

Мѣнескъ

Міньск

Мянеск

Minsk|Miensk

Mieniesk

Urban Transformation 1

Менеск

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Мѣнескъ

Менск

МИНСК

Mynsko

Miensk-Biełaruski

קסנימ

Менѣск

Step 1

- select a town in your country of origin, (ideally your home-town),
- search for maps from different times and for today,
- distinguish major periods of urban development and their characteristics in terms of urban growth and expression of design for “core and edges”(1:50000)



June 15, 1917. German aerial photography of the central part of the city.



Minsk is located in the geographical center of Belarus.

- Minsk area : 353,6 km2.
- Altitude from sea level: 280.6 meters
- Inhabitants: 1,996,730
- Density 4,875.7/km2



Water basins



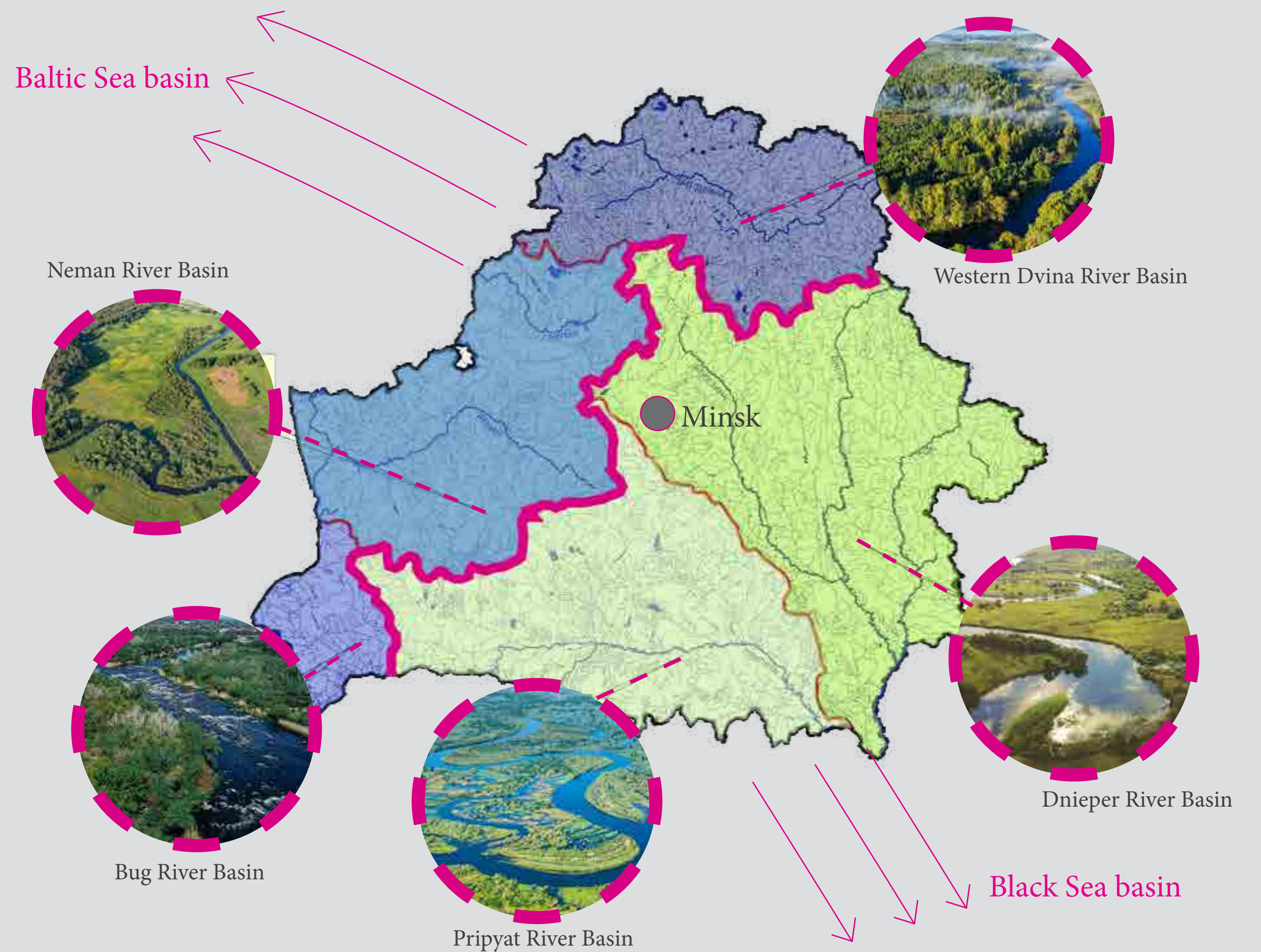
Map by UNEP/GRID-Arendal, May 2007.

Sources: Belarus State University. Atlas of Belarus Geography. Minsk 2005; State Committee for Land Resources, Geodesy and Cartography. National Atlas of Belarus. Minsk 2002; Botnaru V. and O. Kazantseva. Republic of Moldova. Atlas. Chisinau 2005; State Committee for Natural Resources. Integrated Atlas of Ukraine. Kyiv 2006.

THE MAP DOES NOT IMPLY THE EXPRESSION OF ANY OPINION ON THE PART OF ENVSEC PARTNER ORGANISATIONS CONCERNING THE LEGAL STATUS OF ANY COUNTRY, TERRITORY, CITY OR AREA OF ITS AUTHORITY, OR DELINEATION OF ITS FRONTIERS AND BOUNDARIES.

<https://www.grida.no/resources/7969>

Water system and relief



Belarus is a country where many rivers start.

55% of the country's territory lies within the Black Sea basin, and 45% within the Baltic Sea.

Water system and relief

The Vileika-Minsk Water System is a water supply system for Minsk that **transfers water from the Vileika** (Neman basin) **to the Svisloch** (Dnieper basin).

Construction began in 1968 and was commissioned on January 15, 1976.

Water is pumped from the Vileika Reservoir to the Zaslavskoye Reservoir, **which is 75 meters higher, using six pumping stations.**

The reason for the construction is the insufficient supply of water to the city, including for **industrial needs.**

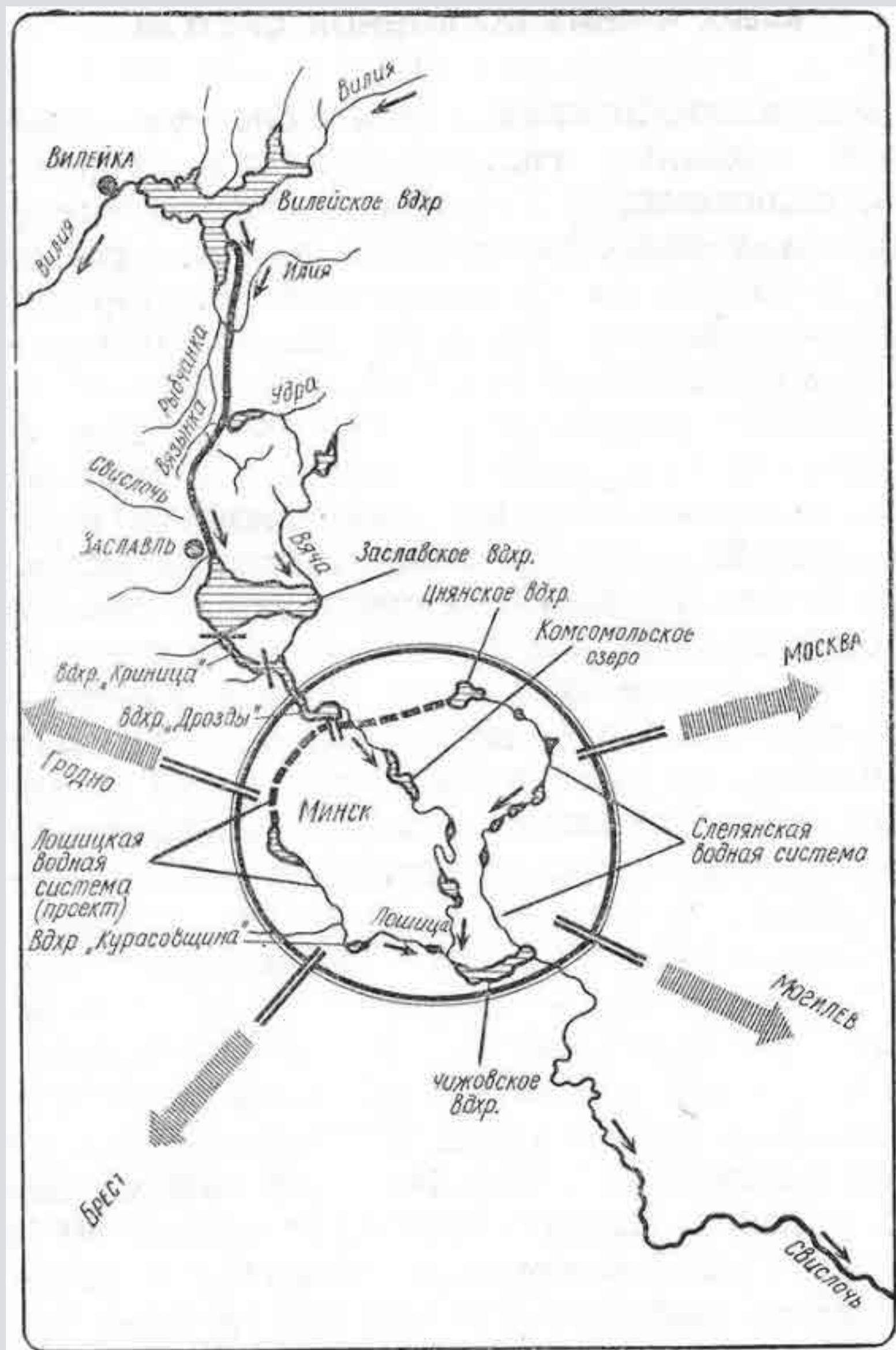
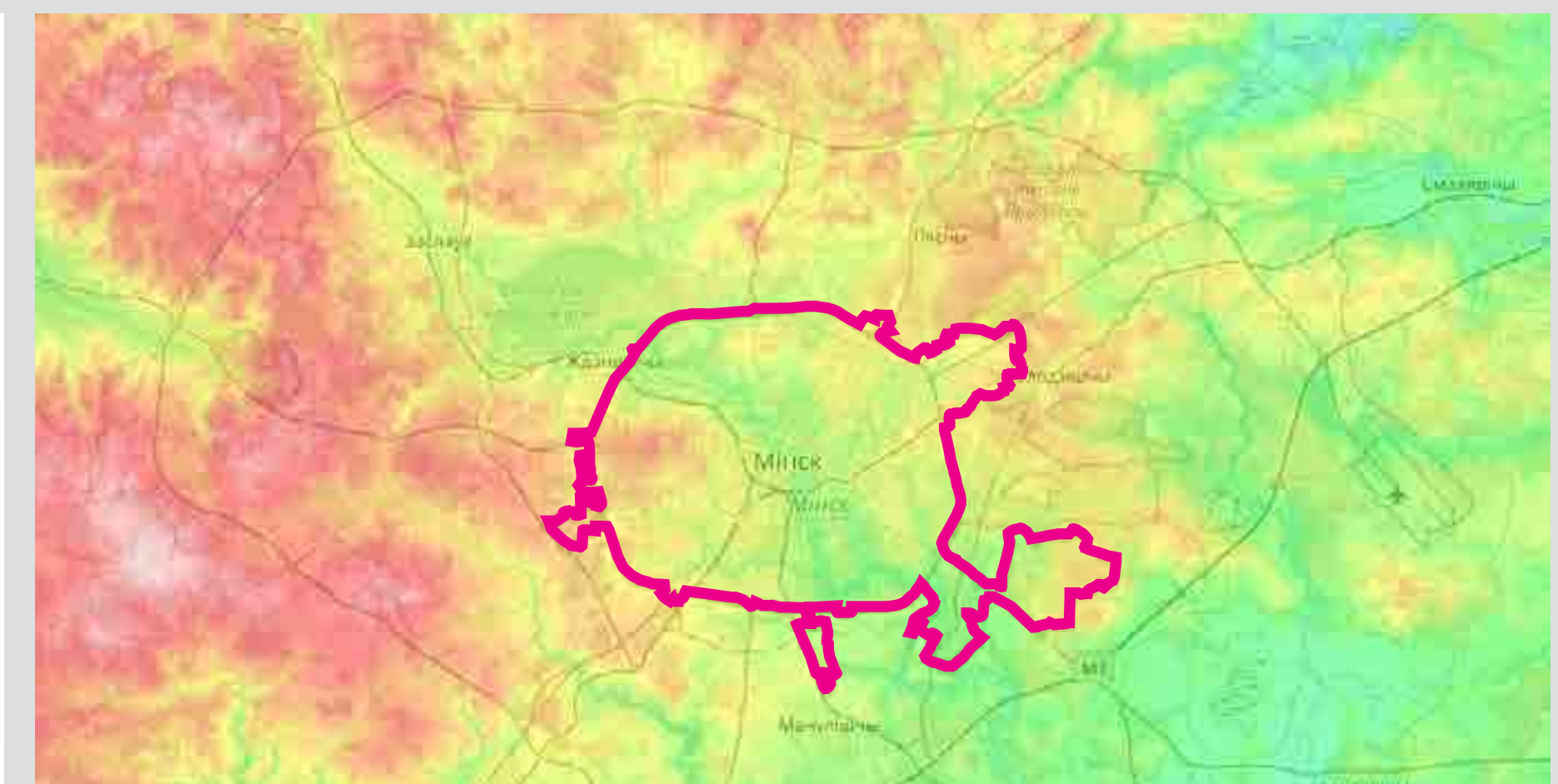
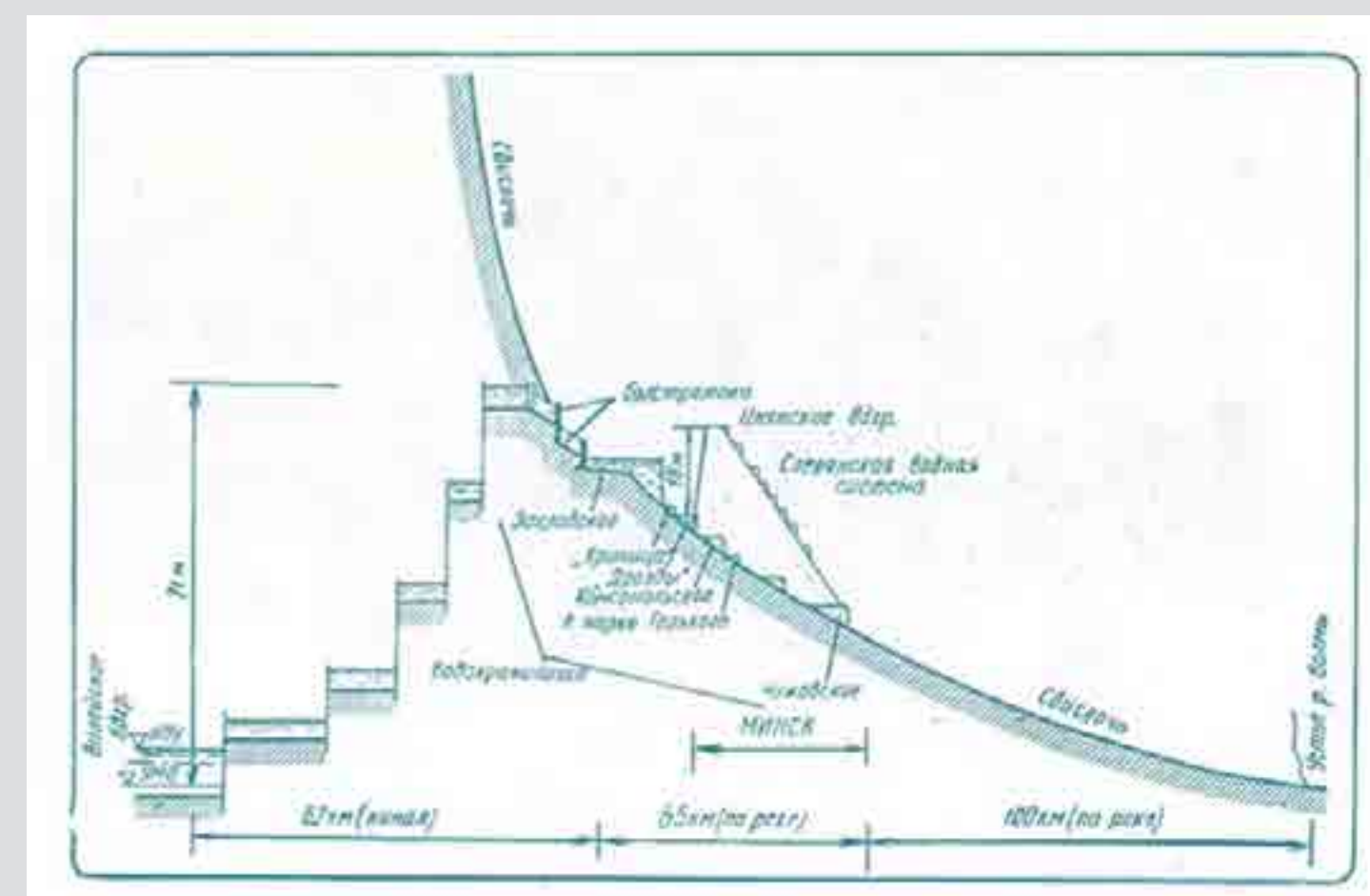
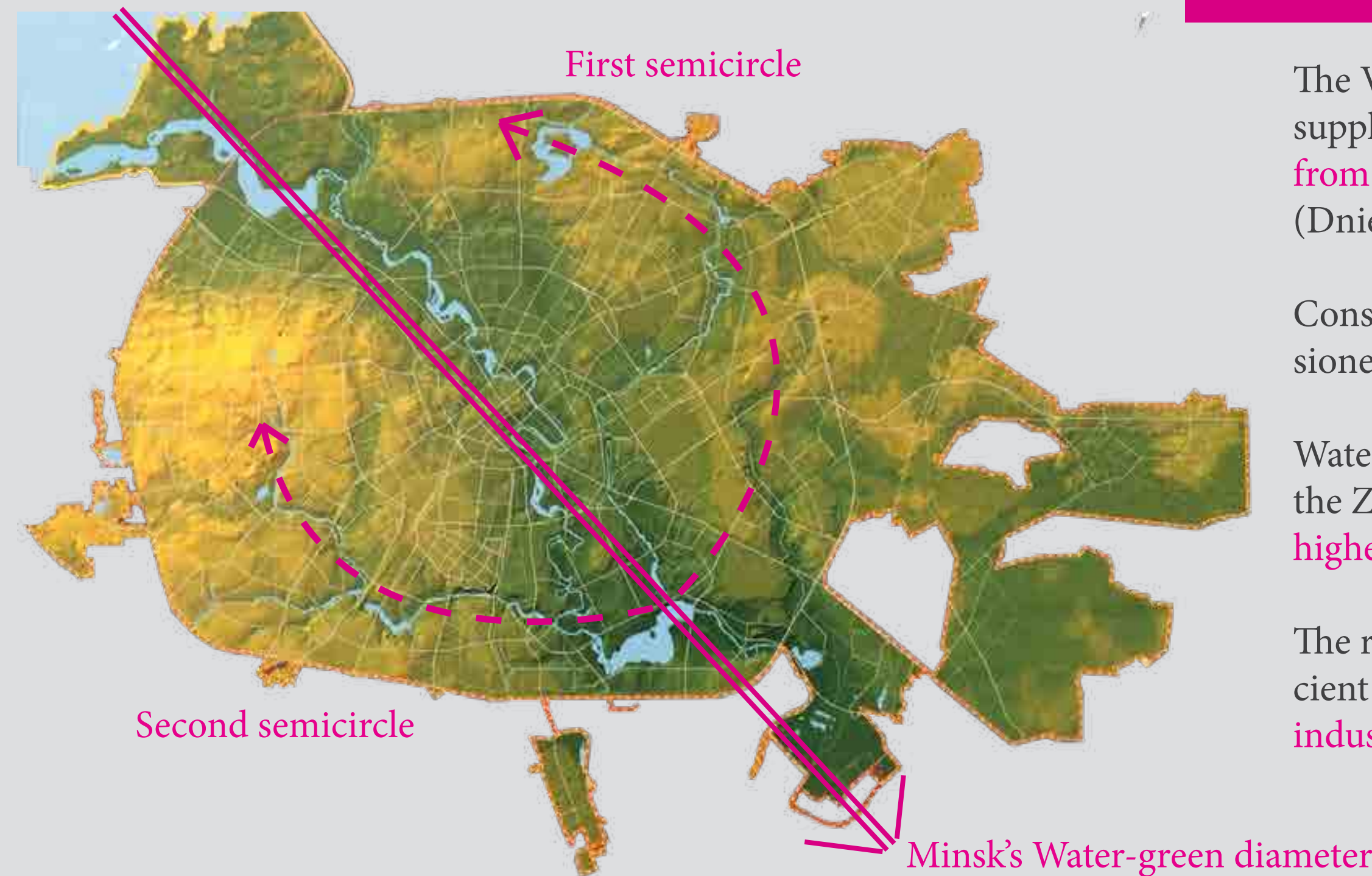


Рис. 3. Схема Вилейско-Минской водной системы

Scheme of the Vileika-Minsk system

<https://www.mienskurban.space/chasopis/vodno-zelenaya-sistema-minska-v-mirovom-kontekste-istoriya-logika-razvitiya-i-budushcheye>

Longitudinal section of the Vileika-Minsk water system

https://www.youtube.com/watch?v=YCsqZvX-HN8&list=PLO7U7v_IazYIkUMOctQxZH16eIeQbOGlQ&index=1&t=2s

The relief of the Minsk region

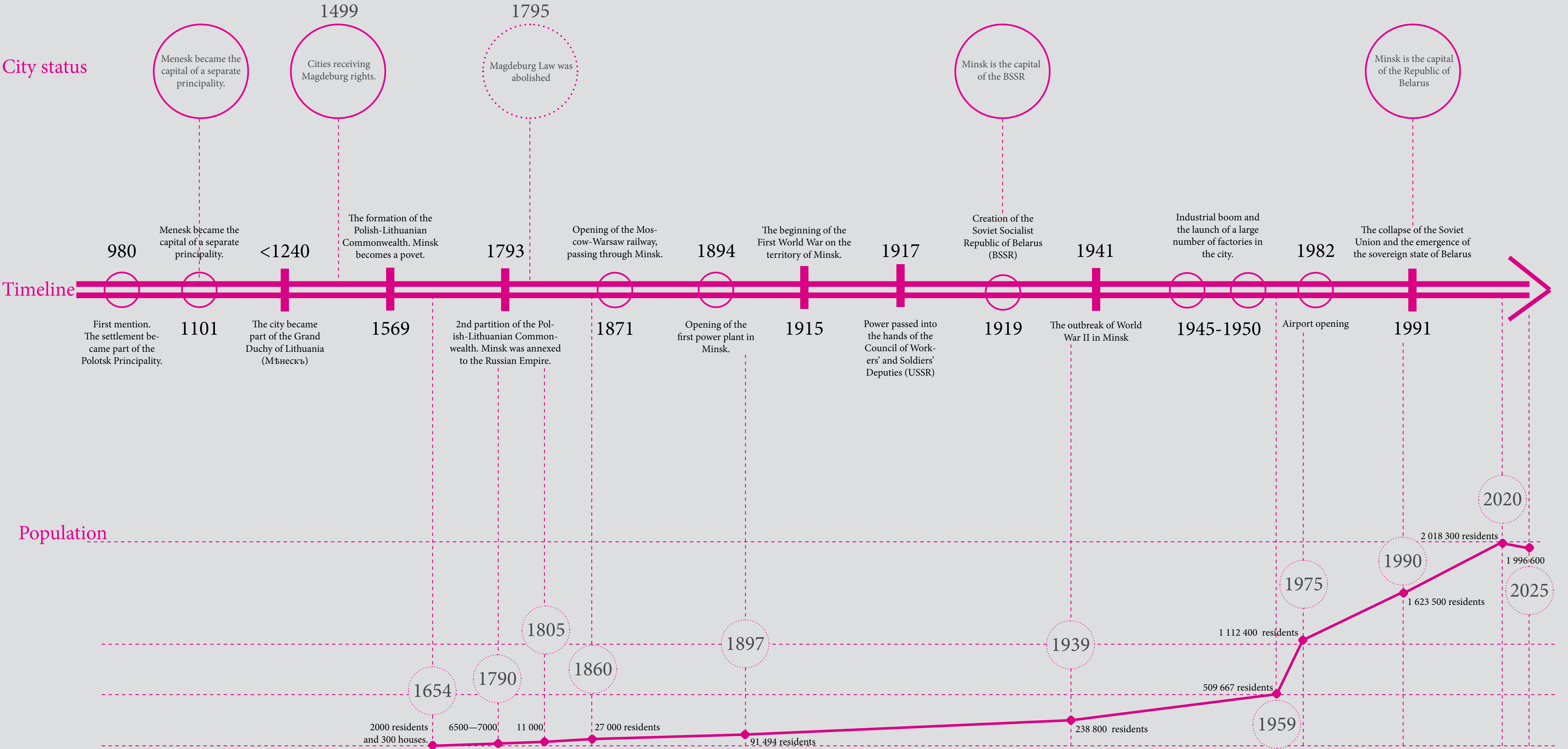
<https://en-gb.topographic-map.com/>

History: Timeline

City status

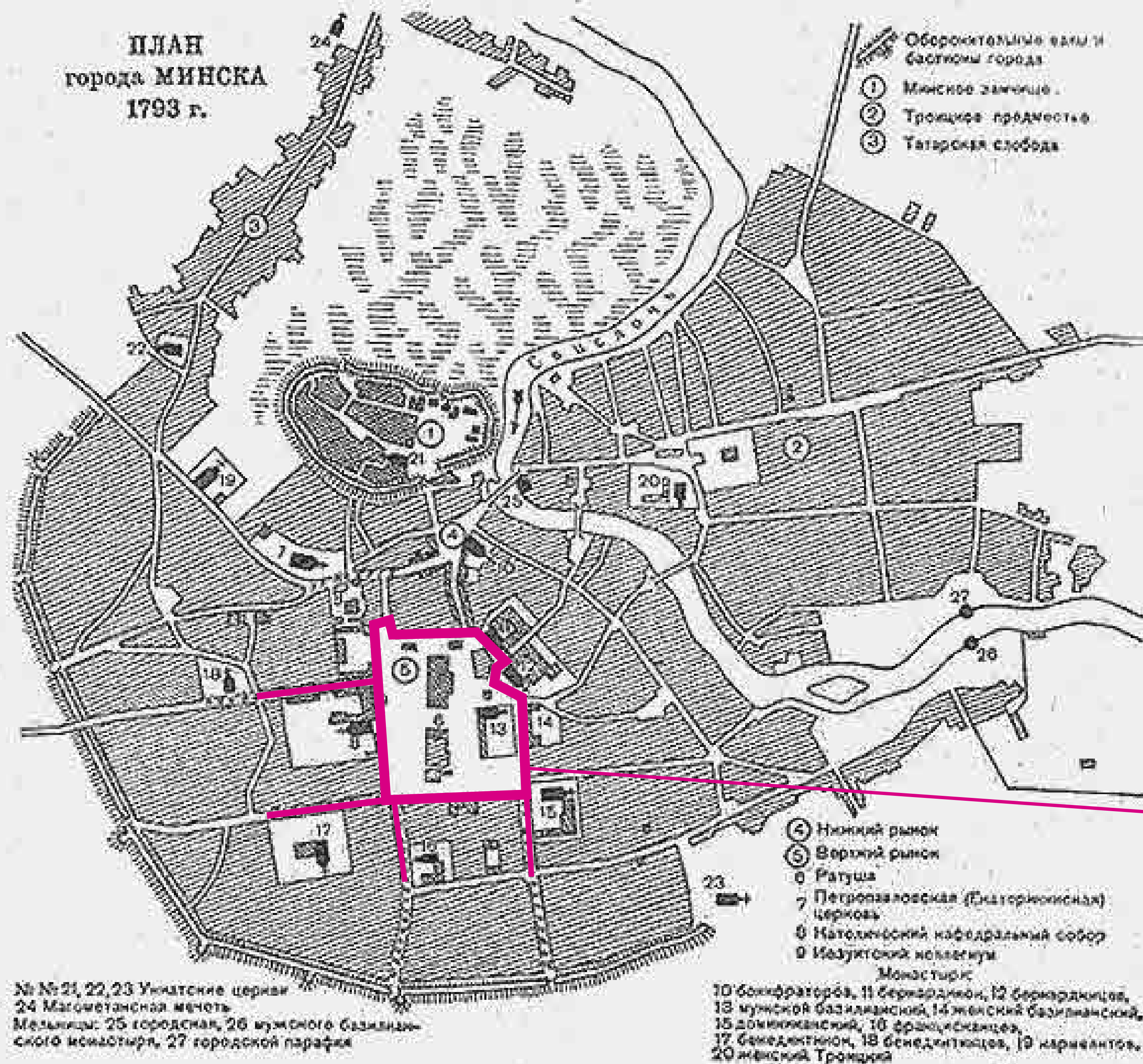
Timeline

Population

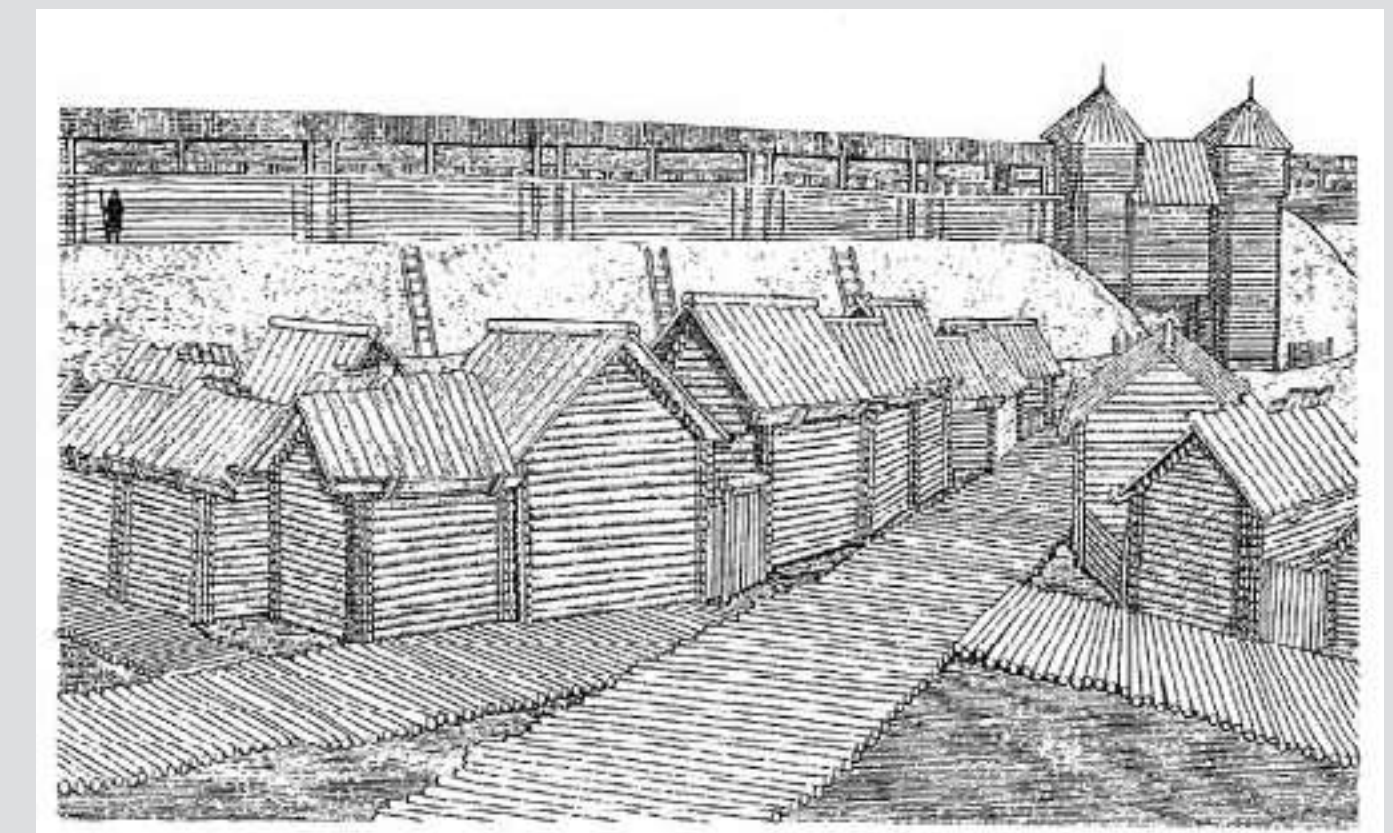




History: Map of 1793



The main square

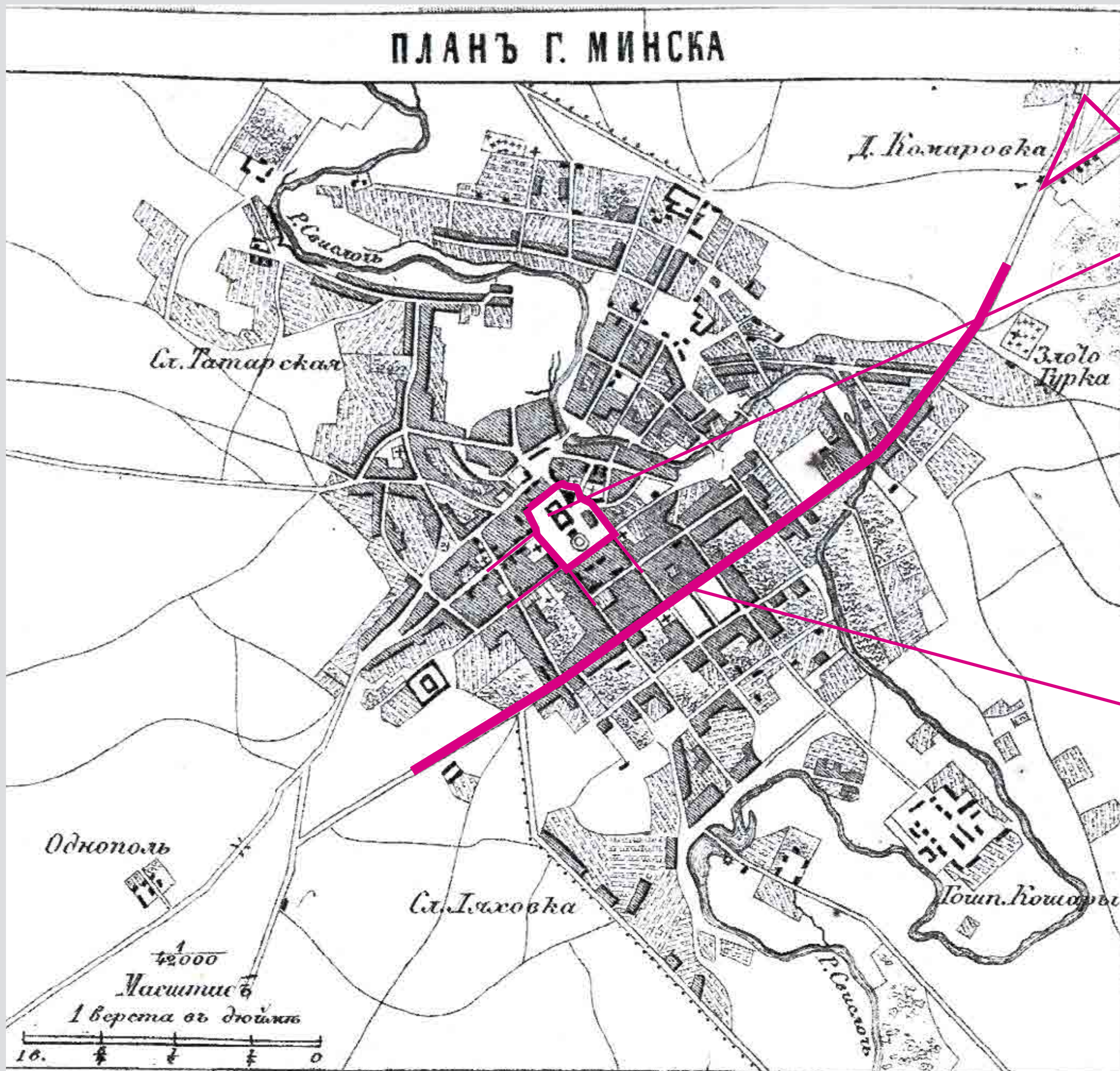


<https://www.radzima.org/ru/object-photo/8294.html%0%b3%0%be/minsk-1793/>

2nd partition of the Polish-Lithuanian Commonwealth. Minsk was annexed to the Russian Empire.

<https://karty.by/%0%b2%0%b7%0%b3%0%bb%0%b4-%0%b8%0%b7-%0%bd%0%b0%0%b1%81%0%b2%0%be%0%b1%8f%0%b5%0%b3%0%be/minsk-1793/>

History: Map of 1876



The main square

The main street



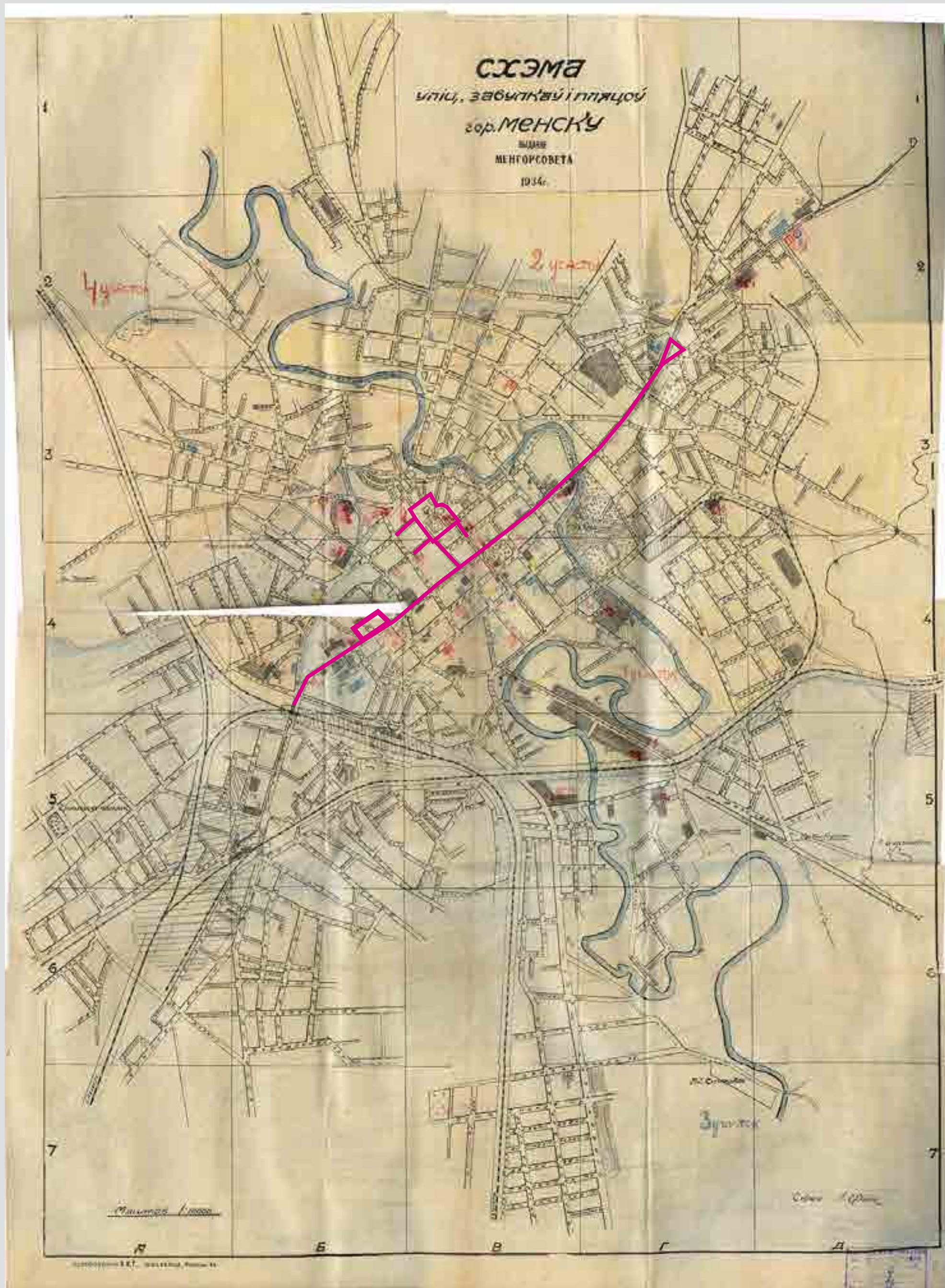
<https://www.radzima.org/ru/object-photo/8294.html>



<https://planetabelarus.by/publications/v-kadre-rayon-derevyannoy-zybitskoy-kak-vyglyad-minsk-v-dovoennykh-filmakh/>

https://runivers.ru/mp/maps-detail.php?ID=468700&SECTION_ID=7614

History: Map of 1934



<https://realt.onliner.by/2016/03/29/war>



<https://gorod-minsk.com/dom-pravitelstva-respubliki-belarus.html>



<https://planetabelarus.by/publications/v-kadre-rayon-derevyannoy-zybitskoy-kak-vyglyadel-minsk-v-dovoennykh-filmakh/>



<https://minsk.1prof.by/news/no-category/unikalnye-foto-minska/>



<https://realt.onliner.by/2014/02/05/interwar>

<https://karty.by/1900-1938/minsk-streets-1934/>

МИНСК



Карта составлена и оформлена в декабре 1979 г.
Подписана к печати 31.03.80 г.

“Road to Moscow”



<https://blisch.by/minsk-sovietagain>

<https://karty.by/1945-2005/%d0%bf%d0%bb%d0%b0%d0%bd-%d0%b3%d0%be%d1%80%d0%be%d0%b4%d0%b0-%d0%bc%d0%b8%d0%bd%d1%81%d0%ba%d0%b0-1980-%d0%b3%d0%be%d0%b4/>



Step 2

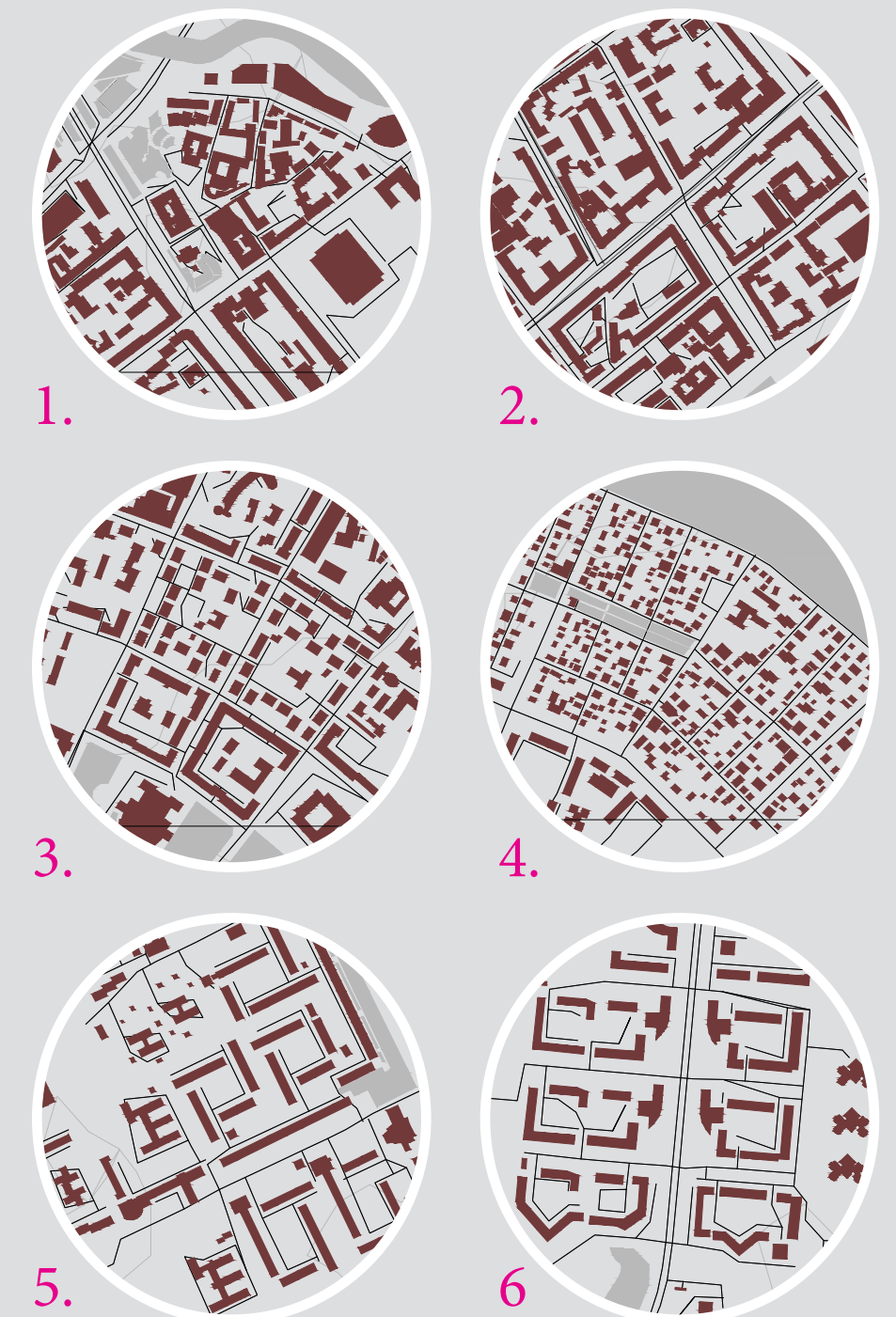
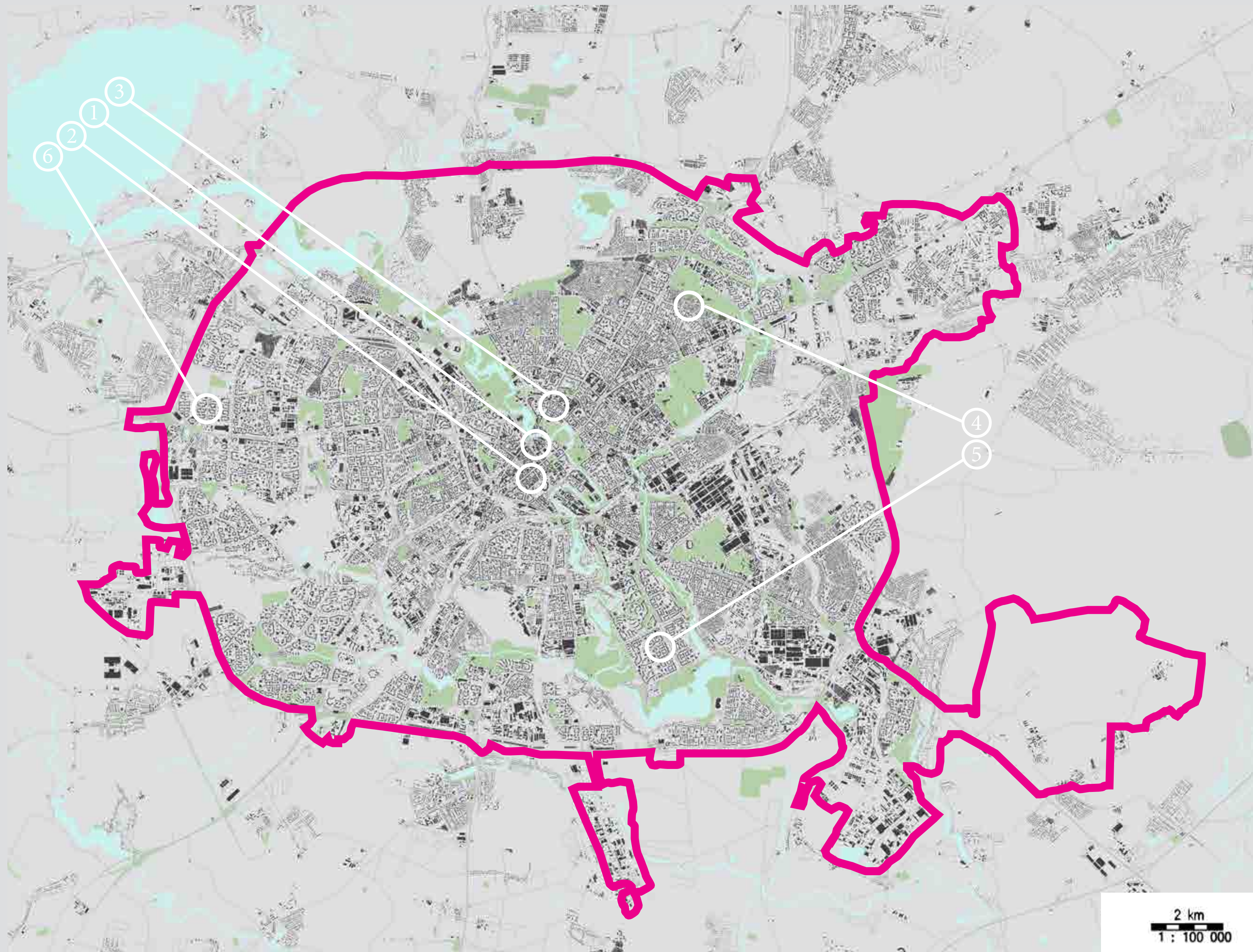
- Identify and localize a characteristic fine-grain urban morphology in this town and investigate its typologies of built form and open spaces (1:500).
- Indicate values of use and form for it.
- Simulate small-spatial urban changes of tomorrow (extension/ elevation of built form on private ground, 1:500), relative to the structural conditions of the land-market today.
- Define the spatial differentiation of the morphology (public-private)



Morphology

Most of the city was **built up after** World War II. But there are a few fragments or areas that were planned or already existed for the war.

Below are **6 different** main examples of spatial organization that can be found in Minsk today.



Morphology: Old town



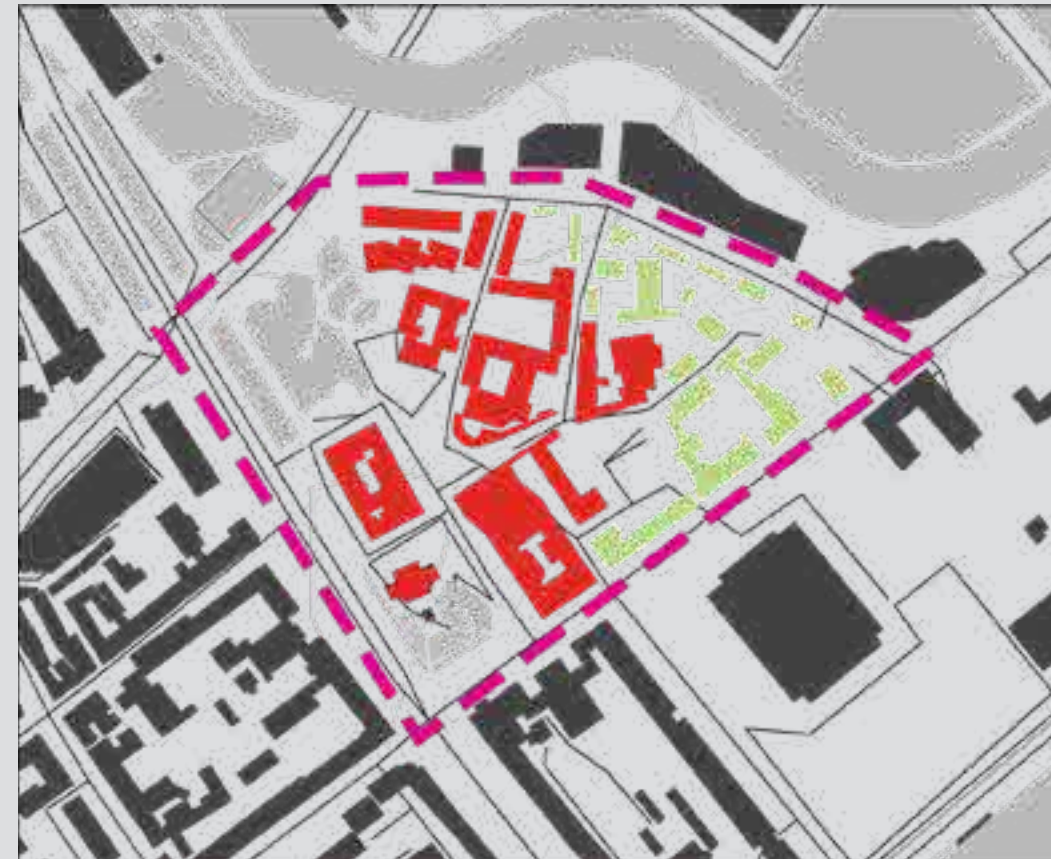
<https://limberi.by/ekskursii/attractions-belarus/ploshhad-svobody.html>



Public-private space scheme



<https://www.dobovo.com/blog/ru/%D1%82%D1%83%D1%80%D0%B8%D1%81%D1%82%D0%B8%D1%87%D0%B5%>



Functional zoning scheme



https://ru.freepik.com/premium-photo/panoramic-view-historical-center-minsk-old-town-center-minsk-belarus_17217396.htm



The Old Town is **the oldest part of the city**, or the area where the city has always been.

Freedom Square, its existence in its current size can be traced back to the very first maps presented in the presentation.

This square and the areas adjacent to it can be called the **main core of the city**.



Functional zoning:

Publicity-privacy of space:

- Administrative
- Commercial
- Residential
- Educational
- Parking
- Mixed use

- Private
- Semiprivate
- Semipublic
- Public

Morphology: Main avenue

The main street is Independence Avenue, the second main core of the city. The avenue existed as a main street even before the appearance of the avenue in its current form.

The avenue was planned before the outbreak of World War II and implemented after it.

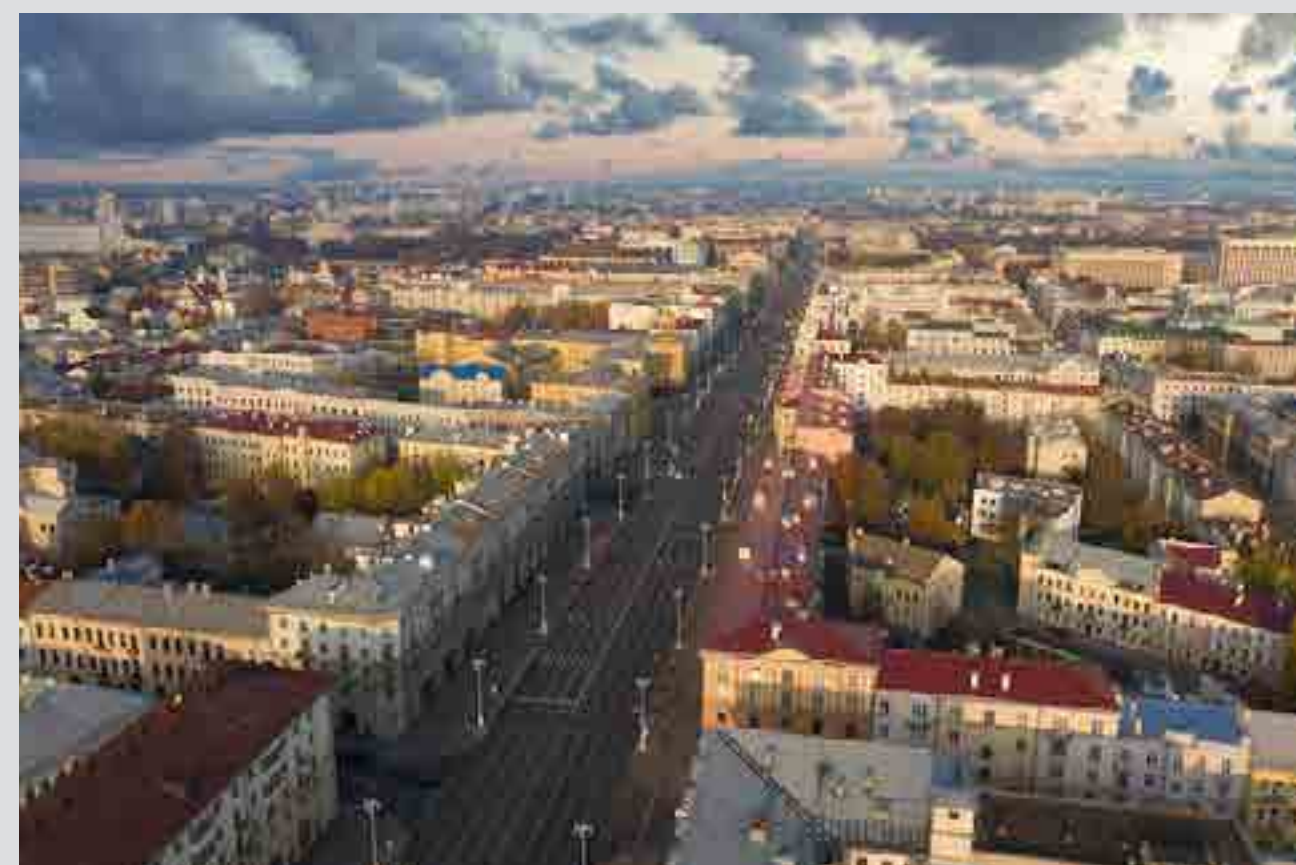
The beginning of the avenue in the illustration was built during the Stalinist rule of the USSR and included Stalinist architecture.

Functional zoning:

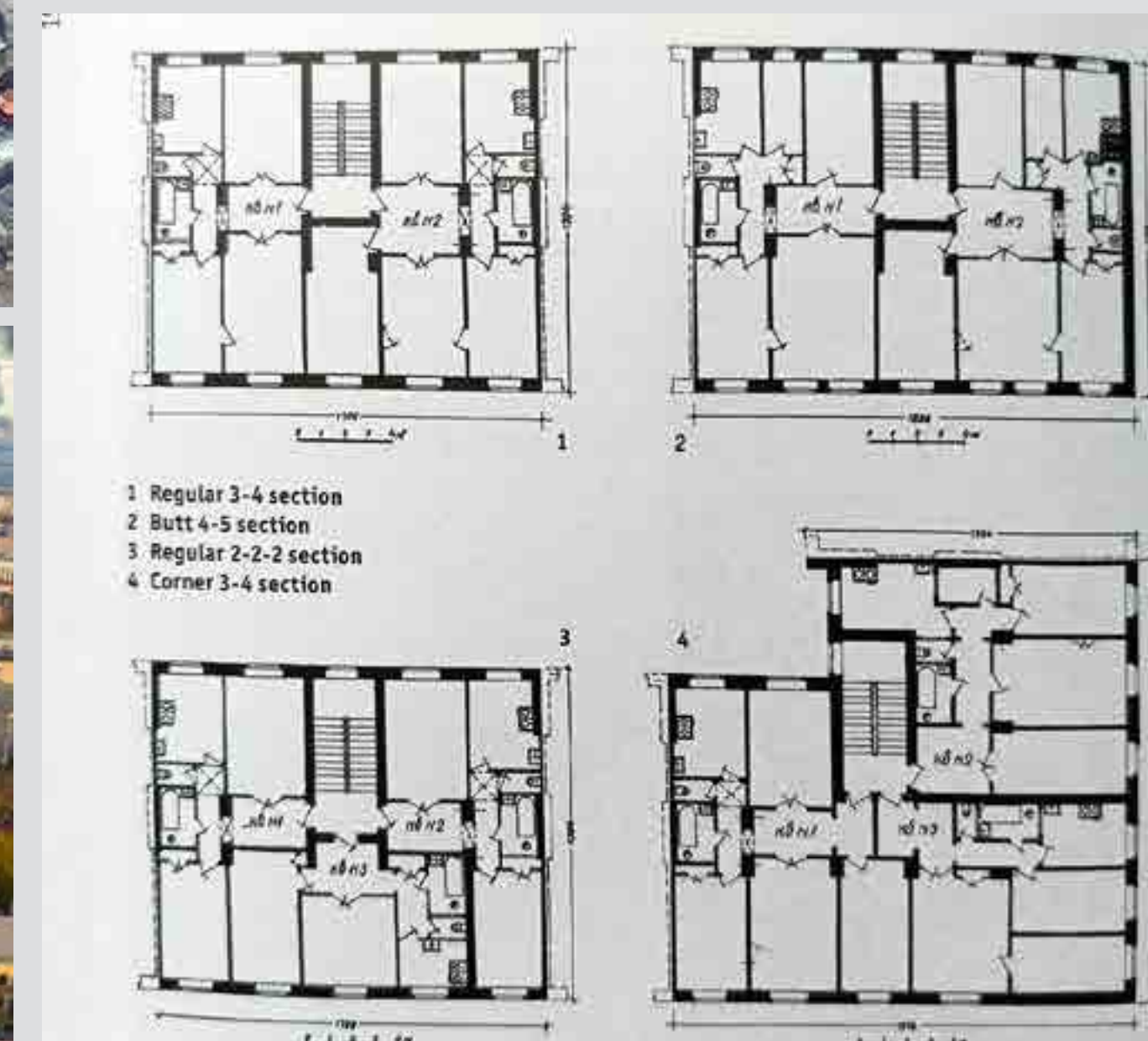
- Administrative
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<https://realt.by/news/article/15867/>



Architectural Guide Minsk, DOM publisher, 2018



Public-private space scheme



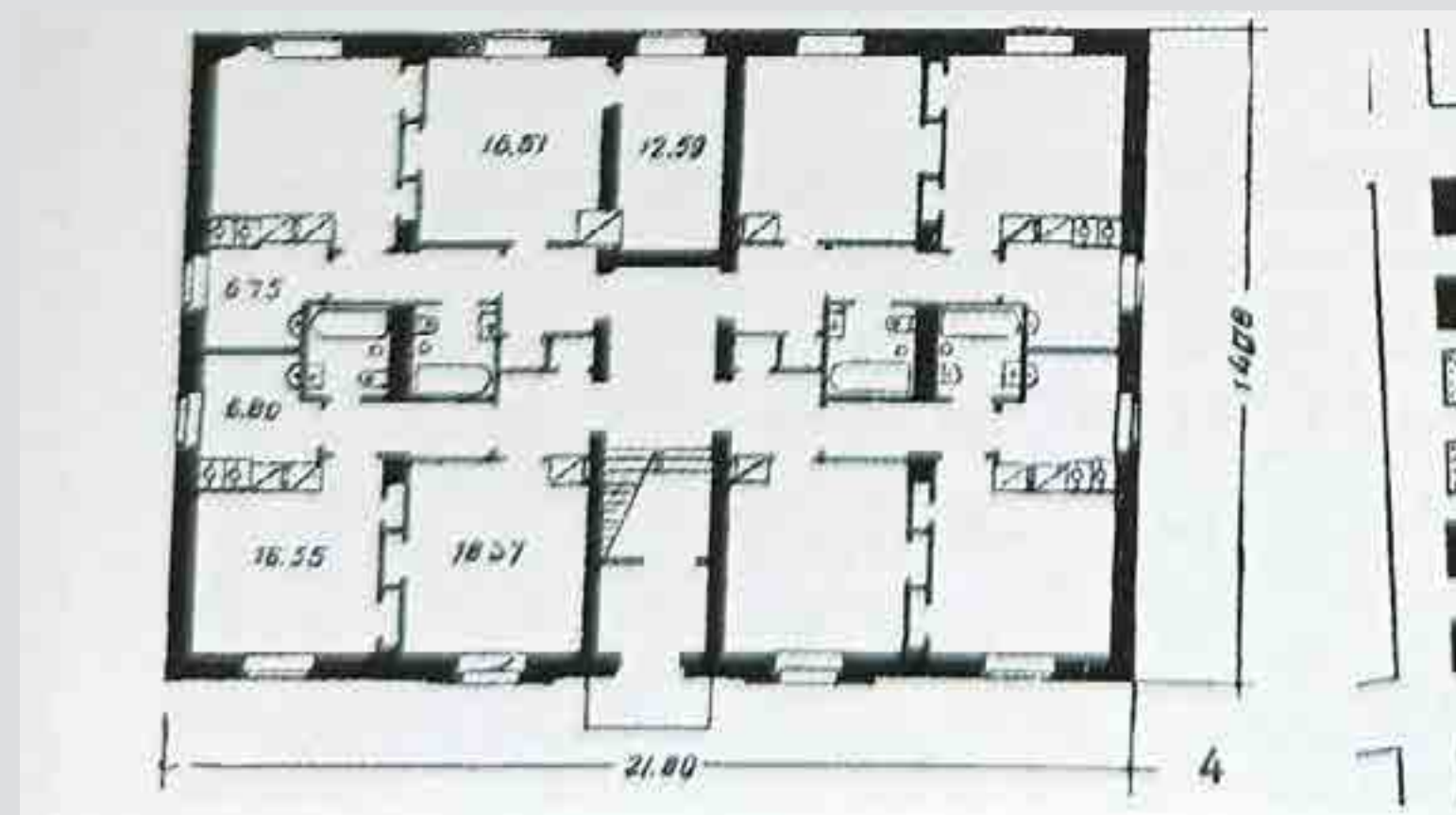
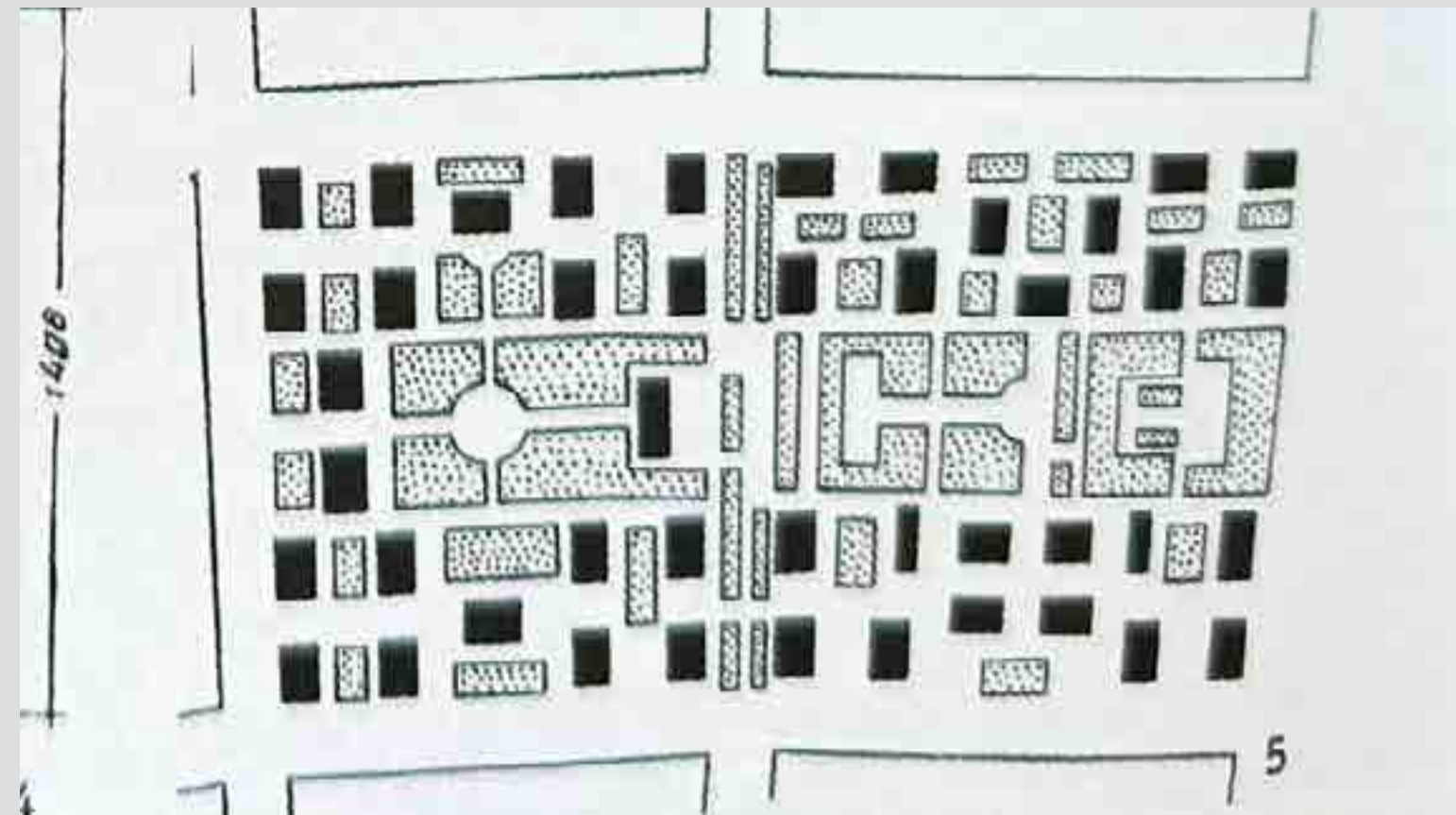
Functional zoning scheme

Morphology: Post-war buildings

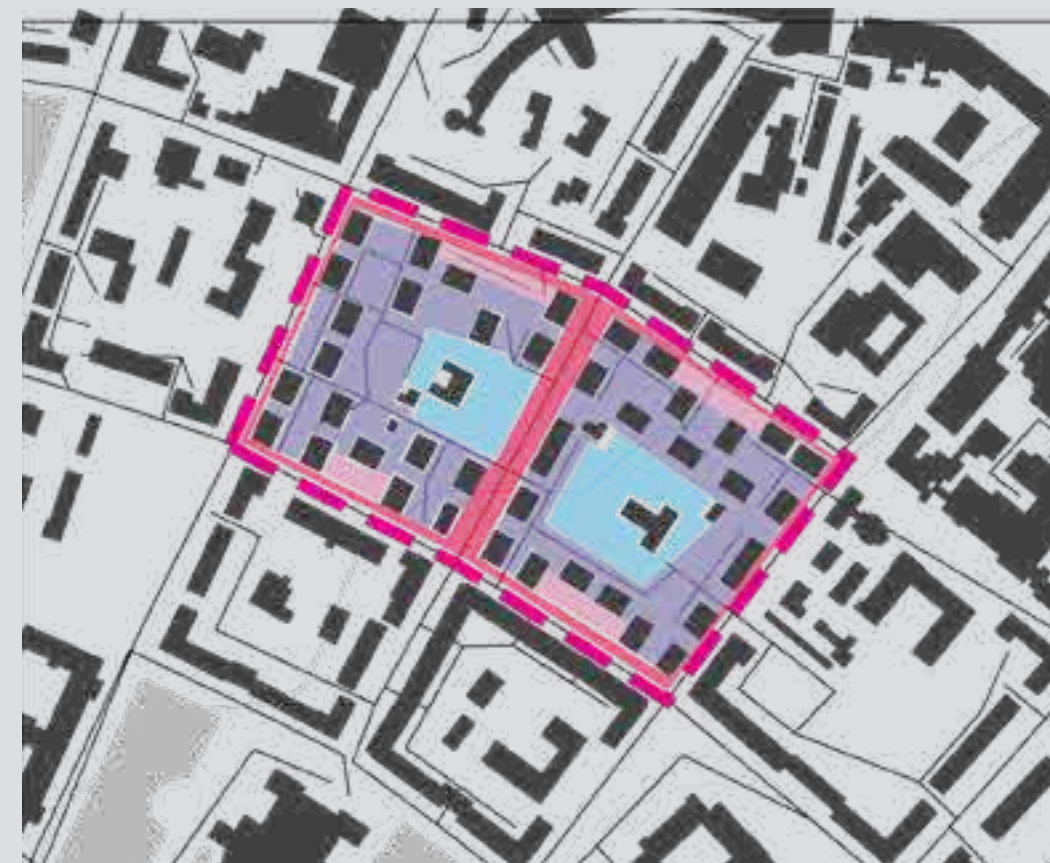
One of the first examples of the beginning of mass construction. The Osmolovka district was built in 1946-1949.

Two-story buildings consisted of a series - 1-205-5, 1-205-6, 1-205-7.

Now the district is considered inefficient and low-rise. The district does not have a protected heritage status and a number of new development projects have been developed for the district. But the revitalization and PR of the district have postponed the demolition of the district for now.



Architectural Guide Minsk, DOM publisher, 2018



Public-private space scheme



Functional zoning scheme



Functional zoning:

- Administrative
- Commercial
- Residential
- Educational
- Parking
- Mixed use

Publicity-privacy of space:

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Morphology: Private development

There were many villages around the old city of Minsk. It is believed that **over the past 140 years, Minsk has absorbed about 200 villages.** Some of them have been transformed into modern neighborhoods. But some of them still look like areas with private housing.

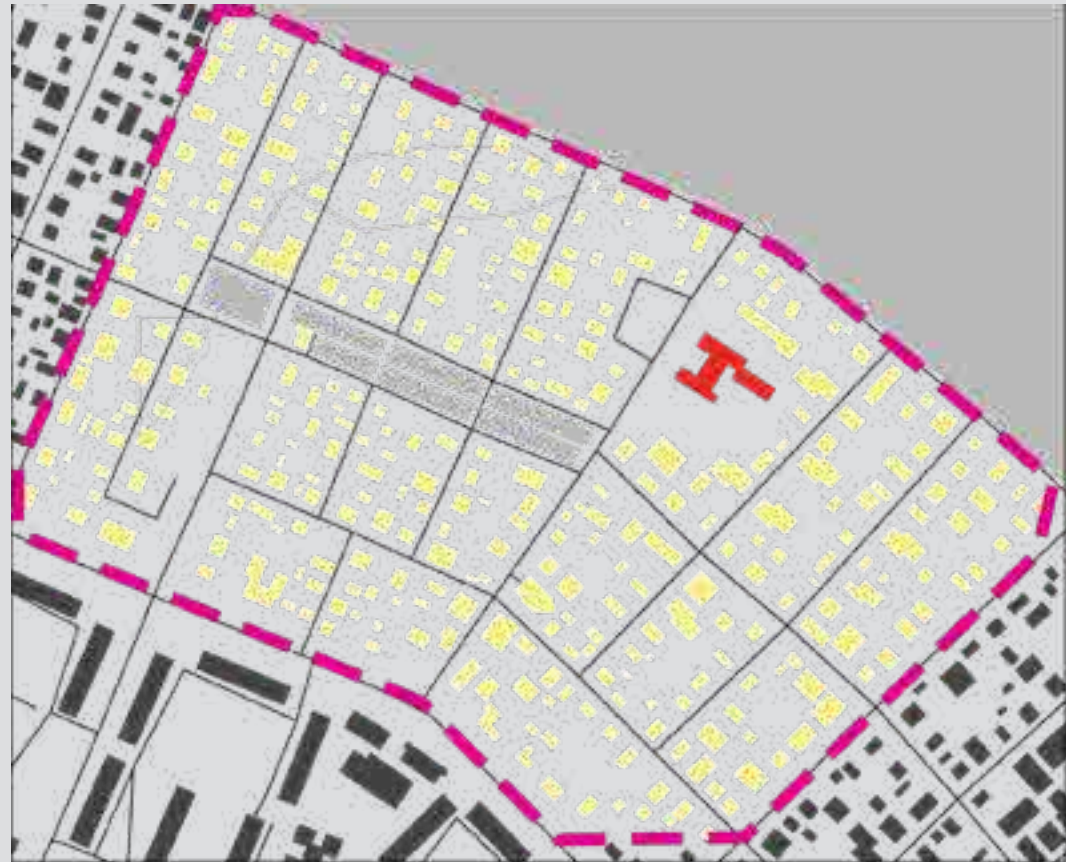
Today, there is an aggressive fight against private housing. And this area in particular is now partially destroyed from the west and built up with multi-story buildings.



<https://yandex.com>



Public-private space scheme



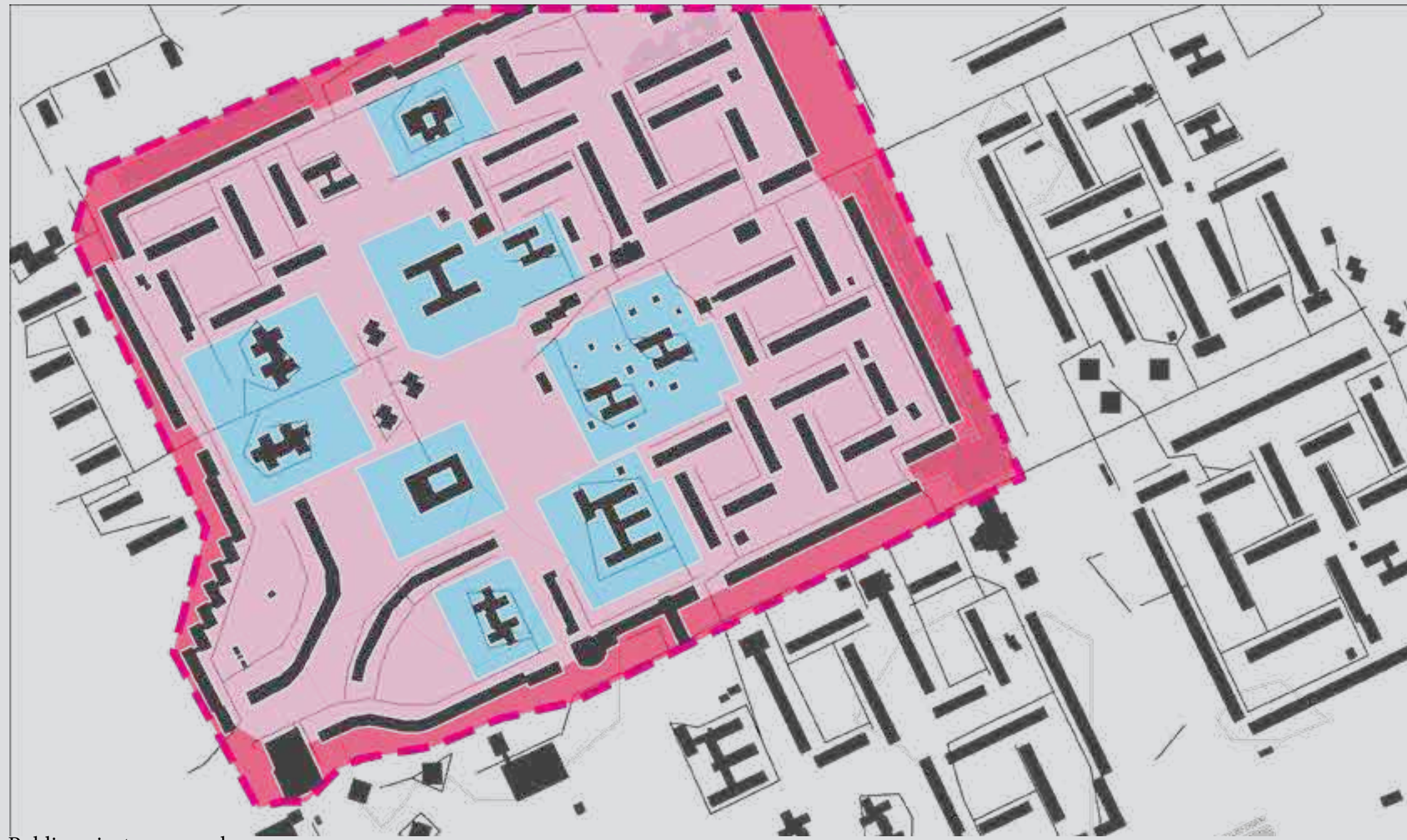
Functional zoning scheme



Functional zoning: Publicity-privacy of space:

- | | |
|------------------|---------------|
| ● Administrative | ● Private |
| ● Commercial | ● Semiprivate |
| ● Residential | ● Semipublic |
| ● Educational | ● Public |
| ● Parking | |
| ● Mixed use | |

Morphology: Soviet microdistrict



Public-private space scheme



Functional zoning scheme

Functional zoning:

- Administrative
- Commercial
- Residential
- Educational
- Parking
- Mixed use

Publicity-privacy of space:

- Private
- Semiprivate
- Semipublic
- Public

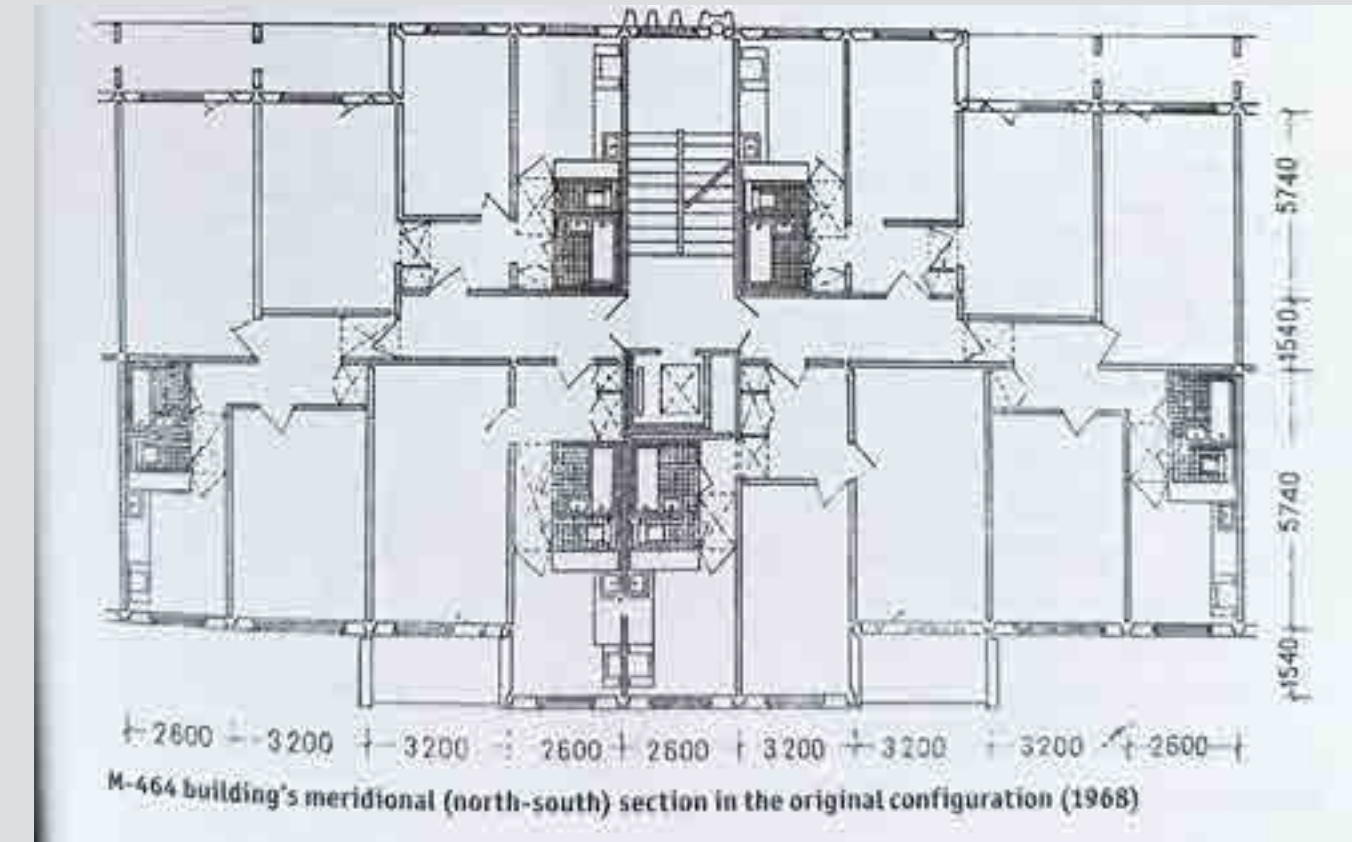


M-464 of the early latitudinal (east-west) configuration in Serebryanka (1976)

Part of one of the microdistricts (Serabryanka) built in Minsk during the period of rapid growth of the city. Mass construction became the basis of the construction and rapid expansion of the city.

Microdistricts were built according to the principle - houses in a park, where there was actually only residential buildings and educational facilities (schools and kindergartens). Workplaces - most often factories, were located separately or adjacent to residential areas.

Mass construction of Serebryanka was carried out by DSK-1 and most often used the M-464U1 and M-90 series of houses.



M-464 building's meridional (north-south) section in the original configuration (1968)

Morphology: Modern microdistrict

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Construction began in 1968 and was commissioned on January 15, 1976.

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The reason for the construction is the insufficient supply of water to the city, including for **industrial needs.**

Functional zoning:

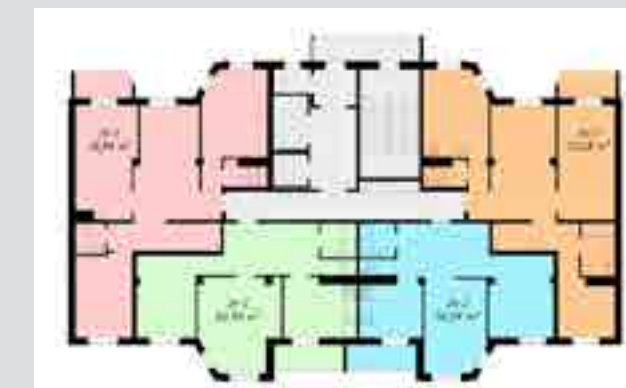
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<https://yandex.com>



<https://mapid.by>



Public-private space scheme



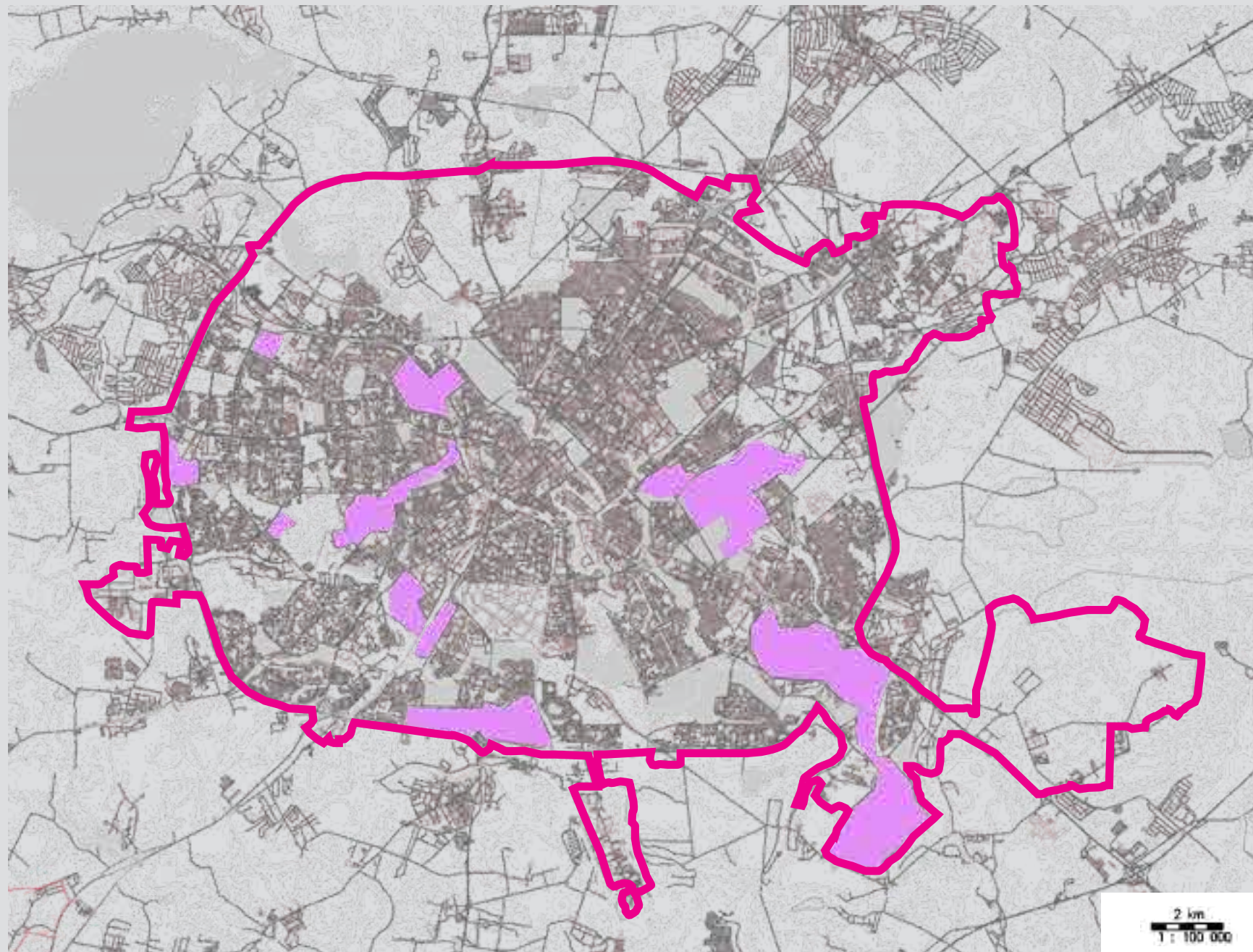
Functional zoning scheme

Morphology: Simulation

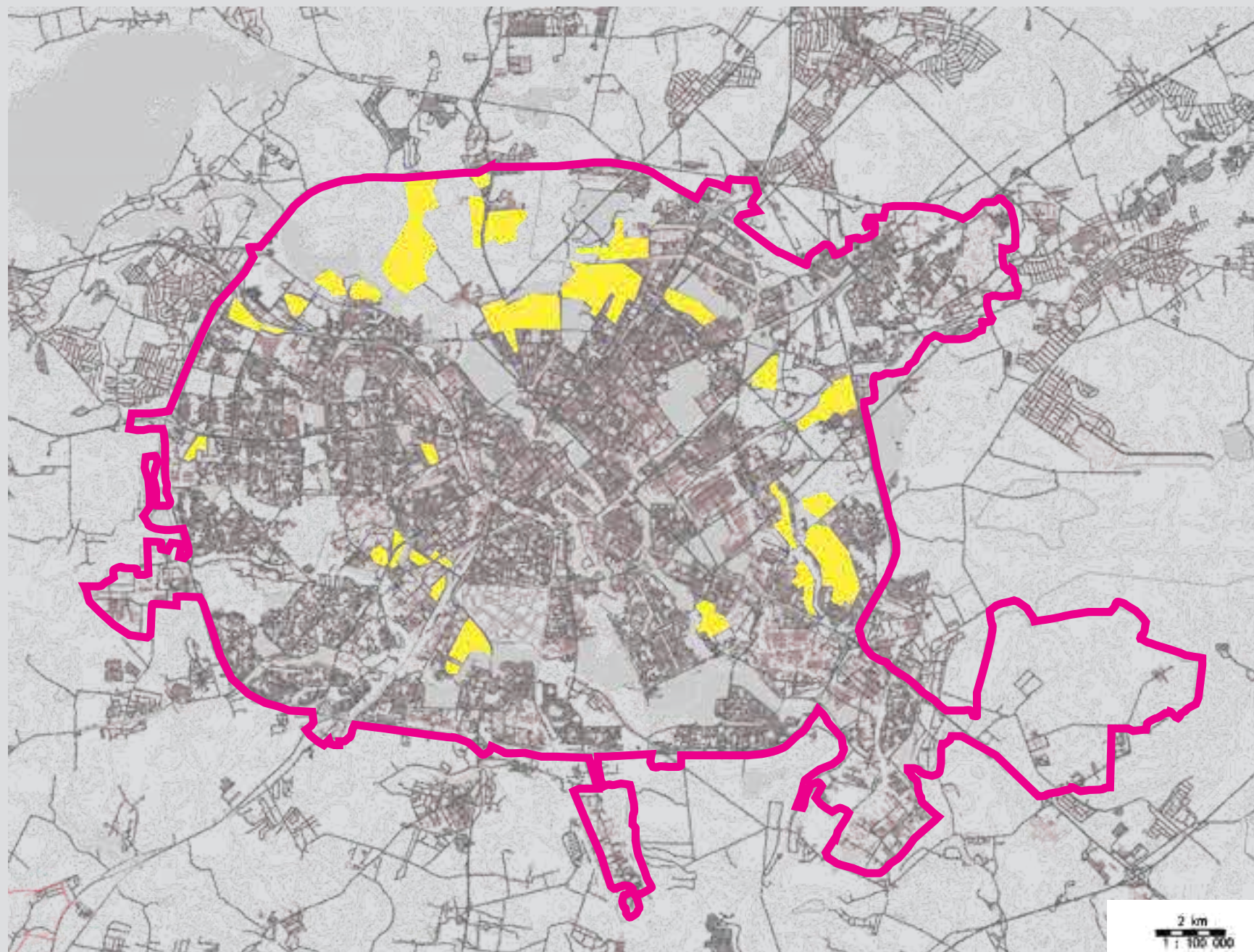
Today, 5 methods of creating new development are practiced in Minsk:

1. Microdistrict on green areas
2. Development of brownfields
3. Demolition of private low-rise houses and development with separate multi-storey buildings
4. Densification of existing development with separate houses
5. Development of districts on the outskirts of the city that use urban infrastructure

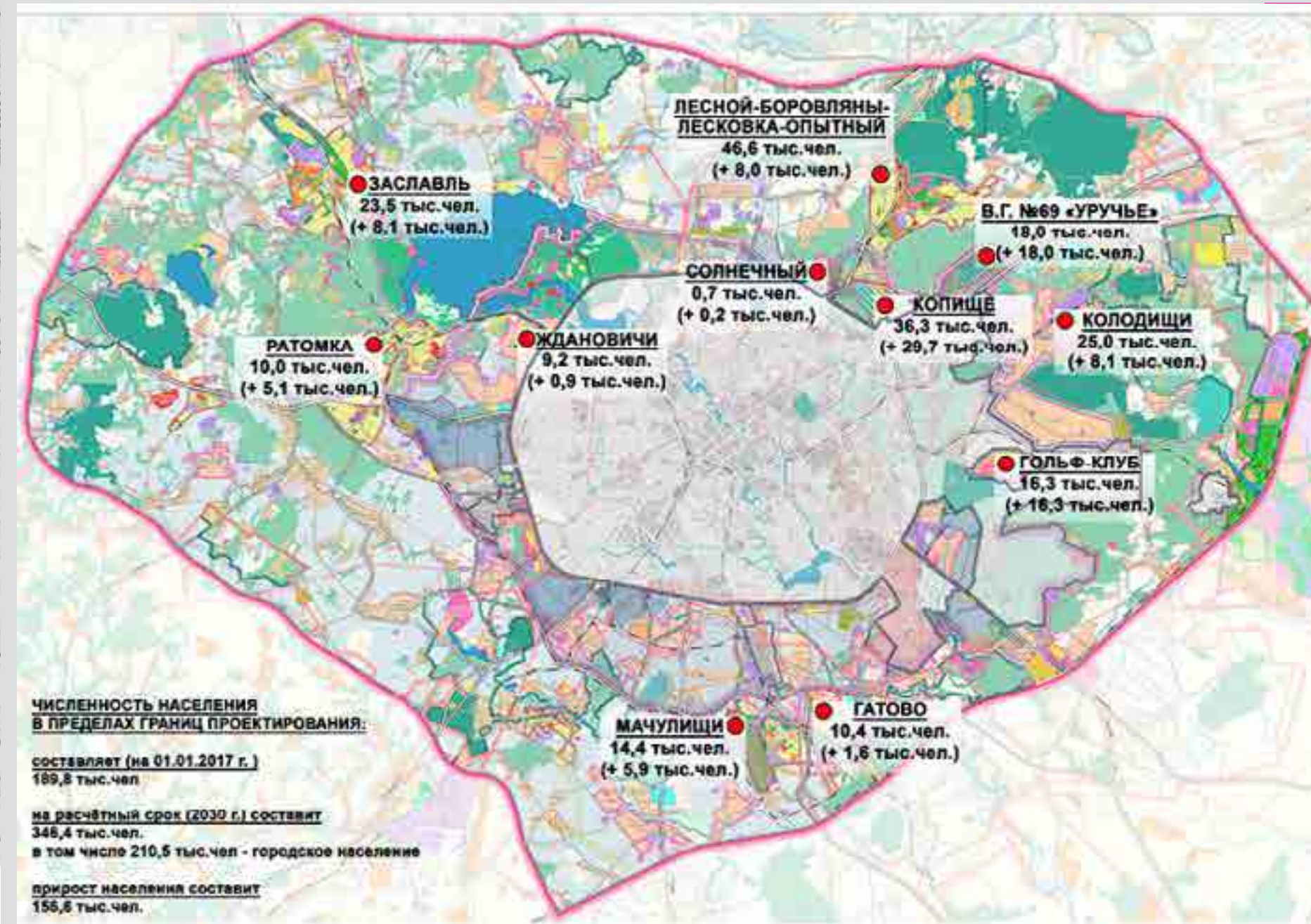
For development, panel houses from the MAPID factory are most often used.



Industrial areas



Areas with private homes



Growth of territories around Minsk

<https://kolodischi.by/news/4954>



Densification of existing development

Step 3

- Characterize the overall urban structure (compact/ multi-core-fragmented) of the selected town and the role of landscape/ green open spaces relative to periods of history.



https://ru.wikipedia.org/wiki/%D0%A4%D0%B0%D0%B9%D0%BB:Minsk,_Belarus,_Serebryanka.jpg

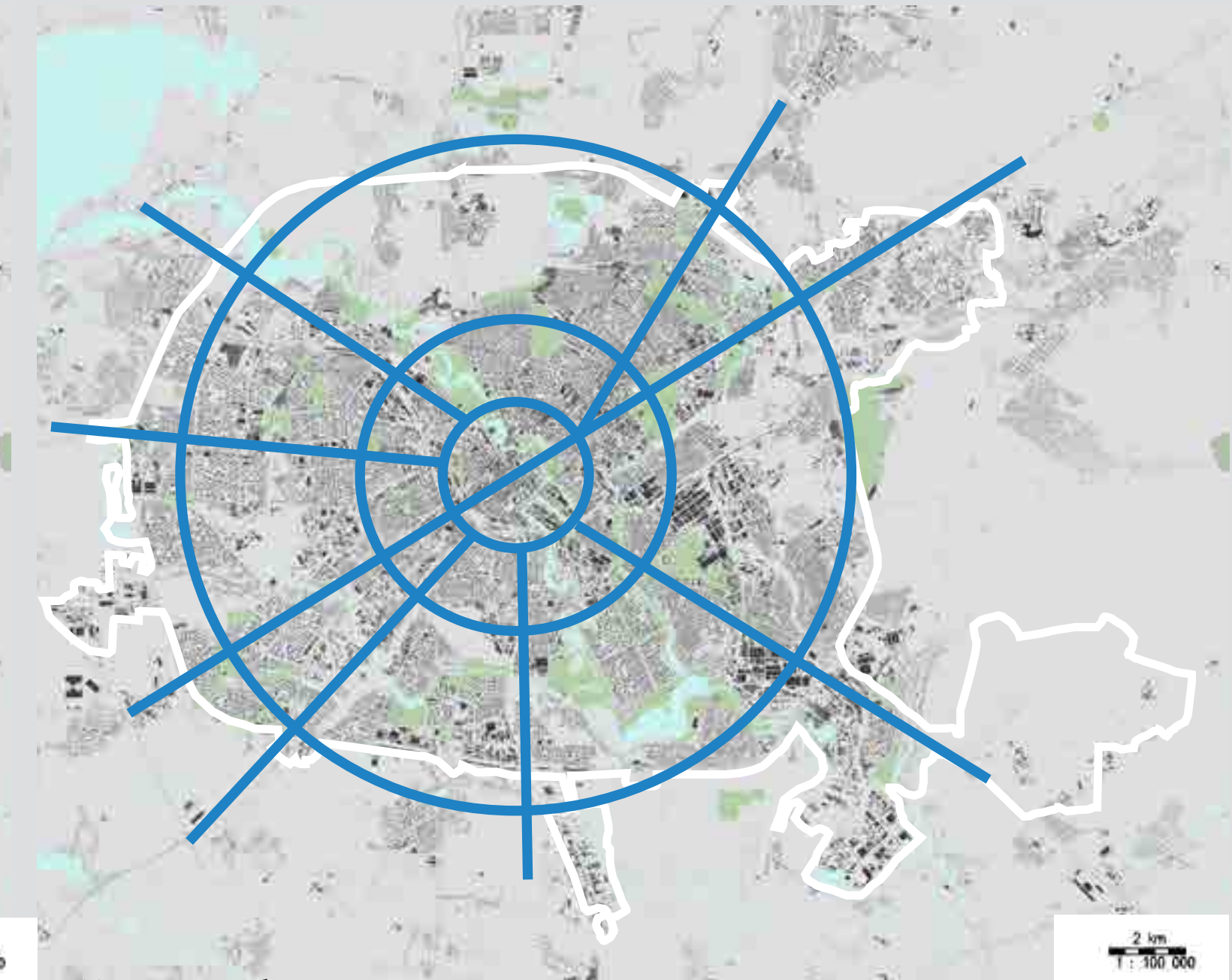
Scheme of the urban structure



Historical cores

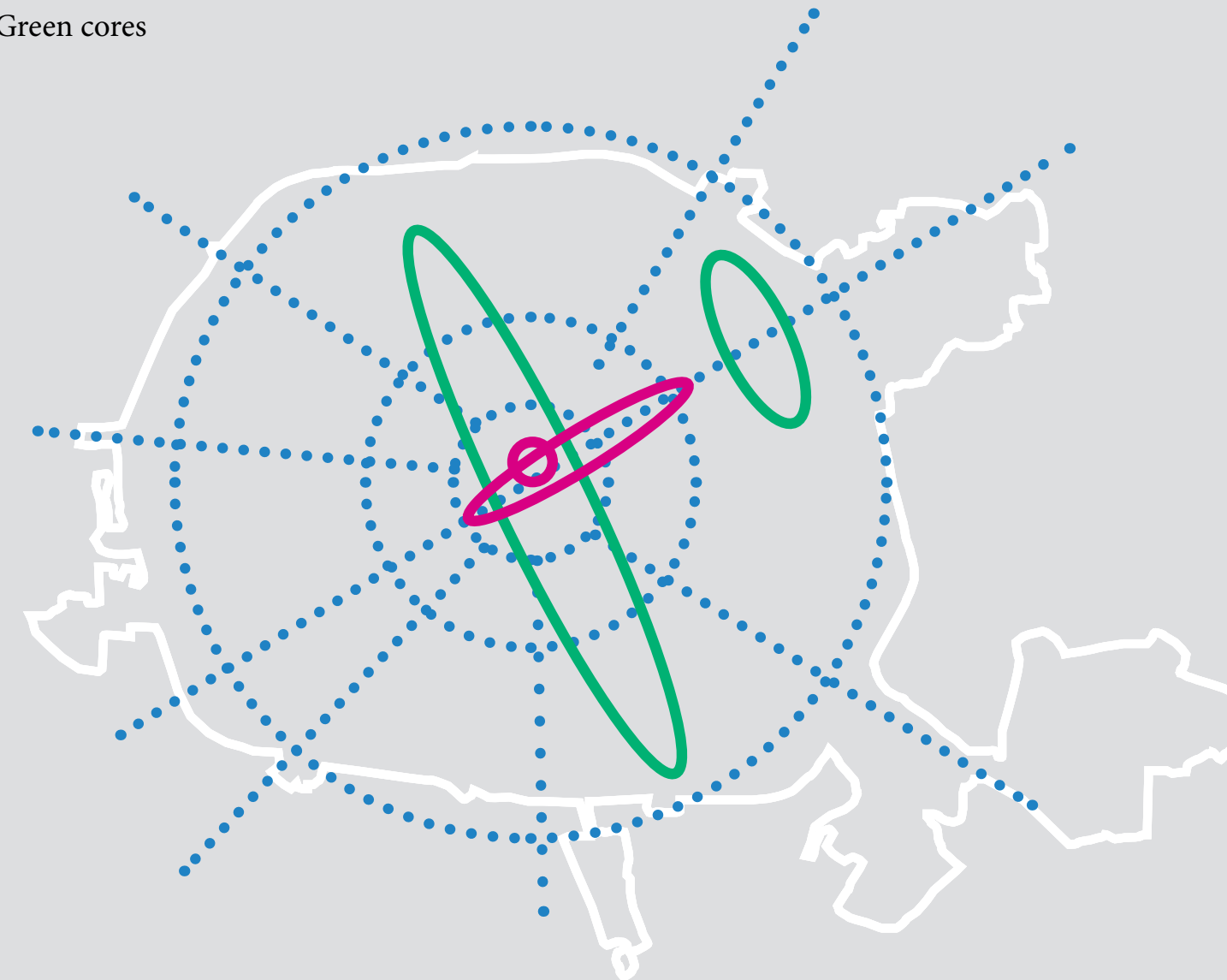


Green cores



Transport corridors

- The city has 2 cores, which are historically formed and partially intersect each other.
- The city has a main and auxiliary green axis, which help to hold the frame of the city.
- The city is formed by a radial ring system of streets, on which the transport frame is held.



- The city has a core that is formed at the intersection of the historical and green frameworks.
- The transport system is a good connector for cars, but transport corridors do not connect the urban fabric, but make it more fragmented.

Step 4

Identify and localize

- Lack of urban changes (because of preservation rules or no interest of the land- market)
- Massive urban changes (replacement of structural conditions in built formarrangement)
- Small spatial urban changes (Integration of extensions/ elevations into built formarrangement)



Map of the chronology of the city's development

The development of the city can be fully characterized as - Massive urban changes (replacement of structural conditions in built form arrangement).

The city as it is today developed after the Second World War. The city was built up in large blocks (microdistricts) using mass-produced prefabricated elements.

It is possible to trace how the form of construction has changed over the decades, but the approach of building up in microdistricts (4-9 hectares) has been preserved.

Now the city is facing the challenge of how to change the approach, as large areas under the so-called microdistricts are running out.

Construction period:

- Pre-war buildings
- 1940
- 1950
- 1960
- 1970
- 1980
- 1990
- 2000
- 2010
- 2020
- Not defined

2 km
1 : 100 000

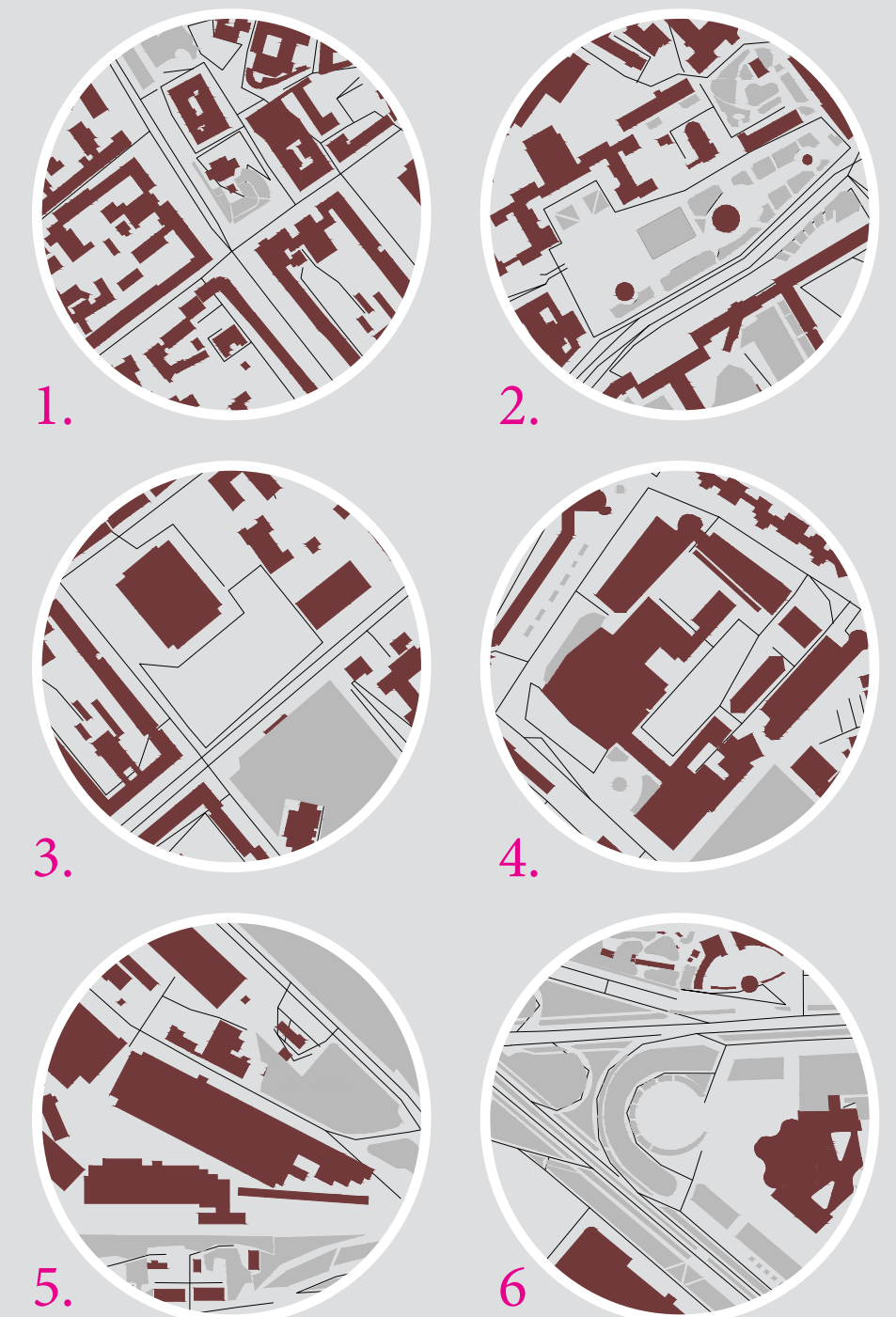
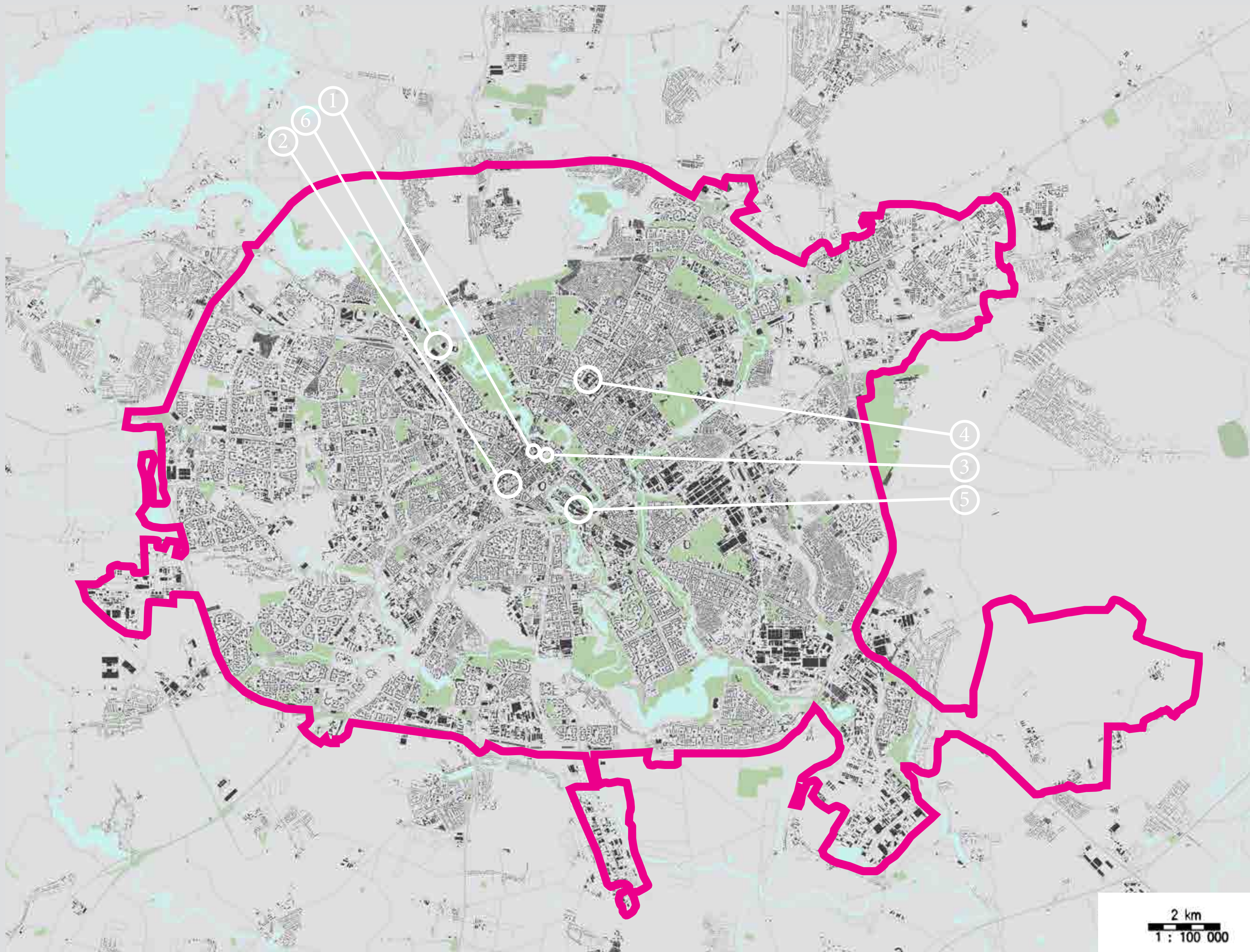
Step 5

- Identify and localize major public spaces and patterns of spatial differentiation by their integration into the surrounding urban context (from public to private)

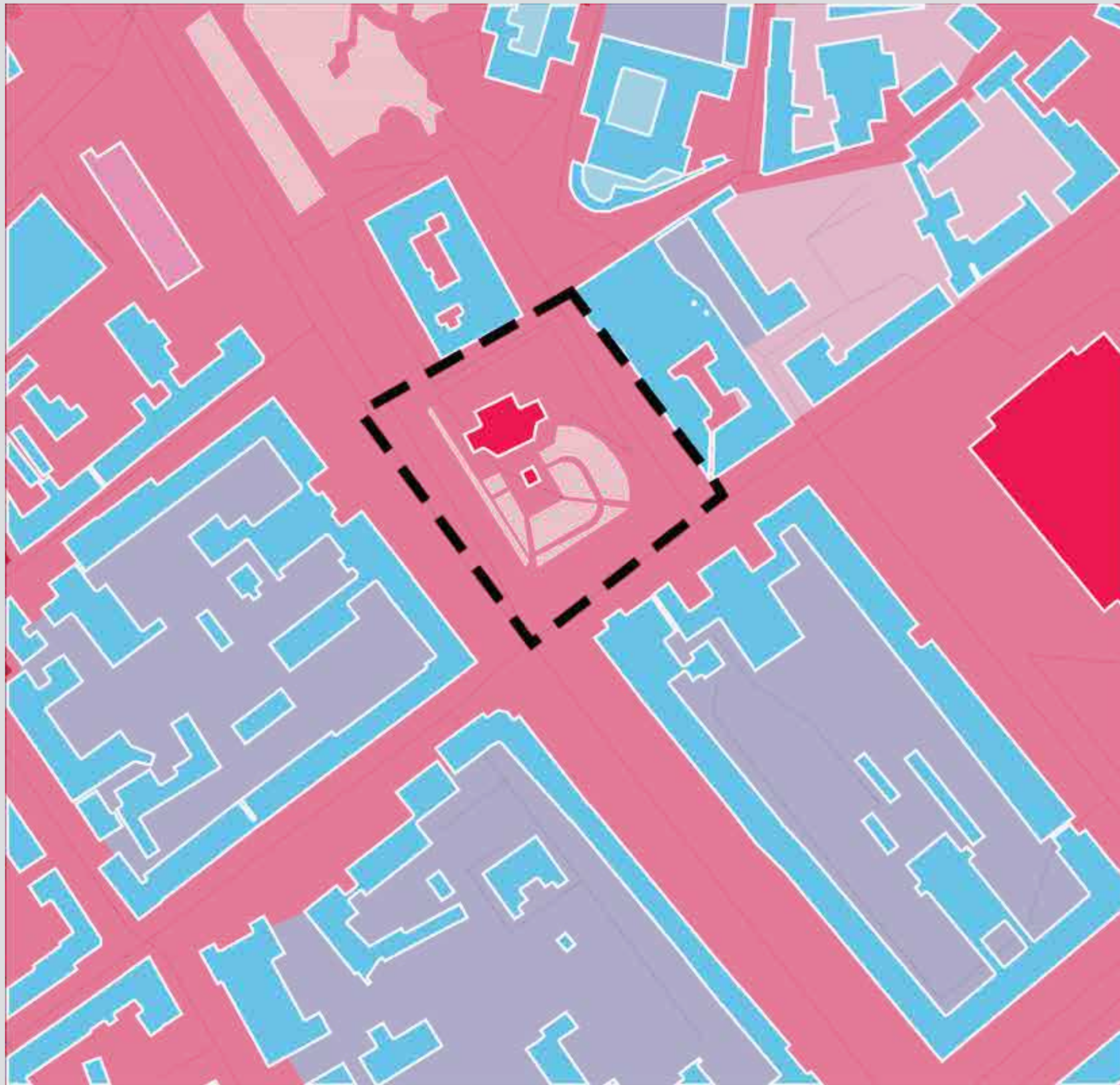


Map of main public spaces

Most public spaces in Minsk have a politicized content. Three areas were selected for further analysis - political statements (2,3,6) and 3 areas working on everyday life (1,4,5).



Public space: historic square



<https://yandex.com>

Freedom Square is the main historical square, preserved from the period of old Minsk in the same dimensions.

The square continues to function as a public space, and has a very compact shape surrounded by buildings.



<https://yandex.com>



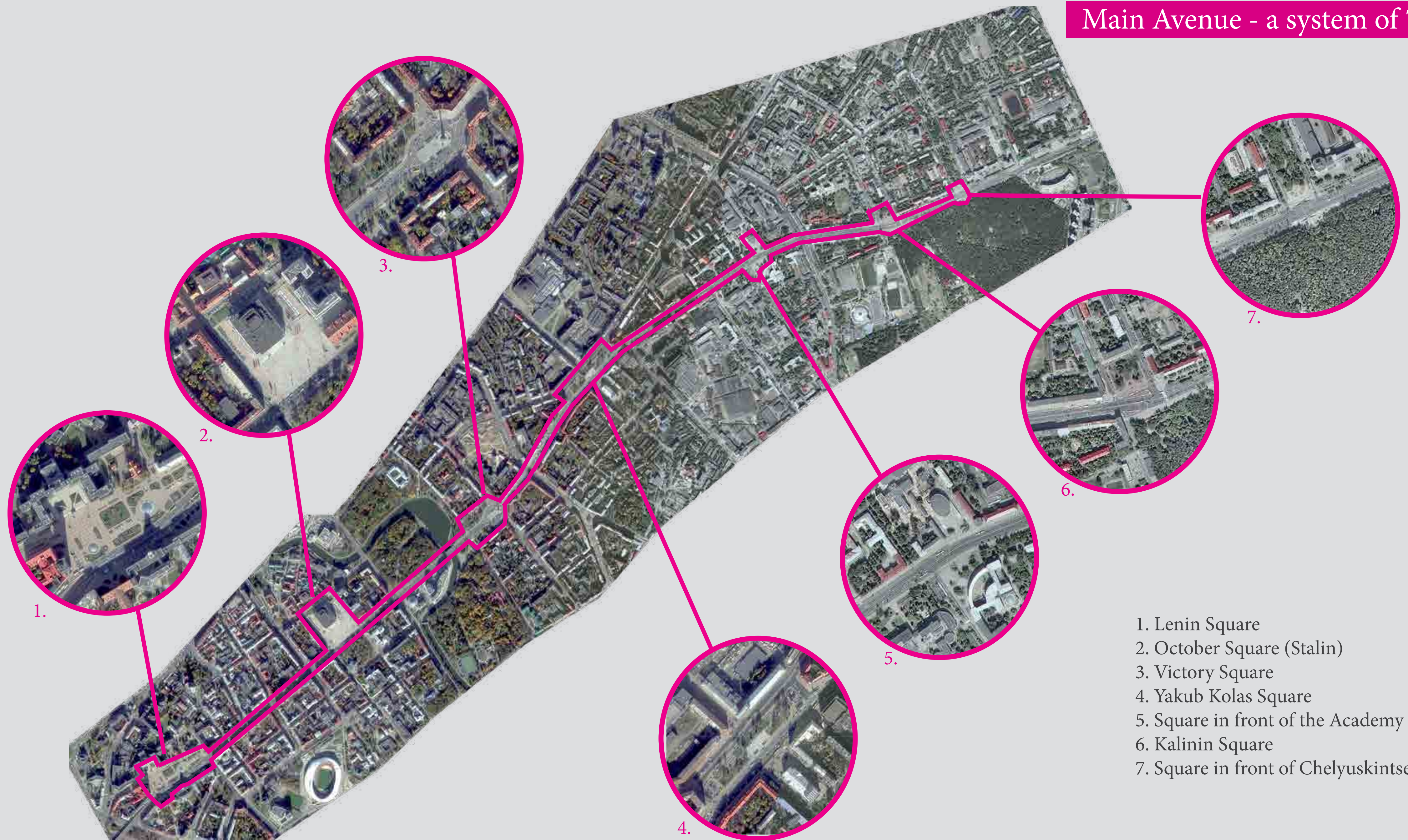
<https://realt.onliner.by/2015/09/25/revolution>

Publicity-privacy of space:

- Private
- Semiprivate
- Semipublic
- Public



Main Avenue - a system of 7 squares



1. Lenin Square
2. October Square (Stalin)
3. Victory Square
4. Yakub Kolas Square
5. Square in front of the Academy of Sciences
6. Kalinin Square
7. Square in front of Chelyuskintsev Park

Public space: square near the government building

Publicity-privacy of space:

- Private
- Semiprivate
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- Public



<https://yandex.com>



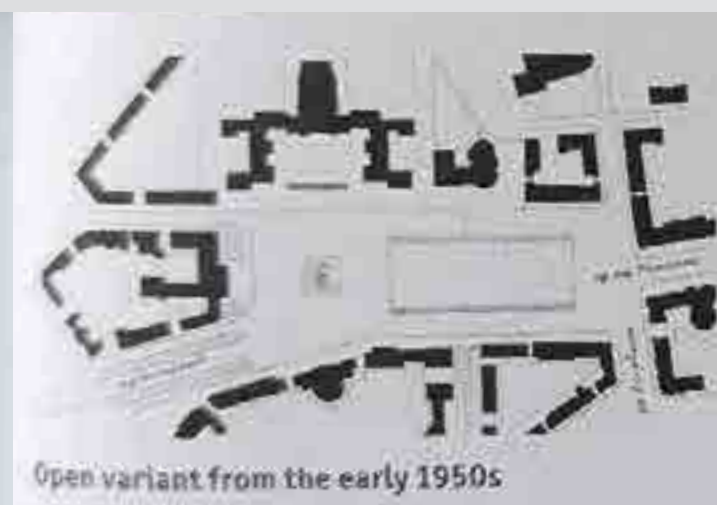
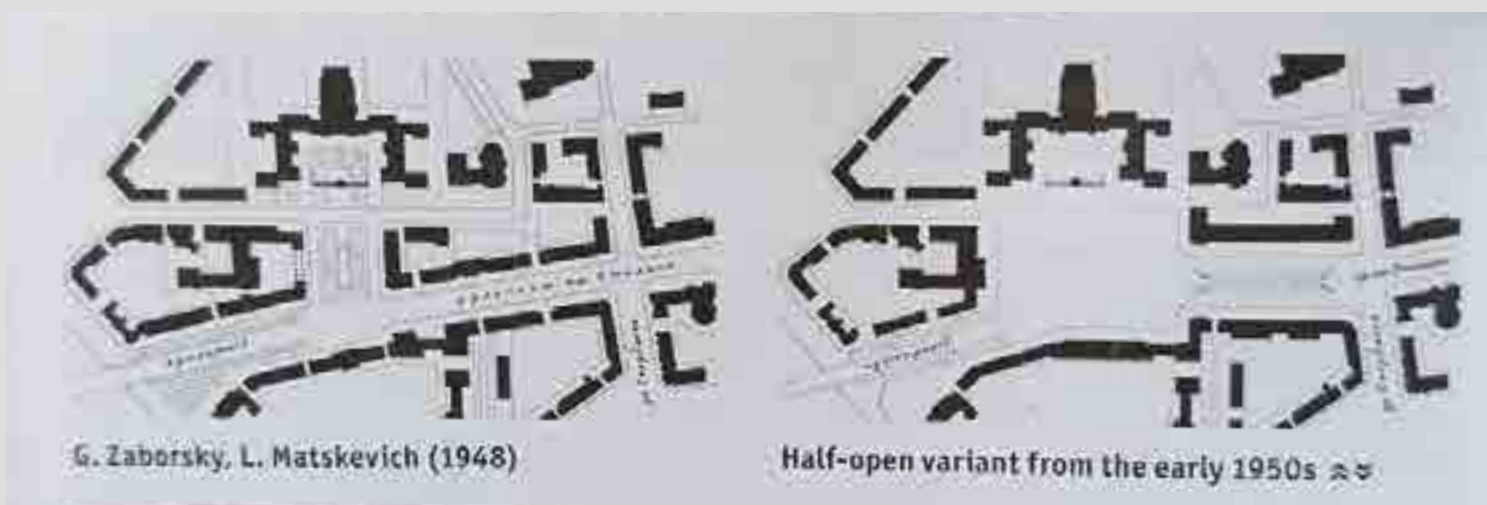
<https://bdantd.by/%D1%81%D1%82%D0%B0%D1%82%D1%8C%D1%8F-%D0%B2-%D0%B3%D0%>

The square in its current form began to be built before the Second World War - the government building and a statue of Lenin were built.

The current boundaries of the square were formed in the post-war period in the 1950s.



<https://ru.dreamstime.com>



Public space: October Square



<https://yandex.com>

The square was formed entirely in the post-war period and began its existence as Stalin Square. A monument to Stalin was built, but Stalin’s palace was not built.

The main building, the Palace of Independence, was built after Stalin’s death, and a replacement for the monument was not found.



<https://bdantd.by/%D1%81%D1%82%D0%B0%D1%82%D1%8C%D1%8F-%D0%B2-%D0%B3%D0%B0%D0%B7%D0%B5%D1%82%D0%B5-%D0%BA%D0%BE%D0%BC%D1%81%D0%BE%D0%BC%D0%BE%D0%BB%D1%8C%D1%81%D0%BA%D0%B0%D1%8F-%D0%BF%D1%80%D0%B0%D0%B2%D0%B4%D0%B0/>



https://charter97.org/ru/news/2018/11/21/313661/#google_vignette

Publicity-privacy of space:

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- Semiprivate
- Semipublic
- Public



Public space: square near the market



Publicity-privacy of space:

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- Semiprivate
- Semipublic
- Public



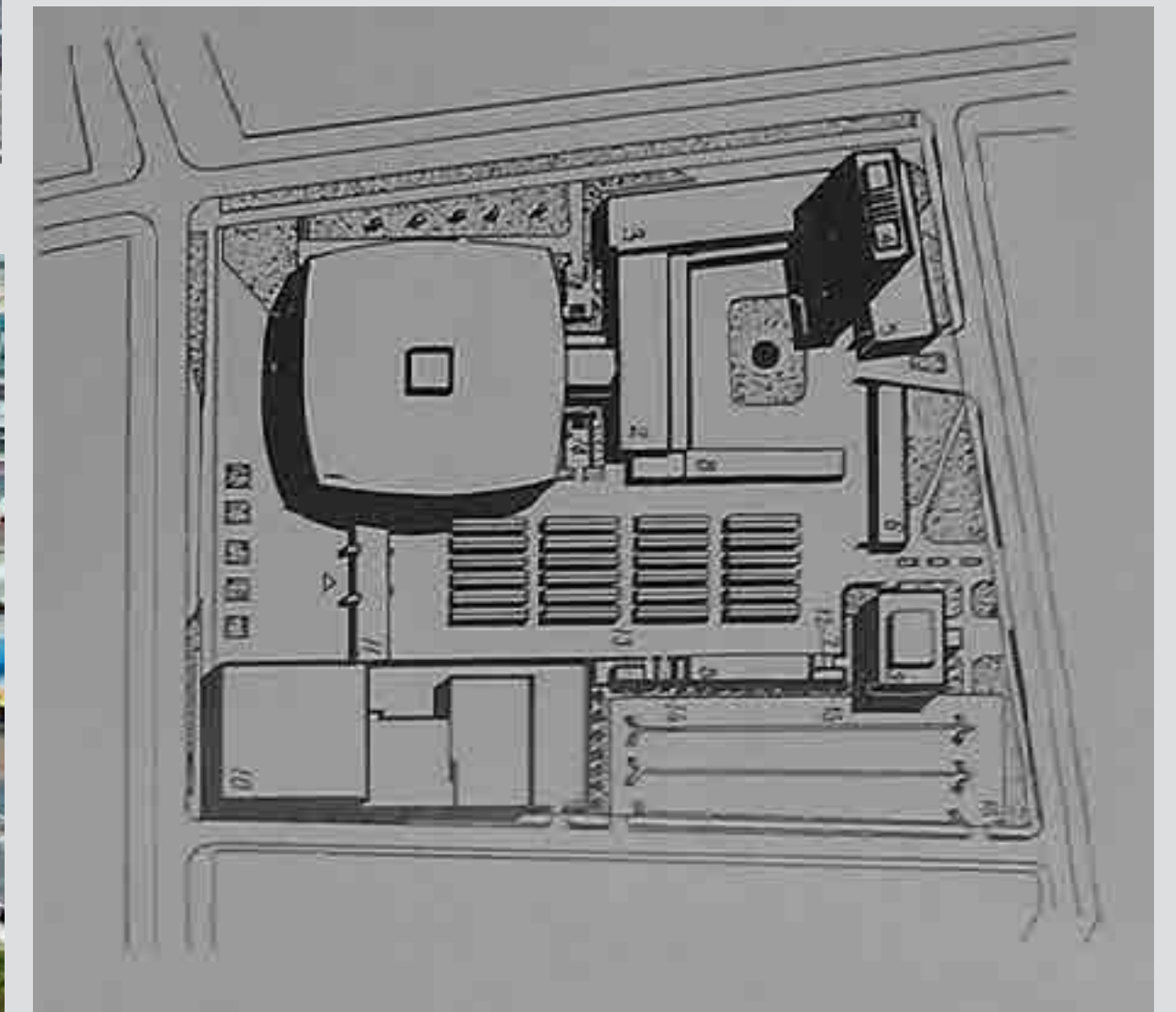
<https://yandex.com>



https://tochka.by/articles/life/lyudi_na_bolote_kak_rabochaya_okraina_stala_tsentrom_torgovli_v_minske/

The square in front of the Komarovsky market, one of the most visited and central markets in the city.

The market itself was built according to the original design, but the square has changed its appearance several times and new reconstructions are planned.



<https://realt.onliner.by/2012/05/12/komar>

Public space: industrial street



Publicity-privacy of space:

- Private
- Semiprivate
- Semipublic
- Public



<https://yandex.com>

Kastrychnitskaya Street is an industrial street with three large factories, which due to the economic situation began to rent out premises to private entrepreneurs.

Since the street is located far from major transits, political institutions, and housing, this made it possible to form an informal center and a number of public spaces along the street.

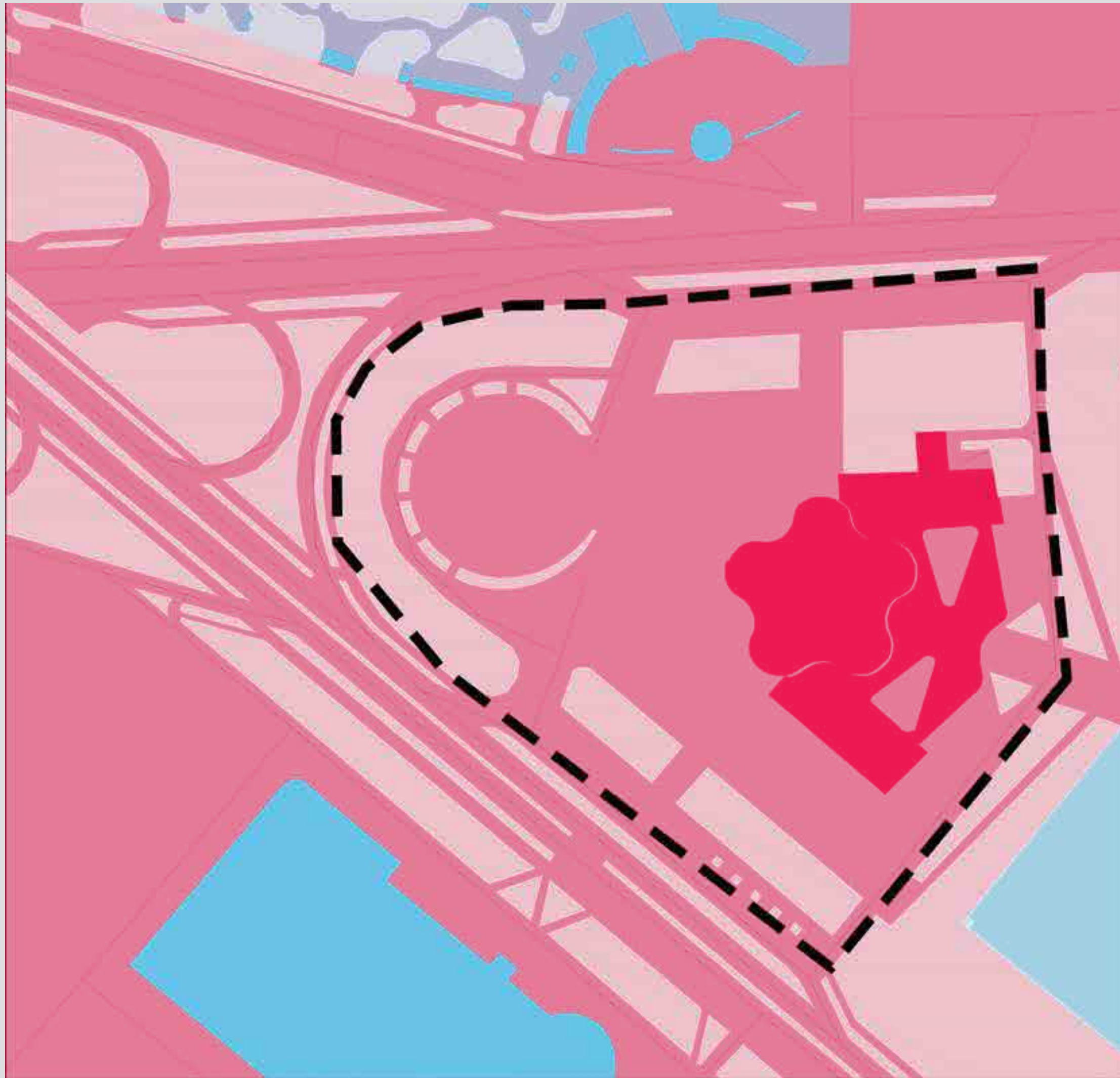


<https://34travel.me/post/chto-delat-na-vulica-brasil>



<https://findit.city/belarus/minsk/leisure/tourism/sights/oktyabrskaya-ulica/photos>

Public space: flag square



<https://yandex.com>

Styoga Square was built in 2014. The goal is to perpetuate the symbol of power and the regime.

The square was intended for parades and other official ceremonies next to the presidential palace built later.



https://www.minsk.nemiga.info/ploschad_gosudarstvennogo_flaga.htm



<https://belta.by/society/view/ploschadi-gosudarstvennogo-flaga-respubliki-belarus-ispolnjaetsja-10-let-574892-2023/>

Publicity-privacy of space:

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Step 6

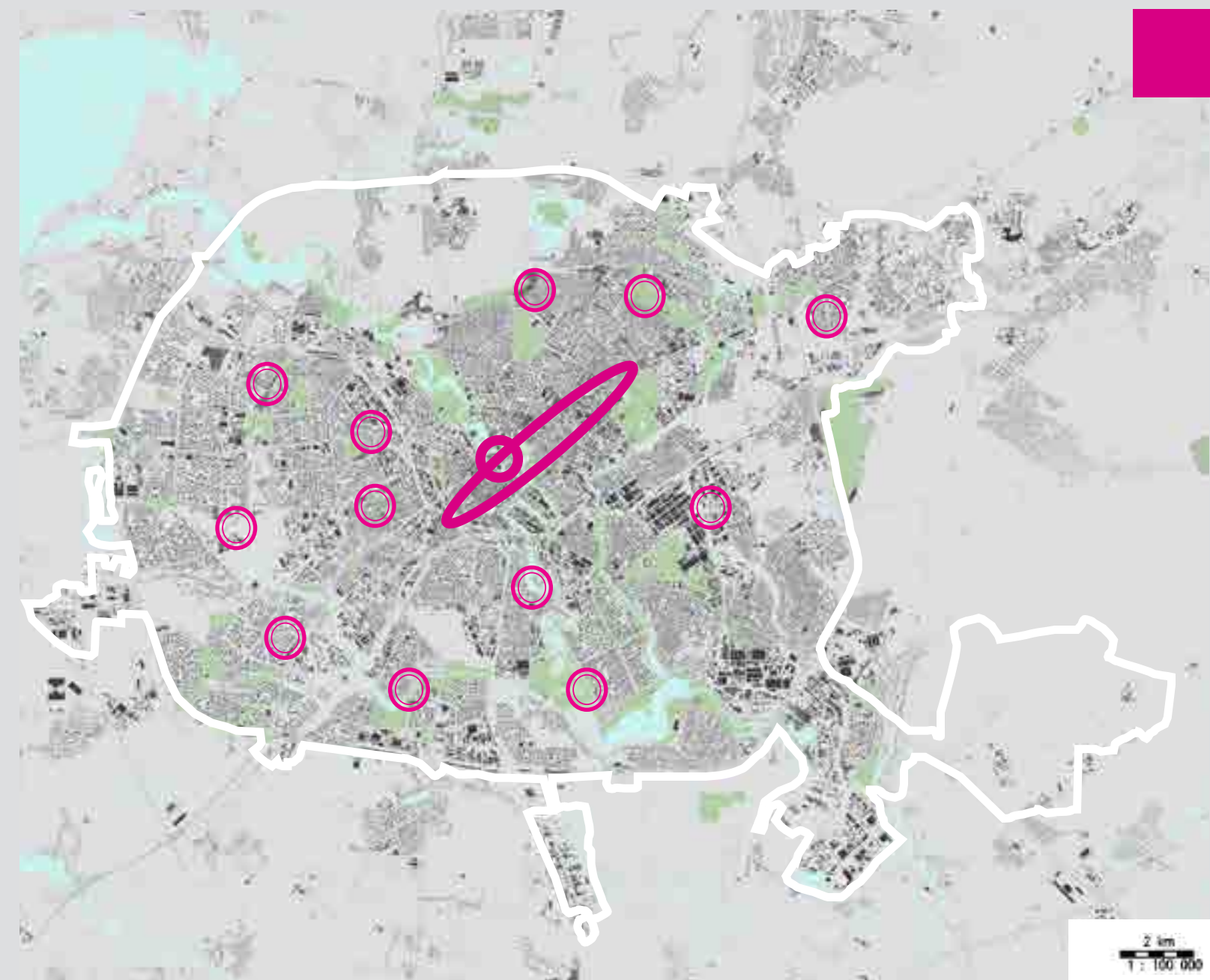
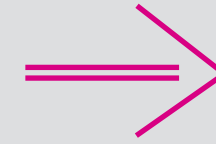
- Define existing structural opportunities for local urban transformation over time, which are appropriate to counterbalance the tendencies of the land –market. The opportunities and derived perspectives can be taken from the selected characteristic morphology, the patterns of urban structure growth and the overall urban landscape.



Centers and green corridors



Historical cores



New centers

Today the city has 2 cores that intersect with each other. There is an expression among people living outside the central areas “Going to the city”. To make the spaces more sustainable, it is necessary to create new centers that are monocentric, diverse and polycentric with a connected structure.



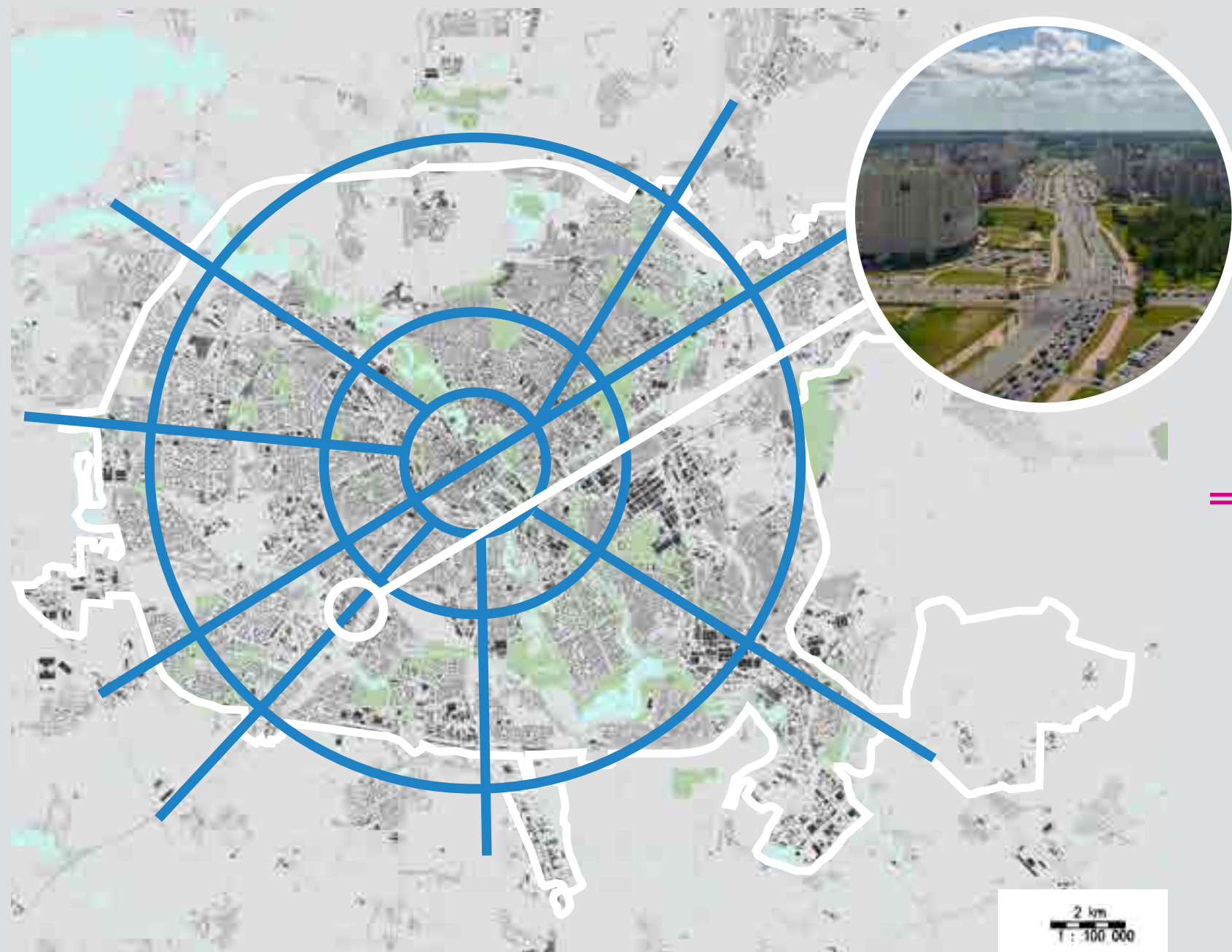
Green cores



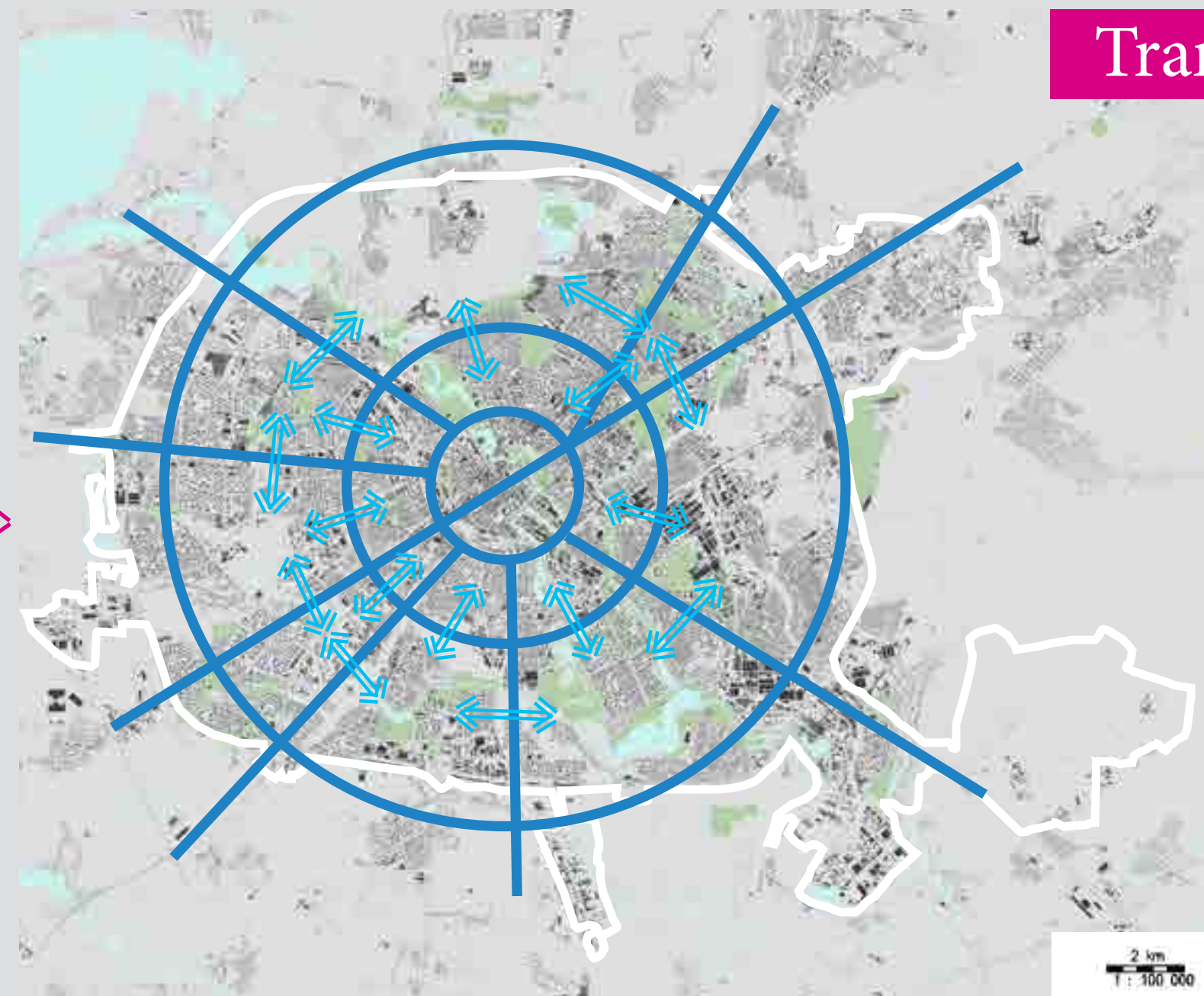
New green corridors

The city has only partially implemented the green belt concept. However, there is potential for a connected system of green corridors that would improve the permeability of the urban fabric.

Transport corridors and development



Transport corridors

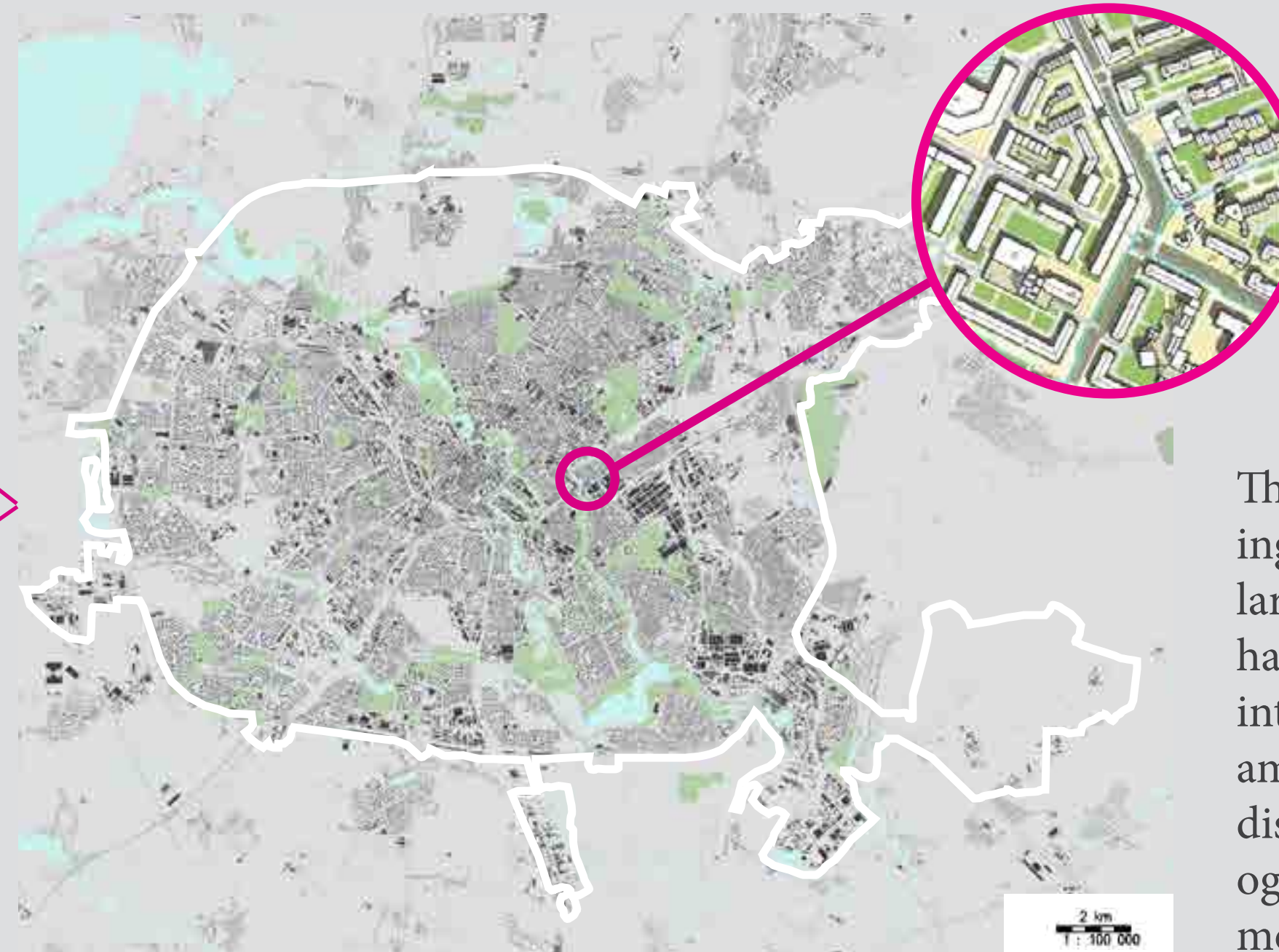


New connectivity

The city has a system of transport rings connecting the city via private cars. Transport rings and rays perform a rather disjointing function for the urban fabric. Each ray separates the urban fabric by approximately 100 meters between houses. The connectivity of the urban fabric is a necessity for the functioning of public spaces.

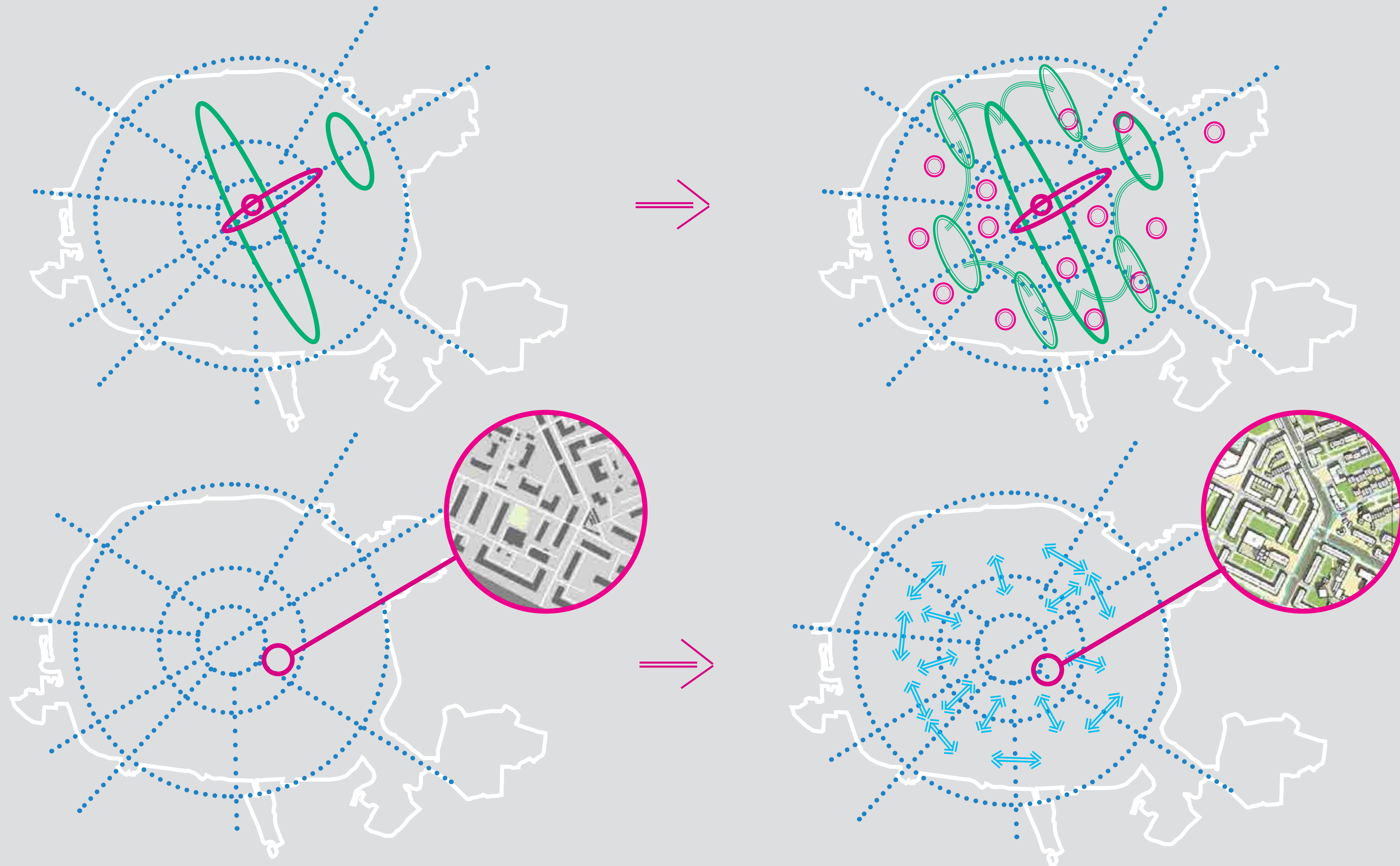


Building



New development

The city was built up mostly by mass housing projects, so the districts look rather similar. And the spatial organization of the district has a flowing character without clear division into separate spaces. At the same time, a large amount of space has been preserved in the old districts, which can be used to add new typologies of development, making the urban space more diverse.



Thank
You



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