VICTOR ZOTOV

MARIUPOL. VISION OF RECOVERY AND DEVELOPMENT

20.01.23

VISION

compact city by the sea

- 1. Reduction of the city territory, suburban development, densification of the city as a basis for revitalizing its life. Restoration of agricultural land
- 2. New state-of-the-art multifunctional center on the territory of the Azovstal plant
- release from pollution in the city center
- filling the torn urban fabric
- creation of new functions inherent in the modern European city center
- 3. The sea, as the greatest value and the most important city-forming factor.
- 4. Attracting maximum public activity to the shore
- 5. United Sea and River embankments, performed in the most natural way
- Combined into a continuous structure Green spaces, primarily along rivers and streams. Planting millions of new trees



VISION

compact city by the sea

- 7. A continuous structure of pedestrian and bicycle paths, as a mobility priority
- 8. The United Railway Station is a central transport hub (near Postmost and Azovstal port)
- 9. Integrated system of public transport
- 10. Elimination of the railway along the sea coast, A new railway line to Moreport from the west of the city
- 11. Mariupol remains a giant of ferrous metallurgy and heavy engineering, based on the renovated llyich and Tyazhmash plants
- 12. To develop small farming production for the employment of the population and food supply
- 13. To establish short connections between consumers and producers in order to reduce the cost of small farming products and improve their quality
- 14. Involvement of the best specialists in the world and international Competitions as a guarantee of the quality of solutions



REDUCTION OF CITY TERRITORY

densification of the city

- Even compared to the existing limits,
 even more so in relation to the decisions of the last
 General Plan, in favor of Nature and agricultural lands
- 2. Densification of the city as a factor of acceleration of its urban development
- 3. New construction should be carried out on already built-up abandoned and outdated areas
- 4. Demolish the panel houses of the eastern district in favor of agricultural lands
- 5. Prevent the expansion of the city build new high-rise buildings on vacant lots closer to the center



SUBCENTRAL DEVELOPMENT

densification of the central part of the city

- 1. As an activation of the modern urban lifestyle
- 2. First of all, on the territory of the Azovstal plant



CITY CENTER

as a balance of past and future

1 Historical center - touristic, valuable with strict restrictions on intervention (including height, density, functions, landscaping, even materials and colors). With a high level of improvement.

Despite the fact that the city has a small number of valuable old buildings that have been preserved in good condition, the old center has a unique typology of buildings, with cozy streets and narrow deep courtyards with a unique character

State-of-the-art **2 New center** on the territory of Azovstal. It requires soil reclamation and the involvement of global experience in working with contaminated territories, including with a mountain of slag



the sea as the greatest value

Maximum openness of urban activity to the sea



continuous sea promenade

- 1. Embankment from the left to the right bank across the new bridge
- 2. Create a coastal protective strip along the sea with a width of 100 m
- 3. Opening access to the sea, through the dismantling of railway tracks along the sea
- 4. Continuous sea embankment along the entire city coast (through the new bridge and Slag Mountain)
- 5. The most natural way of landscaping



natural embankments

Preserve and restore the natural form

Minimal intervention

Preservation and support of existing biodiversity

An example of a natural embankment / Tel dor national park / Israel





the coastal zone is the most valuable in the city

To develop here, first of all, displacing the low-value buildings of the coast of the Harbor and the Left Bank:

- 1. Sports and health facilities
- 2. Children's activity
- 3. Build homes for the elderly of European quality on the coast
- 4. Revitalize the health facilities of the Central District (near Primorsky Park)

examples of activities in the coastal zone / 1. Trent Community Sport and Recreation Centre, Canada. 2. Yoga Retreat





embankment

They protect the city from floods

Combine different parts of the district

A variety of functions along

They improve the quality of life of the residents who live nearby

waterfront example / NYC East Side Coastal Resiliency Project. BIG





on the territory of Azovstal

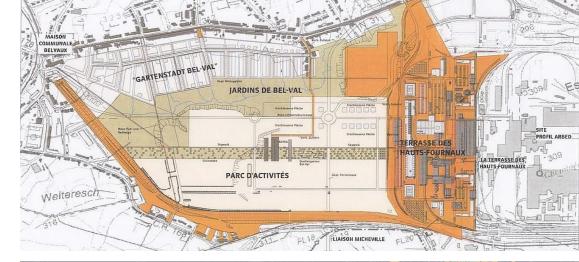
- 1. The estimated area is 10 km2. The factory should not be restored, instead, a new ultra-modern multifunctional dense, diverse center should be created here
- 2. Release from the pollutant in the city center (for 90 years it destroyed the sea, the city and its inhabitants)
- 3. Filling the torn urban fabric (in the very center, in the most beautiful historical place, where the rivers flow into the sea)
- 4. Creation of millions of square meters of new functions inherent in a modern European city center
- 5. The architecture is modern, with the involvement of the best architects in the world
- 6. Some existing industrial buildings that remain can be adapted for a new life



modern developed multi-functional complex

an example of an innovation park / Belval / Luxembourg

Transformation of the territory of a defunct steel plant into a modern, developed multi-functional complex: housing, university faculty and campus, offices, shopping centers, centers of science and culture, music palace, cinema house





preservation and transformation of plant elements

an example of an innovation park / Belval / Luxembourg

Preservation of the most characteristic industrial structures

Transformation of factory elements into a modern public space





mix of functions

an example of an innovation park / Belval / Luxembourg



mixed functions and sea orientation

an example of the transformation of an industrial area / Navy Yard / Philadelphia

In the past, it was a developed port with a large industrial area

Seven districts with diverse architecture



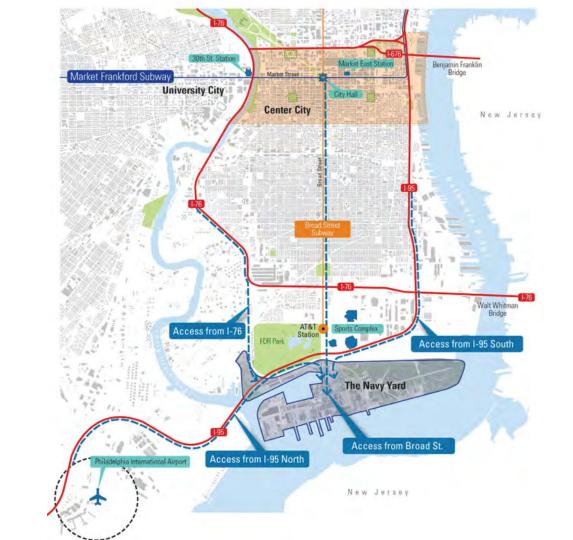


developed business campus

an example of the transformation of an industrial area / Navy Yard / Philadelphia

Navy Yard is a thriving 485 hectare business campus with more than 145 companies occupying over 650,000 m2 of office, industrial/manufacturing and R&D space. More than 11,500 employees.

The Navy Yard's historic waterfront campus and unique development opportunities make it a dynamic location for local companies seeking to create a collaborative, progressive and modern work environment.



multifunctional residential area

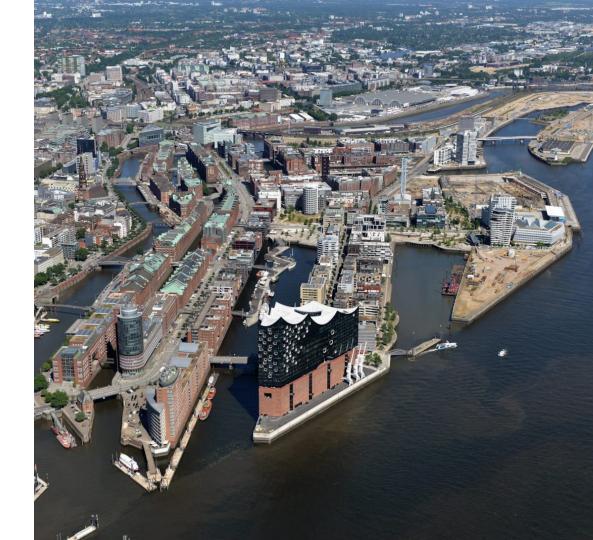
an example of the transformation of an industrial area / Hafencity / Hamburg

The duration of construction is 15-20 years

The plot size is 165 hectares

Developed on a competitive basis

Functions: multifunctional residential area with offices, public urban space by the water, philharmonic hall, international museum of the sea, aquarium, science center



multifunctional diverse building

an example of the transformation of an industrial area / Paris Rive Gauche / Paris

Construction began in 1990

The plot size is 150 hectares

Functions: multifunctional residential area, offices, education, culture, institute of languages and civilizations



multifunctional district of the city

an example of the transformation of an industrial area / Greenwich Peninsula / London

In the past, it was an industrial area, gas holders, chemical industry

Construction started in 1997

The duration of construction is 20 years

The size of the site is 121 hectares

Functions: multifunctional residential area, business park, public buildings, entertainment complex, cable car, park system, pedestrian promenade



the multifunctional district of the city is oriented towards the sea

an example of the transformation of an industrial area / Helsinki / Finland

Architectural competition for the best idea for the development of the territory (2021-2022)

In the past, it was an industrial area, industrial productions

Functions: multifunctional residential area, business park, public buildings, entertainment complex, cable car, park system, pedestrian promenade





memory saving

- 1. Preserve some remains of the Azovstal plant
- 2. Integrate into the modern space

Examples:

1. Sarajevo roses

In different parts of Sarajevo, you can see red spots on the sidewalk or roadway. These are traces that were formed during the bombing of the city during the Bosnian war of 1992-1995. After the war, the funnels were filled with resin and painted red, which symbolizes blood.

2. "stumbling stones"

Memorial signs in the form of monuments - 10 cm cubic stones, the visible side of which is covered with a metal plate with an inscription. Name, year of birth and death, place and cause of death are engraved on the plate.





BUILDING HEIGHT

decrease in number of storeys

Was:

- before the Second World War 1-3 floors
- 45-55 years old 1-3 floors
- 55-70 years old 5 floors
- 70-90 years old 9 floors



BUILDING HEIGHT

panorama from the sea

new high-rise buildings only in Azovstal and the Business Center on Svobody Square





DIVERSITY

as a sign of a full-fledged city

- 1. According to social characteristics
- 2. By spatial typology: individual and block houses, townhouses, point houses, etc.
- 3. By materials, construction technologies
- 4. By location within the site
- 5. On the organization of the home territory
- 6. By class (by price)
- 7. By type of property: private housing, housing for rent, social housing, experimental housing

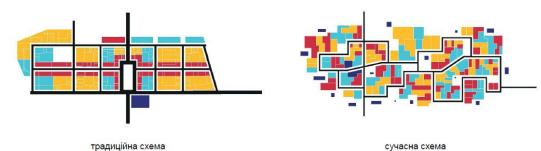


SOFT ZONING

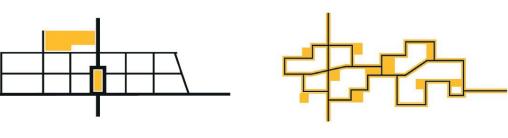
rejection of strict zoning

Creation of local community centers around: kindergartens, schools, sports and playgrounds, sports and cultural centers, parks and squares

Mixed zoning



Decentralization



традиційна схема

сучасна схема

PUBLIC SPACE

decentralization of public space and activities



Toronto's Eastern Waterfront / Sidewalk Labs

PUBLIC SPACE

city squares

- 1. It is the center of activities
- 2. High level of landscaping
- 3. Versatility of use
- 4. High availability of public infrastructure facilities (availability of services on the first floors and expanded public facilities)

Freedom Square, Mariupol Israels Plads, Copenhagen



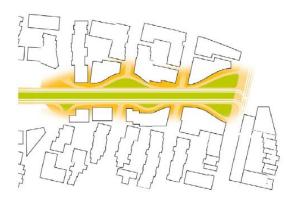


PUBLIC SPACE

diversity as the basis of the quality of public spaces

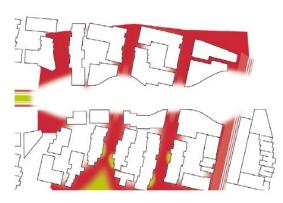
Boulevards

the pulsating nature of avenues creates space for activities



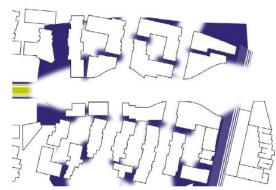
Streets

transit and mixed-use streets activate the first floor and encourage residents and guests to spend time outside



Promenades

as the most intimate type of street, promenades provide space for games, recreation and connect residential buildings with small multi-functional spaces



COMMUNITIES

communities as the basis of the planning structure

Family, local community, city community

Advantages of social values over personal ones

family



local community



city community



COMMUNITIES

involvement and activity of citizens

Participation in planning and decision-making of local importance

Creating space for mutual exchange / Kalkbreite, Zurich





COMMUNITIES

variety of opportunities in the city

Carsharing - quick car rental to reduce the need to own a car

Collective garden, garden / Lilac, Leeds, England





a single system of green spaces

- 1. Connect green and suburban green areas into a continuous system, primarily along rivers and streams
- 2. Connect green zones with pedestrian and bicycle paths
- 3. Preferential improvement in the most natural way possible, to restore the balance of flora and fauna
- 4. Provide coastal protective strip of rivers
- 5. To increase the number of trees by orders of magnitude, to expand the palette of plants (now in the city almost only acacias and pyramidal poplars can grow here, as in the Crimea). Provide watering and care for them
- 6. Contributes to the sustainable development of the city. It combines nature and people
- 7. Connects different areas of the city with green, healthy paths
- 8. Routes of animal transits
- 9. Increases the value of the district, city
- 10. Biological diversity



minimal intervention for nature conservation

- 1. Support of local natural identity
- 2. Maintenance of a network of footpaths
- 3. Infrastructure for comfortable walking
- 4. Minimal landscaping, paths with a sand-gravel coating without curb stone









continue cooperation with French experts

The concept of the development of the Azov coast from French experts, Interland, CASAGEC, Rivages de France 2021

The concept should be refined according to post-war conditions

By project reference code:





river embankment

Creation of walking routes

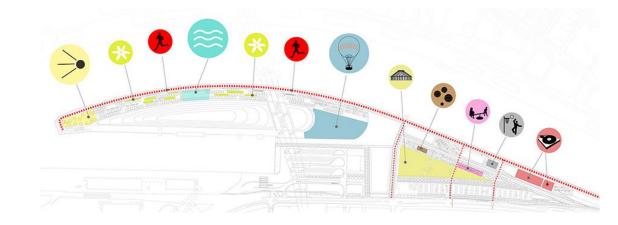
Delicate landscaping

Support biodiversity

The natural shape of the shores

Plant many new plants native to the area

Alternation of zones: quiet rest, sports, contemplation of nature, beach, fishing









vision

- 1. Tourist tram line along the sea across the mouth of Kalmius
- 2. Sea routes (to the western sea resorts of Melekino, Yalta, Urzuf...)
- 3. Dismantling of the railway along the Central Embankment
- 4. New pedestrian-bicycle-tram bridge and auto-pedestrian-bicycle bridge across Kalmius
- 5. Various public transport
- 6. High frequency of public transport
- 7. Tram line to the city center. Bus connection with the suburbs
- 8. The distance to stops is 300-500 m, depending on the capacity of the type of transport, to the metro/fast tram 1000 m
- 9. High-quality pedestrian and bicycle infrastructure



MOBILITY

high-speed tram

The dedicated traffic lane does not depend on car traffic



Vertical distribution with other types of transport





MOBILITY

tourist tram

Sightseeing tours, communication along the embankment







MOBILITY water transport Sea and river transport, such as tourist to coastal seaside resorts Маріуполь Scheme from the project "Reconstruction of Pischanka beach" Zotov&CO, 2019 ділянка проектування Мелекіно Ялта національний природний парк "Меотида" Урзуф - морський туристичний маршрут - зона пляжів - межа м. Маріуполь Морський туристичний маршрут

MOBILITY

integrated station

Different types of transport differ in different levels

Collected the maximum number of types of transport

The dead-end scheme of the railway station allows you to arrange all railway platforms and the station area on the same level without descents or ascents

example of an integrated station / Main station / The Hague





MOBILITY

minimization of pendulum migration

Creating a maximum of activities in each district: education, work, rest, study, sport, recreation

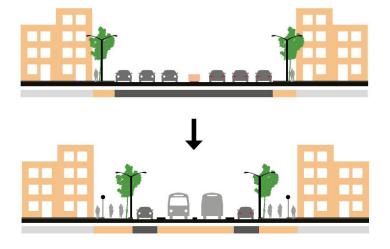




trends

- 1. Comfortable streets for pedestrians
- 2. Cycling
- 3. Priority of public transport over private cars
- 4. Creation of transfer hubs for the maximum number of types of transport





MOBILITY

cycling

Following the example of Amsterdam

Shrinking the city can make the bicycle the fastest of all modes of transportation

Amsterdam speed facts:

- 1. Bicycle
- 2. Tram
- 3. Taxi
- 4. Bus
- 5. Private car

Total provision of bike lanes throughout the city

Continuous priority bicycle traffic

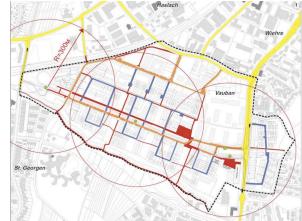




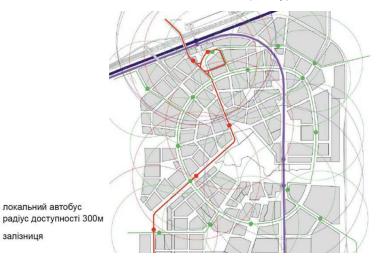
MOBILITY

integrated public transport

- 1. High frequency of public transport (every 7.5 minutes on weekdays and 15 minutes on weekends)
- 2. Tram line to the city center
- 3. Bus connection with the suburbs
- 4. The distance to the stops is 300-500 m, depending on the capacity of the type of transport
- 5. High-quality pedestrian and bicycle infrastructure



Vauban / Фрейбург, Німеччина



локальний автобус

залізниця

трамвай

трамвай

радіус доступності 500м

радіус доступності 400м

Aspern Seestadt / Відень, Австрія

INDUSTRY

an industrial city with modern technologies

- 1. Remove industry from riverine areas
- 2. Strictly limit emissions according to European standards
- 3. The city remains industrial (Ilycha, Azovmash, the northern industrial hub of the Left Bank), but with updated technologies
- 4. In the center, it is possible to develop enterprises of light industry and harmless high-tech production)
- 5. Development of alternative heavy industry businesses
- 6. Development of a strategy for industry and the entire business with an emphasis on more ecological and diversification models, as an example you can take the experience of European metallurgical regions in the transformation of large industrial cities, for example, the "Ruhr Basin"



INDUSTRY

industrial symbiosis

Example Kalundborg Symbiosis / Denmark

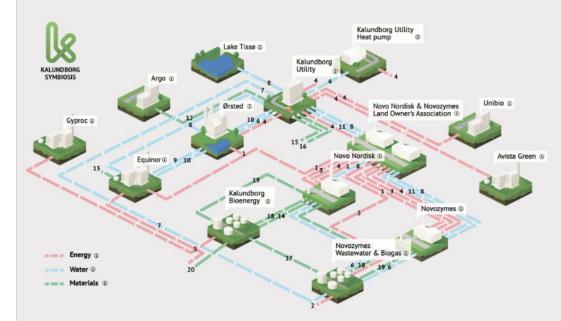
The first industrial symbiosis in the world and is considered an example of best practice

This is an association that includes 11 partner companies

Works closely with Kalundborg Municipality and they collaborate on several projects and share knowledge.

A key principle of industrial symbiosis is the exchange of materials, energy and water between two or more companies, turning what is normally considered waste into a resource.







vision

- 1. New construction should be carried out on already built-up areas, instead of outdated, destroyed or damaged. Existing housing can be replaced in whole or in part, depending on the results of individual reconstruction projects
- 2. Gradually demolish panel-type houses as:
- unsuitable for replanning under new conditions
- dangerous from the point of view of easy destruction and do not meet fire requirements
- 3. Creation of new building blocks based on the best global examples (environmental construction, energy-saving, with developed green spaces)
- 4. Equalize the quality of life throughout the city, avoid social and territorial segregation
- 5. New housing low-rise, apartment building 3-9 floors
- 6. Diversify the typology of housing: apartments, houses and outdoor spaces
- 7. Provide housing in kindergartens and schools in accordance with norms
- 8. Mixed typology as a trend, in particular by social characteristics



landscaping

High-quality landscaping is more important than decoration on the facades





industrial construction

To introduce industrial construction from products of high factory readiness using advanced global practices





trends

the best examples of settlements / VAUBAN / FREIBURG / Germany

Environmental friendliness and sustainable development

- solar panels
- "Passivhaus" standard

Quality and identity of spaces

- private gardens, orchards. Natural economy. 3800 gardens
- lack of a supermarket

Mobility (transportation)

- there are no surface parking spaces
- bike lanes
- 70% of residents do not have their own car
- tram network

Inclusiveness and social diversity

- promotion of social interaction through sharing services
- avoiding social segregation
- profit from excess energy produced

Economic development

and viability

Political activity

- self-government, a group of residents makes recommendations to the municipality

- exchange, mutual use of cars





trends

the best examples of settlements / WESTERN HARBOR / Malmö / Sweden

Transformation of an industrial area into a sustainable city

- under construction (2001-2035)
- 187 hectares
- 12,000 population

The total living area is 393,000 m2

69 people per hectare

Environmental friendliness and sustainable development

areas cleaning

- ecological construction
- waste processing system
- centralized heating

Quality and identity of spaces

Mobility

a developed educational component
 (kindergartens - 7 units, elementary
 schools - 2 units, higher education units

- 4 units)
- high-quality water space
- two bus lines
- bicycle network
- restricted movement of motor vehicles

Social diversity

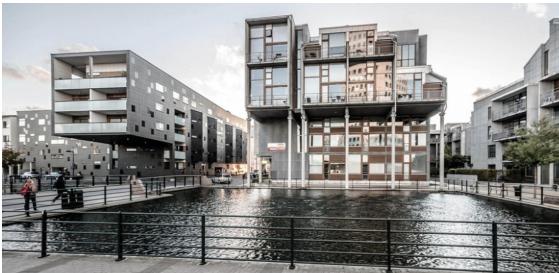
(transportation)

- division into districts, neighborhoods, different typologies

Economic development

- 10,000 jobs





trends

the best examples of settlements / Hammarby sjostad / Stockholm / Sweden

Transformation of an abandoned industrial and residential area into a sustainable city

- under construction (2008-2028)
- 200 hectares
- 25,000 population
- 9,000 residential units

Environmental friendliness and sustainable development\

Quality and

identity of

spaces

- 19% green area
- waste water collection and filtration
- Alternative Energy Sources
- energy reuse
- multifunctional environment
- access to water, forest conservation
- typological diversity
- traditional local architecture

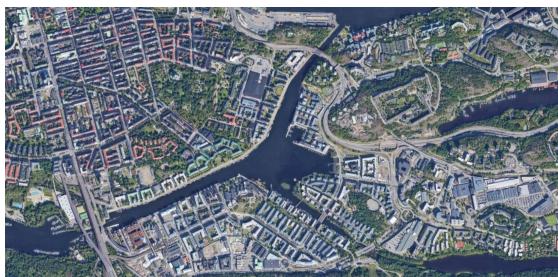
Mobility (transportation)

- 52% of transport is public
- bicycle and pedestrian networks
- a city of short distances

Social diversity

- division into districts, neighborhoods
- gradations in population density





trends

the best examples of settlements / REISEFELD / FREIBURG / Germany

Environmental friendliness and sustainable development

Quality and

identity of

spaces

- climate, air, noise are taken into account in the design process
- responsible planning
- a park in the center
- connection of inner quarter yards with common greenery
- for residents underground parking lots

Mobility (transportation)

- a reserve of 250 hectares is nearby
- the existing transitive was extended to the new district
- tram line along the main street
- surface parking lots for guests only
- speed limit 30 km/h
- avoidance of social segregation

Inclusiveness and social diversity

- Economic development
- Political activity and viability
- 600 jobs
- a group of local volunteers is engaged in nature protection
- "glashaus" center for the development of children and youth was created on the initiative of residents





with increased socialization

Example / KALKBREITE, Zurich, Switzerland / 2014

- total area 22,900 m2
- public service 4,900 m2
- total space 570 m2
- housing 7,000m2

Social benefits:

- typological and social diversity
- participation as the main aspect / attractor
- low rent, availability of housing and offices

Common spaces:

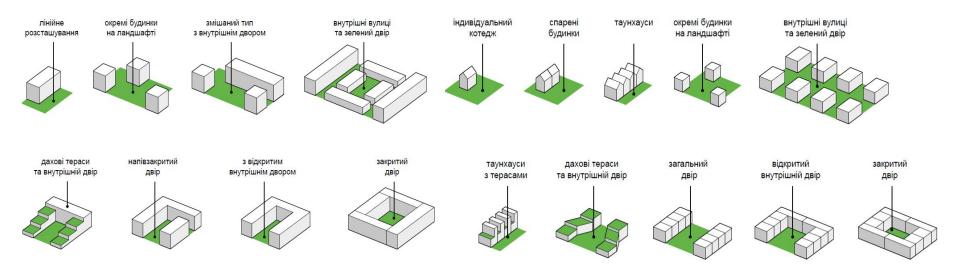
lobby, dining room, laundry room, shared guest rooms for 7-9 families, guest rooms, children's room, primary and conference halls







typologies of open spaces



spatial identity

examples



Ypenburg, Гаага, Нідерланди



Chase, Бреда, Нідерланди



Arabianranta, Хельсінкі, Фінляндія



Vauban, Фрайбург, Німеччина



Theresienhohe, Мюнхен, НІмеччина



Vauban, Фрайбург, Німеччина



DWELLING spatial identity

an example from ZOTOV&CO projects



typological diversity

low density example





25 Social Housing Units, Вільнев-сюр-йона





Helsinge Haveby, Хельсінге





The avenue, Сафрон Вольден

typological diversity

low density example





Caledonian Somosaguas, Мадрид





Bosrijk квартал 3, Ендховен





Cesta v Gorice, Словенія

typological diversity





Bosrijk квартал 2, Ендховен





HEGEN ISLAND квартал 3, Голандія





Hagen Island квартал 2, Гаага

typological diversity





Vauban квартал 1, Фрайбург





Амстердам, Нідерланди





квартал на вул. Ганса Фішера, Німеччина

typological diversity





Vauban квартал 1, Фрайбург





Аффольтерн, Швейцарія





Stadstuin, Нідерланди

typological diversity





Bosrijk квартал 3, Ендховен





Hagen Island квартал 4, Гаага





Muri, Швейцарія

typological diversity

high density example





Canopia Park Housing, Франція





Schlierenstrasse, Швейцарія





Quellenpark, Швейцарія

typological diversity

high density example





Vauban квартал 1, Фрайбург





квартал 2 на вулиці Г. Фішера, Мюнхен





Funen, Амстердам

typological diversity

high density example

multi-apartment housing - only up to 9 floors



ASPERN, Австрія





KROYERS PLADS, Данія





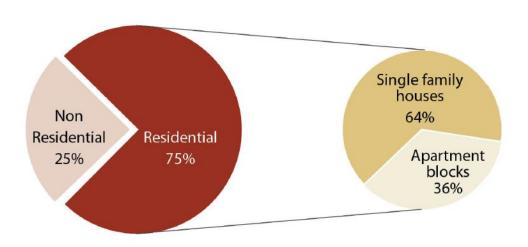
VM HOUSE, Данія



ratio of housing and public functions

resource: Europe's buildings under the microscope BPIE survey

The share of public functions in residential quarters will be raised to 10-20%, in large areas - to 25%





distribution of the non-residential sector by category in the EU as a whole

resource: Europe's buildings under the microscope

BPIE survey









MULTIFUNCTIONALITY, SOFT ZONING

the quality of urban space is determined by the variety of situations and events

FUNCTIONAL FILLING IS HUMAN-ORIENTED

culture, leisure, sports, recreation, education...

PUBLICITY

the value of the urban area is determined by the availability and quality of public spaces

EDUCATION

kindergartens

- 1. Uniform placement across the city
- 2. Reorganize into modern educational centers
- 3. More outdoor activities





EDUCATION

schools

Use by residents of school infrastructure, sports fields and gyms, swimming pool, event halls, libraries, workshops







SPORT

availability of sports spaces

Accessibility for all residents



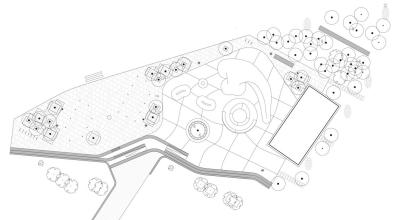
SPORT

integrated into the urban space

an example of a street sports field / Hilversum, Netherlands

Nike skatepark. Skatepark with an area of 2,300 m2. It is an inclusive place, specially designed to give skateboarders a space integrated into the active life of the city.

The blurred line between skateboarding forms and the rest of the public realm identifies skateboarding as a borderless activity. This new type of hybrid zone is attractive to all users and is a progressive approach to public space.







SPORT

multifunctional sports complex

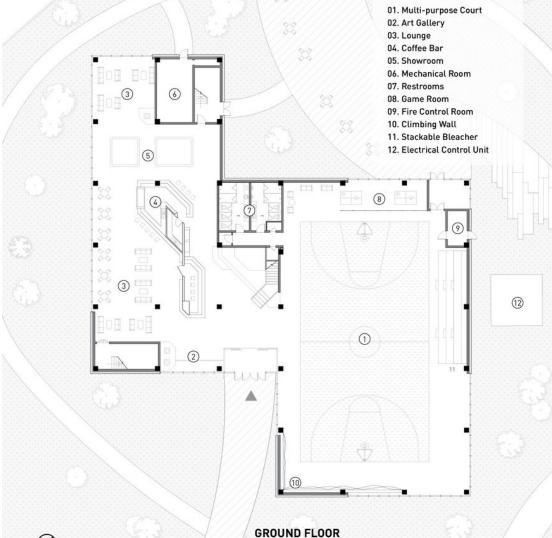
an example of a multifunctional public sports complex / Changchun / China

The public sports center with an area of 2396 m2 is located in the old industrial area of the power plant.

The center consists of two main spaces, one side of the complex has a double-height basketball court and a climbing wall (surrounded by a walkway above). In the second, there is a coffee shop, a public space and a fitness room.

An outdoor playground and exercise equipment enhance physical activity opportunities within the center, while walking paths connect to the surrounding neighborhood through a sculptural landscape.





PUBLIC CENTERS

communication space









PUBLIC CENTERS

multifunctional filling of public centers

Administration

Universal hall for 500 seats

Media library

Leisure center

Children and Youth Development Center

Platform for joint events

Art gallery

Museum of History

Food

Conducting festivals



HOMES FOR ELDERLY PEOPLE

a calm and protected old age

Location near the sea

Proximity and cooperation with kindergartens to connect generations

Coudraie & Les Hêtres Homes, Switzerland Psychiatric Center Friedrichshafen, Germany







STREET SERVICES

on the first floors

Commerce and services are close to users

A large number of food establishments

Focus on small and medium-sized businesses

Hospitality streets

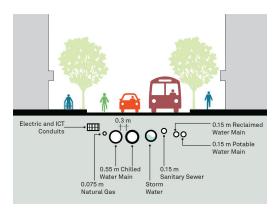


TECHNICAL INFRASTRUCTURE

as the basic needs of the city

Update engineering networks according to the latest global trends

Drinking water is the greatest value of life

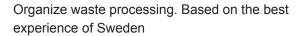


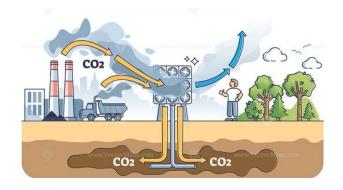


CLEAN CITY

emissions and waste processing

Ensure high-quality cleaning of emissions, primarily industrial emissions, primarily into the sea. Involve the city in cleaning the sea. Based on European standards







COMPETITIONS

as the best method of ensuring the quality of projects





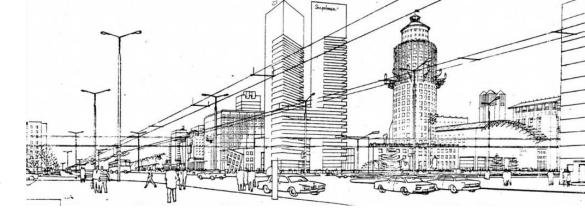


OMA

Western Harbor / Malmö
20 developers
more than 30 architectural bureaus

worth implementing

Construction of the Business Center near Freedom Square, author V. Zotov, 1990s





Hotel on Svobody Square, 25 floors. Zotov&CO, 2020

worth implementing

Reconstruction of Khmelnytsky Boulevard. Zotov&CO, 2021

The winning competition project for the improvement of the liberation square and the revitalization of the TSOU building, 2020





worth implementing

Port of cultures competition project, AER, Studio re:view, 2021



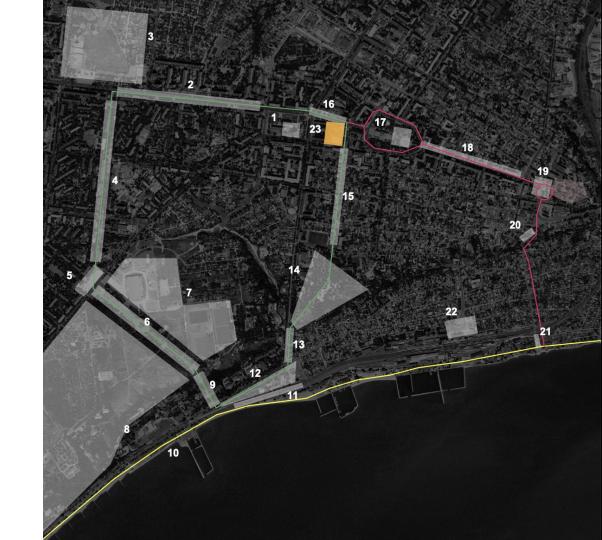


The winning project of the competition for the reconstruction of the Central Embankment. SBM studio, 2021

worth implementing

Creation of a pedestrian circle in the city center:

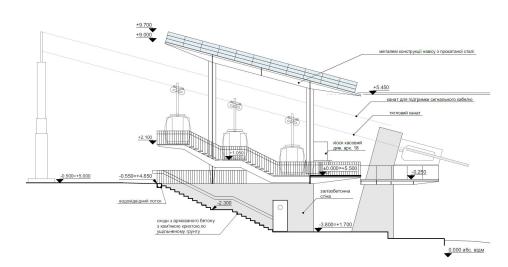
- 1 administrative square
- 2 Myru Ave. from Kazantseva St. to Khmelnytskyi Blvd
- 3 Freedom Square
- 4 Br. Bohdan Khmelnytskyi
- 5 Warriors-liberators square
- 6 alley with a boat
- 7 city sports center
- 8 seaside park
- 9 exit to Primorsky Boulevard
- 10 the central embankment
- 11 train derailment zone
- 12 seaside square
- 13 pr. Metalurgiv going up to Horsad
- 14 Horsad
- 15 Nielsen (Engelsa) pedestrian street
- 16 pedestrian section of Myru Ave
- 17 theater square
- 18 Myru avenue from the drama theater to Torgovaya street
- 19 Liberation Square with the DOSAAF building
- 20 the exit to Gamper's house
- 21 Exit from Gamper's house to the sea
- 22 railway station, square
- 23 the territory of the vodka factory



worth implementing

Reconstruction of Pischanka beach. Zotov&CO, 2019





Cable car to Pishchanka beach. Zotov&CO, 2021