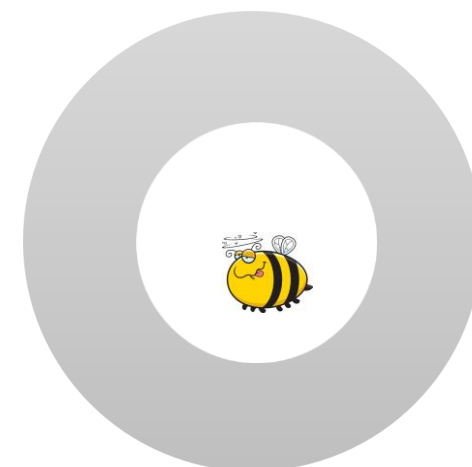
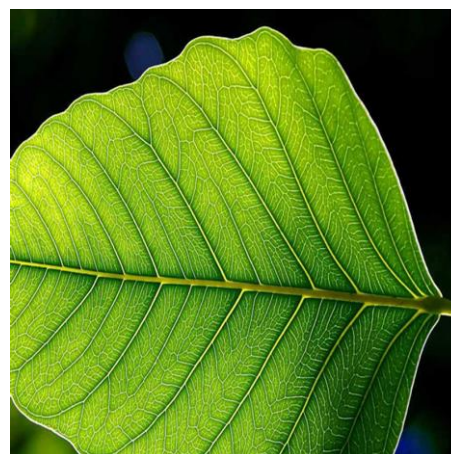


CITY: URBAN STRUCTURES _ URBAN LANDSCAPE

as a SCULPTURE
as a MECHANISM or an ALGORYTHM



as PROCESS
as ORGANISM
or HYBRID PHENOMENA

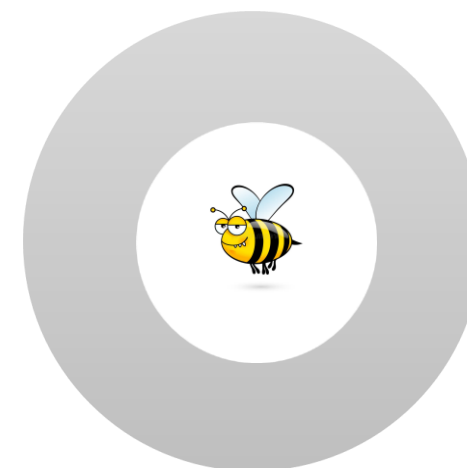


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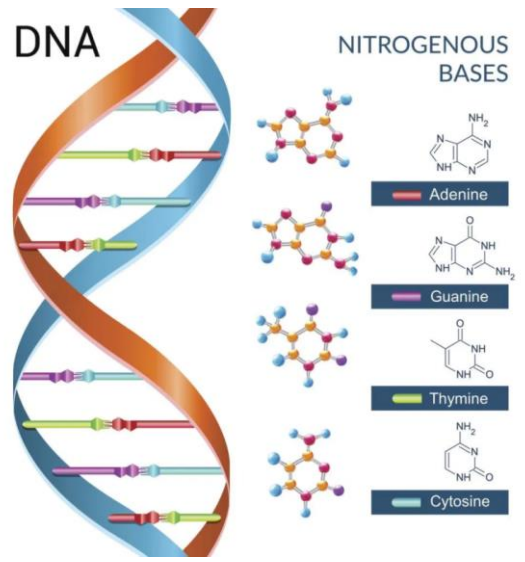


as PROCESS
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or HYBRID PHENOMENA

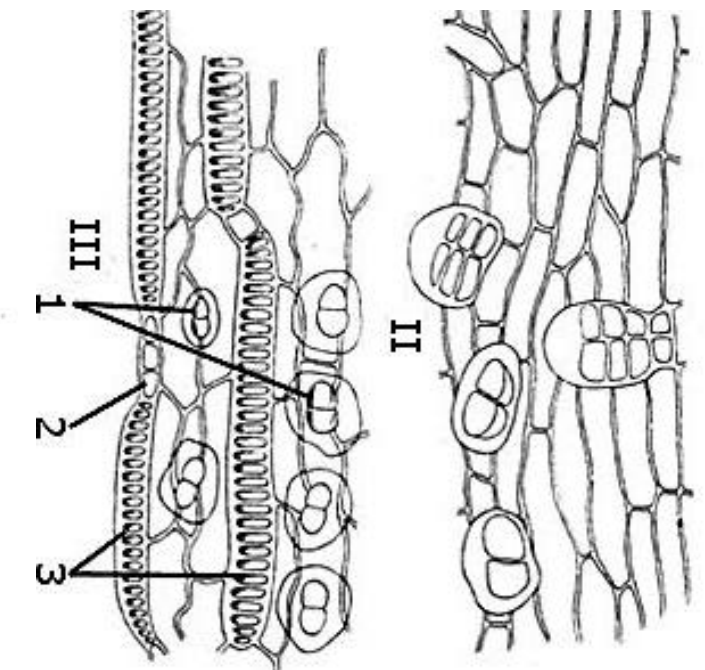
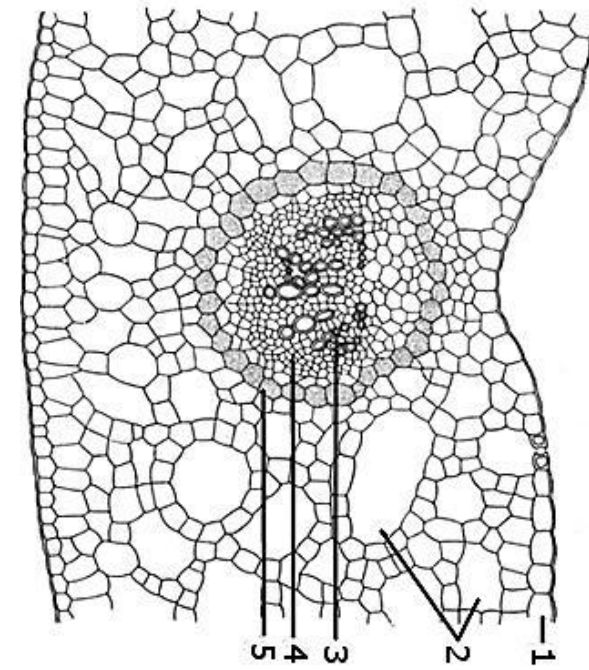
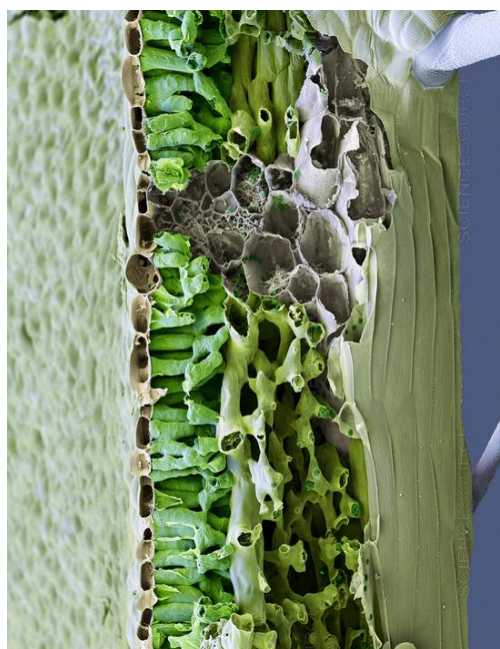
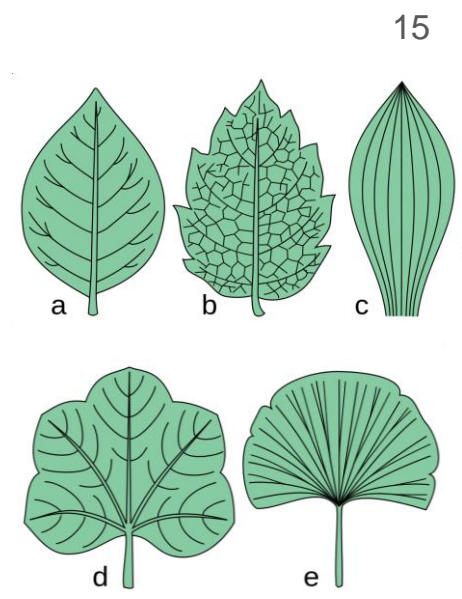
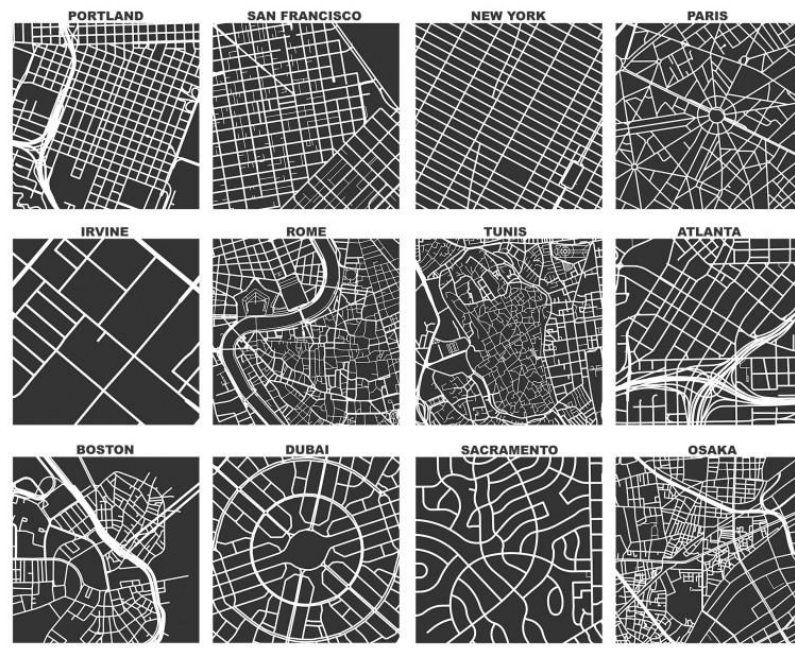




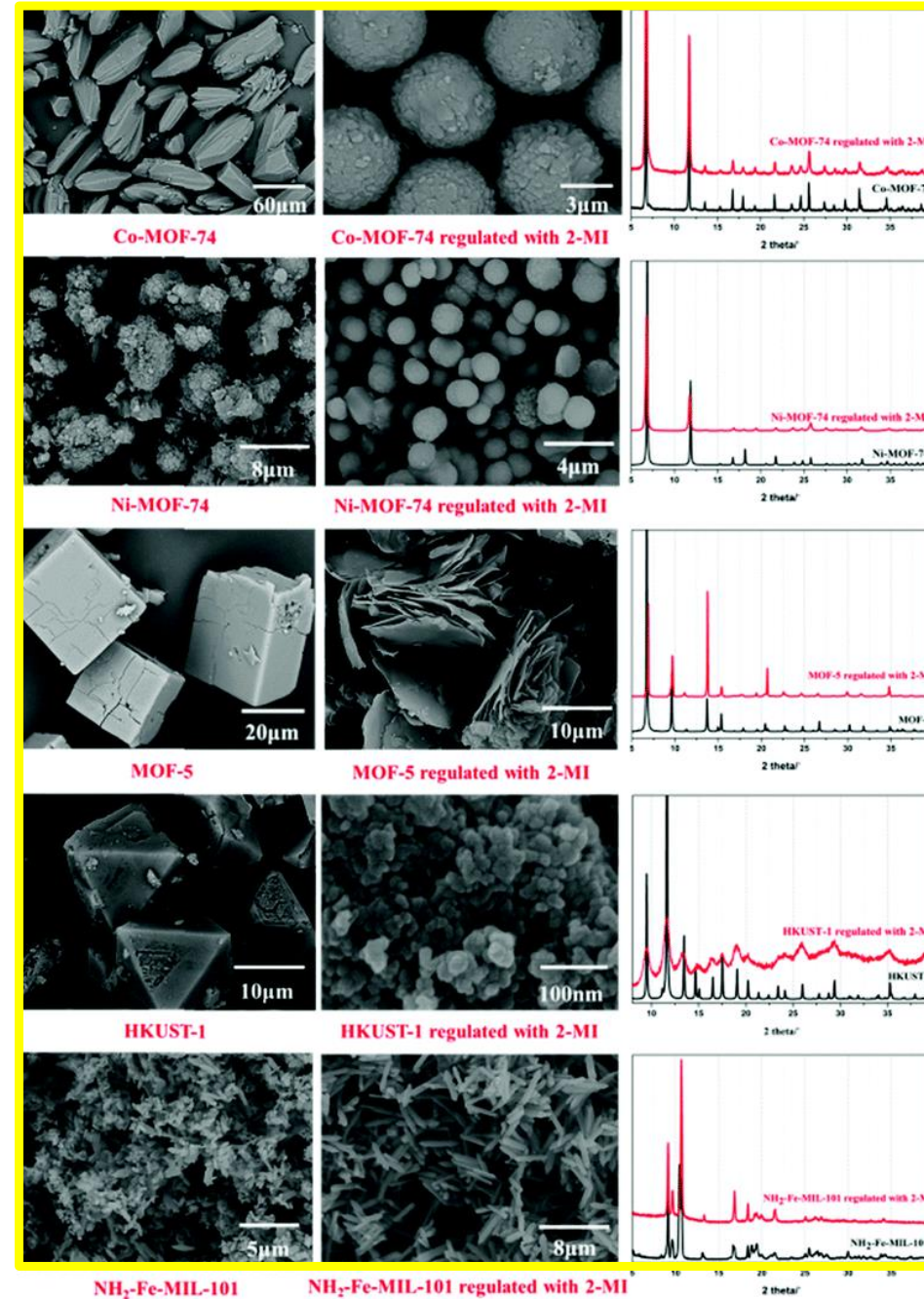
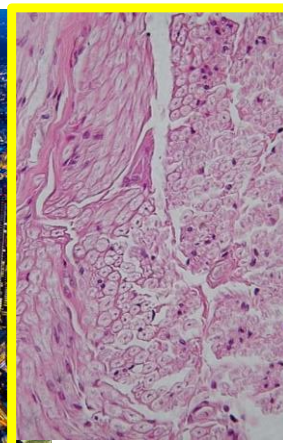
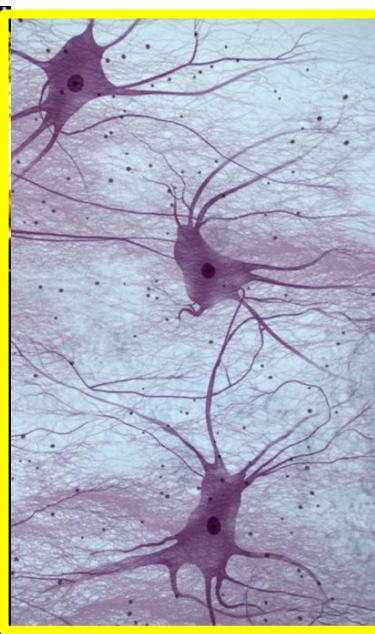
CITY URBAN LANDSCAPE DNA



**URBAN TISSUE
PLAN _ On-set form analyses
% procentage build-up and open
sqm/ ha surface of bioactive
street grid shape**



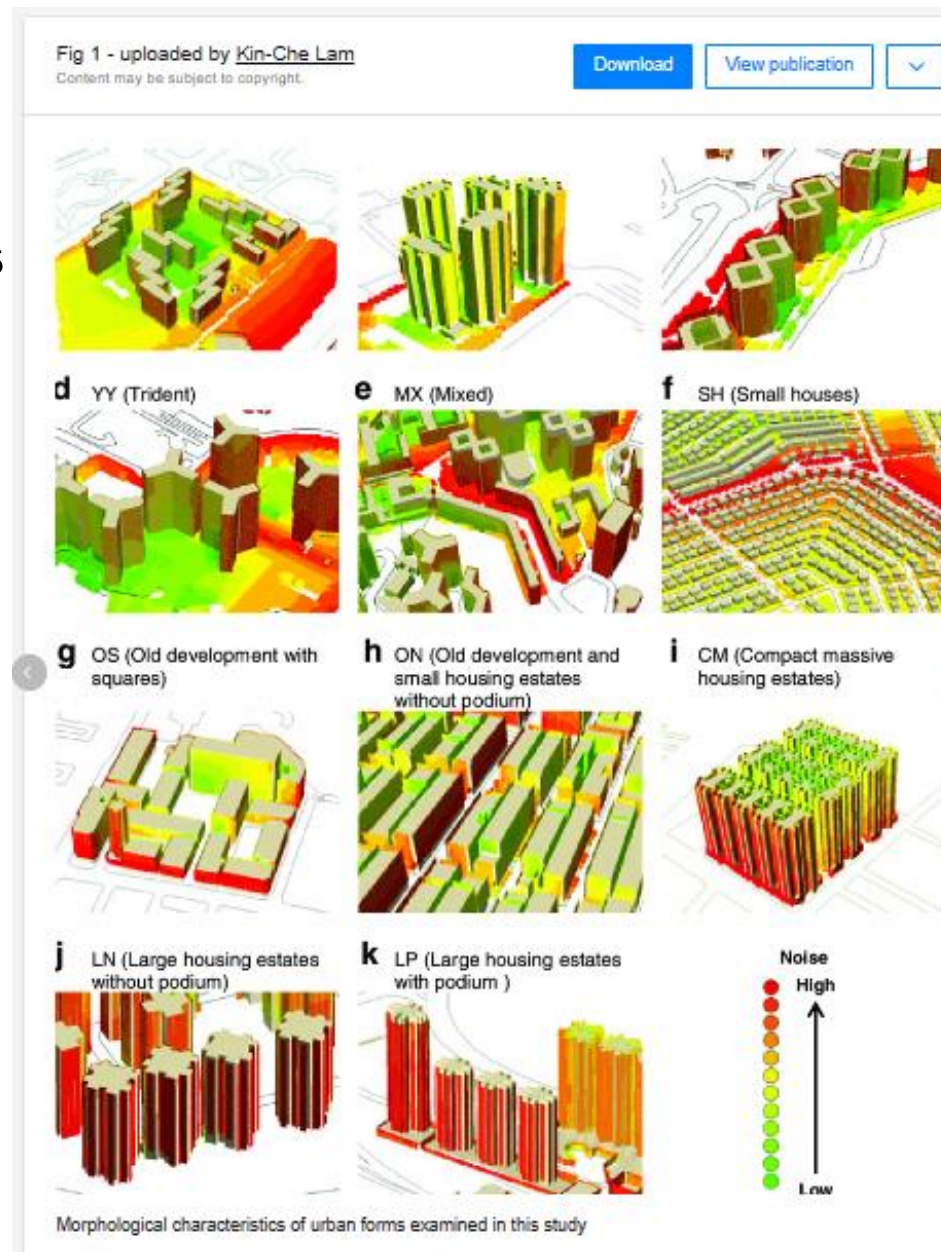
**URBAN TISSUE
URBAN MORPHOLOGY**
tangible and measurable
(objective) features



URBAN TISSUE

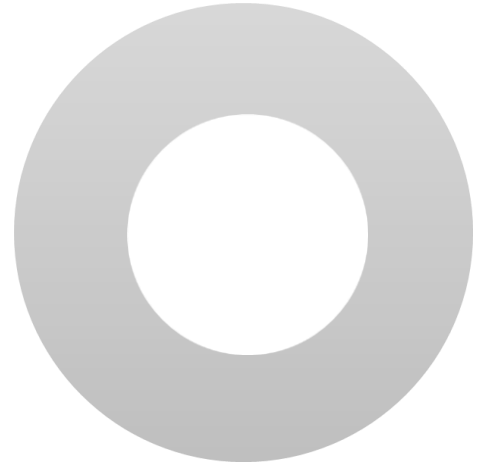
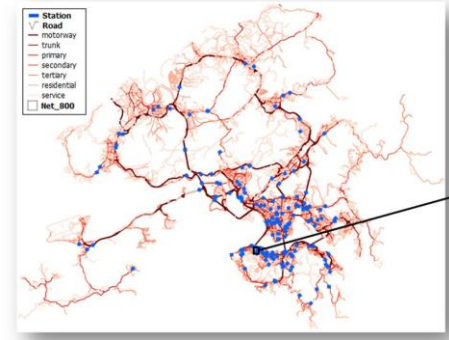
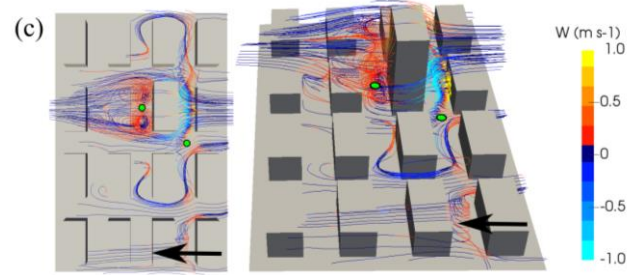
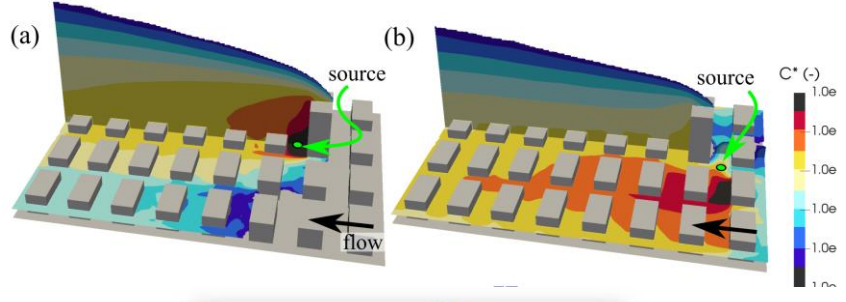
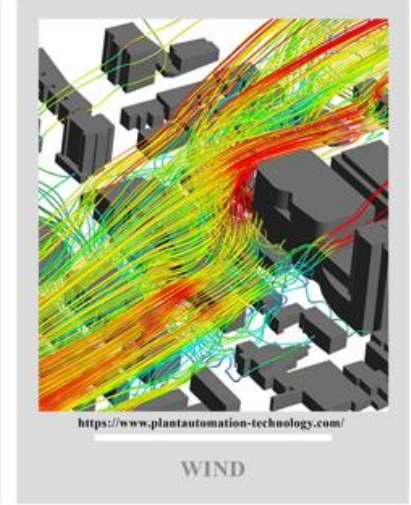
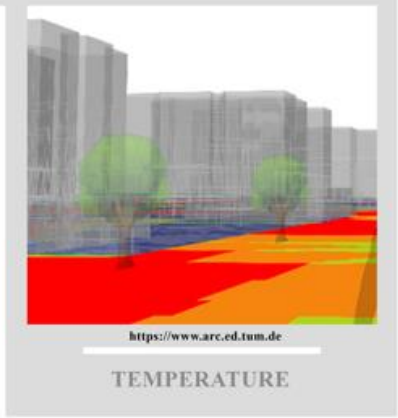
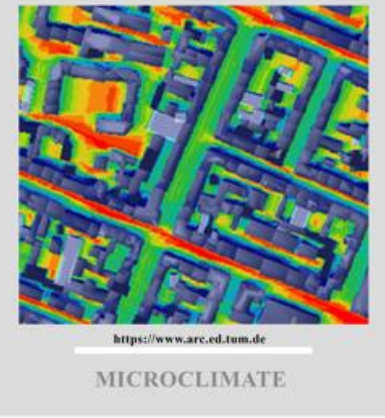
URBAN MORPHOLOGY

tangible and measurable (objective) features



METABOLISM of urban structures
URBAN CLIMATE
TRAFFIC
TRANSPORT
CIRCULATIONS
ENERGY
TECHNICAL INFRASTRUCTURE

#3 URBAN CLIMATE & ENERGY





COMPACT CITY

SMART CITY

15-MINUTES CITY, WALKABLE COMMUNITIES, 8-80 COMMUNITIES

SLOW CITY

TOD Developments

POSITIVE ENERGY DISTRICTS

The development of new urban concepts for the residential areas, has in main focus urban metabolism to increase technical, economical and social effectiveness of urban structures.



SOLAR CITY LINZ/AUSTRIA



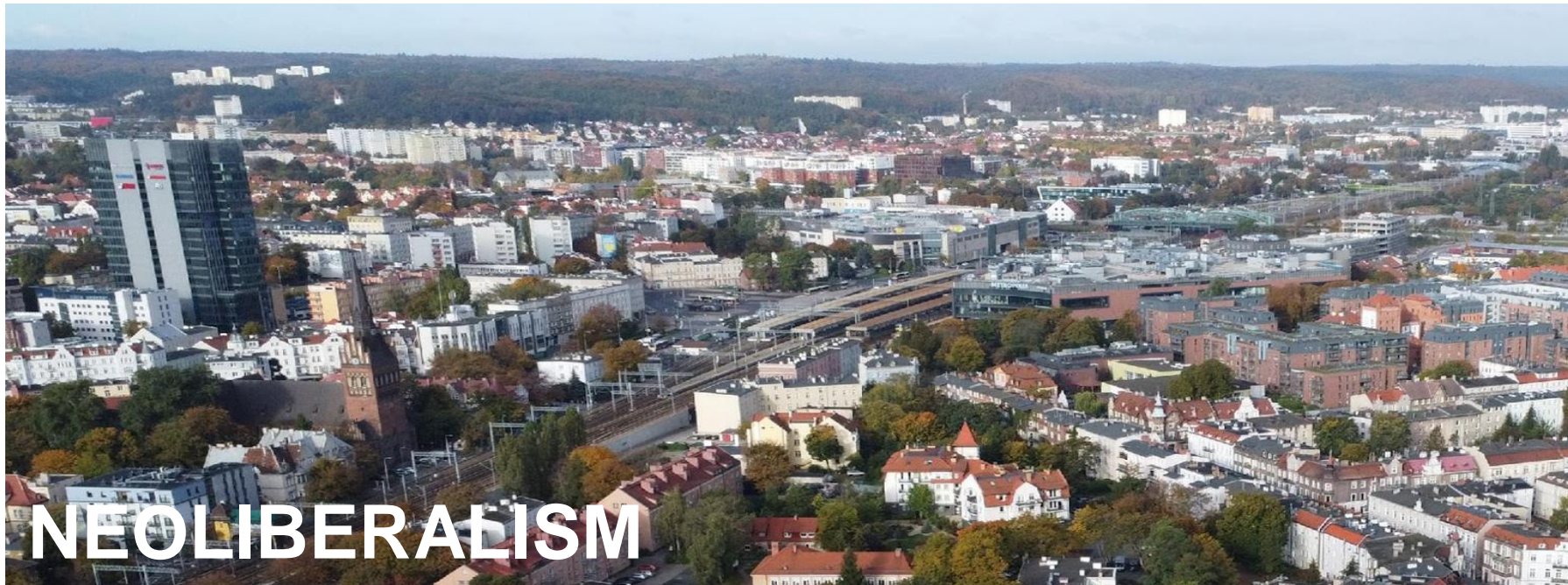


question no. 3:

What kind of urban landscape form arises in what kind of social process?



Economic and political system versus landscape 22



**Districts of Gdańsk,
Polanad**

Stakeholders

- investors
- users/owners of apartments
- local community (inhabitants, people who work there)
- local business
- city, local authorities
- country, government, EU

Key economic dimensions

CITY

Local authorities build flats on land owned by the city and rent them at favorable rents - an offer for people with very low incomes



SOCIAL HOUSING ASSOCIATIONS

Municipal companies build flats on land owned by the city and rent them at favorable rents (an offer for people with low and medium incomes).

They are financially supported by the government, a small own contribution of future users



COMPANY FOR EMPLOYEES

The company (factory, university, corporation) builds apartments on its own land and rents them to employees at favorable prices



ECONOMIC MODELS OF DWELLING INVESTMENT
who is the investor?



PRIVATE INVESTMENTS

The owner of the plot builds a residential building from his own resources - it mainly concerns single-family houses

DEVELOPMENT COMPANIES

Companies buy land, build flats and sell them at market prices to individual clients

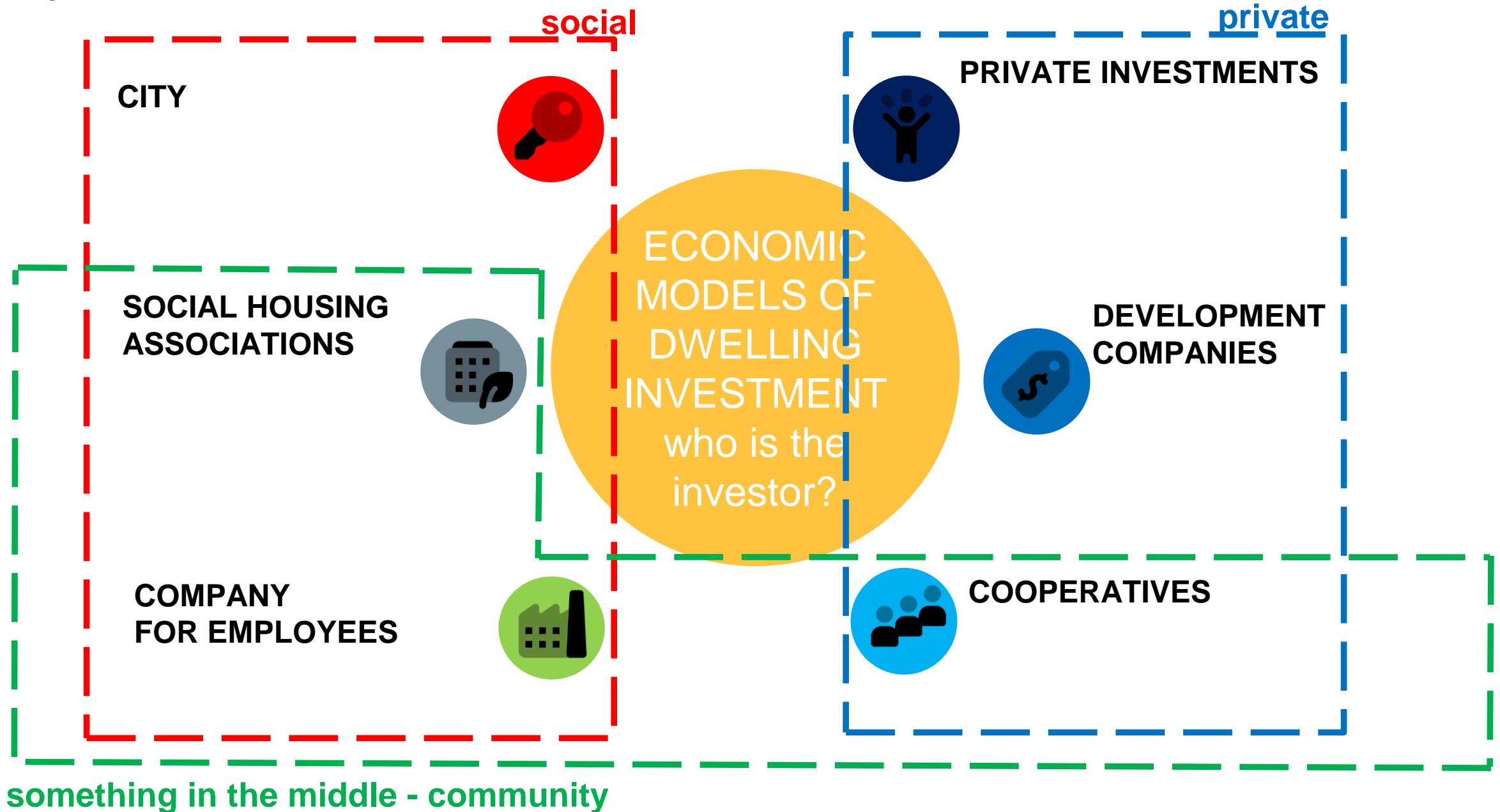


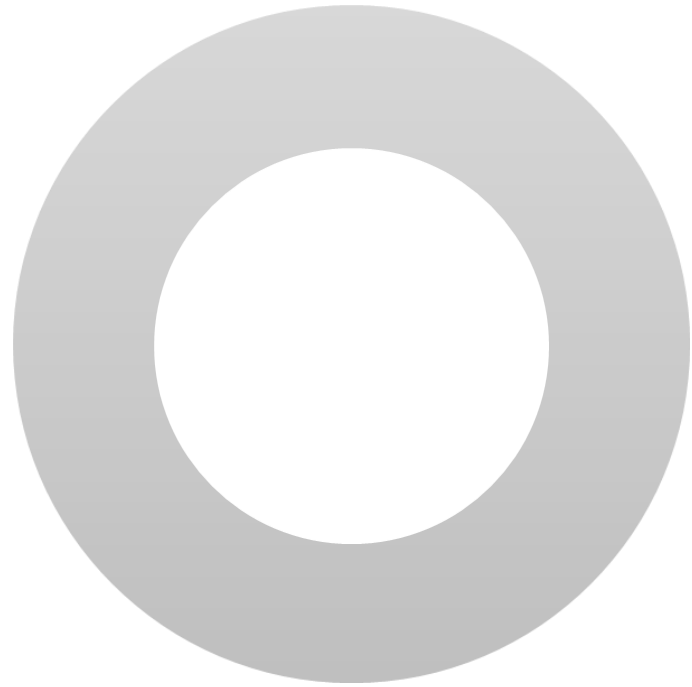
COOPERATIVES

A group of people establishes a community, buys a plot of land and builds apartments for themselves -

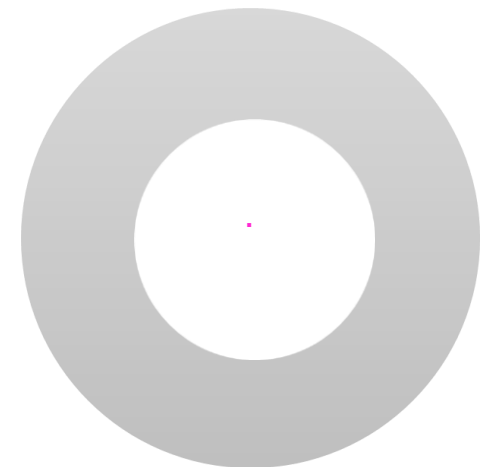


Key economic dimensions





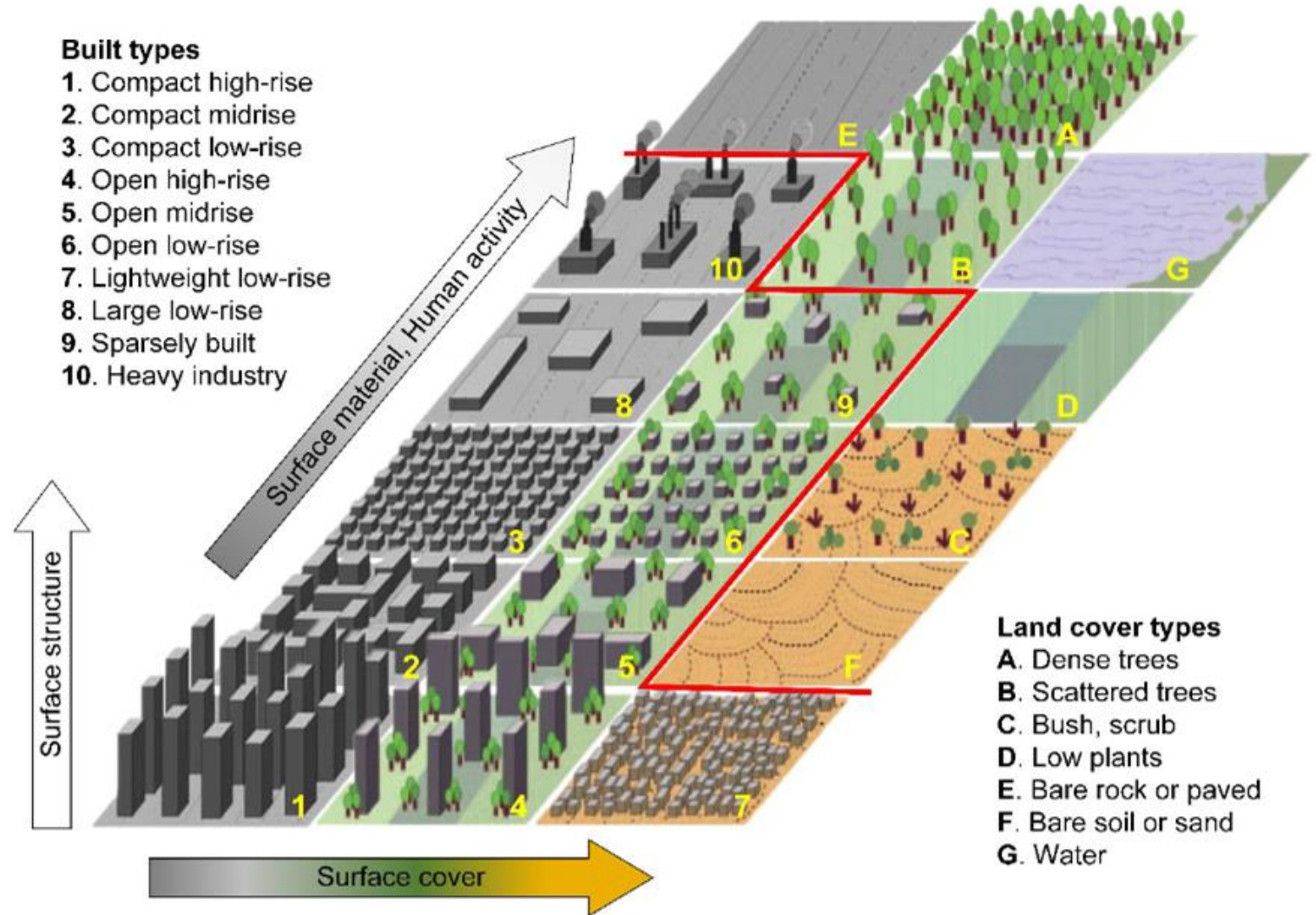
MORPHOLOGY - tangible features



Physic-Morphological Urban Features

Local Climate Zones Typology

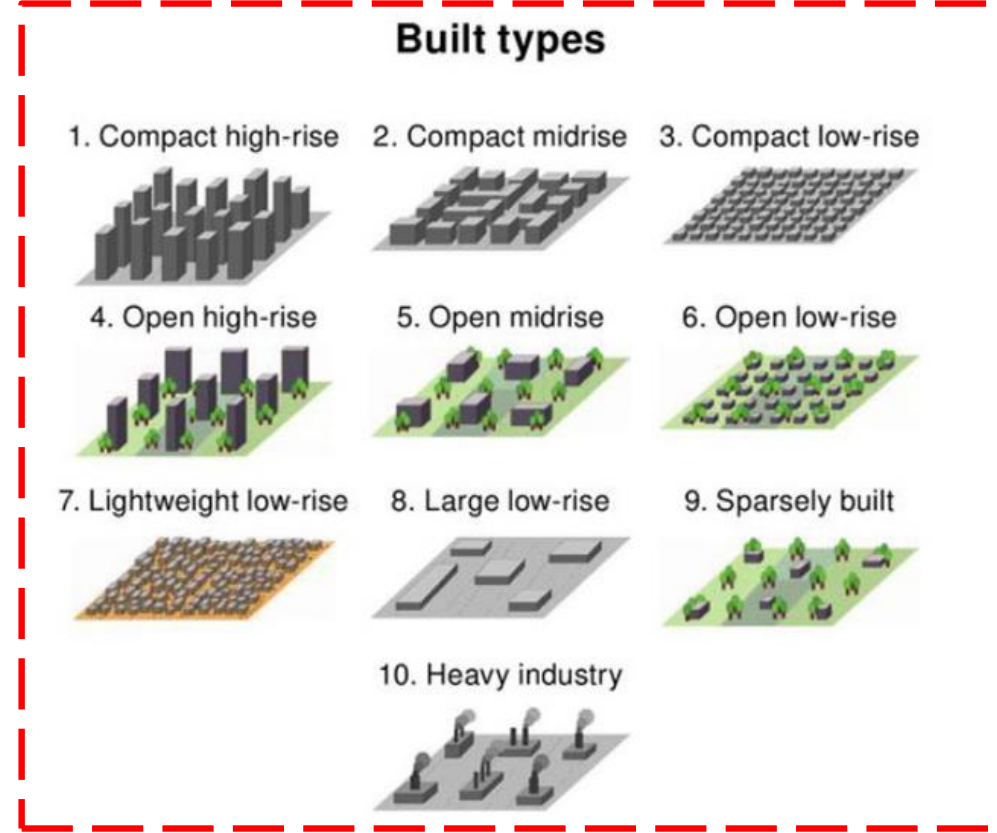
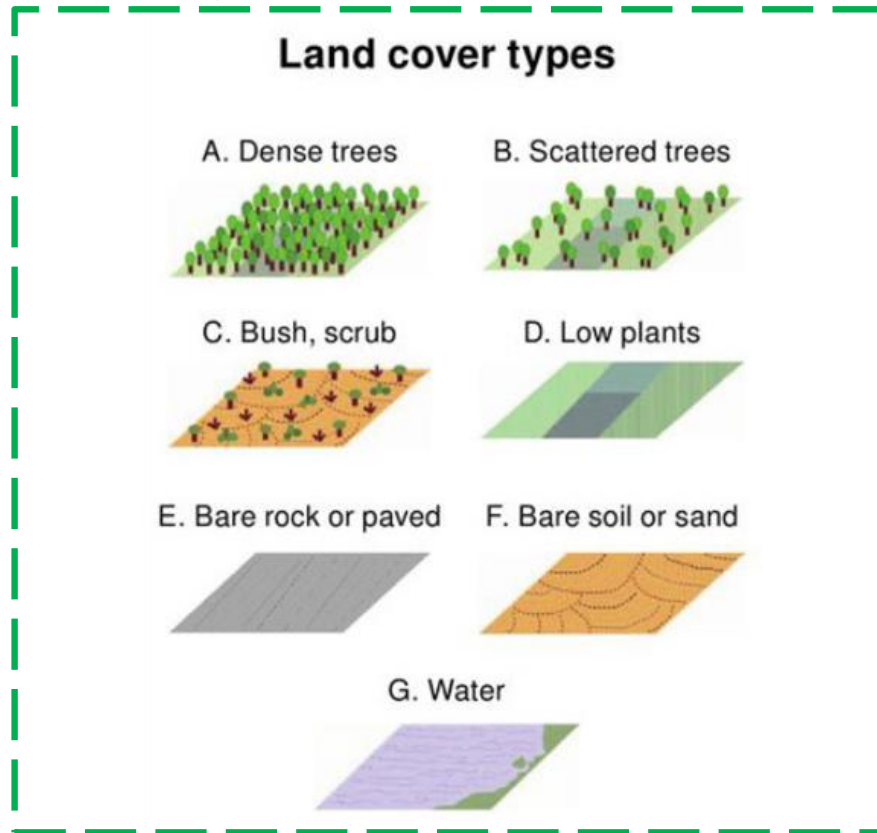
LCZ are defined as the regions that possess similar characteristics like surface cover, material, structure, and population activity, extending from several hundred meters to kilometers



Physic-Morphological Urban Features

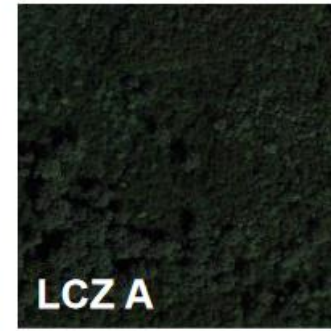
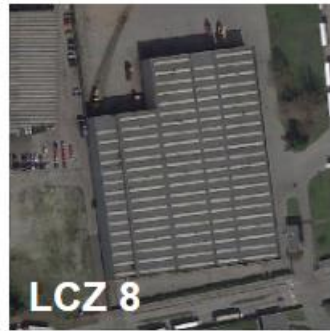
Landscape means an area, as perceived by people, whose character is the result of the action and interaction of **natural** and/or **human** factors

Council of the European Landscape Convention



source: Stewrd I.D., Oke T.R.(2012), „Local Climat Zones for urban temperature studies”, Bulletin of the American Meteorological Society 93 (12).

Physic-Morphological Urban Features



Training samples
for the LCZ
classification in
the Metropolitan
City of Milan

Residential Districts



They differ in:
density (FAR) and height of buildings,
amount of open areas, biological active
area, sky view factor, street aspect ratio,
population -
**these are measurable housing parameters
resulting from morphological features**

Residential Districts



source: Eldesoky A., Connanino N., Morello E., „An Approach for Improving Local Climate Zone Classification including Physic-Morphological Urban Features”, http://www.labsimurb.polimi.it/wp-content/uploads/2020/02/191003_Barcelona_CTV_LCZ.pdf

Compact midrise



Main advantage:
effective use of land, public space, services and technical infrastructure.

Problems:



01 dense buildings - little space for greenery, water reservoirs

04 reduced view range - no distant views, no horizon

02 most of the surface is hardened, impermeable to water

05 no attractive public spaces in the vicinity of buildings



03 unfavorable microclimate: reduced access to sunlight, poor ventilation, UHI effects

06 hindered contact between man and nature

Open lowrise



Main advantages:

The realization of the dream of a house with a garden, close to nature, the possibility of growing plants, good microclimate

Problems:



low land use efficiency



lack of services, public space, infrastructure



urban sprawl



transport problems, increasing car traffic (stress for residents)



interference in naturally valuable areas and natural landscape



Morphological type versus landscape

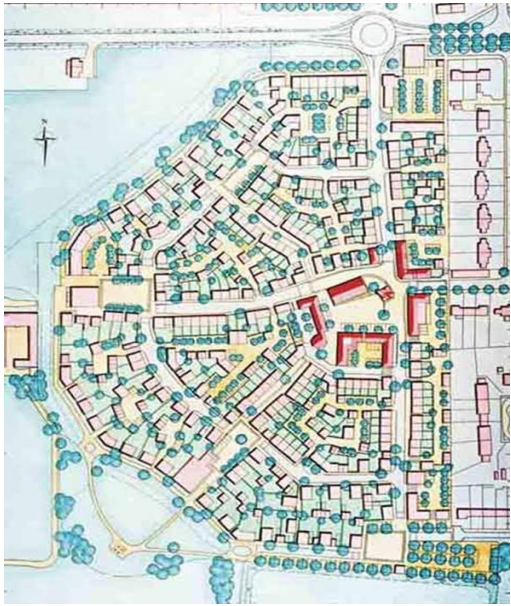


COMPACT MIDRISE



OPEN LOWRISE

Urban composition approach versus landscape



POUNDBURY DORSET UK



SOLAR CITY LINZ AUSTRIA

There are many options...



To conclude this part of lecture:

Housing is an integrated concept of the **URBAN ECOSYSTEM.**

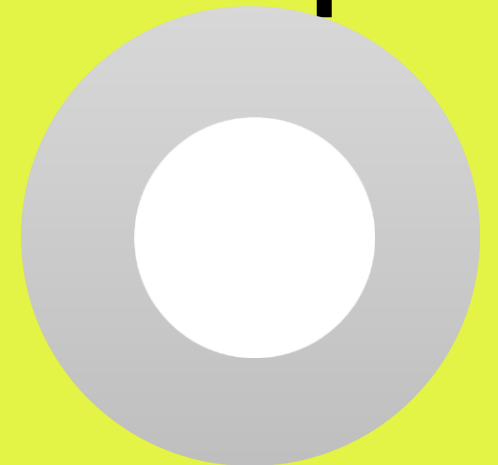
Image of the urban landscape is both economic and physio-morphological value.

High value landscape, in it's intangible dimensions like esthetics, culture, identity, social acceptance beneficially influences economical values of the measurable elements.



question no. 4:

**How to govern urban development
to increase the values of the landscape?**



Directions of transformation in accordance with European Green Deal



1

increasing the **quality** of anthropogenic factors (buildings, estates and their infrastructure)

2

increasing the **quantitative share** of natural factors in relation to anthropogenic factors

3

increasing the **quality / effectiveness** of natural factors

Directions of transformation

● increasing the **quality / effectiveness** of natural factors
– **ecosystem services - the more the better**



cultural services

- Recreation and tourism
- Aesthetic values
- Inspiration
- Education and research
- Spiritual and religious experience
- Cultural identity and heritage
- Mental well-being and health
- Peace and stability



provisioning services

- Food
- Water
- Raw material
- Medicinal resources
- Ornamental resources
- Genetic resources



regulating services

- Climate
- Natural hazards regulation
- Purification and detoxification of water, air and soil
- Water / water flow regulation
- Erosion and soil fertility regulation
- Pollination
- Pest and disease regulation



supporting services

- Ecosystem process maintenance
- Lifecycle maintenance
- Biodiversity maintenance and protection



Case study test



Case studies

01

Two different images of a city – two different approaches to urban landscape

02

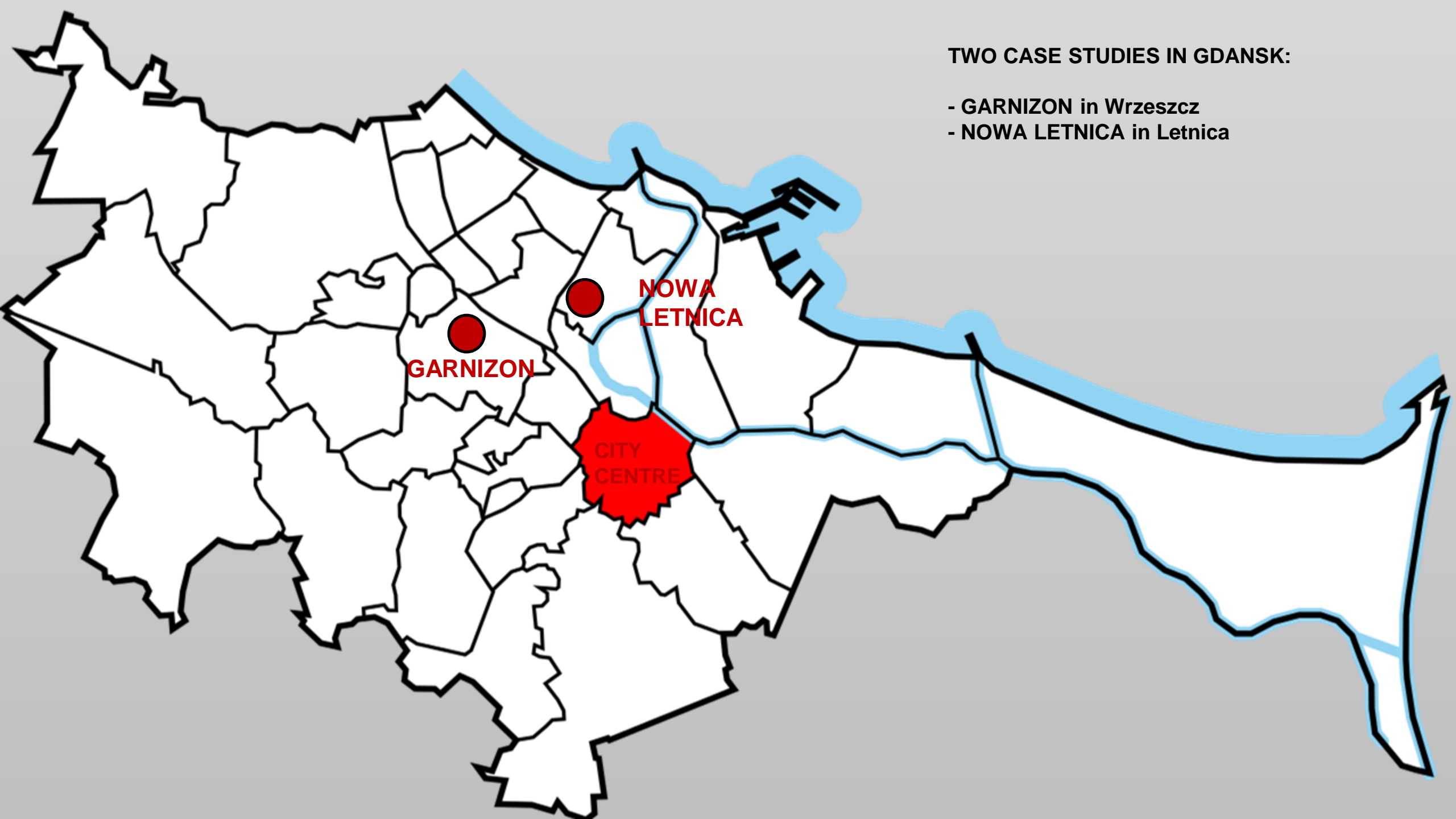
New residential estates **Garnizon in Wrzeszcz and **Nowa Letnica** in Gdańsk, Poland**

03

Comparison based on
- quality of public space
- culture
- reaction to natural landscape.

TWO CASE STUDIES IN GDANSK:

- GARNIZON in Wrzeszcz
- NOWA LETNICA in Letnica



Physic-Morphological Urban Features: Garnizon and Nowa Letnica

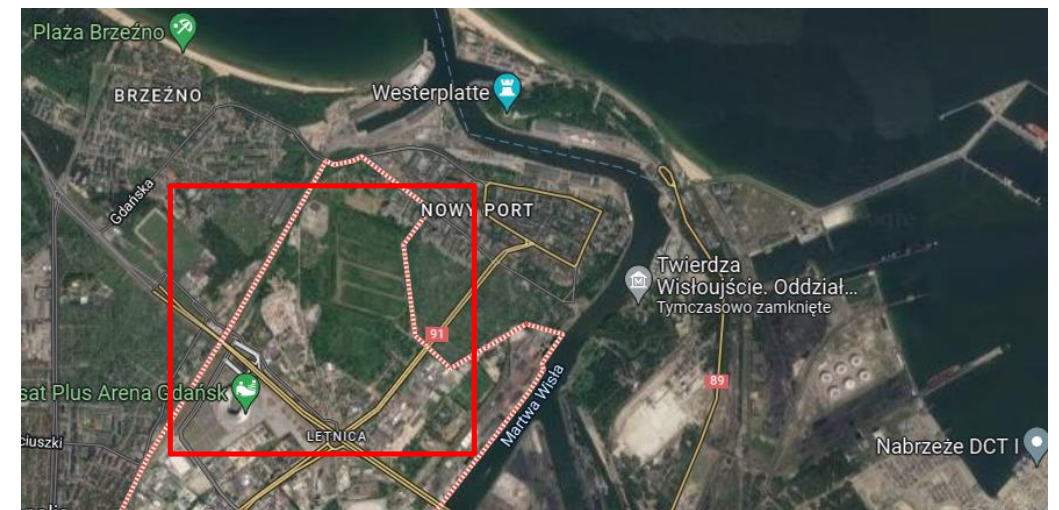


Training samples for the LCZ classification in the Metropolitan City of Milan

GARNIZON – EXAMPLE OF **LCZ2**



NOWA LETNICA – EXAMPLE OF **LCZ4**



source: Eldesoky A., Connanino N., Morello E., „An Approach for Improving Local Climate Zone Classification including Physic-Morphological Urban Features”,
http://www.labsimurb.polimi.it/wp-content/uploads/2020/02/191003_Barcelona_CTV_LCZ.pdf

TWO EXAMPLES OF PHYSIC-MORPHOLOGICAL URBAN FEATURES – Local Climate Zones: LCZ 2 AND LCZ 4

Nowa Letnica

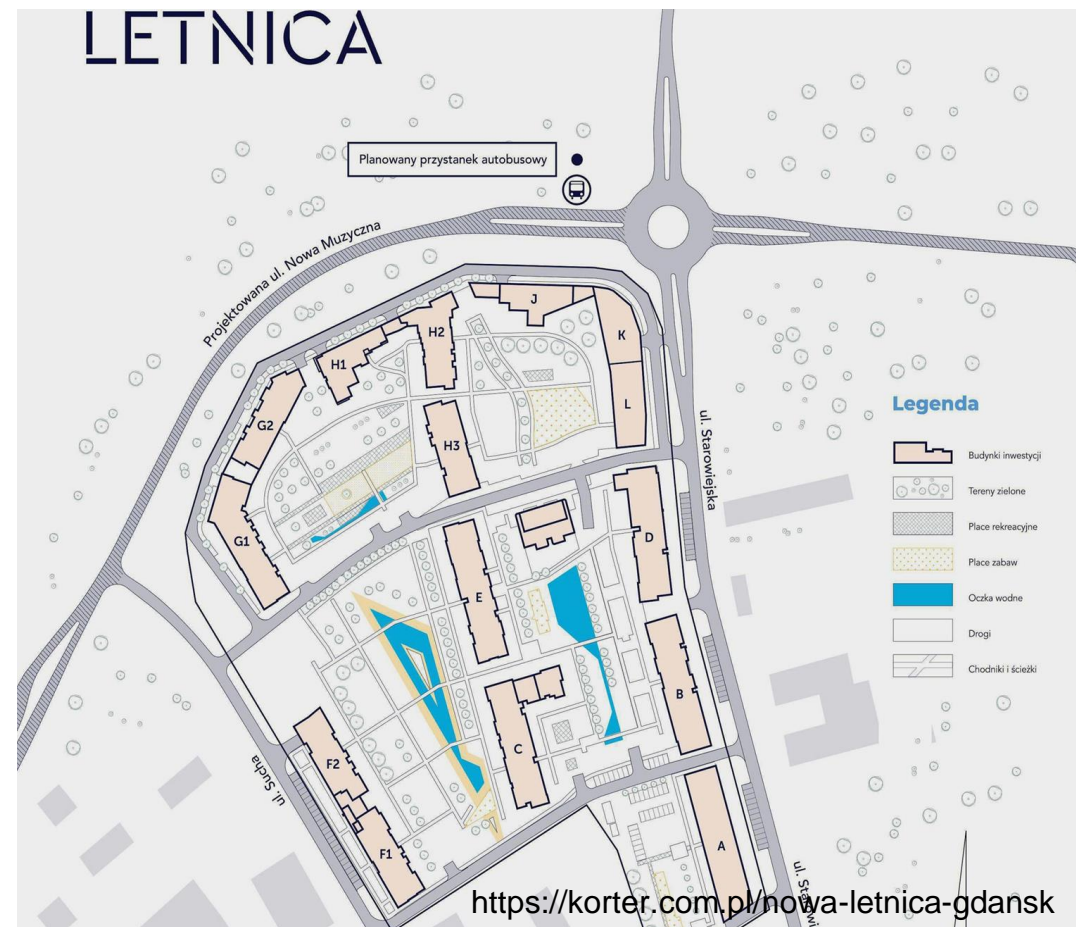
First visualisations and plans





Nowa Letnica

Main functions and urban composition



General function: multifamily housing areas

Urban composition based on urban quarter with semi public, recreational space inside,

LCZ 4(Local Climate Zone) 4

Nowa Letnica

Ecosystem Services



CULTURAL SERVICES:

- debatable aesthetic values
- no strict relation to DNA of a place
- Recreation and tourism-
close proximity to the Baltic Bay
- semi public space system



Garnizon

Garnizon is a **multifunctional development complex** in the centre of Wrzeszcz district, **on the area of previous Prussian military garrison.**

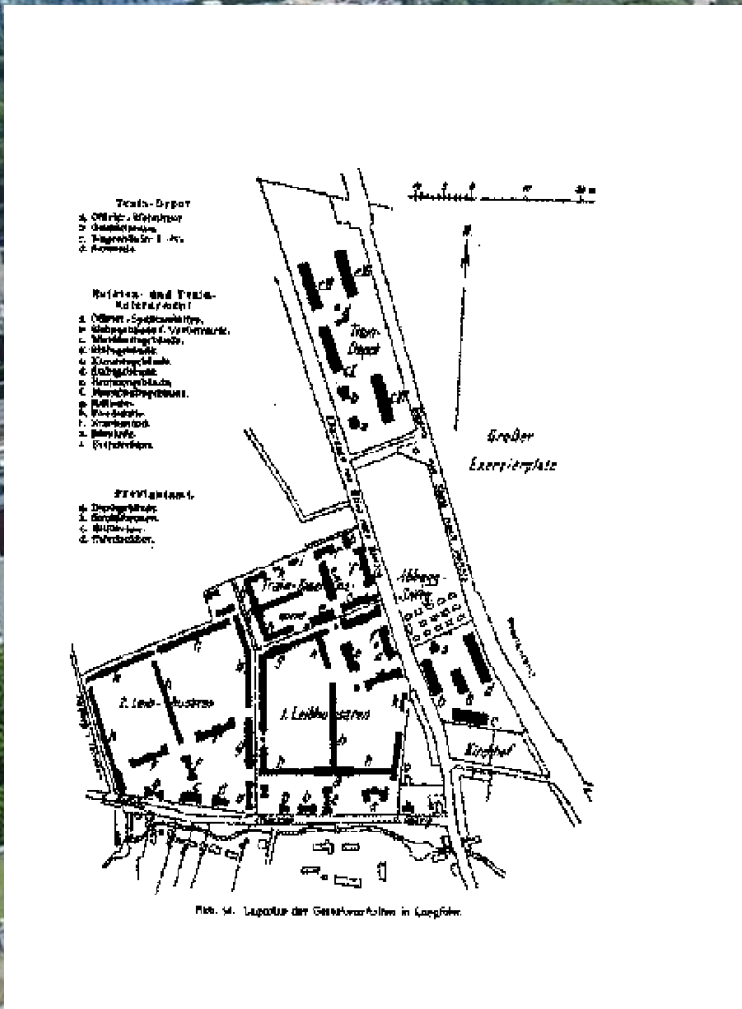
The project, executed to the plan selected in a competition, is staged and still need to be completed.

The **ultimate goal** was to create an **open, multifunctional and buzzing city area** with a rich service offer, densely developed and diverse, set in meticulously designed public space.



Masterplan for the district Garnizon in Wrzeszcz
<https://korter.com.pl/garnizon-gdansk>





Garnizon

Ecosystem services



CULTURAL SERVICES:

- High aesthetic values
- DNA of a place: cultural identity and heritage
- Recreation and tourism
- Vivid public space system.



Garnizon

Quality: functionality and aesthetics

Increased quality of antropogenic factors:

1. Buildings and their infrastructure,
2. emphasis on modernization and revitalisation,
3. changing the functions of buildings rather than arising new ones,
4. accessibility of public spaces and services (architecture and urban planning),
5. high aesthetic values.



Garnizon vs Nowa Letnica

Garnizon – Local developer - Hossa,
ecosystem services more extensive and diverse,
very good reference to DNA of place – integrating old, post –
industrial part into the whole concept
Very well developed public space system
Creating a strong, new city image connected with a context of a place.

Nowa Letnica - global developer - Robyg,
Ecosystem services less extensive
public, semi-public space less connected with the general system of
public space
No reference to the DNA of place, the so-called "old" part of the
Letnica district
**New city image more connected to the rapid urban development,
rather than DNA of a place.**



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<https://www.urban-design-guidelines.planning.vic.gov.au/toolbox/glossary>

THANK YOU