

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

#4

Compare two housing areas in Gdańsk

REFERENCES:

#5

LAND USE &
DEVELOPMENT FORM

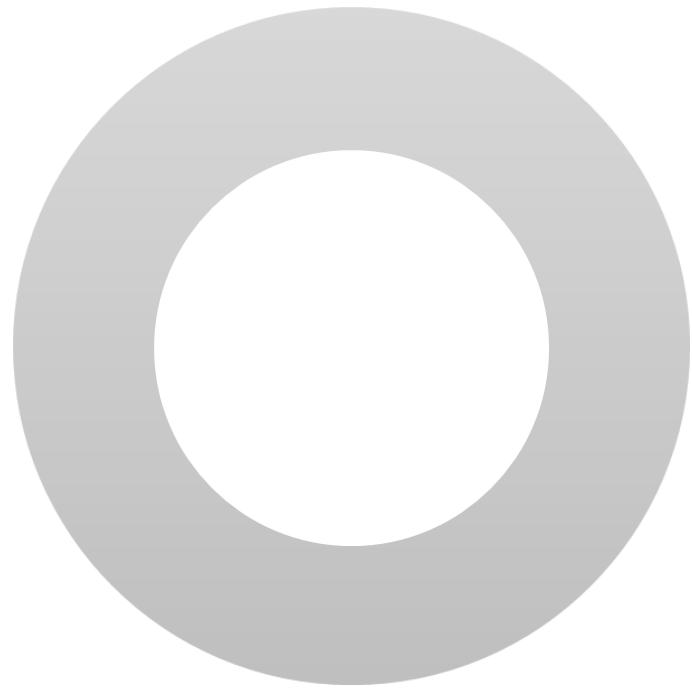
FUNCTIONAL &
SPATIAL PROGRAM

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

URBAN TISSUE

URBAN
MORPHOLOGY &
METHABOLISM

ECOSYSTEM
SERVICES

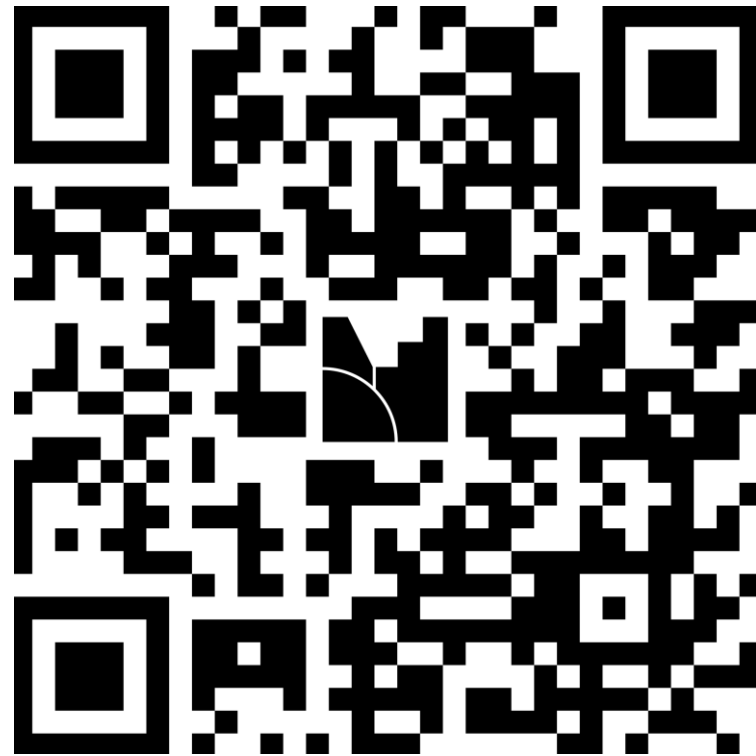


question no. 1:

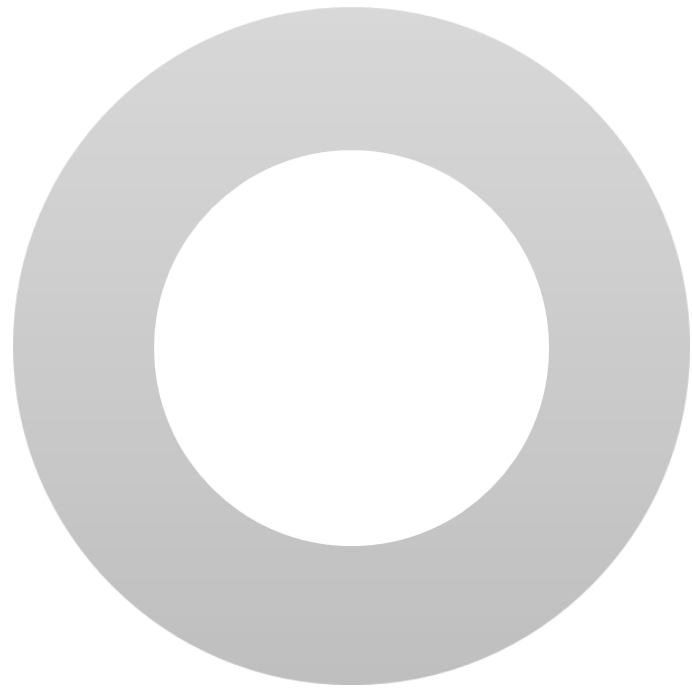
**How topic of Housing/Dwelling applies
to the field of landscape economy?**



QUIZ



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question no. 2:

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



Housing / dwelling

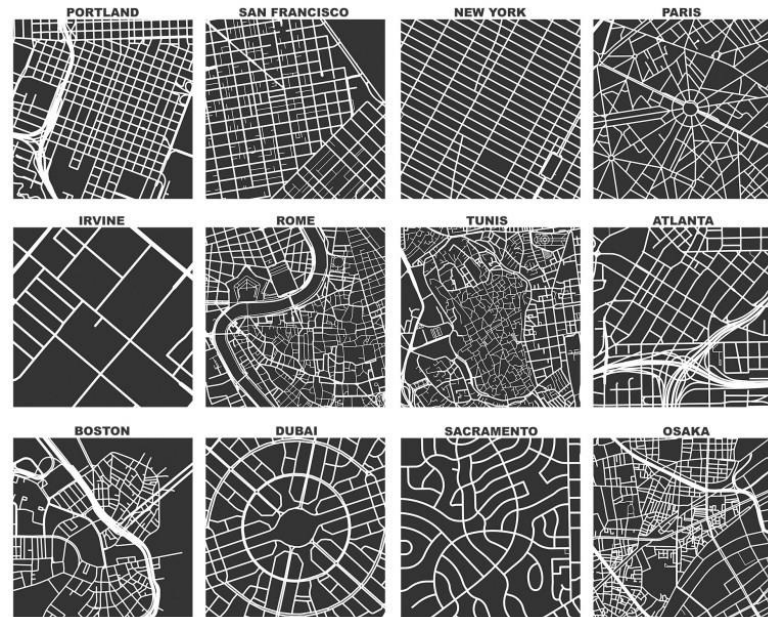
- A physical space or structure that serves as a home or place of residence for individuals or households – buildings where people live
- One of the most fundamental human needs
- It is supported by services (other buildings – shops, schools, healthcare centres), working places and technical infrastructure
- Key part of urban landscape

	ANTROPOGENIC	NATURAL
S T A T I C	Buildings Technical infrastructure	Water reservoirs Plants Soil
D Y N A M I C	Human flow Transport Energy	Climate Energy Animals

Components of the urban landscape
in the housing context

Housing in a landscape context is a formal expressions of relations between open and build-up spaces

■



Different urban patterns



Urban morphology – case of historical part Gdańsk



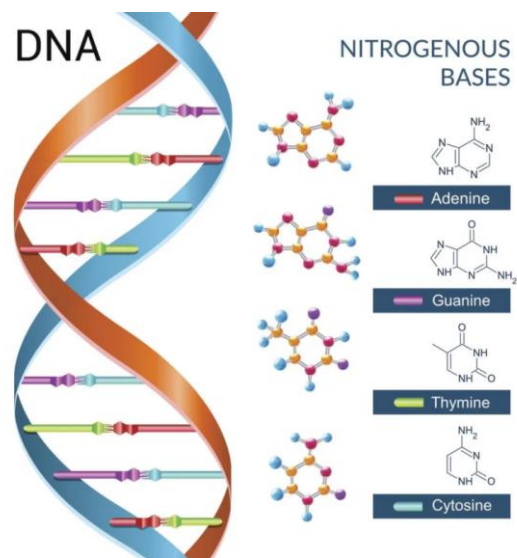
Public space – case of historical part Gdańsk

**What are the key features defining dwelling landscape?
How to evaluate it?**

Tangible and intangible landscape values

	TANGIBLE	INTANGIBLE
M O N E T A R Y	<u>Building coverage ratio</u>	<u>Attractiveness of the location</u>
	<u>Floor aspect ratio</u>	<u>Tourist attractiveness</u>
	<u>Building height</u>	<u>Access to greenery</u>
	<u>Usable floor ratio</u>	<u>View from the window</u>
	<u>Energy demands</u>	<u>Availability of services</u>
	<u>Biologically active elements</u>
	<u>Rainwater recovery</u>	
	<u>Number of residents</u>	
	
N O N M O N E T A R Y	<u>Regulatin role of nature: absorption of pollutants, regulation of temperature and humidity, protection against wind, etc</u>	<u>Urban composition</u>
	<u>Aesthetics</u>
		<u>Historical value</u>
		<u>Identity</u>
		<u>Cultural value</u>
		<u>Friendliness to residents</u>
		<u>Inclusivity</u>
		<u>Educational value</u>
		<u>Wellbeing</u>
	

City urban landscape DNA



Historical part Gdańsk

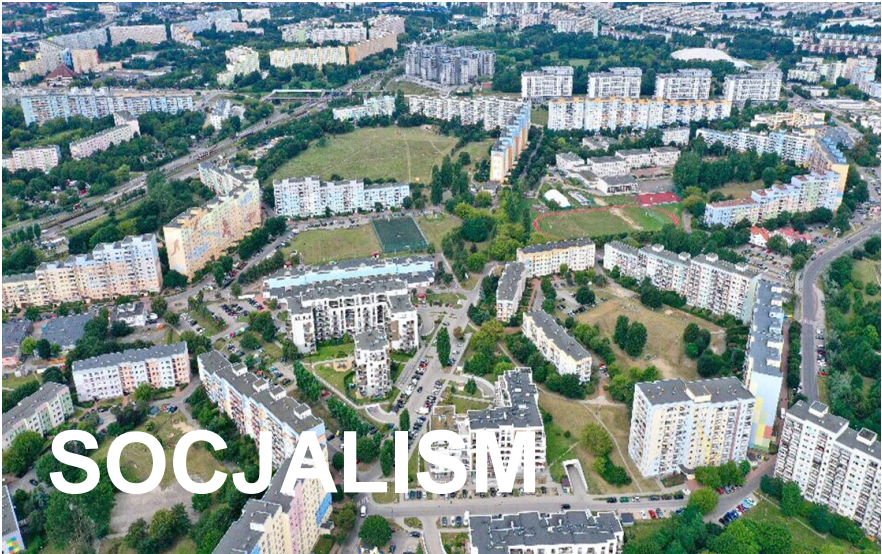


question no. 3:

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



Economic and political system versus landscape



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

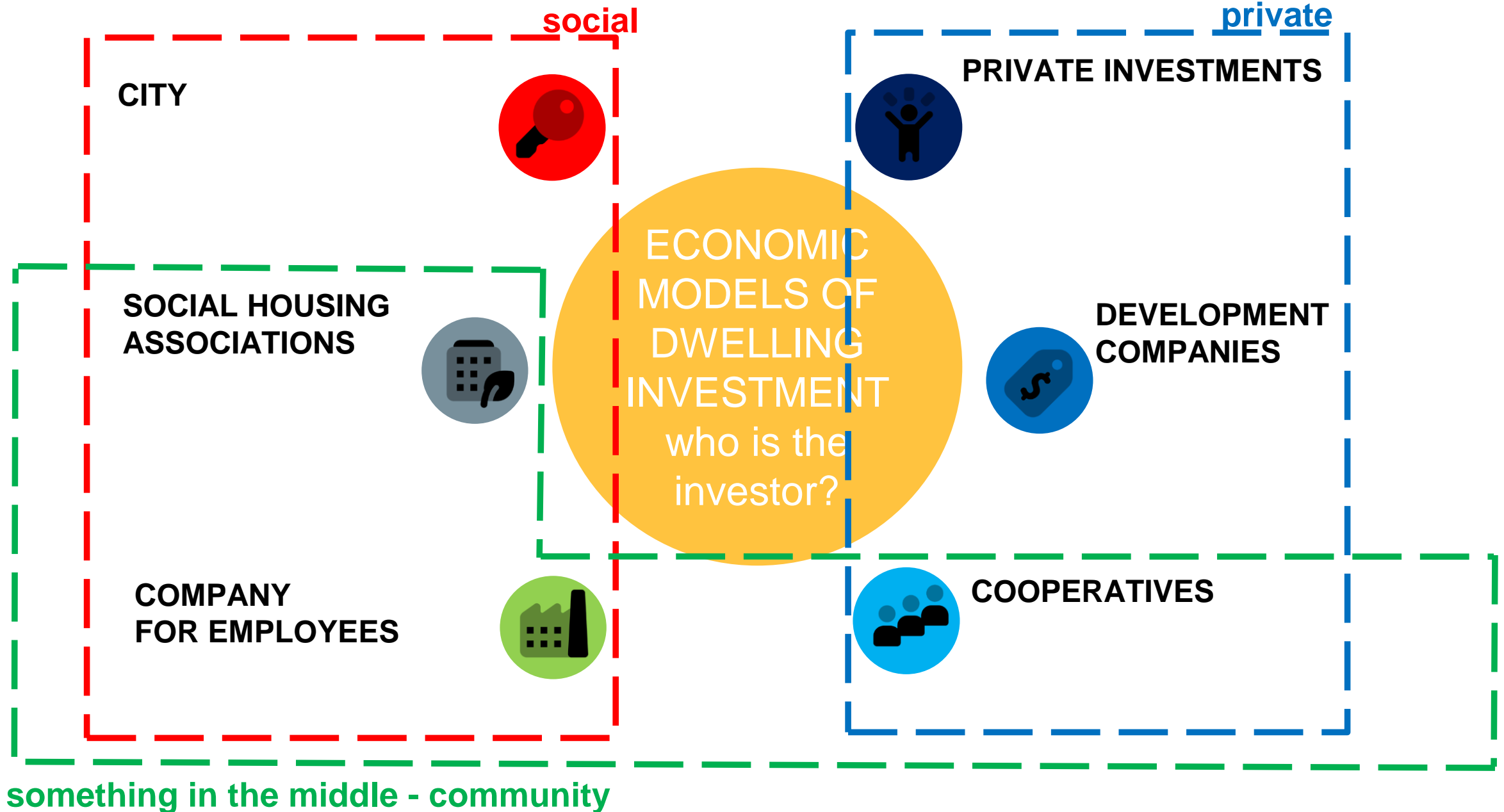


COOPERATIVES

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



Key economic dimensions



Key economic dimensions

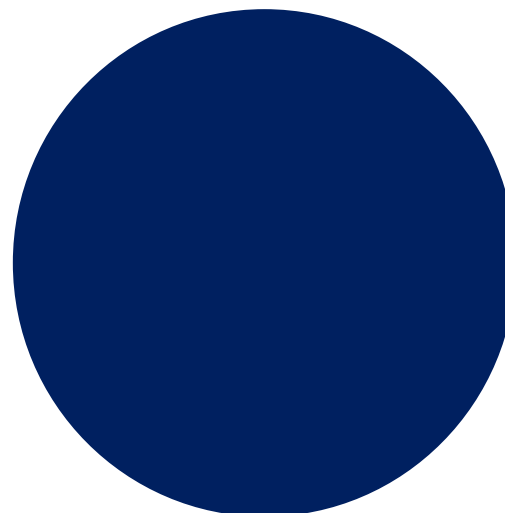
THE PERCENTAGE SHARE OF VARIOUS TYPES OF HOUSING INVESTMENTS IN POLAND IN 2014



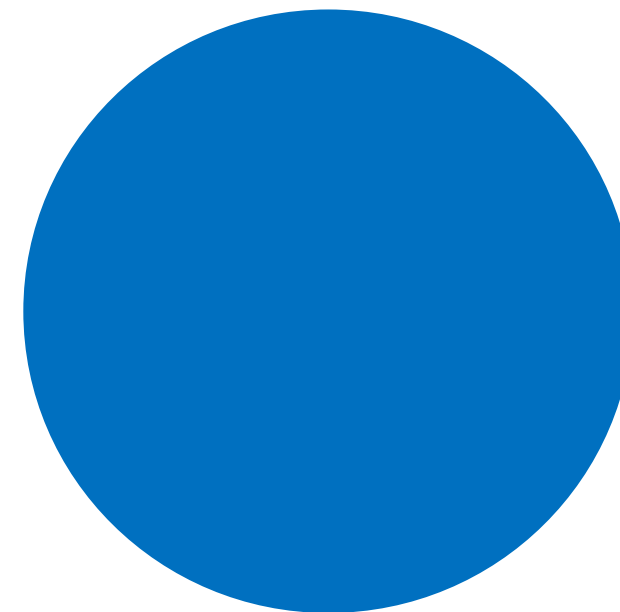
CITY
1,5%



COMMUNITY
4%
cooperatives – 2,4%
social housing associations – 1,2%
company for employees – 0,4%



PRIVATE INVESTMENTS
40,2%



DEVELOPMENT COMPANIES
54,3%

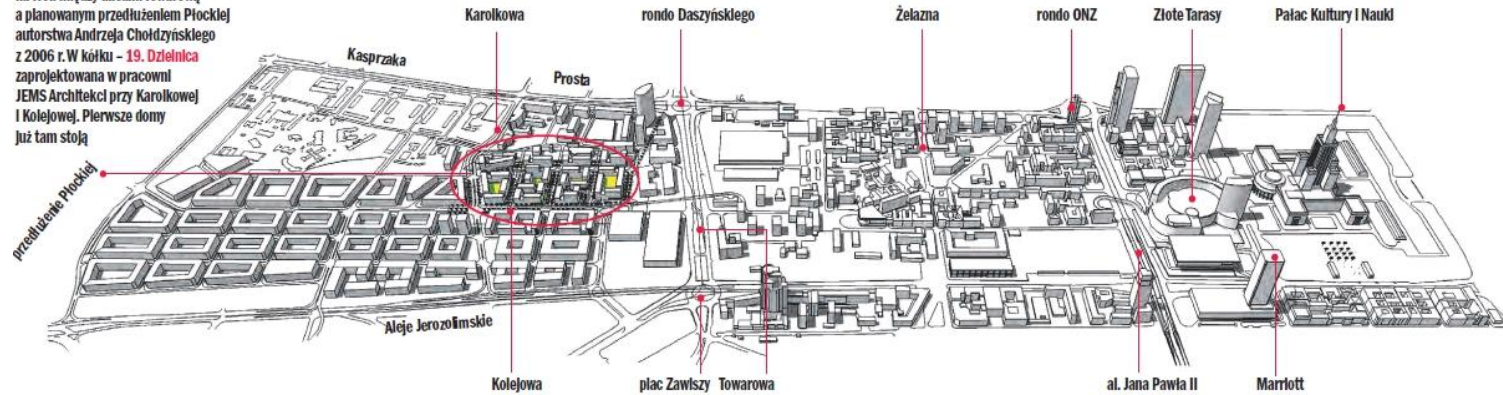


big pressure on profit
- housing is a product of sale,
an investment of capital

Urban landscape and key economic dimensions

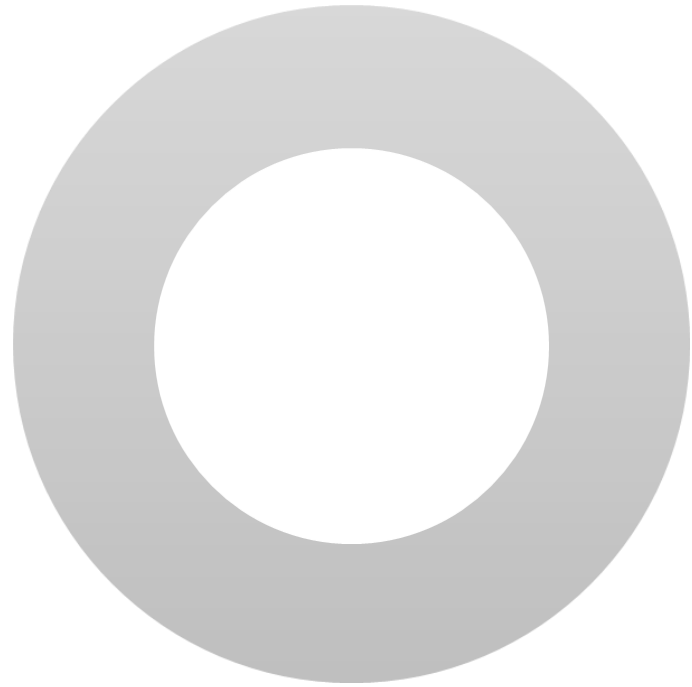


Konsepca zabudowy rejonu Czystego na Woli między ulicami Towarową a planowanym przedłużeniem Płockiej autorstwa Andrzeja Chodźzyskiego z 2006 r. W kółku - 19. Dzielnica zaprojektowana w pracowni JEMS Architekci przy Karolkowej i Kolejowej. Pierwsze domy już tam stoją

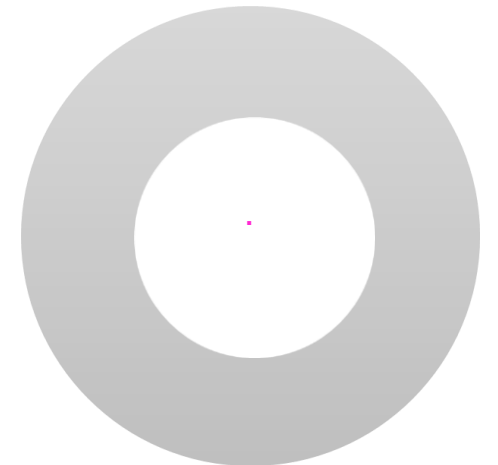


Residential districts in Warsaw erected by development companies after 2000.

Examples where the economic interests of the investor have not been balanced by the requirements imposed by local authorities.



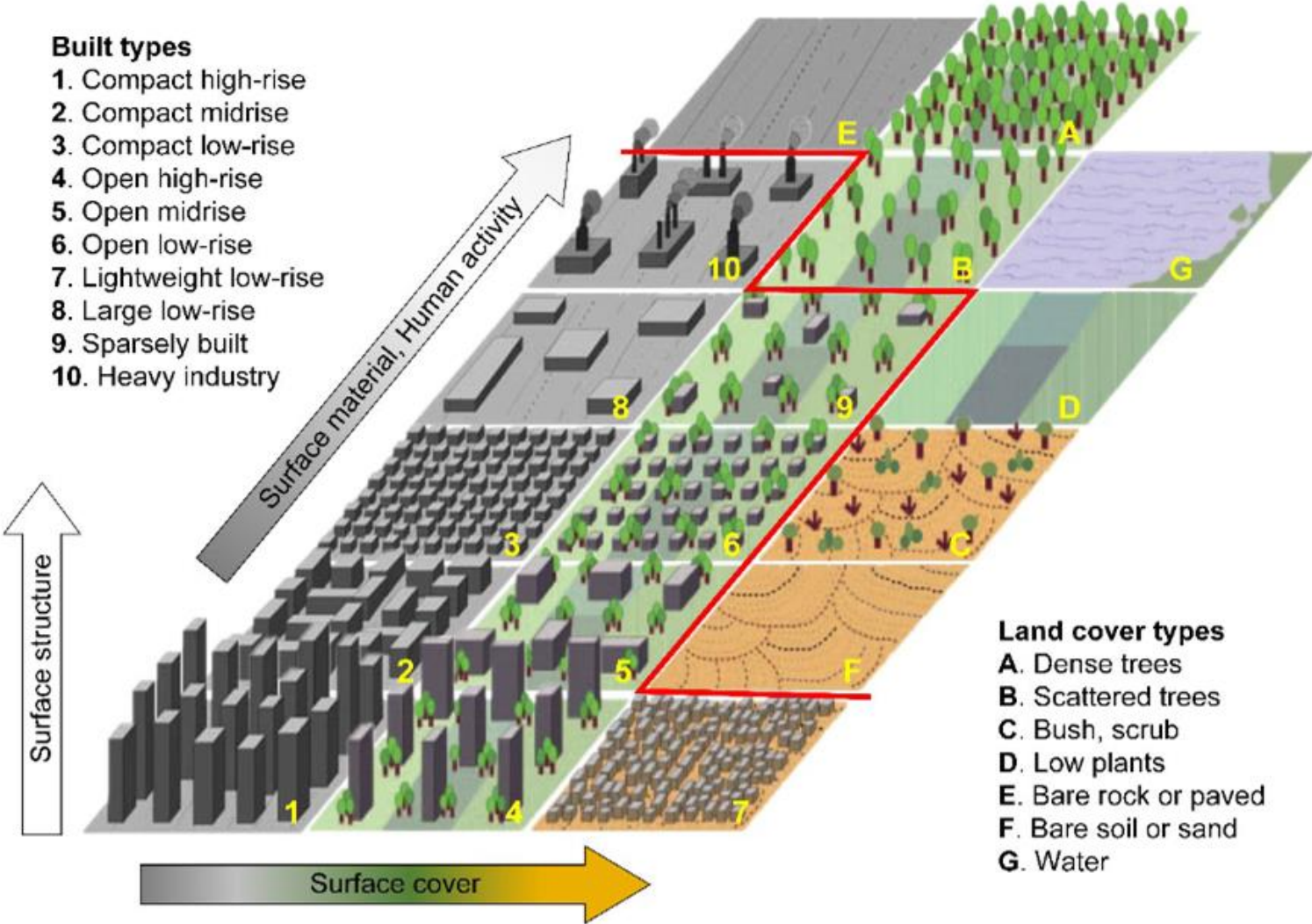
MORPHOLOGY - tangible features



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

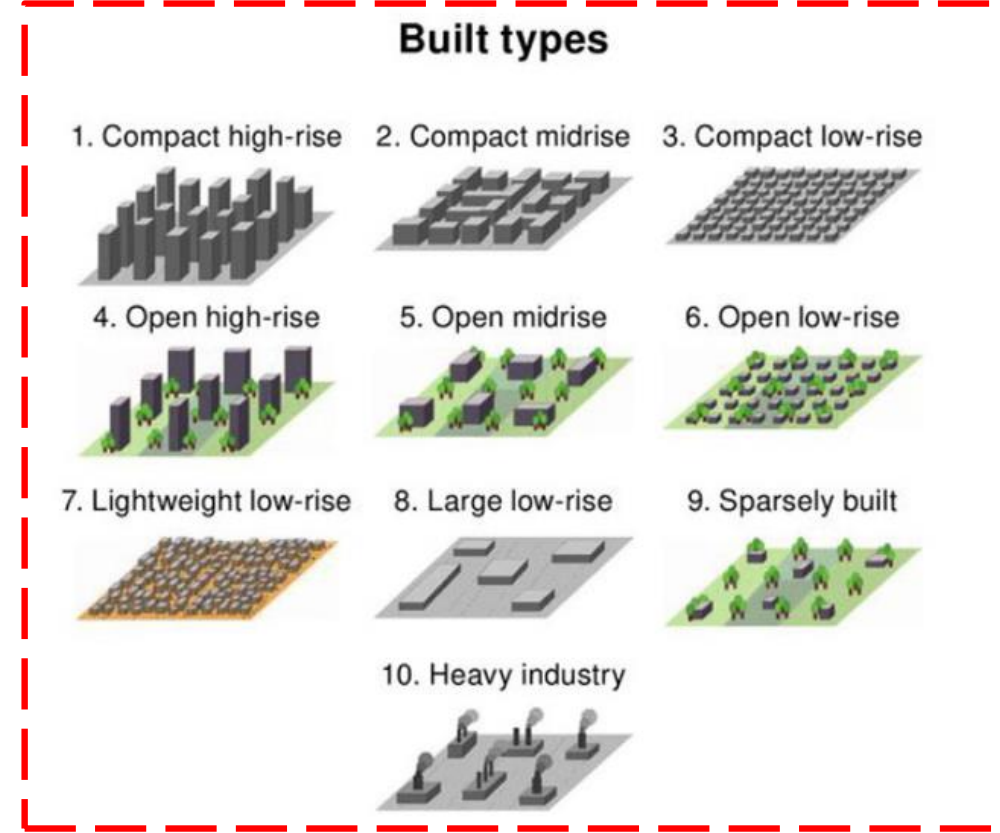
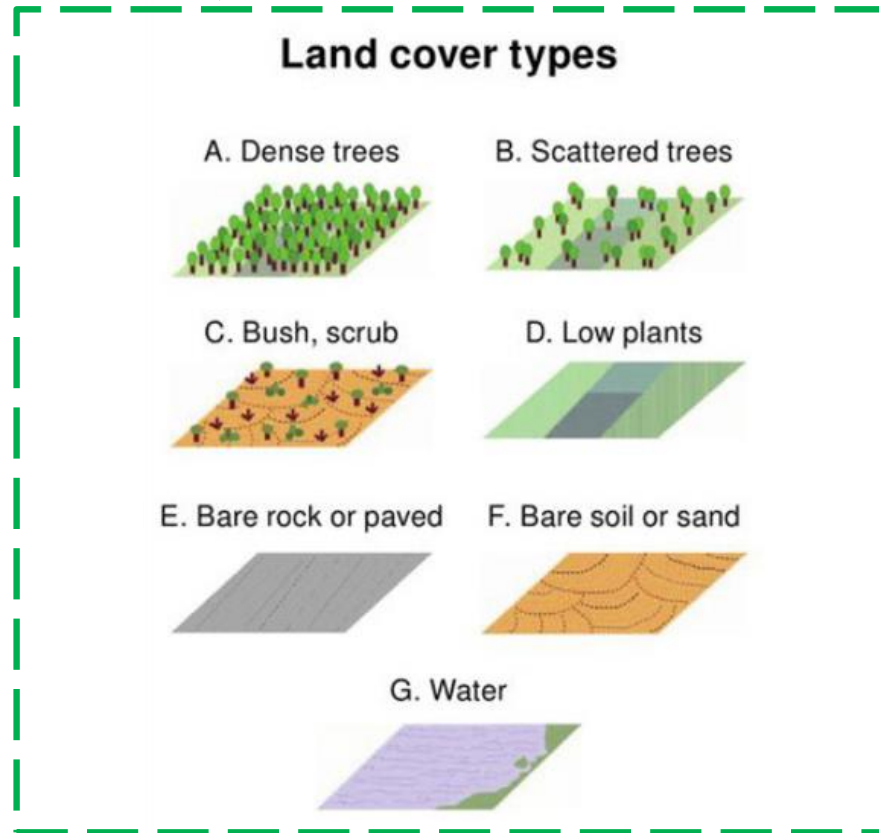


source: Stewrd I.D., Oke T.R.(2012)

Physic-Morphological Urban Features

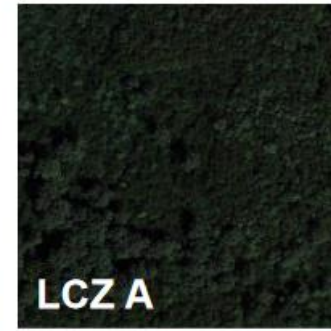
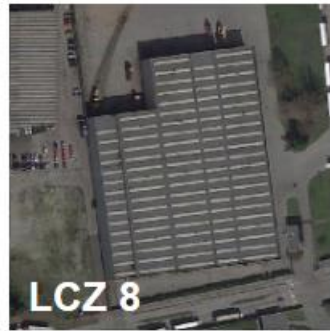
Landscape means an area, as perceived by people, whose character is the result of the action and interaction of **natural** and/or **human** factors

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



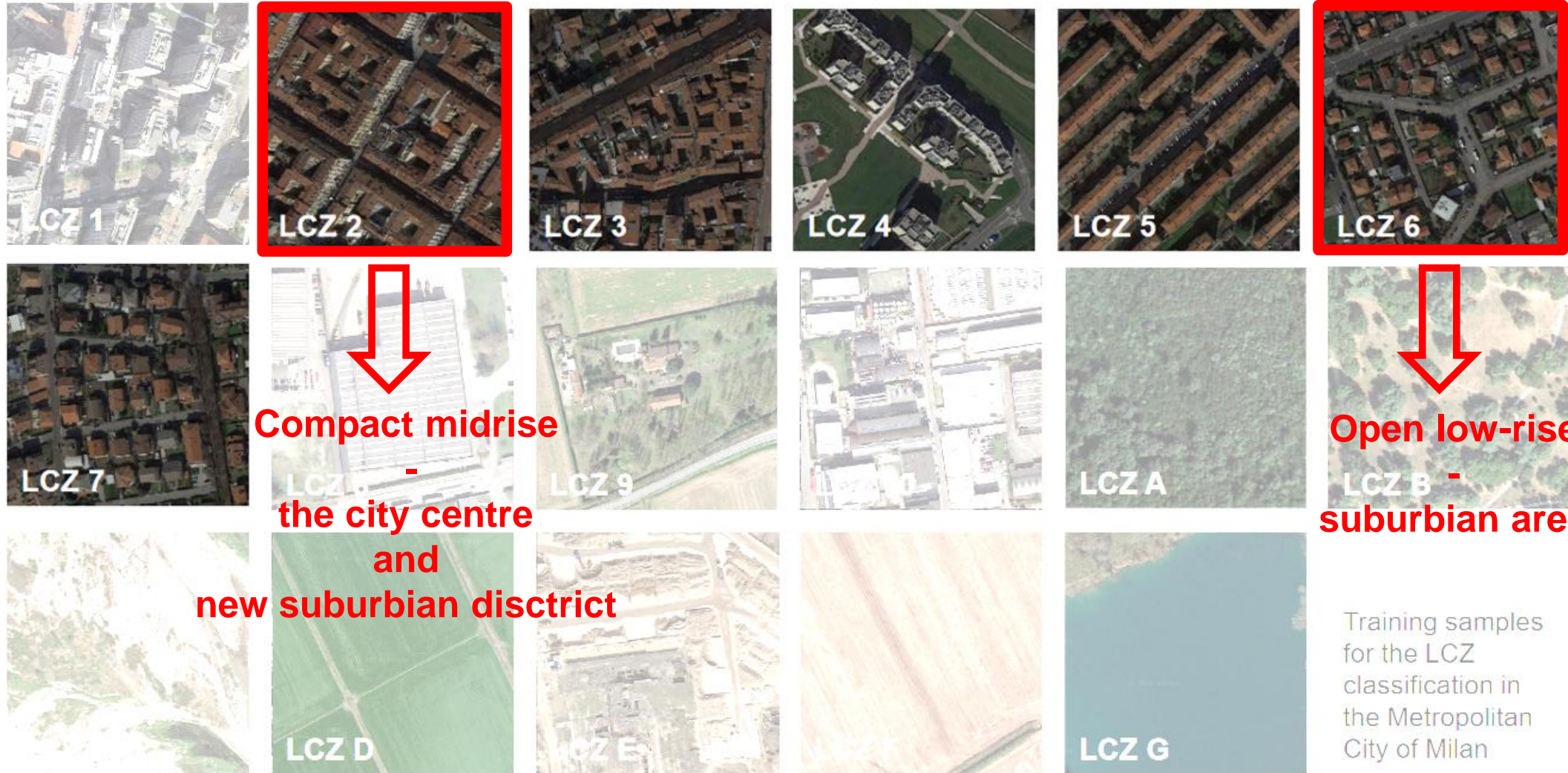
Training samples
for the LCZ
classification in
the Metropolitan
City of Milan

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



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

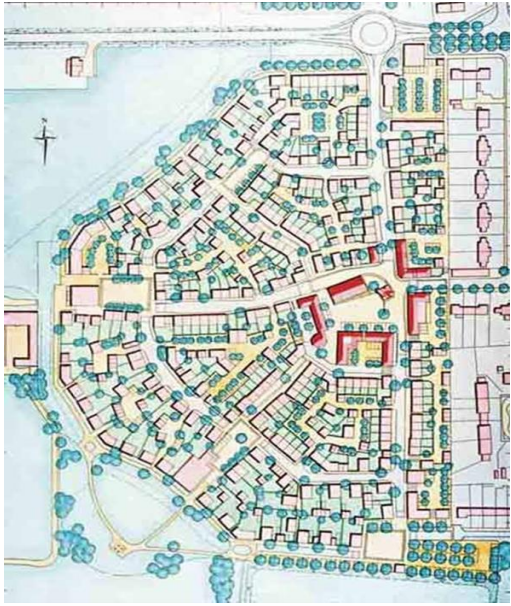


COMPACT MIDRISE



OPEN LOWRISE

Urban composition approach versus landscape



POUNDBURY DORSET UK



SOLAR CITY LINZ AUSTRIA

There are many options...

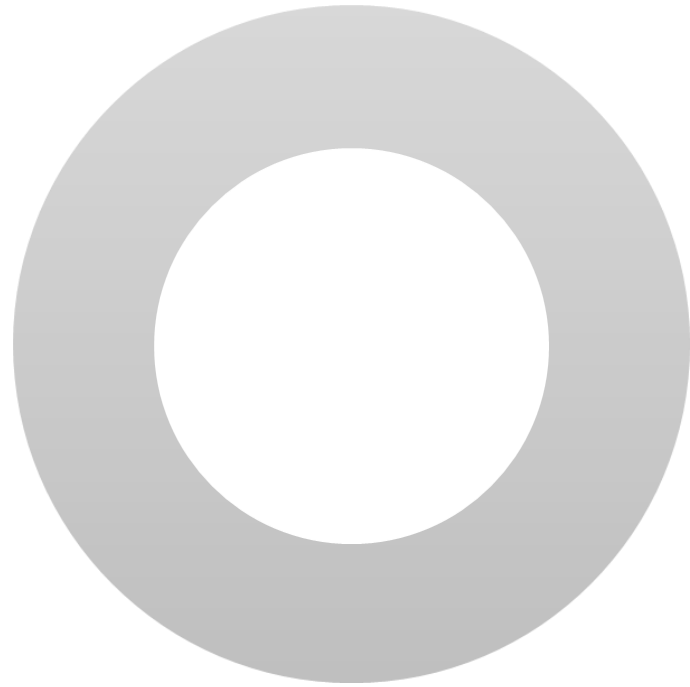


To conclude this part of lecture:

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

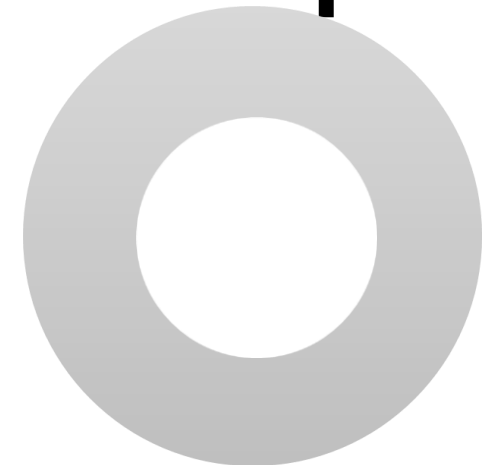
Image of the urban landscape is both economic and physico-morphological value.

High value landscape, in its intangible dimensions like aesthetics, 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

1

Increasing the **quality** of anthropogenic factors (buildings, estates and their infrastructure) - more emphasis on modernization, changing the functions of buildings than arising new ones.

Priorities:

Reducing carbon footprint: energy efficiency, renewable energy surces, circular economy of building materials (technological problem)

Quality (functionality, aesthetics) and accessibility of public spaces and services (architecture and urban planning)

Dwelling availability for everyone, not only for the richest (social politics)

Directions of transformation

2

increasing the **quantitative share** of natural factors - increasing water-permeable areas, street greenery, green roofs and balconies



Eco-revitalization of the Philadelphia district; source: www.phillywatersheds.org

Directions of transformation

2

increasing the **quantitative share** of natural factors - reducing the availability of land for cars



Vabaun eco-district in Freiburg; source: <https://stadtteil-vauban.de/en/traffic/>



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

Directions of transformation

- 3 Increasing the **quality / effectiveness** of natural factors
Regulation services – water retention, regulation of microclimate



Residential Estate in Gdańsk

Directions of transformation

3

Increasing the **quality / effectiveness** of natural factors
Provision services— social gardens



Directions of transformation

3

Increasing the **quality / effectiveness** of natural factors
Cultural services – social interactions

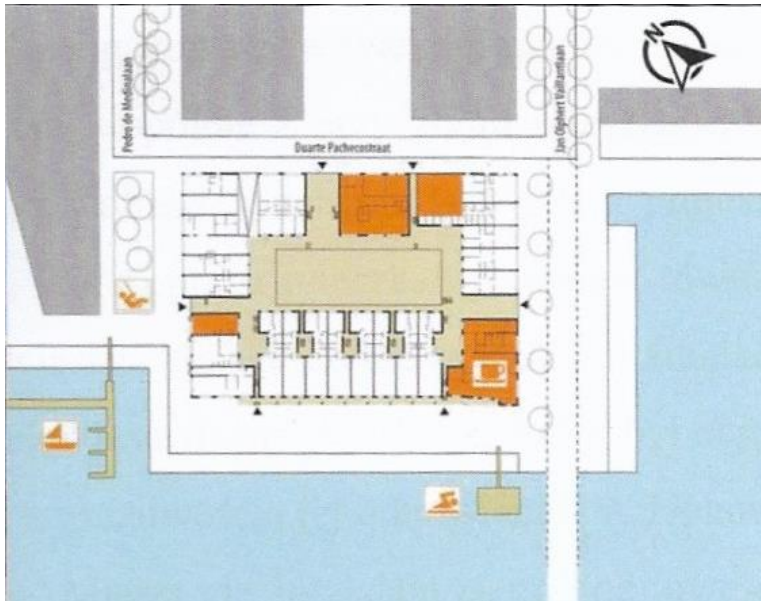
Residential building in
Vrijburcht, Amsterdam,
Netherland (CASA Architecten)



Fot. 72 Widok nabrzeża,

Fot. 73 Widok kładek łączących wejścia do mieszkań

Fot. 72, Fot. 73 © <https://clubblog.wordpress.com/2017/06/16/vrijburcht-amsterdam/>



Fot. 74 Widok od strony nabrzeża rzeki,

Fot. 75 Widok od strony wewnętrznego dziedzińca

Fot. 74, Fot. 75 © <http://cohousing-cultures.net/projects/vrijburcht/?lang=en>



Case study



Case studies

01

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

02

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

03

Comparison based on:

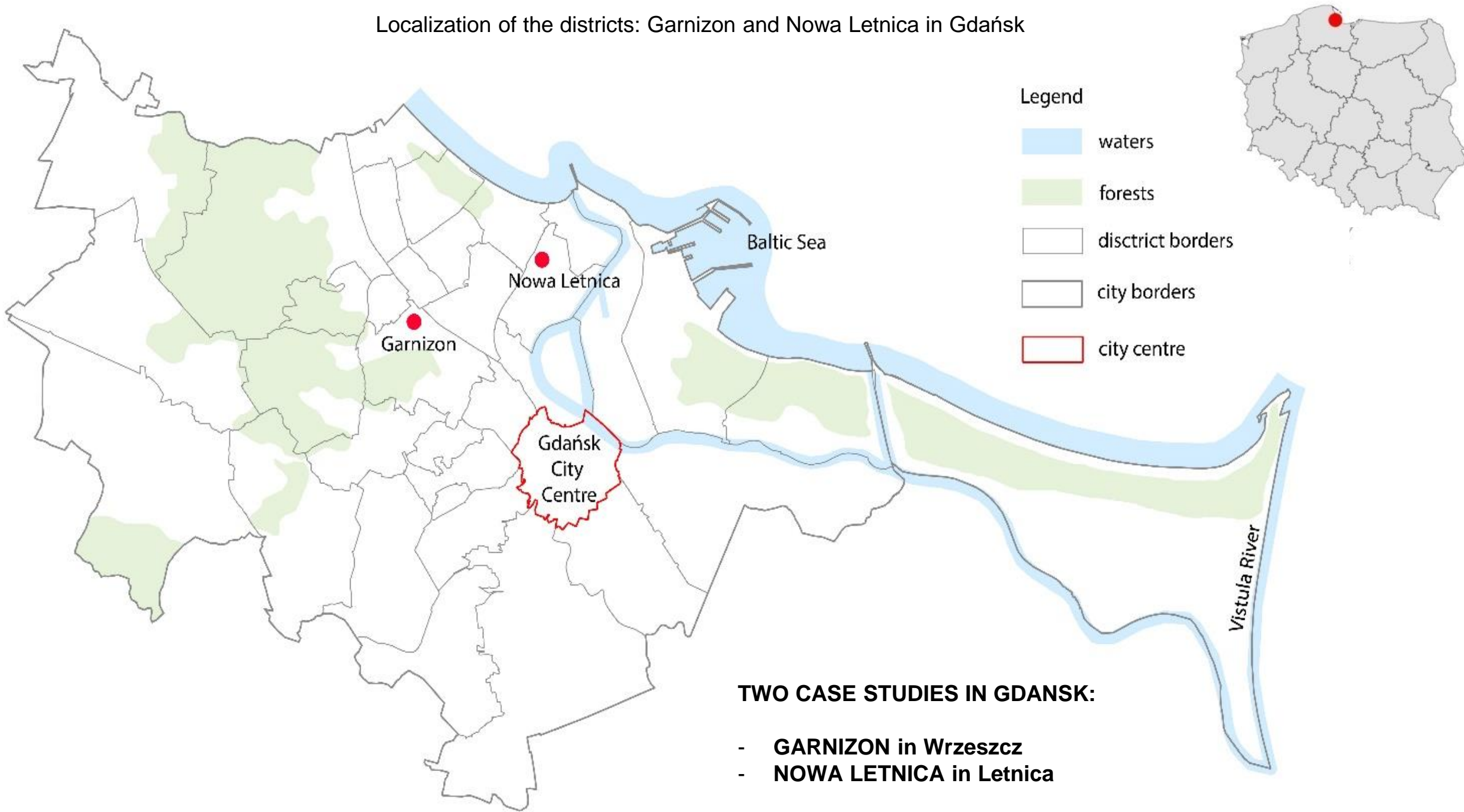
Tangible features:

- urban morphology (open/built up space, urban intensity, bioactive surface)
- building heights
- functional differences
- type of housing investment
- relation to natural landscape

Intangible features:

- culture, heritage, urban DNA
- quality of public spaces

Localization of the districts: Garnizon and Nowa Letnica in Gdańsk



TWO EXAMPLES OF PHYSIC-MORPHOLOGICAL URBAN FEATURES – Local Climate Zones:



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

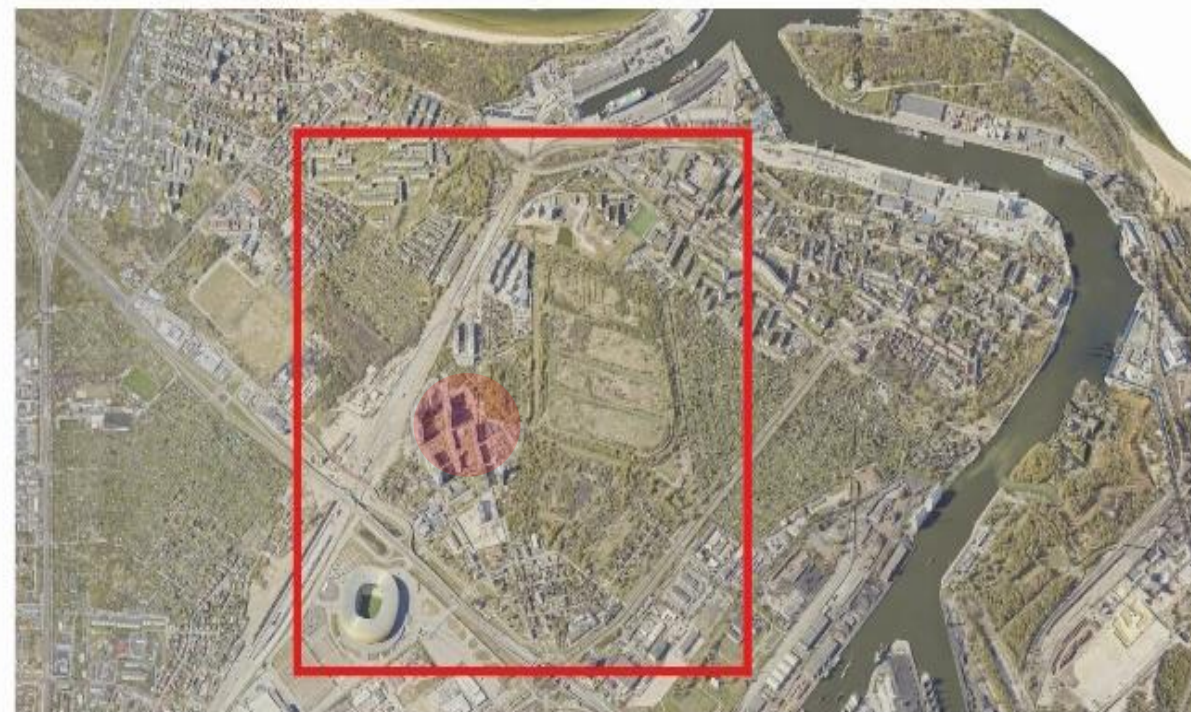
- **LCZ 2 COMPACT MIDRISE**
- **LCZ 4 OPEN HIGH RISE**

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

GARNIZON - example of LCZ2



NOWA LETNICA - example of LCZ4



Physic-morphological urban features – Local Climate Zones: LCZ 2 - Garnizon and LCZ 4 – Letnica. Source: <https://obliview.brg.gda.pl/>

Garnizon

Mixed use, built within historical buildings of Prussian garrison
Urban morphology: quarters
Investment of private developer

Area: total 25ha/ about 2 ha (quarter II)
Flats: about 450 flats and services in quarter II, Floors: about 6-8 floors



Own source

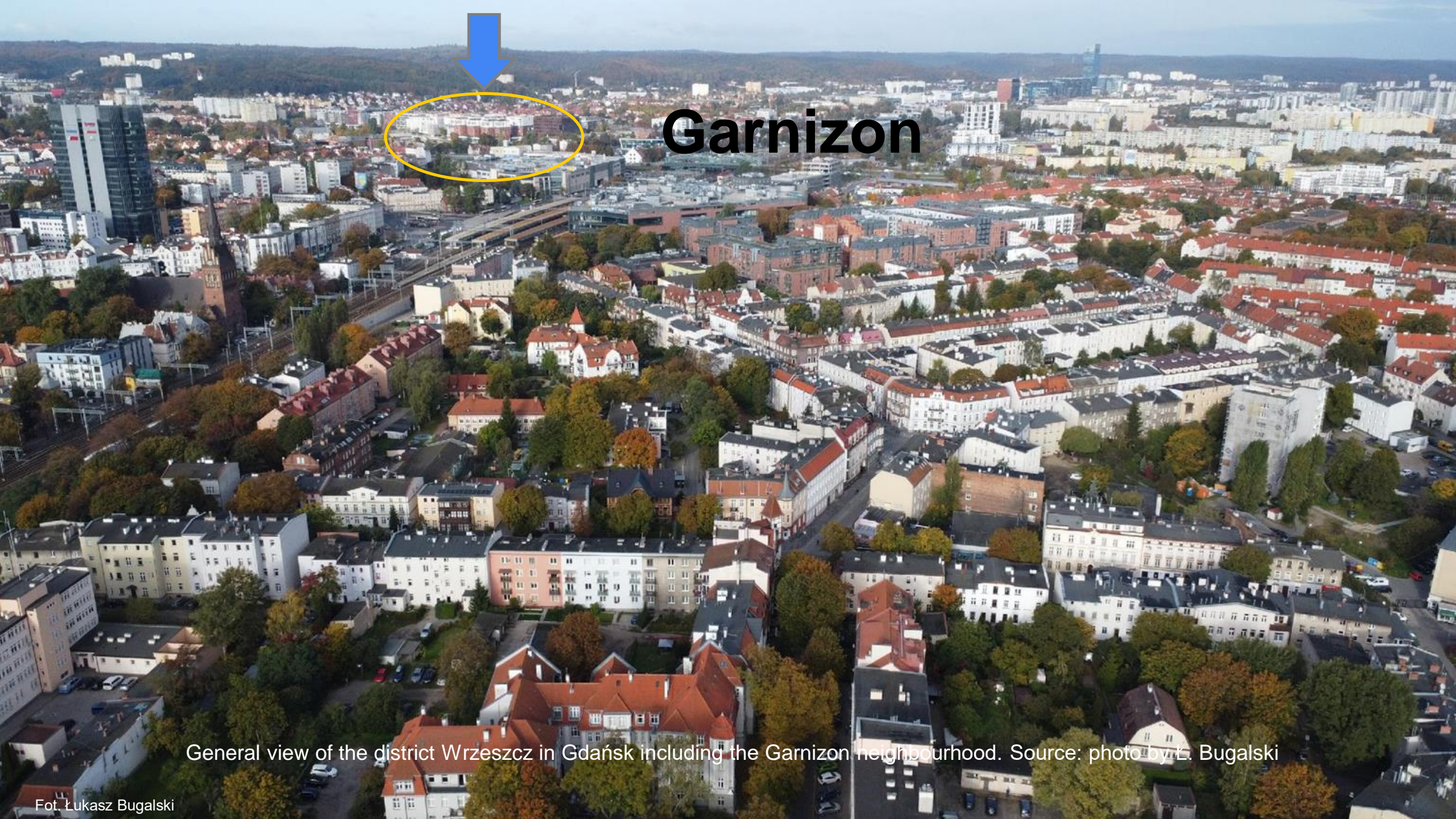
Nowa Letnica

Mostly residential, built on the former meadow, next to historical workers district
Urban morphology: blocks of flats
Investment of private developer

Area: 6 ha
Flats: about 2400 flats
Floors: 7- 17 floors



<https://www.google.com/maps>



Garnizon

General view of the district Wrzeszcz in Gdańsk including the Garnizon neighbourhood. Source: photo by Ł. Bugalski

Garnizon

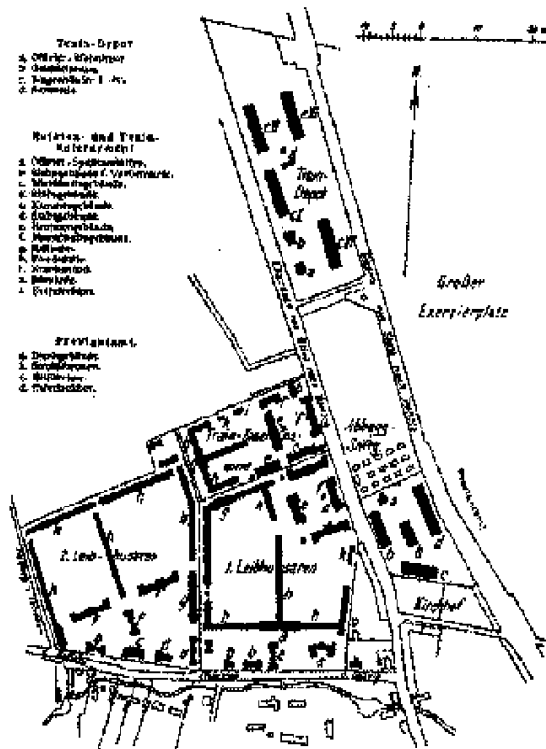
Masterplan for the district Garnizon in Wrzeszcz
<https://korter.com.pl/garnizon-gdansk>



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.



Plan. 14. Legenda der Gesamtentwicklungs in Gagnion

Garnizon

Main functions and urban composition





Garnizon

DNA of the place
and public spaces



CULTURAL SERVICES:

- High aesthetic values
- DNA of a place: cultural identity and heritage
- Recreation and tourism
- Vivid public space system:
 - Well planned and equipped.
 - Human-oriented (cars are not welcome).
 - Historically embedded.



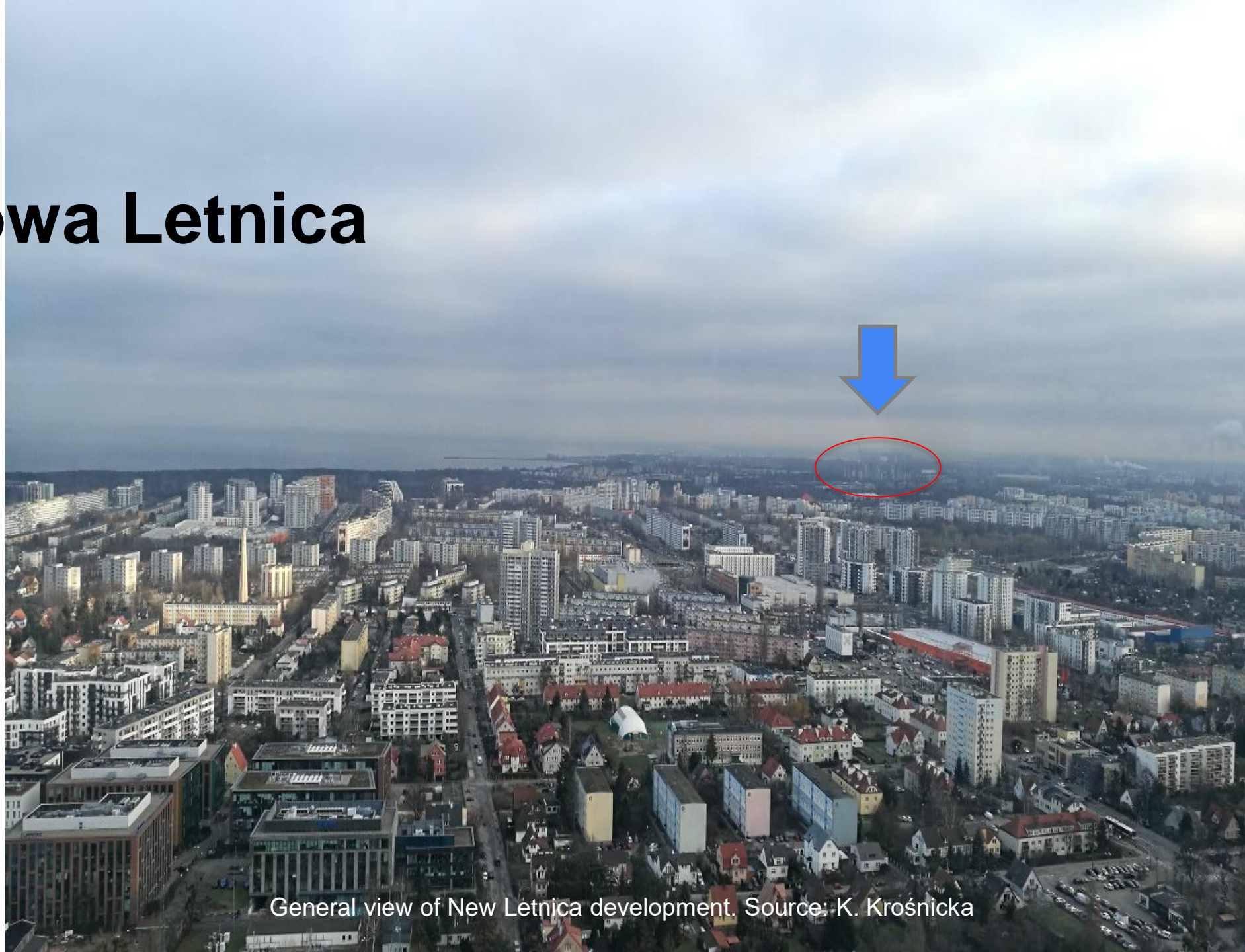
Garnizon

Relation to greenery

- Greenery is maintained where possible
- Architecture frames the views toward the forest on the hills
- New greenery is planted
- Greenery and squares are open for the public



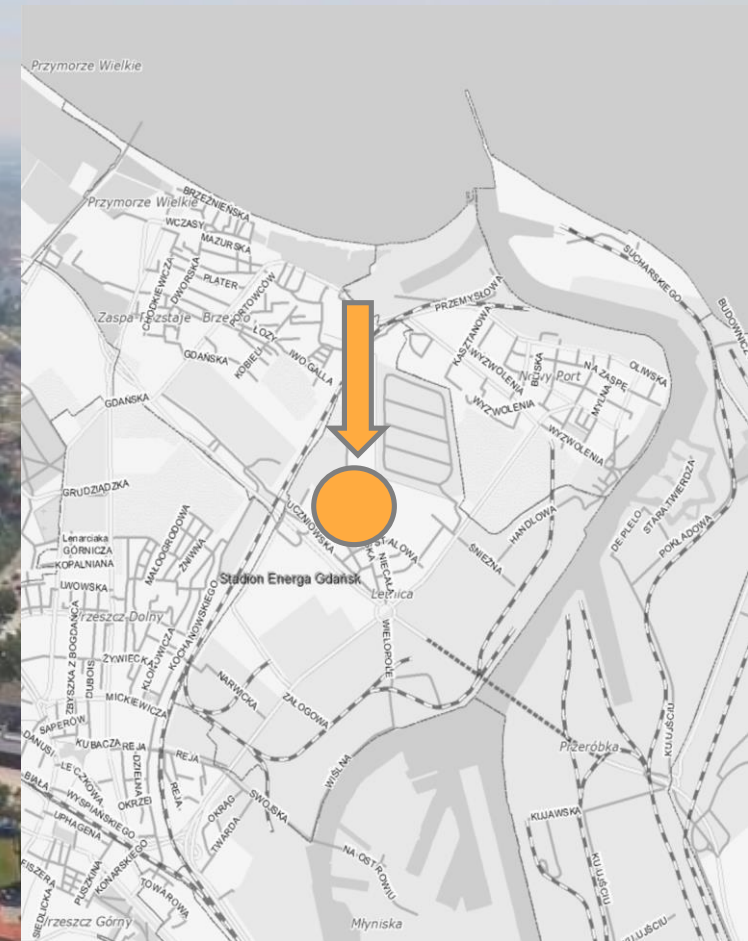
Nowa Letnica



General view of New Letnica development. Source: K. Krośnicka

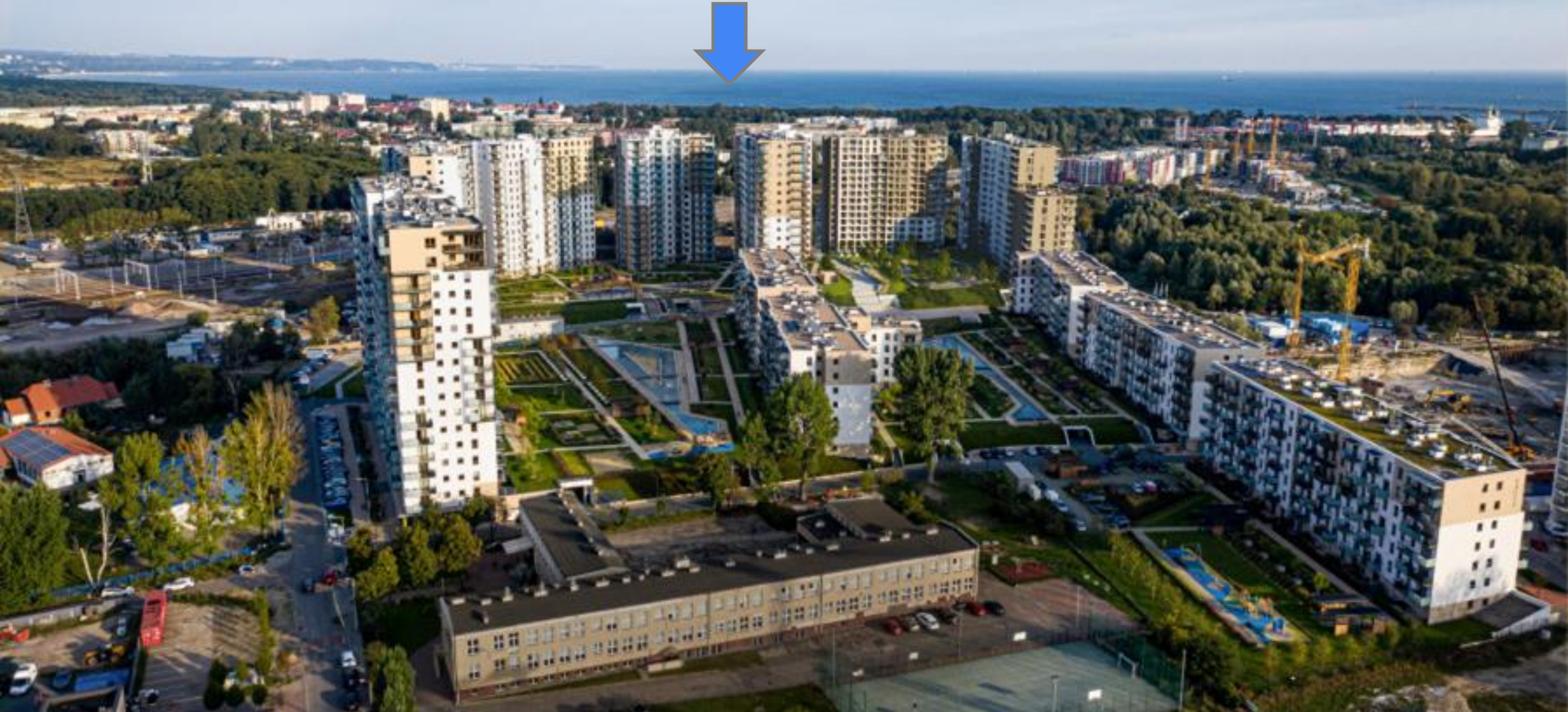
Nowa Letnica

First visualisations and plans



Nowa Letnica

Existing investment



Nowa Letnica



- General function: residential, services only at the ground level
- Monofunctionality of the space
- Urban composition: block of flats located in the shape of quarters with semi public, recreational space inside
- Semi public space system – not fully accessible



Nowa Letnica



- no strict relation to DNA of a place
- debatable aesthetic values
- recreation and tourism- do not use proximity to the Baltic Sea (great views from the window, but no clear pedestrain connections)
- Greenery created as a new system with concrete basins for water retention



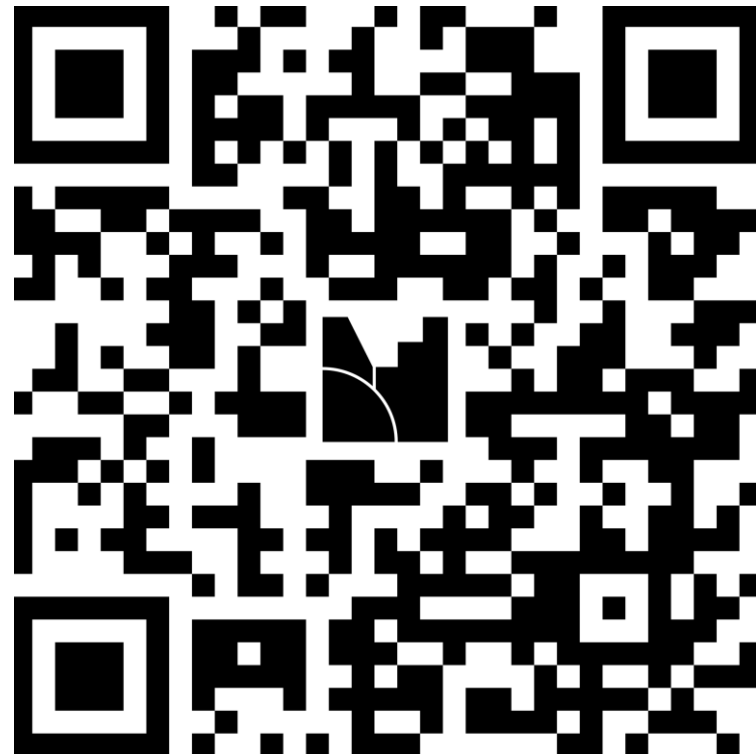
Garnizon vs Nowa Letnica

Garnizon – Creating a strong, new city image connected with a context of a place.

Nowa Letnica - New city image more connected to the rapid urban development, rather than DNA of a place.



QUIZ



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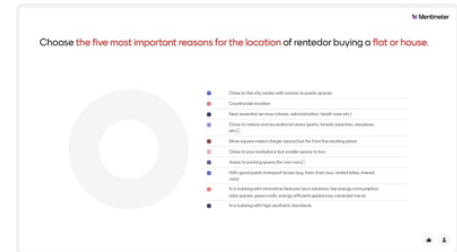
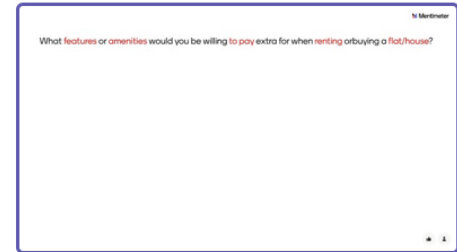
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2025_HOUSING_TELOS



What **features** or **amenities** would you be willing **to pay** extra for when **renting** or buying a **flat/house**?

Choose a slide to present



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Choose **the five most important reasons for the location** of rentedor buying a **flat or house**.



- Close to the city center with access to public spaces
- Countryside location
- Near essential services (stores, administration, health care etc.)
- Close to nature and recreational areas (parks, forests, beaches, meadows, etc.)
- More square meters (larger space) but far from the working place
- Close to your workplace but smaller space to live
- Access to parking space (for own cars)
- With good public transport acces (e.g. tram, train, bus, rented bikes, shered cars)
- In a building with innovative features (eco solutions, low energy consumption, solar panels, green roofs, energy-efficient appliances, rainwater harve
- In a building with high aesthetic standards

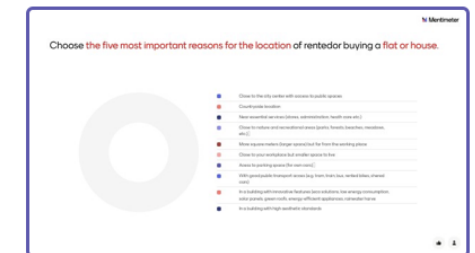
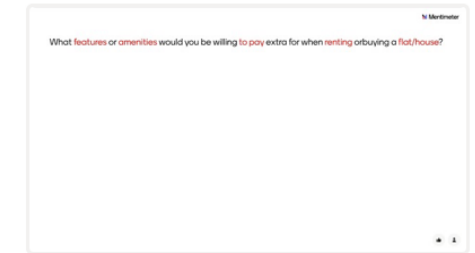


Menti

2025_HOUSING_TELOS



Choose a slide to present



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THANK YOU