



for Architectural and Urban  
Development Solutions  
for Gorskaya Territory  
Saint Petersburg



# INVITATION TO PARTICIPATE



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# ABOUT COMPETITION



# ABOUT COMPETITION

## Format of the competition

- Open
- International
- Two-stage

## Object of the competition

Former construction site of the Gorskaya flood protection complex with an area of about 126.8 hectares.

## Purpose of the competition

Selection of the most optimal architectural and urban planning solutions for Gorskaya territory in Saint Petersburg, reflecting a promising development model taking into account the identified potential of the territory.

## Competition participants

Professional organizations in the field of territorial development and urban planning, architecture, design, development of concepts for the development of public spaces, master planning, operating in Russia and capable of attracting specialists in the field of economics, finance, content programming to the team.

## Jury

Representatives of public authorities of Saint Petersburg, Megaline LLC, Russian and international experts in the field of design and architecture, as well as specialists in the field of finance and economics.

## Finalists

According to the results of the first stage, 3 finalists will be selected based on a portfolio and an essay.

## Winner

According to the results of the final meeting of the Expert Council, the author of the best Competition Proposal will be determined.

## Prize fund

Three finalists that will develop the final Competition Proposals receive a remuneration in the amount of RUB 2,000,000 each, including all taxes and fees.

Following the results of the jury meeting and in accordance with the distribution of prize places, an additional payment will be made in the following amounts, including all taxes and fees:

- 1st place — RUB 4,000,000
- 2nd place — RUB 3,000,000
- 3rd place — RUB 2,000,000

# COMPETITION TERRITORY



## LOCATION OF THE COMPETITION TERRITORY

The competition area is located in the north-western part of the city, in the Primorsky district, on the coast of the Neva Bay (the Lisy Nos Village municipality). From the north, the territory is bounded by the Ring Road, from the east - by the territory of urban forests adjacent to the Primorskoye Highway, and individual residential buildings in the village of Lisy Nos, from the south and west - by the water area of the Gulf of Finland. The total area of the consideration area is 159 ha (including a part of the water area separated by a breakwater), the proposed design area is 126.8 ha.

# 159 HA

area of the territory under consideration

# 126.8 HA

area of the competition area



### Legend:

-  Borders of St. Petersburg
-  Borders of districts
-  Territory of study
-  Competition territory



Fig. 1. Layout of the competition area

# CHARACTERISTICS OF THE COMPETITION TERRITORY



Fig. 2. Competition territory

The competition area is a former construction site "Gorskaya", formed in 1984 as part of the city's flood protection complex. Lakhten concrete plant, Gorskaya port station with a technical fleet base and other facilities, including an electrical substation, were previously located within the boundaries of the site. The southern part of the territory is heavily swampy and crossed by ponds. Currently, a part of the eastern section (8.5 ha) is leased by Tretiy Park JSC, a section of the coastline (2.4 ha) is leased by the stevedoring company Trust for Mechanization of Construction Works JSC (TMCW).

## Master Plan

According to the law of Saint Petersburg "On the Master Plan of Saint Petersburg", adopted by the Legislative Assembly of Saint Petersburg dated 19.12.2018<sup>1</sup>, three functional zones are allocated in the boundaries of the competitive territory: public-business (change of function from production use), recreational (green spaces performing special functions), engineering and transport infrastructure and external transport facilities (Fig. 3).

## Rules of Land Use and Development

According to the Rules of Land Use and Development approved by the Decree of the Government of Saint Petersburg No. 524 dated 21.06.2016<sup>2</sup>, the competition territory refers to a multifunctional public and business zone of public and business development facilities and water transport facilities with the inclusion of engineering infrastructure facilities. The territory boundaries also include sections of the territorial zone of engineering and transport infrastructure facilities, utilities and recreational areas (Fig. 4).



### Legend:

- Competition territory borders
- Living sector
- Zone of all types of public and business buildings and water transport facilities with the inclusion of engineering infrastructure facilities
- Zone of green spaces with special functions
- Urban forest zone
- Zone of engineering and transport infrastructure and external transport facilities
- Zone of urban highways and roads with the inclusion of engineering infrastructure facilities



### Legend:

- Competition territory borders
- Multifunctional public business zone of the objects of public and business development and water transport facilities with the inclusion of engineering infrastructure facilities
- Zone of recreation - green spaces that perform special functions on the territory of sanitary protection zones, with the placement of objects of the main types of permitted use of adjacent territorial zones
- Area of the city's road network
- Zone of engineering and transport infrastructure facilities, communal facilities, sanitary cleaning facilities with the inclusion of warehouse and production facilities of the 4th and 5th hazard classes

<sup>1</sup> <https://portal.kgainfo.spb.ru/Genplan/>.

<sup>2</sup> <https://docs.cntd.ru/document/456007157>.



## Land relations

There are 15 land plots within the boundaries of the competition territory, five of which are not registered in the cadastral register (Table 1).

**Table 1. List of cadastral plots within the boundaries of the competition territory**

No.	Cadastral number of land plot	Area, ha
1	78:34:0004444:1141	24.58
2	78:34:0004444:3	8.14
3	78:34:0004444:1138	25.96
4	78:34:0004444:1140	2.22
5	78:34:0004444:1139	7.82
6	78:34:0004444:1104	3.09
7	78:34:0000000:8789	36.56
8	The plot is not registered in the cadastre	7.1
9	The plot is not registered in the cadastre	3.37
10	The plot is not registered in the cadastre	1.5
11	78:34:0004444:1133	0.6
12	78:34:0000000:8768	0.5
13	78:34:0004444:1	2.7
14	The plot is not registered in the cadastre	2.3
15	The plot is not registered in the cadastre	0.4
<b>Total:</b>		<b>126.84</b>



**Legend:**

- Competition territory borders
- Borders of cadastral plots

## Restrictions and special conditions for the use of the territory

The competition area is subject to restrictions on the water protection zone of the water body, the coastal protection zone of the water body, the sanitary protection zone of the Gulf of Finland, the flood zone, and the fish protection zone. In the north-eastern part, there are restrictions on the security zone of utilities (Fig. 6).

According to the Master Plan,<sup>3</sup> height construction restrictions apply to the territory. The height regulation for the territory is 40 m, which is the maximum allowable building height.<sup>4</sup> Deviations from the maximum parameters are not provided.

The town-planning regulations of the territorial zone provide for the following main types of permitted use of the public and business development zone: conducting scientific research, business management, hotel services, providing indoor sports, water sports, tourist services, placement of trade facilities, shops, service garages, berths for small vessels. The conditionally permitted uses include the placement of warehouses.

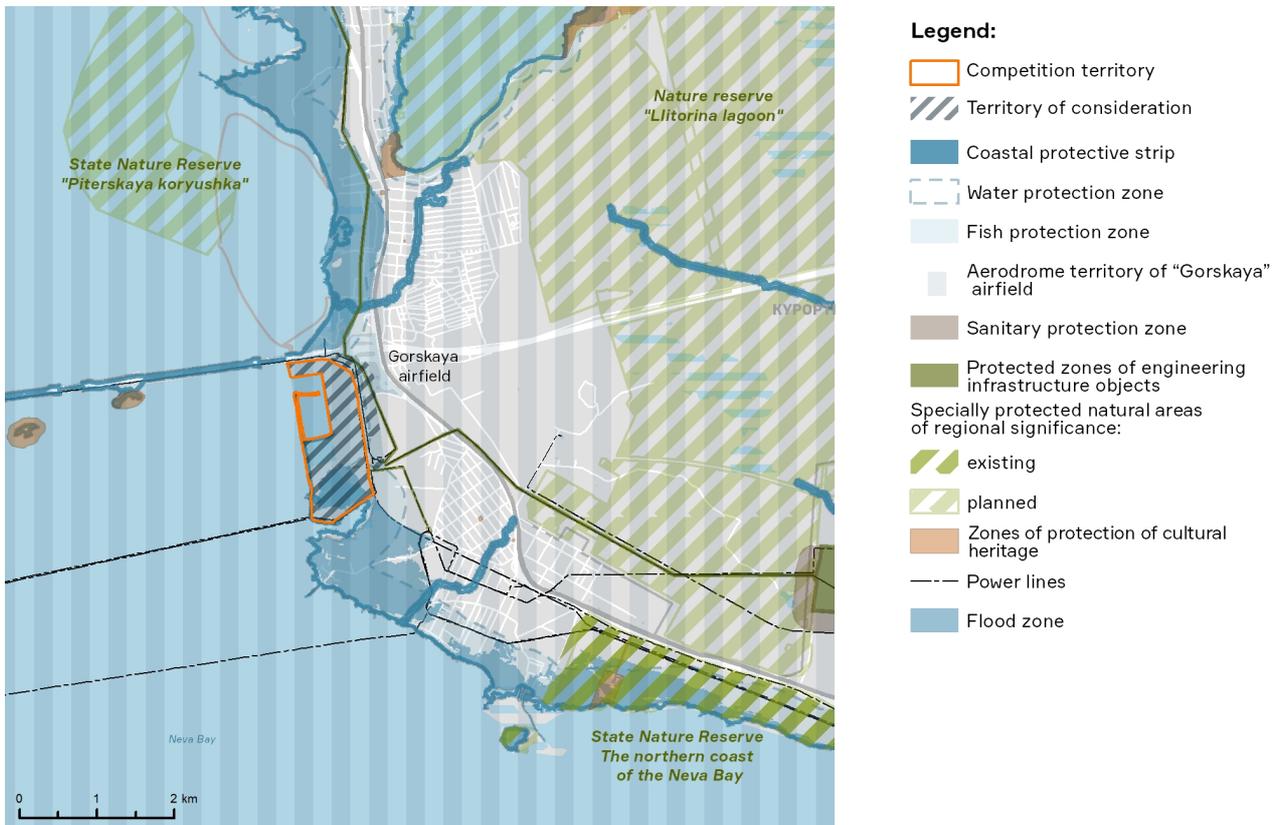


Fig. 6. Scheme of restrictions and special conditions for the use of the territory

<sup>3</sup> <https://portal.kgainfo.spb.ru/genplan>.

<sup>4</sup> 43 m is the maximum permissible height to the highest mark of a structural element of a building, structure, structure for placing engineering equipment made in permanent structures. Deviations from the maximum height are not provided.

## PROJECT DEVELOPMENT OF GORSKAYA TERRITORY<sup>5</sup>

At the St. Petersburg International Economic Forum (SPIEF-2021), an agreement was signed with the Investment Committee of St. Petersburg on cooperation in the implementation of a large-scale renovation project of the former industrial zone and the formation of a single development area "Gorskaya".

***"As part of the project, we want to form a single ecosystem to create organizational, economic and social conditions that ensure the development of the project area as a single integration space to meet the needs of society. The project implementation will give a new impetus to the socio-economic development of St. Petersburg, contribute to the creation of new jobs, reduce the pendulum migration, improve investment attractiveness, directly affect the reduction of the outflow of qualified technical, engineering and IT specialists from the Russian Federation. Our project will also contribute to creating the image of a new Russian industry."***

G.P. Kuropyatnik, within the SPIEF-2021

According to the Concept of the development of the former construction site<sup>6</sup>, the area is intended to accommodate mainly commercial and industrial (Light Industrial) facilities with the inclusion of cultural and educational facilities and hotel services. The concept provides for the allocation of functional zones, the configuration of which follows the boundaries of land plots (Fig. 7).

The central part of the competition area provides for the placement of warehouse, industrial and business facilities; in the southern part it is planned to place cultural, business, innovation and sports functions, tourist infrastructure, including a hotel complex. The northern part of the competition area involves the placement of cultural and educational facilities (Fig. 7).



Project for the development of the Gorskaya area, website of Megaline Company



### Legend:

-  Competition territory borders
-  Light industrial
-  IT cluster with the objects of innovation activity
-  Dam museum and observation deck
-  Tourism objects
-  The second stage of the territory development

<sup>5</sup> <https://megalinestroy.ru/razvitie-territorii-byvshej-stroitelnoj-ploshhadki-kompleksa-zashhitnyx-sooruzheniya-ot-navodnenij-gorskaya/>.

<sup>6</sup> The concept of development of the former construction site of the complex of flood defenses of St. Petersburg "Gorskaya", Megaline LLC.

### Innovation Center

Creation of a world-class scientific and technological center with opportunities for the development of science and business in a preserved natural landscape. Turning business ideas into a successful product through agents of change and creating a favorable environment with extensive public spaces of the Work.Live.Play.Learn model, including coworking, meeting point, cafes, pop-up modules, lofts, conference rooms, united by comfortable galleries of a barrier-free environment.

### LIGHT INDUSTRIAL format

Light Industrial is a new format for the construction and functional support of industrial buildings in the warehouse real estate market in Russia. This segment facilities are special structures, the area of which is relatively small and is approximately 200-2,000 m<sup>2</sup>. Such modern warehouses are in great demand among representatives of small and medium-sized businesses.

### Hotel and service infrastructure facilities

The tourist infrastructure includes the Dam Museum, a landscaped embankment, cycle lanes, an eco-trail, accommodation facilities and other related infrastructure, including for festivals and public events, as well as the reconstruction of the bicycle route along the northern coast of the Gulf of Finland.

### Museum of the complex of protective structures and observation tower

Dam Museum, observation deck, public embankment and other facilities that create a comfortable urban environment.

**>60**  
**BILLION RUBLES**  
total investment

**33**  
**BILLION RUBLES**  
total investment in priority facilities

**Table 2. Main technical and economic indicators of the project:**

<b>Innovation Center</b>	128,000 m <sup>2</sup>
<b>Warehouses (Light Industrial)</b>	353,520 m <sup>2</sup>
<b>Hotels</b>	76,000 m <sup>2</sup> - room area 20,000 m <sup>2</sup> - public space
<b>Museum, cultural development, public space</b>	20,000 m <sup>2</sup>
<b>Sports</b>	9,000 m <sup>2</sup>
<b>Parking lot</b>	2,000 places with an area of 60,000 m <sup>2</sup>



## BRIEF HISTORICAL BACKGROUND



Fig. 8. Gorskaya industrial site and photos before the area was cleared (on the right)<sup>7</sup>

The project of a complex of protective structures in the form of a dam was first proposed in the first half of the XIX century by engineer Pierre Bazin, but the project was not implemented. Construction of the existing dam began in 1980, it was suspended in the 1990s, resumed in the 2000s and completed in 2011.

Gorskaya construction site housed a concrete plant, a base of prefabricated reinforced concrete, a reinforcement farm, berthing facilities, a base of the technical fleet, a motor transport enterprise, a railway farm, a mechanization base with a fleet of earthmoving equipment, a crane farm and other construction machinery, as well as an electric substation PS 110/35/6 kV "Dam-1".

<sup>7</sup> Photo source: <https://urban3p.ru/object14277/gallery>.

# CONTEXT



## LENINGRAD REGION

The Leningrad Region is located in the north-west of the European part of Russia, bordered by the federal city of Saint Petersburg, the Republic of Karelia, the Pskov, Novgorod and Vologda regions, as well as the EU countries - Estonia and Finland. It has an extensive access to the waters of the Gulf of Finland of the Baltic Sea. The region area is 83.9 ths. km<sup>2</sup>, the length from west to east is 450 km, from north to south – 150-300 km.

The Leningrad region has an advantageous economic and geographical position due to the proximity of a large sales market (St. Petersburg), developed sea, land and air transport routes and border position. The region is among the top ten constituent entities of Russia in terms of investments in fixed assets, and their share in the gross regional product is twice as high as in the average for Russia<sup>8</sup>.

Industry and transport prevail in the structure of the gross regional product of the region. Oil and gas chemical complex, power generation and food industry are distinguished among the industries. There are 4 seaports in the region, and several large trunk pipelines pass through the region<sup>9</sup>.

## 2ND PLACE

in terms of population in the Northwestern Federal District (1.89 million people as of 01.01.2021)

## 2ND PLACE

according to GDP (2019 - RUB 1,224.5 billion) in the Northwestern Federal District

## 171.1 MLN TONS

cargo turnover of the region seaports in 2020

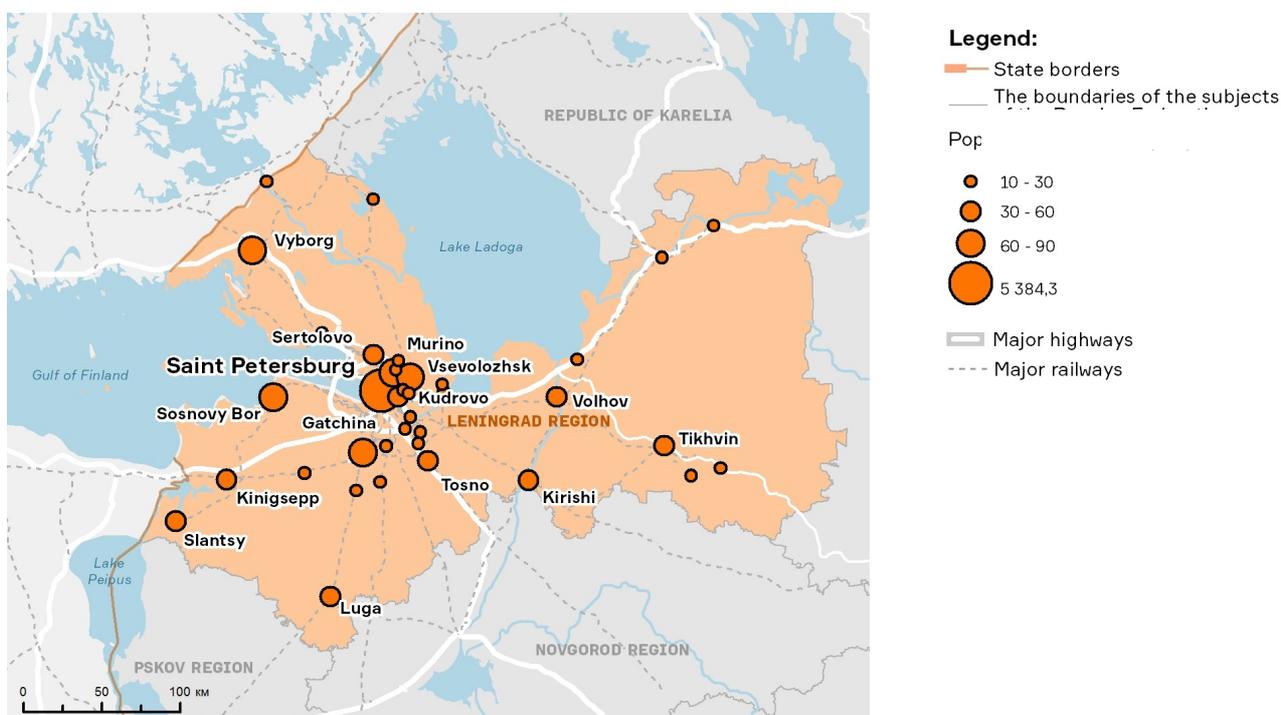


Fig. 9. Leningrad Region

<sup>8</sup> Source Investment portal of the Leningrad region.

<sup>9</sup> Photo source: <https://excurspb.ru/bus/buspri/shlisselburg/>.

# SAINT PETERSBURG

The federal city of Saint Petersburg is located on the shores of the Gulf of Finland of the Baltic Sea, it consists of 18 districts, which include 81 municipal districts, 9 cities and 21 villages. The city is the administrative center of the Northwestern Federal District.

Saint Petersburg is one of the leaders in Russia in terms of gross regional product and is an active participant in Russia's foreign trade with a share of 7.4% in the country's foreign trade turnover. It is one of the largest industrial and financial centers of the Russian



Federation.

Fig. 11. Location of Saint Petersburg in the Russian Federation

Saint Petersburg is focused on the development of high-tech sectors of the economy, tourism, science and culture. The city annually attracts millions of tourists from both Russia and abroad due to its rich historical and architectural heritage. 10% of Russia's scientific potential is concentrated in St. Petersburg<sup>10</sup>.



Fig. 13. Center of St. Petersburg. Top view

## 1ST PLACE

in terms of population  
in the Northwestern Federal District  
(5.38 mln people as of 01.01.2021)

## 3RD PLACE

according to GDP (2019 – RUB 5,124.6 bln) in Russia

## 5TH PLACE

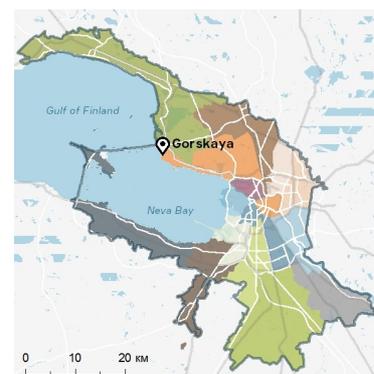
in Russia by the number of investments  
in fixed assets (778 bln in 2020)

## 2ND PLACE

in Russia by the number of foreign  
tourists (4.9 mln in 2019)

## 2ND PLACE

among Russian cities by population



Legend:

— Borders of St. Petersburg

📍 Location of the competition area

<sup>10</sup> Source: Investment Portal of Saint Petersburg.

In accordance with the Strategy of Socio-economic Development of St. Petersburg for the period up to 2035<sup>11</sup>, the city's mission is connected with the realization of the potential of cultural and historical heritage of world significance and dynamic modern development.

The general goal of the Strategy-2035 is to ensure a stable improvement in the quality of life of citizens on the basis of sustainable economic growth using the results of innovative and technological activities and increasing the global competitiveness of St. Petersburg. To achieve these results, three priorities of the socio-economic policy of the state are identified.

- Development of innovative and technological activities in St. Petersburg (City of Innovations). The implementation of this direction will ensure the leadership of St. Petersburg in the creation of breakthrough technologies that will increase the competitiveness of the economy of St. Petersburg and the quality of life of St. Petersburg residents.
- Improving the level of living comfort in St. Petersburg (Comfortable city). The implementation of this direction implies the creation of a beautiful, convenient, high-quality, safe and well-maintained urban environment that meets modern standards and meets the expectations of residents and guests of St. Petersburg as much as possible, but retains its historical individuality, which will create a city with a polycentric model of balanced development of territories where various public, business centers of various levels and profiles will function.
- Development of an effective system of external and internal communications of St. Petersburg (Open City). The implementation of this direction will allow St. Petersburg to become a place of attraction, a world-class social, business and cultural center.

Four areas of socio-economic policy have been identified within these priorities:

- human capital development;
- improving the quality of the urban environment;
- ensuring sustainable economic growth;
- ensuring the effectiveness of governance and the development of civil society.

<sup>11</sup> <https://docs.cntd.ru/document/551979680>.

## GULF OF FINLAND

The Gulf of Finland is located in the eastern part of the Baltic Sea, washing the shores of Russia, Finland and Estonia. It stretches from west to east for 400 km and has a width between 20 and 120 km.

The federal city of St. Petersburg, as well as the capitals of Finland and Estonia - Helsinki and Tallinn are located on the shores of the Gulf of Finland respectively. The cities located on the coast of the Gulf of Finland are visited by tens of millions of tourists every year.

The waters of the bay are characterized by low salinity due to significant desalination. To protect St. Petersburg from wind surges, a dam was built in the very east of the Gulf of Finland<sup>12</sup>, along which the Ring Road passes.

The Gulf of Finland is of great transport importance for settlements and countries located on its shores. Three of the 10 largest Russian seaports in terms of cargo turnover are located on its coast, and two large gas pipelines are laid along the bottom of the water area.

For the local population, the Gulf of Finland is a significant recreational attraction. A large number of historical, architectural, natural and other objects are located on the coast - points of attraction for recreants.

# 29,500 km<sup>2</sup>

water area of the Gulf of Finland

# 9.2‰

the maximum salinity of the waters of the Gulf of Finland at the surface

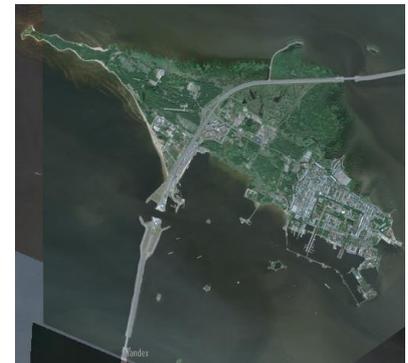


Fig. 14. Kronstadt Island and a dam in the Gulf of Finland

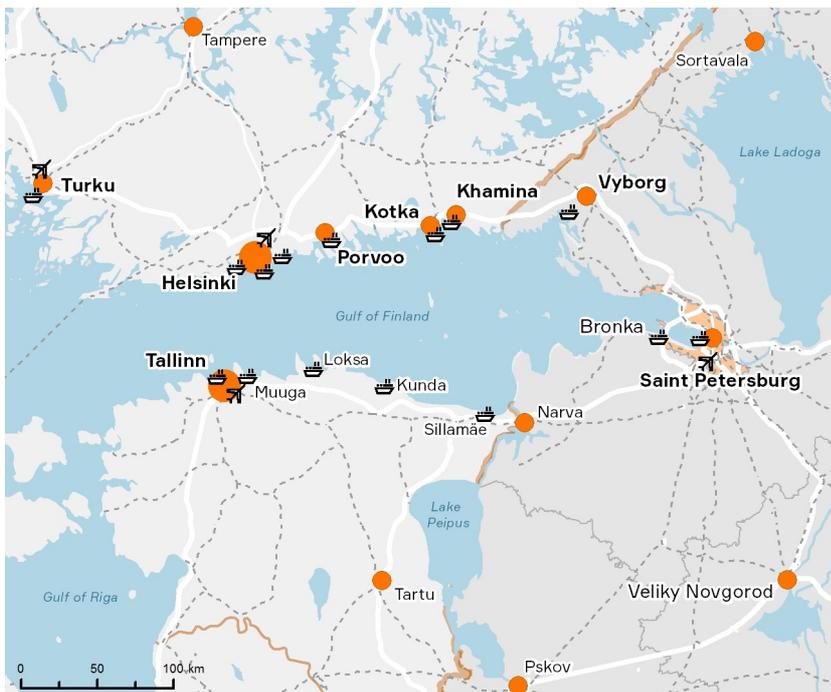


Fig. 15. Cities and major ports of the Gulf of Finland

### Legend:

- State borders
- The boundaries of the subjects of the Russian Federation
- Saint Petersburg
- Airports
- Sea ports and terminals
- Settlements
- Major highways
- Major railways

<sup>12</sup> Photo source: Yandex Maps.

## PRIMORSKY DISTRICT

Primorsky district is located in the northwestern part of St. Petersburg, on the shore of the Gulf of Finland, almost completely within the Ring Road (CAD). Today, Primorsky District is the most populated city area with a population of 580,100 people at the beginning of January 2021.

The eastern part of the district is densely built up with apartment buildings, including new buildings<sup>13</sup>. There is a ring road in the district, there are five metro stations. Along the coast of the Gulf of Finland there is a railway line connecting the area with the Finnish railway station in the center of St. Petersburg. Primorsky is one of the most ecologically clean districts of the city and the cleanest within the boundaries of the Ring Road due to the abundance of green spaces, which occupy about 25% of the area.

There are several large research and production enterprises - Research and Production Enterprise Radar mms, Klimov JSC, etc., as well as large infrastructure facilities of engineering support - North-West TPP, Northern Aeration Station in the territory of the district. In recent years, the district has been increasingly developing as a business and entertainment center of the city. This was facilitated by the construction of the Lakhta Center<sup>14</sup>.

### 1ST PLACE

in the city by population (580.1 ths people as of 01.01.2021)

### 4TH PLACE

according to the area among the city districts – 109.87 km<sup>2</sup>

### 20%

of new housing commissioning in St. Petersburg in 2020 falls on the Primorsky district



Fig. 17. Primorsky district

#### Legend:

- Primorsky district
- Municipal formation Lisiy Nos settlement
- Location of the competition area



Fig. 16. Lakhta Center

<sup>13</sup> Source: Petrostat.

<sup>14</sup> Photo source: <https://nevnov.ru/881987-lakhta-centr-okrasilsya-v-cveta-flaga-rossii>.

## The village of Lisiy Nos<sup>15</sup>

The village of Lisiy Nos, inside which the competition territory is located, is located in the west of the Primorsky district, on the shore of the Gulf of Finland. The first mention of the settlement here dates back to the beginning of the XVI century. In 1950, in accordance with the decree of the Presidium of the Supreme Soviet of the RSFSR dated March 21, 1950, it became part of Leningrad. In 1994, in accordance with the Order of the Mayor of St. Petersburg dated 11.03.1994 No. 196-p, it was reassigned from Sestroretsky district (currently Kurortny) to Primorsky. As of January 1, 2021, 4,653 people lived here.

At the moment, the village mainly consists of individual residential buildings. The Primorskoe highway and a railway line with a stop at the Lisiy Nos station pass through the village.



Fig. 18. Public saunas and an example of a summer residence in the village of Lisiy Nos

<sup>15</sup> Photo source:

<https://yandex.ru/maps/org/nega/1128065264/?ll=29.998412%2C60.016263&z=17>

<https://peterburg.center/story/lyubopytnoe-mesto-lisiy-nos-v-sankt-peterburge-istoriya-i-chto-interesnogo-posmotret.html>



# TRANSPORT FRAME

Gorskaya area occupies an advantageous transport position - at the intersection of the Primorskoye Highway and the Ring Road (Levashovskoye Highway). Transport accessibility by car to the city center from the area is about 30 minutes and 10 minutes to Sestroretsk and Kronstadt. The Oktyabrskaya Railway (Sestroretskoye direction) runs parallel to the Primorskoye Highway, the nearest station of which, Gorskaya, is within a 10-minute walk. There are several bus and minibus stops at the intersection of the Ring Road and the Primorskoye Highway, as well as at the exit to the site on the Primorskoye Highway.

There are five berths with gantry cranes located within the competition area, which can be accessed by vessels of the "river-sea" type.

At the moment, there is no automobile exit to the territory from the Ring Road, the area is connected by an asphalt road with the Primorskoye Highway.

The distance from the competition area to Pulkovo International Airport is 53 km.

**30 KM**

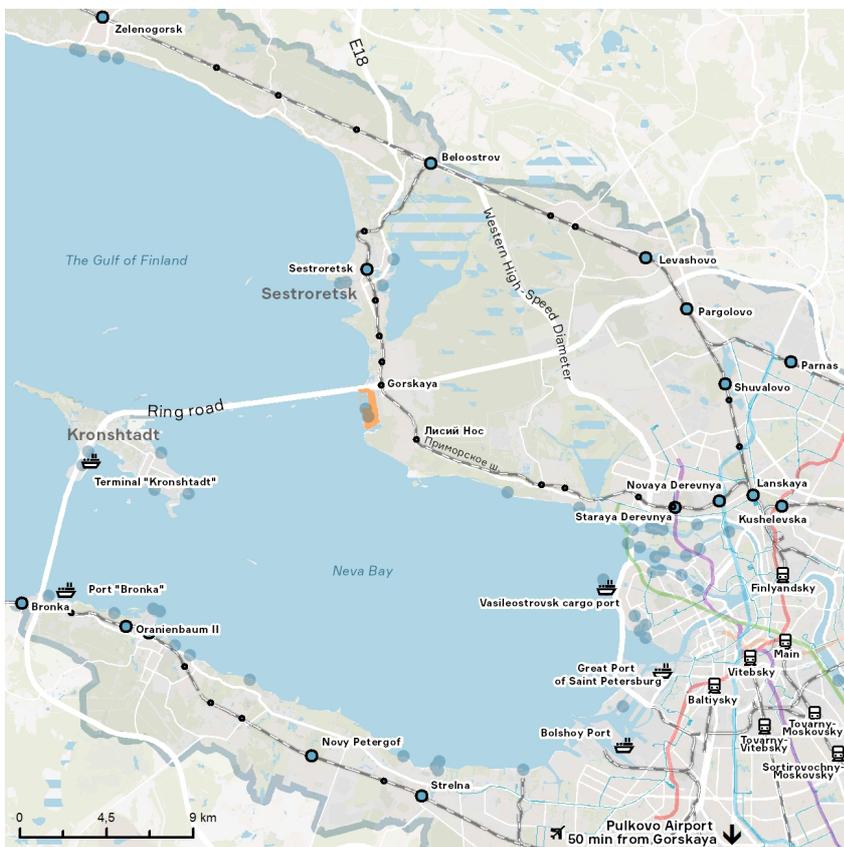
to the city center

**4 PUBLIC TRANSPORT STOPS**

within walking distance

**10 MIN.**

to Kronstadt and Sestroretsk



**Legend:**

- Competition territory
- Transport infrastructure facilities:
- ports
- berths and anchorages of small vessels
- halt
- stations
- bus stops
- railways
- tram routes
- subway lines



Fig. 19. Scheme of the transport frame of the city of St. Petersburg

In the state program of St. Petersburg "Development of the transport system of St. Petersburg",<sup>16</sup> the goals of development of the city transport infrastructure are designated as ensuring accessibility, reliability, comfort and safety of the functioning of the transport complex of St. Petersburg, meeting the needs of socio-economic development and transit potential of the city, with priority development of the urban passenger and external transport system.

To achieve this goal, the following tasks were defined:

- increase in the share of the population using urban passenger transport services;
- improving the efficiency of using all types of resources of the transport complex of St. Petersburg;
- improvement of non-motorized traffic conditions;
- increasing the efficiency of external transport communication.

Among other things, the following results are expected from the implementation of the program:

- increasing the share of passenger transportation by urban passenger transport to 75;
- increasing the length of the bicycle route network to 180 km.

Near the competition area, in the area of Olgino station, 9 km from the competition area, it is planned to build the M-49 highway and in the Lakhta station area (10 km from the competition area) it is planned to build the M-32 highway, which will connect the Primorskoe highway with the Western High-Speed Diameter. It is also planned the reconstruction of the Primorsky Highway in the Lakhta Center area and the reconstruction of the Primorskoye and Zelenogorskoye Highways.

<sup>16</sup> [https://www.gov.spb.ru/gov/otrasl/c\\_transport/gosudarstvennaya-programma-sankt-peterburga-razvitie-transportnoj-sist/](https://www.gov.spb.ru/gov/otrasl/c_transport/gosudarstvennaya-programma-sankt-peterburga-razvitie-transportnoj-sist/).



## NATURAL AND RECREATIONAL FRAMEWORK

There is a state natural reserve of regional significance "Northern coast of the Neva Bay" to the south of the area, behind the Lisiy Nos cape and the village of the same name. The nursery and Olginsky Forest Park, located to the east across the railway from the competition area, and Sestroretsky Bay with the Sestroretsky Bogs nature reserve to the north are among the large natural objects. The nearest natural and recreational facilities are located in the Sestroretsk City district – Dubki Culture and Recreation Park, Tarhovka Forest Park. There are several public beaches on the coast of Sestroretsky Bay. It is also planned to create in the immediate vicinity of the territory the following protected areas of regional significance: the nature memorial "Litorinovaya Lagoon" and the state nature reserve "St. Petersburg Smelt".



Fig. 20. Scheme of a natural recreational framework in the vicinity of the area

In the Strategy of socio-economic development of St. Petersburg until 2035, in the direction of "Improving the quality of the urban environment relative to the development of the natural and recreational framework", it is planned to develop the potential of the coastal territories of St. Petersburg, within which it is planned to ensure the preservation and active use of the unique recreational and historical and cultural potential of the northern coast of the Gulf of Finland in the territory of the Resort and part of the Primorsky districts of St. Petersburg, including through the development of recreation facilities, hotel and service infrastructure, health resort facilities and public spaces.

## DIRECTION OF DEVELOPMENT OF TOURIST SERVICES IN ST. PETERSBURG

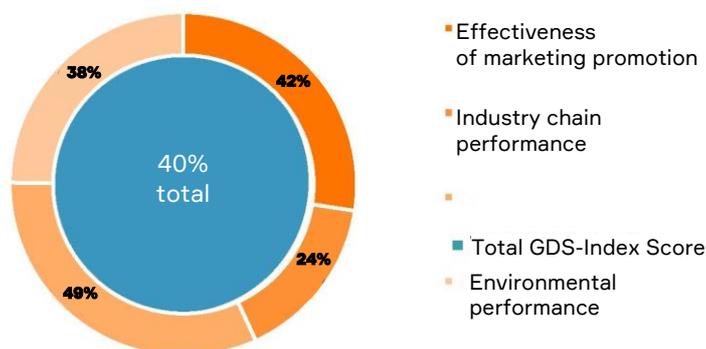
In 2018, St. Petersburg- received three awards according to the World Travel Awards: as the world's leading cultural destination, as the best European cruise destination and the best European cultural destination.

In 2020, St. Petersburg- won one of the most prestigious awards in the world in the field of tourism - the "Tourist Oscar" of World Travel Awards - 2020 in the nomination "World's Leading Cultural City Destination 2020"<sup>17</sup>.

### Competitive advantages of St. Petersburg in the tourism sector:

- advantageous geopolitical position (border and seaside location, proximity to Moscow and EU countries);
- the cultural, historical and architectural heritage of St. Petersburg, the status of a UNESCO World Heritage Site;
- extensive network of rivers and canals with sightseeing, walking and transport routes;
- unique infrastructure for exhibition and congress events (palaces, museums, etc.);
- developed diversified economy, presence of the largest industrial enterprises, scientific and research institutions.

The tourist function is a system-forming one, providing a stimulating effect on other sectors of the economy, contributing to the creation of new jobs and an increase in the taxable base of the city. In 2018, St. Petersburg became the first city in the Russian Federation to join the international urban rating GDS-Index (Global Destinations Sustainability Index)<sup>18</sup>, and today it meets its criteria by 40%. In 2019, St. Petersburg was recognized as the best urban destination in Europe.



## 2<sup>ND</sup> PLACE

in the Russian Federation in terms of the volume of the congress and exhibition tourist market

## 3<sup>RD</sup> PLACE

in the world in terms of the number of architectural monuments and museums

## 375 BILLION RUBLES

total contribution of tourism to the

## 10.4 MLN PEOPLE

tourist flow to St. Petersburg in 2019

## 870 THS

cruise tourists in 2019

Fig. 21. Criteria for the sustainability of a tourist destination according to the GDS-Index rating

<sup>17</sup> <https://www.itmexpo.ru/media/news/59868/>.

<sup>18</sup> <https://www.gds.earth/destination/Saint%20Petersburg/2021/>.

St. Petersburg is one of the largest ports of the Baltic Sea. Since 2014, the project "City Berths of St. Petersburg" has been successfully implemented, providing access to the berthing infrastructure of all enterprises carrying out transportation along the rivers and canals of St. Petersburg. The port of St. Petersburg "Marine Facade" is the first and only specialized passenger port in the North-Western region of the Russian Federation.

It is planned that by 2023 the main goal of every fifth tourist arriving in St. Petersburg - will be event tourism. Large-scale events include<sup>19</sup>:

- Fire Festival "Christmas Star";
- flagship event in the field of lighting technologies - "Wonder of the World";
- Flower Festival;
- Brass Band Festival;
- Icebreaker Festival;
- St. Petersburg River Carnival;
- Baltic Yacht Week;
- Festival "Motostolitsa";
- St. Petersburg Restaurant Festival "Around the World".

As of the end of 2020, 1,107 classified accommodation facilities with a total number of 44,425 rooms were operating in -St. Petersburg<sup>20</sup>, including:

- 5 stars – 34 hotels;
- 4 stars – 120 hotels;
- 3 stars – 313 hotels;
- 2 stars - 92 hotels;
- 1 star – 27 hotels;
- without stars – 521 hotels.

# 1,107 PC.

number of classified accommodation facilities

# 98 THS.

number of beds in classified accommodation facilities

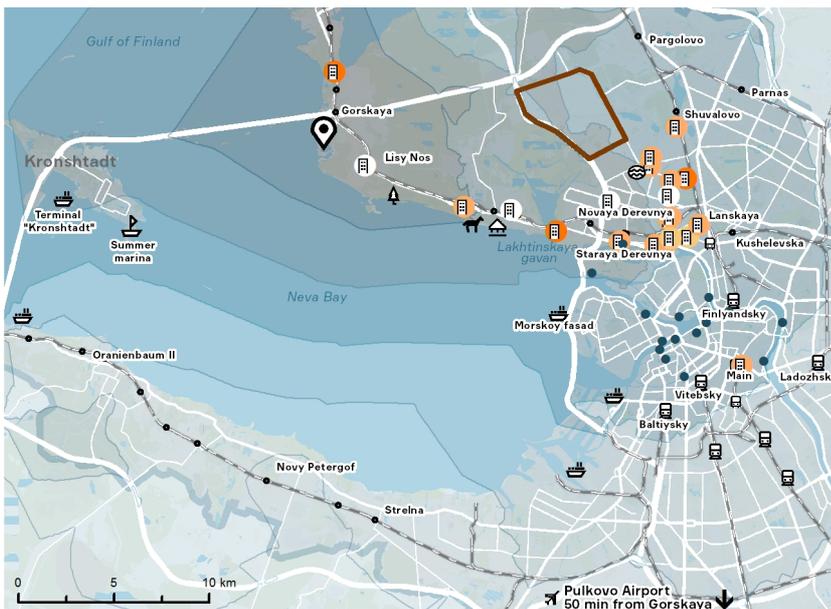


Fig. 22. Tourist infrastructure

#### Legend:

■ Competition territory

Transport infrastructure facilities:

-  stations
-  bus stations
-  ports
-  city berths
-  railways

Iconic tourist sites

-  historical district Kamenka
-  Equestrian club "FACT"
-  Former Stenbock-Fermor Manor
-  complex state nature reserve of regional significance "Northern coast of the Neva Bay"
-  Dolgoe Lake

Hotels by the number of stars:

-     

Transport accessibility, minutes:



<sup>19</sup> Unified calendar of events: <https://www.visit-petersburg.ru/ru/calendar/>.

<sup>20</sup> [https://www.gov.spb.ru/gov/otrasl/c\\_tourism/statistic/](https://www.gov.spb.ru/gov/otrasl/c_tourism/statistic/).

In accordance with the State Program "Development of tourism in St. Petersburg",<sup>21</sup> the diversification of the tourist offer in the long term

includes the following areas:

- development of cultural and educational tourism;
- development of event tourism;
- development of business tourism and congress and exhibition activities;
- development of medical tourism;
- development of social tourism.

The comprehensive development of the tourist infrastructure of St. Petersburg is aimed both at the development of the tourism sector itself and at creating a comfortable urban environment for residents of St. Petersburg. As part of this direction, Gorskaya area was allocated to the project of the first "city in a city" in St. Petersburg<sup>22</sup> - a new center of attraction for guests and residents of St. Petersburg, located in the coastal zone of the Gulf of Finland.

<sup>21</sup> Resolution of the Government of St. Petersburg dated 14.11.2017 No. 936.

<sup>22</sup> Source: [https://www.gov.spb.ru/gov/otrasl/c\\_tourism/statistic/](https://www.gov.spb.ru/gov/otrasl/c_tourism/statistic/).

## PUBLIC, BUSINESS AND CONGRESS CENTERS OF ST. PETERSBURG

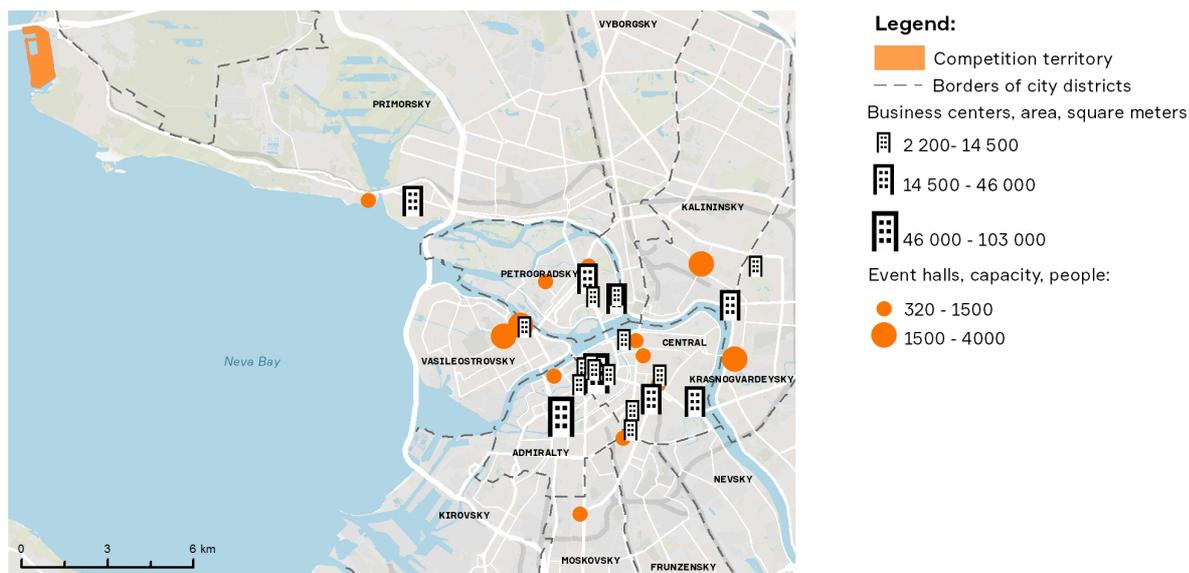


Fig. 23. Layout of Class A and A+ business centers and main event halls in St. Petersburg

There are 21 Class A and 1 Class A+ business centers in St. Petersburg. This list does not include the Lakhta Center, as it is the headquarters of Gazprom. Most of the facilities (8) have an area of up to 10,000 m<sup>2</sup>, 7 facilities have an area of 10-20 and >20 ths m<sup>2</sup>. The largest (103,000 m<sup>2</sup>) and the only facility of class A+ — "Atrium" - is located on Nevsky Prospekt.

In St. Petersburg, there is a pronounced concentration of business centers in the central part of the city, which does not contribute to the formation of the city's polycentricity declared in the strategy of socio-economic development.

Large venues intended for holding events also tend mainly to the central districts, exceptions are the event hall in the Lakhta Center and the largest ExpoForum located in the south of the city (outside the presented layout) with 30,000 seats. Most (10 out of 16) event halls have a capacity of 1,000 people or less, 5 more event halls can accommodate from 1.5 to 4 thousand visitors.

# INNOVATIVE INFRASTRUCTURE OF ST. PETERSBURG

Saint Petersburg is one of the leaders of innovative development in Russia<sup>23</sup>.

The status of a scientific and educational center of the All-Russian level with prospects and goals of reaching the world level of competition attracts private and public investors in innovative sectors of the economy of St. Petersburg. The city has 6 territories of innovative development with federal status, 2 objects of innovative infrastructure to support SMEs (as of 2019). In St. Petersburg, there is a preferential tax regime for owners of private technology parks and many IT companies.

Since 2014, the city has been implementing the state program "Development of Industry, innovation and agro-industrial complex in St. Petersburg"<sup>24</sup>, designed to ensure the strategic competitiveness of the urban industry through the introduction of innovations.

## The goals of St. Petersburg in the implementation of the state program are:

- development of innovations in the industry of St. Petersburg, increasing the competitiveness of the industry of St. Petersburg in the economy of the Russian Federation and the world economy;
- development and effective use of the innovative potential of St. Petersburg, assistance to the development of the technology market, the introduction into production and services of the results of scientific and technical activities, the release and promotion of knowledge-intensive, competitive products to the domestic and foreign markets, ensuring economic growth and improving the life quality of the population.

## Objectives of the state program:

- increasing the competitiveness of St. Petersburg's industry, contributing to the technological re-equipment of production facilities and innovative activity of enterprises;
- development and effective use of the innovative potential of St. Petersburg with an increase in the share of innovative products in the total volume of products in manufacturing industries;
- promotion of technology transfer and development of innovative activities, including with the participation of innovative industrial and technological parks of St. Petersburg.

## 2<sup>ND</sup> PLACE

in the ranking of the most innovative regions

## 3<sup>RD</sup> PLACE

in terms of the share of employees in the field of research and development among the constituent entities of the Russian Federation

## 9.2%

9.2% of those employed in the Russian IT sector work in St. Petersburg

<sup>23</sup> Sources of infographic data:

Rating of innovative development of constituent entities of the Russian Federation, edition 7. Institute of Statistical Research and Knowledge Economics of the National Research University "Higher School of Economics". <https://www.hse.ru/mirror/pubs/share/492403134.pdf>.

Atlas of economic specialization of regions. Institute of Statistical Research and Knowledge Economics of the National Research University "Higher School of Economics". <https://cluster.hse.ru/mirror/pubs/share/460933626>.

<sup>24</sup> <https://cipit.gov.spb.ru/programs/gosudarstvennaya-programma-sankt-peterburga-razvitiye-promyshlennosti-i/>.



## Main innovation clusters of St. Petersburg

### "Technopark of Saint Petersburg"



Fig. 25. One of the Technopark subdivisions - Ingria<sup>25</sup>

The Technopark is directly owned by the Government of St. Petersburg. It is divided into 6 structural divisions, including a business incubator, prototyping and cluster development centers. There is also an IT-technology center among the industry centers.

Technopark helps residents throughout the product development cycle: from team formation to implementation. It helps to attract investments, organize business processes, and conduct marketing campaigns.

#### Solutions:

- cooperation between startups and large clients;
- specialized product support units.

#### Trends:

- a wide range of support measures aimed at the development of the real sector of the economy, highly efficient industrial enterprises and new investment projects and innovations.



Fig. 24. Ingria subdivision interior

# >70

residents of the business incubator

# >6,9 BILLION

revenue of residents during its existence

<sup>25</sup> Photo source:

[https://ingria-park.ru/wp-content/uploads/2019/07/107A7390\\_1-min.jpg](https://ingria-park.ru/wp-content/uploads/2019/07/107A7390_1-min.jpg)

<https://russiaindustrialpark.ru/tehnopark-ingriya>

## Energotechnohab "Petersburg"



# 269

residents of energotechnohab

# 101

direction of work

Fig. 26. Presentation of Energotechnohab (power engineering hub)<sup>26</sup>

Gazprom's online technopark is part of a corporate IT cluster located in three Russian cities. The Technopark is focused on supporting startups and innovations in the field of energy (both traditional and alternative). The annual volume of orders of the technopark is estimated at 100 billion rubles.

The project is being implemented in cooperation with the Government of St. Petersburg and venture funds. Technopark aims to consolidate 30% of energy R&D in St. Petersburg by creating a cluster city (according to the image of American Houston or Norwegian Stavanger).

### Trends:

- creation of internationally competitive clusters;
- support of innovative solutions for your own business.

<sup>26</sup> Photo source:  
<https://www.gazprom-neft.ru/upload/medialibrary/a2f/2-120321.jpg>.

## Technopark "Lenpoligrafmash"



Fig. 27. Technopark exterior<sup>27</sup>

The technopark operates on the site of the Lenpoligrafmash Industrial Holding and is aimed at the interrelated development of high-tech industries with the spheres of architecture and design. It is based on residents who develop products and services in the fields of IT and robotics, biological and pharmaceutical technologies.

The technopark has its own design bureau, residents can use the production facilities to create their own products.

### Solutions:

- selection of startups for the needs of client companies;
- popularization of the technopark through educational platforms and spaces for events.

### Trends:

- placement of startups from different industries to obtain a synergistic effect;
- systematic interaction of creative startups with industrial enterprises.



**>200**

technopark residents

<sup>27</sup> Photo source:

[https://www.sobaka.ru/images/image/01/25/49/50/\\_normal.jpg](https://www.sobaka.ru/images/image/01/25/49/50/_normal.jpg),  
[https://sun9-56.userapi.com/impj/4\\_hBZO6dBmpnOR-Me6eD135dBjC-ChaH64frvbw/\\_cLZILkUWeg.jpg?size=453x604&quality=96&sign=20077a76b8495b29d831f57dfaed8ff2&type=album9.png](https://sun9-56.userapi.com/impj/4_hBZO6dBmpnOR-Me6eD135dBjC-ChaH64frvbw/_cLZILkUWeg.jpg?size=453x604&quality=96&sign=20077a76b8495b29d831f57dfaed8ff2&type=album9.png) (1680x1192) (tildacdn.com).

# LIGHT INDUSTRIAL FACILITIES

Light Industrial is a new format for the construction and operation of warehouse buildings, which allows you to divide a room into separate smaller cells. The flexibility of the format allows you to place offices, retail premises and light industrial production in the complexes. The format, suitable for companies of various types and sizes, closes a previously empty niche (most of the proposals in the market start from 2,000 m<sup>2</sup>) and is growing rapidly, occupying a quarter of the warehouse market and having the potential for further growth, as in Western Europe and the USA, where Light-industrial has collectively exceeded the area of large warehouses.

There are four categories of premises in **Light Industrial**:

- self-storage (blocks from 1 to 100 m<sup>2</sup>);
- mini (100-300 m<sup>2</sup>);
- midi (300-1,000 m<sup>2</sup>);
- maxi (from 1,000 m<sup>2</sup>).

**Light Industrial** occupies a quarter of the warehouse market due to a number of advantages:

- no dependence on a single tenant;
- possibility of placing warehouses, offices and small production facilities in one complex;
- compactness of building and reduction of energy consumption;
- reducing the impact on the environment;
- possibility of construction within the city and in the immediate vicinity of residential buildings.



## "Pererva" Technopark, Moscow<sup>28</sup>



The only Light-industrial complex in Moscow combines warehouses with office and production facilities, combining all work processes in one place. The three-storey warehouse provides open-plan module rooms with an area of 60 m<sup>2</sup> or more. The status of the Moscow Technopark allows resident tenants to receive preferential tax treatment and other benefits.

The complex is located within walking distance from metro stations and ground public transport and in the vicinity of the main Moscow highways.

### Solutions:

- full-fledged infrastructure inside the complex (canteen, pharmacies, shops);
- possibility of redevelopment of the premises to increase the height of the ceilings or the load on the floor.

### Trends recommended for use:

- orientation of warehouse infrastructure to small business;
- warehouse is not an exclusion zone, but an element of the district;
- use of regional preferences to attract tenants.

# 2.16 HA

land plot area

# 32,880 M<sup>2</sup>

total area of premises

<sup>28</sup> Photo source:

<https://pererva.ru/upload/iblock/ee1/ee1ec49d6084ae870d5ab4fde7967277.jpg>;

<https://cdn-p.cian.site/images/93/614/701/1074163967-6.jpg>;

<https://cdn-p.cian.site/images/04/614/701/1074164044-6.jpg>.

## Digital industrial coworking "Synkovo" Industrial City, Podolsk, Moscow region<sup>29</sup>



# 57 HA

land plot area

A large-scale warehouse complex in the Moscow region offers for rent modules with an area of 450 m<sup>2</sup> and more. Each module is an office and warehouse unit suitable for doing business in one place and equipped with its own loading area. Residents can combine adjacent blocks in case of a need for a larger warehouse area.

A special feature of the complex is its own data processing center and a general data storage service. The management company among the standard services offers tenants to conduct an energy audit of the premises.

### Solutions:

- unified rental of warehouse and office space in one room;
- powerful IT infrastructure.

<sup>29</sup> Photo sources:  
[https://www.icpark.ru/upload/resize\\_cache/iblock/87f/860\\_649\\_2/DJI\\_0145\\_2.jpg](https://www.icpark.ru/upload/resize_cache/iblock/87f/860_649_2/DJI_0145_2.jpg);  
<https://www.icpark.ru/upload/iblock/377/image-27-08-21-05-47-2.jpeg>.



## Left&Right Business Center, Saint Petersburg<sup>30</sup>



The complex, which is close to the Light Industrial concept, rents multi-functional modules with an area of 288 m<sup>2</sup> and a ceiling height of 8 meters. Half of the modules, having panoramic glazing of facades, departs from the usual warehouse architecture, which makes it possible to attract more diverse tenants who need to store goods. Thus, there are auto parts and clothing stores among the existing tenants of the complex. The main highways of St. Petersburg are located in the immediate vicinity of the complex.

### Solutions:

- multi-format usage;
- combination of warehouse and retail.

### Trends:

- modular design of the complex, adaptable to the tenant;
- "green" infrastructure solutions (charging electric vehicles, healthy food cafes).

<sup>30</sup> Photo sources:

<https://left-right.ru/templates/v8/images/photos/15.jpg>;

<https://left-right.ru/templates/v8/images/photos/07.jpg>;

<https://left-right.ru/templates/v8/images/photos/03.jpg>.

# ANALYSIS OF GLOBAL TRENDS



## Revitalization of coastal areas

### HafenCity, Hamburg, Germany<sup>31</sup>



HafenCity district is a former port area on the banks of the Elbe River in the German city of Hamburg. This is an ambitious development project to create a "district of the future" on the site of the port territories, which is currently in the process of being implemented.

The key goal of this project is to revitalize the port areas and transform them into an urban multifunctional quarter. As a result, it is planned to create green public spaces, business areas, as well as residential premises. About 45,000 jobs are expected to be created during the project implementation.

The industrial infrastructure of the territory is being transformed into cultural, hotel and service infrastructure facilities (museums, tourist centers, etc.).

The project was developed taking into account the division of the territory into functional zones, as well as flexible design rules. This will allow you to change certain decisions during the implementation of the project, which is designed for 25 years.

# 165 HA

area of the territory

# 2000

start of project works



Fig. 28. Existing project Master Plan

<sup>31</sup>Urban planner and supervisor: KCAP/ASTOC.  
Photo source: <https://www.kcap.eu/ru/projects/v/hafencity/>.

## B.I.G Haizhu Bay Creative Zone, Guangzhou, China<sup>32</sup>



The cluster is located by the Pearl River in the capital of the Chinese province of Guangdong - the city of Guangzhou.

Before the redevelopment, the territory was used as a raw material reserve and a production base for large state-owned chemical enterprises. The decision to renovate these areas was made in connection with the transfer of industry to other areas. The main idea of the project is to create a space that unites scientific and technological innovations, business, creative industries and tourism.

### The cluster includes:

- large public space - a park facing the river;
- commercial premises located throughout the cluster;
- offices of creative industries and workshops;
- local public spaces and tourist attractions (skate park, photo zones, basketball court, art installations, etc.).

Special attention is paid to the preservation of the industrial identity of the area. Thus, two warehouse buildings, previously used for industrial purposes, have been reconstructed and are now intended for rent.

The entire area is a creative space, which is expressed through street art, stained glass windows, art objects and night art and architectural illumination (Fig. 29-30).

### Recommended trends in the revitalization of coastal areas:

- multifunctionality of the area;
- use of original architectural solutions and art objects.
- focus on creating new jobs and business development;
- preservation of the industrial identity of the territory.

# 32 THS M<sup>2</sup>

area of the territory

# 2018

year of construction



Fig. 29–30. Internal content of the cluster

<sup>32</sup>Project authors: Atelier cn<sup>o</sup>S.

Photo source: [https://www.archdaily.com/919209/big-haizhu-bay-creative-zone-atelier-cn-de-grees-s?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/919209/big-haizhu-bay-creative-zone-atelier-cn-de-grees-s?ad_source=search&ad_medium=projects_tab).

## Museums

### Glasgow Riverside Museum of Transport, Glasgow, Scotland<sup>33</sup>



The Transport Museum is located on the Pointhouse Embankment in the restored harbour area of Glasgow.

The museum is located on the site of the former A. & J. Inglis shipyard on the north bank of the Clyde River. Inside the museum building there are not only exhibition halls, but also cafes, educational and retail premises.

The main idea of the project was to create a facility that would connect the river with the city, a kind of "transparent corridor". Thus, the museum positions itself as an open and functional facility with the inclusion of the environment context and content in the architectural exterior.

Now the museum is not only a tourist attraction, but also a place of attraction for residents on a previously unattractive section of the city's harbor.

# 7000 M<sup>2</sup>

facility area

# 2011

year of construction

<sup>33</sup> Project author: Zaha Hadid Architects

Photo source: [https://transport.mos.ru/mostrans/all\\_news/104537?\\_escaped\\_fragment\\_ =](https://transport.mos.ru/mostrans/all_news/104537?_escaped_fragment_=)  
[https://www.archdaily.com/141274/a-first-glance-at-zaha-hadids-glasgow-riverside-museum-of-transport?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/141274/a-first-glance-at-zaha-hadids-glasgow-riverside-museum-of-transport?ad_source=search&ad_medium=projects_tab).

## The Waterfront Pavilion – Australian National Maritime Museum, Sydney, Australia<sup>34</sup>



The pavilion of the Australian National Maritime Museum is located at South Darling Harbor in Sydney, Australia.

The museum building connects two ships from different sides, to which all visitors have access - there are also various exhibitions located inside. Such a location of the museum allows it to be integrated into the environment as much as possible.

The pavilion design was developed based on the museum theme: it is intended to highlight its industrial specifics. In addition, emphasis was placed on a modern and concise exterior, which made it possible to revitalize the surrounding area. The interior design also emphasizes the military-industrial character of the museum.

# 500 M<sup>2</sup>

facility area

# 2015

year of construction

<sup>34</sup>Project author: FJMT Studio.

## Blue Planet, Kastrup, Denmark<sup>35</sup>



The Aquaculture Museum is located on a hill on the seashore, north of Kastrup Harbor in Denmark. It occupies a strategically advantageous location near the main square of the city and the airport.

Blue Planet has become one of the five main tourist attractions in Denmark. In 2012, the museum was selected as the best project because of its impact on the growth of the local economy, regional development, as well as the use of innovations and unique design.

The building shape is inspired by water whirlpools. It reveals the theme of the museum and shows its connection with water bodies. The facade of the building is covered with aluminum plates, which, like water, reflect daylight.

The interior layout is unique as it has several different routes with a central place - a round foyer. This reduces the number of queues and continues the connection with the water whirlpools taken as the basis for the design of the building.

# 10 THS M<sup>2</sup>

facility area

# 2013

year of construction

### Recommended trends in the museum creation:

- reflection of the facility specifics through the architectural exterior;
- connection with the water body and the urban environment;
- openness and accessibility of space;
- unique modern design.

<sup>35</sup>Project author: 3XN.

Photo source: <https://architizer.com/projects/blue-planet-aquarium/>.

## Tourist infrastructure

### Ex Arsenale de La Maddalena, La Maddalena, Italy<sup>36</sup>



The tourist complex is located on the coast of the Italian island of Sardinia.

The project of the complex was developed as part of the revitalization of the embankment in order to increase its tourist attractiveness. A hotel, a well-maintained embankment and conference halls are located on the transformed territory.

The architectural exterior of the complex is designed taking into account the specifics of the territory - earlier this harbor was used as a berth for naval vessels. The main goal of the architects was to create a space reflecting the specifics of the Mediterranean landscapes and the identity of the territory.

Glass and basalt were used as the main materials. The project is also aimed at environmental sustainability, which is reflected in the use of photovoltaic batteries and a high glazing area for greater penetration of natural light.

# 15 THS M<sup>2</sup>

facility area

# 2009

year of construction

<sup>36</sup> Project authors: Stefano Boeri Architetti.  
Photo source: <https://architizer.com/projects/ex-arsenale-de-la-maddalena/>.

## JW Marriott Hotel, Shanghai, China<sup>37</sup>



JW Marriott Hotel is located on the shore of man-made Jinhai Lake in Shanghai.

The development of this area is now aimed at creating a center for art, tourism and entertainment in the city. The hotel will be part of this concept.

The main emphasis was placed on the building design and the improvement of the adjacent territories in order to reflect the natural uniqueness of the facility location. The curved shape emphasizes the connection of the building with the water body. Glass was used as one of the materials, allowing the penetration of sunlight into the interior and an overview of the lake's panorama.

The hotel building is multifunctional. And there are conference halls, lobbies, restaurants and recreation areas in its territory.

Landscaping of adjacent territories has also become an important aspect of the project.

# 2021

year of construction

---

### Recommended trends in the creation of tourist infrastructure:

- connection with the surrounding landscape, including with a water body;
- reflecting a unique location through architecture and design;
- complex multifunctionality.

<sup>37</sup> Project author: Gensler.

Photo source: [https://www.archdaily.com/962099/jw-marriott-hotel-gensler?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/962099/jw-marriott-hotel-gensler?ad_source=search&ad_medium=projects_tab).

## Innovation centers

### Google's Mountain View Campus, San Francisco, USA<sup>38</sup>



Google's new innovation center project is currently underway in Silicon Valley in the USA.

Its goal is to create a fundamentally new format of technology centers that combine several functions. In addition to the development of innovations and business, it is also the organization of open public spaces and retail and catering facilities. To connect the individual complexes in the center, it is planned to organize a network of cycle lanes and pedestrian zones.

An important goal of the project is to create an environmentally sustainable space. It is planned to use solar and geothermal energy in order to alleviate the negative impact on the environment. Large areas of the territory will be occupied by green spaces.

The project implementation will create a new innovative space, comfortable for employees and visitors. In addition, the center will be a vivid example of how alternative energy sources can be used in the organization of this type of territories.

# 316 THS M<sup>2</sup>

facility area

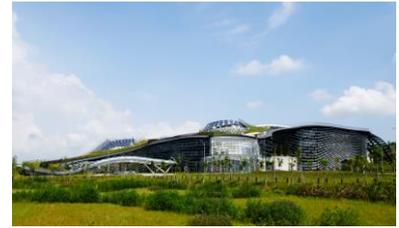
# 2015

year of the project start

<sup>38</sup> Project authors: BIG, Heatherwick Studio.

Photo source: <https://big.dk/#projects-gccp> <https://www.archdaily.com/806391/new-renderings-revealed-of-googles-mountain-view-campus-big-heatherwick-studio>.

## ITRI Central Taiwan Innovation Campus, Nantou, Taiwan<sup>39</sup>



ITRI Central Taiwan Innovation Campus is located in the Central Taiwan Innovation Research Park in Nantou.

The complex of the innovation center includes technological laboratories, a library, exhibition halls, cafes, and coworking spaces. In addition to the creation of the center itself, the improvement of the surrounding territories and the organization of public spaces were parts of the project.

One of the important project goals was to create an environmentally friendly environment both inside and outside the center. The building exterior was inspired by a shoal of fish, which can be seen both in the aluminum materials used and in its shape.

The interior spaces and the entire layout of the building determine the creation of a new type of workspace organization. This creates the effect of a continuous connection between the environment and infrastructure.

**42.5**  
**THS M<sup>2</sup>**  
facility area

**2014**  
year of construction

<sup>39</sup> Project author: Noiz Architects.

Photo source: [https://www.archdaily.com/783708/itri-central-taiwan-innovation-campus-exterior-design-noiz-architects?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/783708/itri-central-taiwan-innovation-campus-exterior-design-noiz-architects?ad_source=search&ad_medium=projects_tab).

## "Water Stadium" Technopark (Olympia Park Business Center), Moscow, Russia



Fig. 31. Water Stadium Technopark<sup>40</sup>

The Class A Business Center is distinguished by the flexibility of office spaces, allowing you to arrange workplaces in any configuration. This attracts large well-known tenants from the IT sector, such as Kaspersky Lab and others.

The business center exterior was developed by the English bureau John McAslan + Partners in conjunction with the territory of the Khimki Reservoir. To create a comfortable and green public area around the center, more than 100 trees and 4,500 m<sup>2</sup> of shrubs were planted. The territory of the complex also includes sports facilities and a well-equipped beach on the shore of the Reservoir.

### Recommended trends in the creation of innovation centers:

- focus on creating a comfortable environment;
- connection with the surrounding landscape;
- openness, accessibility and versatility;
- use of new technologies;
- environmental sustainability;
- infrastructural variety for leisure activities in the territory of the center (recreation, sports);
- flexible office spaces, adaptive to the needs of tenants.

## Light-industrial warehouses<sup>41</sup>

<sup>40</sup> Photo source:

<https://cdn-p.cian.site/images/7/885/441/biznescentr-olimpiya-park-bc-144588757-6.jpg>;

<https://abdevelopment.com/media/1500643038.jpg>;

<https://abdevelopment.com/media/1504610054.jpg>.

<sup>41</sup> Photo sources: [https://www.archdaily.com/926816/cl-warehouses-](https://www.archdaily.com/926816/cl-warehouses-vaga?ad_source=search&ad_medium=projects_tab)

[vaga?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/465291/techno-) <https://www.archdaily.com/465291/techno->

**Light-industrial** warehouses are a sought-after product in the modern real estate market. This term refers to small warehouses with an area from 200 to 2,000 m<sup>2</sup>. Such premises are in great demand among representatives of small and medium-sized businesses.

Various global trends in their organization are being formed against the background of the growing demand for this kind of infrastructure.

## 1. Warehouse design

As the Light-industrial infrastructure begins to occupy more and more sites, its architectural appearance becomes an important aspect for increasing the attractiveness of the urban environment (Fig. 32-34).



Fig. 32. Light-industrial warehouses, Cesario Lange, Brazil



Fig. 33. Warehouse, Aurillac, France



Fig. 34. Warehouse premises, Poing, Germany

## 2. Multifunctionality of buildings

More and more examples of multifunctional use of warehouse territories arise in the world practice (Fig. 35–37). Parking lots are organized near the buildings themselves, and the internal premises are used as catering and business facilities. In order to optimize the use of space, the roof is often used as a location for various facilities.



Fig. 35. Conference hall inside a warehouse, Osaka, Japan



Fig. 36. Parking lots near warehouses, Beijing, China



Fig. 37. Office building combined with storage facilities, Singapore

### Recommended trends in the construction of warehouses:

- multifunctionality of facilities;
- laconic and modern design;
- openness and accessibility;
- connection with surrounding territories.

[https://www.archdaily.com/932053/caseros-warehouse-moarqs?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/932053/caseros-warehouse-moarqs?ad_source=search&ad_medium=projects_tab);  
[https://www.archdaily.com/374501/maintenance-facility-allmann-sattler-wap-pner-architekten?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/374501/maintenance-facility-allmann-sattler-wap-pner-architekten?ad_source=search&ad_medium=projects_tab);  
<http://lightindustrial.ru/pdf/MultyStorage2019.pdf>.

## Multi-storey warehouse complexes<sup>42</sup>

### Tokyo-9 GLP Sugito II, Tokyo, Japan



**107,05**  
**THS M<sup>2</sup>**

facility area

**2007**

year of construction

The six-storey warehouse complex, located in Tokyo, has an operational roof, where a parking lot is arranged, including a parking lot for road trains (trucks). The attached ramp allows loading and unloading of vehicles, including trucks, on each floor of the building. In addition to the logistics infrastructure, a coffee bar and booths are located in the building.

<sup>42</sup> Photo source:  
<https://www.glpjreit.com/en/portfolio/detail.html?id=0009>

## 27 Penjuru Lane, Singapore<sup>43</sup>



**95.7**  
**THS M<sup>2</sup>**

facility area

**2004**

year of construction

2 five-storey warehouse complexes with a ramp in the middle, which allows loading and unloading of vehicles, including trucks, on each floor of the building. In addition, the complex also includes office spaces in a building attached to the end.

<sup>43</sup> Photo source:  
<https://www.aimsapacreit.com/27-penjuru-lane.html>

# FRAMEWORK TERMS OF REFERENCE FOR THE DEVELOPMENT OF A COMPETITION



# PRINCIPLES FOR PREPARATION OF A COMPETITION PROPOSAL FOR ARCHITECTURAL AND URBAN PLANNING SOLUTIONS FOR GORSKAYA TERRITORY, ST. PETERSBURG

## 1. Balanced development in accordance with the global trends of Mixed-use development.

The main idea for the territory development is the creation of a space that combines scientific and technological innovation, business, creative industries and tourism through a mixed-use infrastructure, using the following trends in the development of thematic functional zones:

- innovation center — creation of a world-class scientific and technological center with opportunities for the development of science and business in a protected natural landscape;
- Light-industrial format is a diversified assortment of lots of a small area that can be easily adapted to the needs of each user;
- museum of the complex of protective hydraulic structures is the creation of a unique museum product associated with engineering and technical heritage, behavioral diversity, spectacular and recognizable architectural and artistic appearance;
- hotel and service infrastructure facilities — a new platform of the hotel infrastructure, combining content, media, communication and impressions within the framework of the development of the service economy of the territory.

## 2. Revitalization of the coastal area.

The Competition Proposals should provide an opportunity to revitalize Gorskaya coastal territory as a new center of attraction for guests and residents of St. Petersburg- in order to increase the socio-cultural significance of the territory located in the waters of the Gulf of Finland and strengthen the status of St. Petersburg as the maritime capital of Russia.

## 3. Application of modern architectural and urban planning solutions that form a new quality environment.

The multifunctional and balanced development of the competition territory is ensured through a comprehensive consideration of the existing prerequisites and the disclosure of the urban planning potential of the territory, achieved by:

- internal integration of the 4 thematic functional zones being formed;
- formation of a complex of interconnected infrastructure facilities that meet the needs of a variety of target audiences;
- creating a favorable environment with public spaces of the "Work.Live.Play.Learn" model<sup>44</sup>

- development of business tourism, congress and exhibition activities and hotel infrastructure, which are an important element of the investment policy of St. Petersburg.

#### **4. Clarification of the scenario for the development of the competition territory based on the service model (following the results of additional marketing research).**

A scenario of socio-cultural programming of the territory based on the territory development drivers created by Megaline LLC: IT-cluster with innovation facilities, a Light-industrial format, a Dam Museum and an observation deck, hotel and service infrastructure facilities - based on a service model optimized in terms of creating "growth points" for small and medium-sized businesses following the results of additional marketing studies.

#### **5. Economic efficiency of Competition Proposals.**

Competition Proposals should offer the formation of a sustainable financial and economic model of the territory's development with the possibility of phased implementation of architectural and urban planning solutions of Gorskaya territory, contributing to the creation of a multiplicative effect during the implementation of the work of subsequent stages.

<sup>44</sup> Work.Live.Play.Learn Concept – providing comprehensive comfort for life, work, recreation and self-realization of residents of a modern metropolis, <https://megalinestroy.ru/razvitie-territorii-byvshej-stroitelnoj-ploshhadki-kompleksa-zashitnyx-sooruzheniya-ot-navodnenij-gorskaya/>.



# GENERAL REQUIREMENTS TO THE PREPARATION OF A COMPETITION PROPOSAL

1. Compliance with the requirements of the Terms of Reference.
2. Fundamental compliance with the documents of territorial planning, urban zoning and strategic documents of socio-economic development.
3. Compliance of the Competition Proposals with the functional and planning solutions of the project for the development of the Gorskaya territory of Megaline LLC.
4. Architectural solutions should form a recognizable image and a unique identity of the territory while observing the principles of compositional and artistic unity, integrity of architectural and landscape solutions.
5. The fundamental feasibility of architectural and urban planning solutions, the presence of specific measures and mechanisms for their implementation in the Competition Proposal.
6. Architectural and urban planning solutions of the Competition Proposal should provide for the stages of implementation. At the same time, the Competition Proposals should form the environment and capital construction facilities at each stage, the functioning of which is not complicated by the implementation of the work of subsequent stages.
7. The materials of the Competition Proposal must comply in composition and content with the requirements of the detailed Terms of Reference provided to the finalists at the second stage of the competition, as well as:
  - have a high quality presentation of graphic materials;
  - ensure realistic visualization and stylistic unity of the competition materials.

# CONTENTS OF A COMPETITION PROPOSAL

1. Comprehensive assessment of the prerequisites for the development of the competition territory, including restrictions on its use.
2. Selection and analysis of relevant foreign and Russian examples of the creation of similar multifunctional complexes, identification of the main world trends with an assessment of the possibility of their application in solving competition problems.
3. Socio-cultural programming and service model of the competition territory, refined on the basis of marketing research.
4. Architectural and urban planning concept of the competition territory with the selection of key areas and sites of the first stage of implementation for each of the allocated functional planning zones.
5. Financial model for the implementation of Competition Proposals.



# APPENDICES



# **APPENDIX 1.**

## **LIST OF SOURCE DATA**

- 1.** Topographic survey of the territory (M 1:2000).
- 2.** Scheme of functional and planning organization of the Gorskaya territory, developed by Megaline LLC.
- 3.** Technical and economic indicators of the Gorskaya Territory Development Project.
- 4.** Analytical report on the Gorskaya Territory Development Project.
- 5.** Materials of the agreement concluded at the St. Petersburg International Economic Forum (SPIEF-2021) with the Investment Committee of St. Petersburg (Agreement on cooperation in the implementation of a large-scale renovation project of the former industrial zone and the formation of Gorskaya single development territory).
- 6.** Materials of the Master Plan of St. Petersburg (as amended on 06.03.2019).
- 7.** Rules for land use and development of St. Petersburg (as amended on 02/26/2021).
- 8.** Archival data of engineering and geological surveys of the territory.
- 9.** Archival data of engineering and hydrogeological surveys of the territory.
- 10.** Depth map of the Gulf of Finland water area adjacent to the competition territory
- 11.** Materials for photographing the territory.
- 12.** Copter survey materials (if available).

## APPENDIX 2. HYDRAULIC ENGINEERING BUILDINGS OF ST. PETERSBURG

### St. Petersburg Flood Protection Complex (FPC)



Fig. 38. Navigation facility C-1<sup>45</sup>

A system of dams and hydraulic structures designed to protect the waters of the Neva Bay and the Neva Delta from flooding and surge phenomena.

#### Composition:

- 11 dams (D1–D11);
- 6 culverts (B1–B6);
- two navigation facilities (C1–C2);
- a six-lane highway.



Fig. 39. General layout of dams and other hydraulic structures of the FPC



Fig. 40. Culvert B1 (dam at the Bronka)

# 2011

year of construction

# 25.4 км

total length of structures

<sup>45</sup> Photo source:  
[https://en.wikipedia.org/wiki/Saint\\_Petersburg\\_Dam](https://en.wikipedia.org/wiki/Saint_Petersburg_Dam);  
[http://murzix.ru/wp-content/uploads/2010/09/DSC\\_4078.jpg](http://murzix.ru/wp-content/uploads/2010/09/DSC_4078.jpg);  
<http://baltmp.ru/d/26909/d/zsd5.jpg>.

## Dams of the Sestroretsky Razliv Reservoir



Fig. 41. Gausman Dam<sup>46</sup>

A hydraulic engineering structure blocking the watercourse of the Setra and Chernaya rivers to raise the water level and concentrate the pressure at the place where the Sestroretsky Razliv Reservoir was created.

### Composition:

- Gausman Dam;
- De Volana dam.



Fig. 42. De Volana Dam

# 1723

year of construction

# 5.6 KM

total length of structures

## Dams of the Izhora Reservoir



Fig. 43 Dams of the Izhora Reservoir<sup>47</sup>



# 1805

year of construction

<sup>46</sup> Photo sources:

<https://autotravel.ru/phalbum/91544/139.jpg>;

<https://avatars.mds.yandex.net/get-altay/3923004/2a000001768a585307ac4f0eaa087e0e602a/XXXL>.

<sup>47</sup> Photo sources:

[http://www.newskolpino.ru/icon/news2/465x310/11545\\_1441267431.jpg](http://www.newskolpino.ru/icon/news2/465x310/11545_1441267431.jpg);

[https://topspb.tv/media/768x432/news\\_covers/plotinu-ochistili-3.jpg](https://topspb.tv/media/768x432/news_covers/plotinu-ochistili-3.jpg).

Dams that maintain water in the Izhora Reservoir and regulate the water level in the Komsomolsk Canal.

**Composition:**

- Dam No. 1 of the Izhora Reservoir;
- Dam No. 2 of the Izhora Reservoir;
- Spillway Dam No. 3 of the Izhora Reservoir.

**Exposition and exhibition complex "Universe of Water"**



Fig. 44. Exposition and exhibition complex "Universe of Water"<sup>48</sup>

The main exposition of the museum is located in the building of the I.A. Merts brick water tower (years of construction: 1859-1863) at the address: 56, Shpalernaya str. The museum building is part of the complex of the former main station of St. Petersburg city water pipes and is an architectural monument of regional significance.

<sup>48</sup> Photo sources: <http://www.vodokanal-museum.ru>.

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