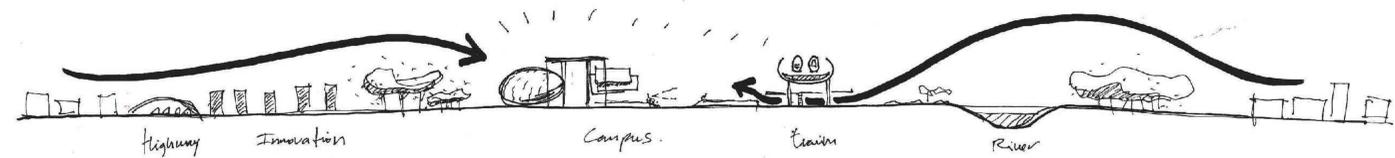
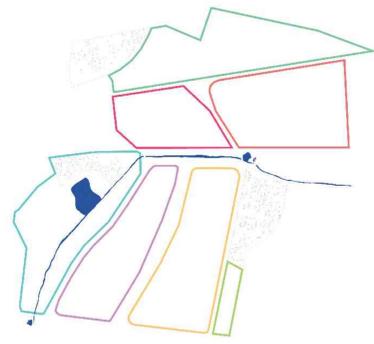
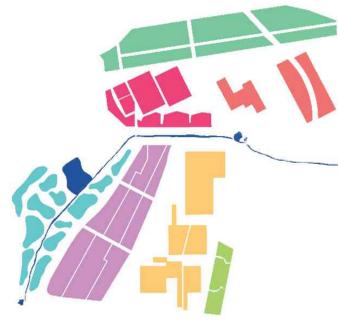


WE HAVE A





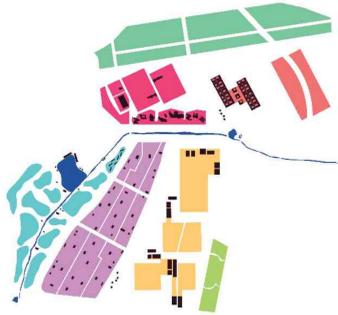
site plot



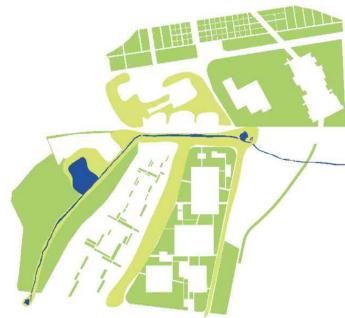
area formation



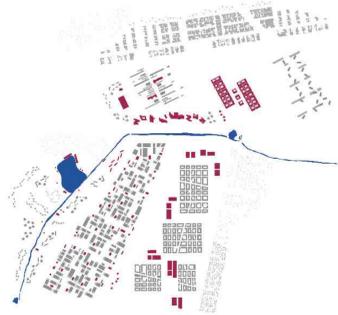
matrix concept



active areas



green areas



built areas

### BITACORA OF A TRIP TO THE FUTURE OF ITMO HIGHPARK AND THE CITY OF YUZHNY

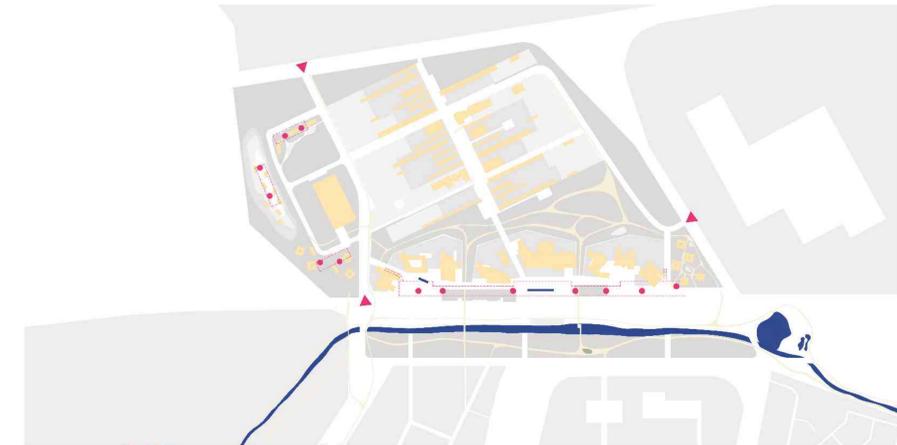
Creating a Place that becomes the MAGICAL SPACE OF THE FUTURE OF HUMANITY was the first association in my mind when reading about the desire to turn ITMO Highpark into a new "Mecca of the Architecture". I believe Architecture is the Creation of Spaces for Life and if that is ITMO Highpark's goal then we believe we are the right architects to support you throughout this process. Changing paradigms is not an easy subject. It requires a collective effort that allows the dreams and illusions of many generations to be translated into stone. The focus of refoundation should not be elitist and should instead follow a Convergent and Inclusive Philosophy.

We are convinced that a HOLISTIC ARCHITECTURE is the right answer to solve the HABITAT at the beginning of the Third Millennium. We refer to an equitable and integral approach that includes all the disciplines and interests that shape the Constructed World.

# holistic



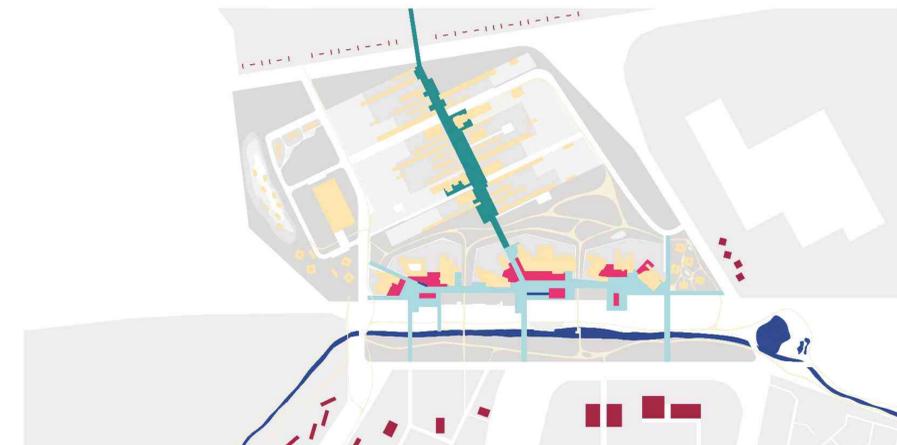
fluid landscape



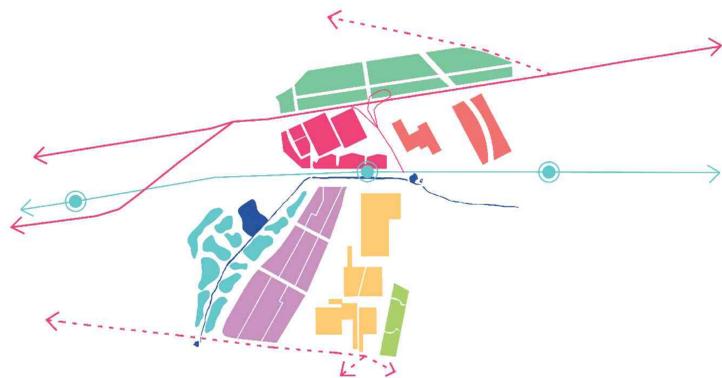
accessibility and parking



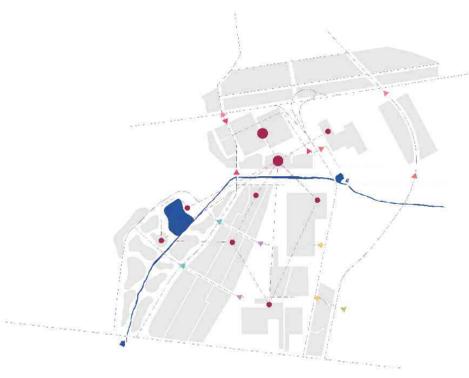
entrances



meeting areas



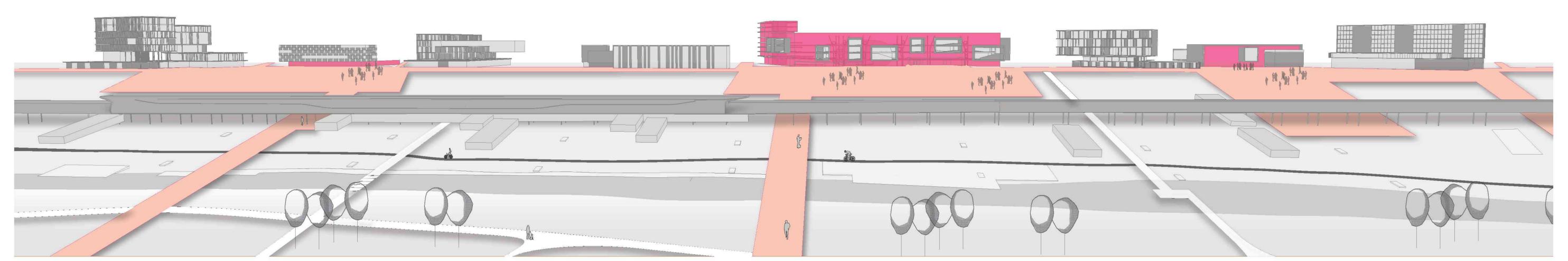
transport concept



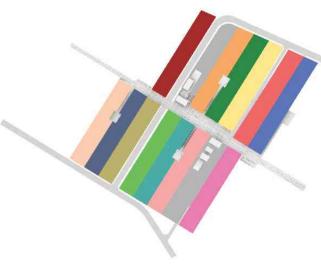
uses and connections

# DREAM

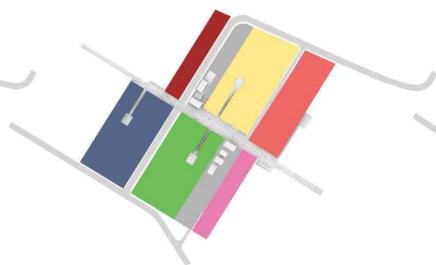
# village ITMO highpark



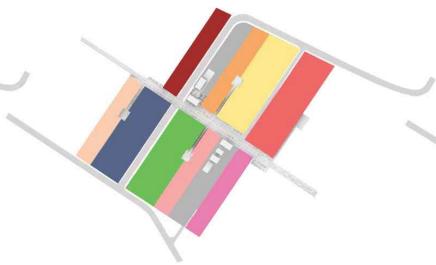
*options for economic development for all*



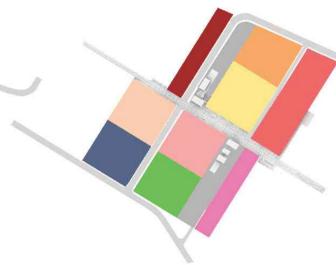
13\_2ha



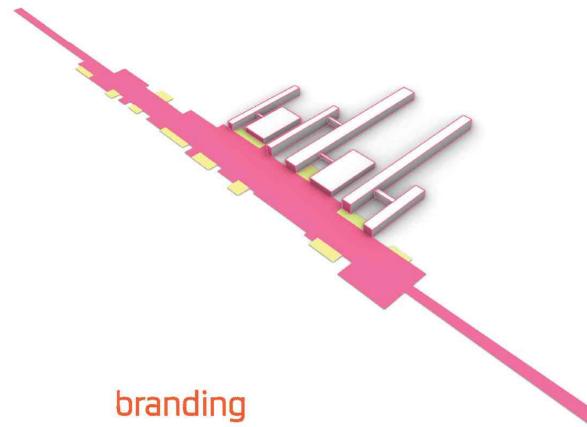
2\_2ha+1\_4ha+3\_6ha



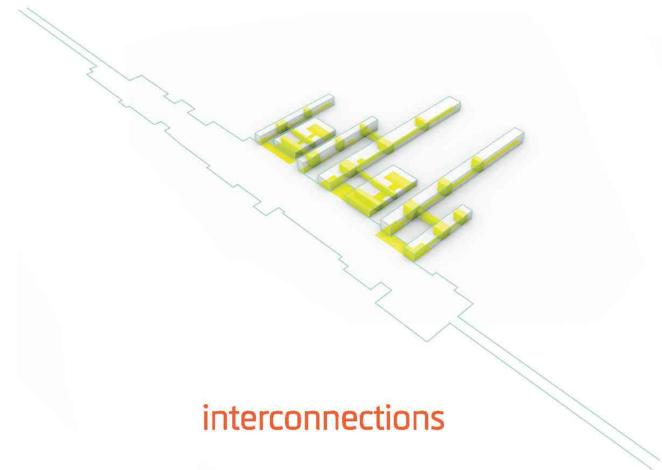
5\_2ha+4\_4ha



2\_2ha+6\_3ha+1\_4ha



branding

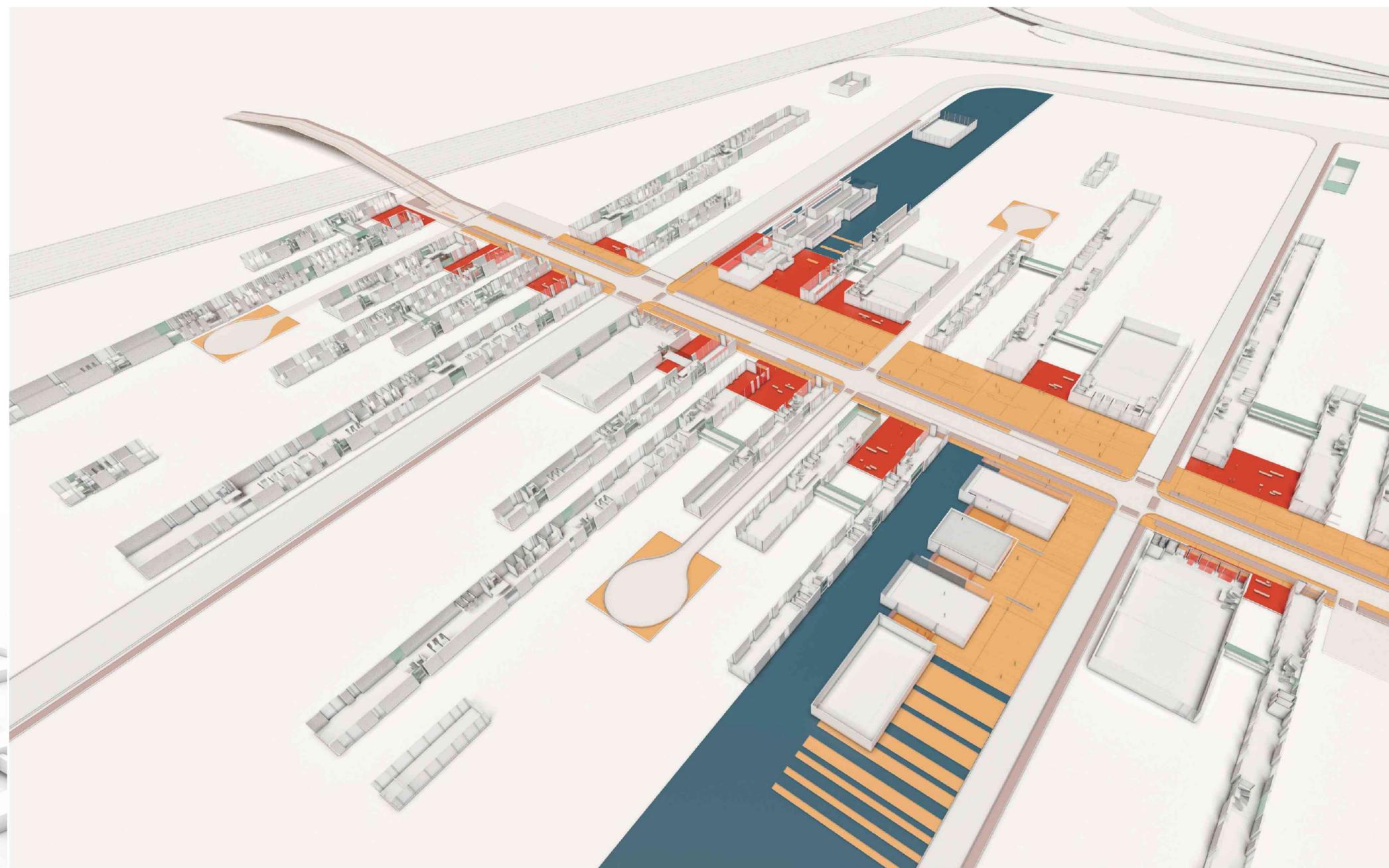
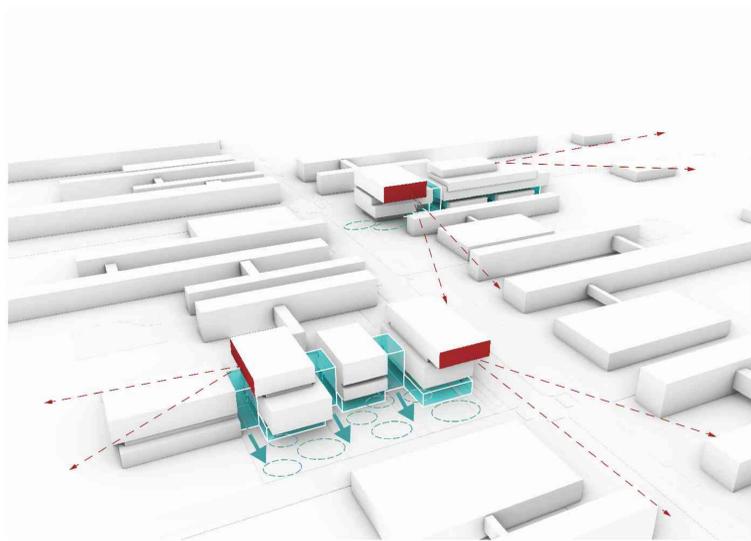


interconnections

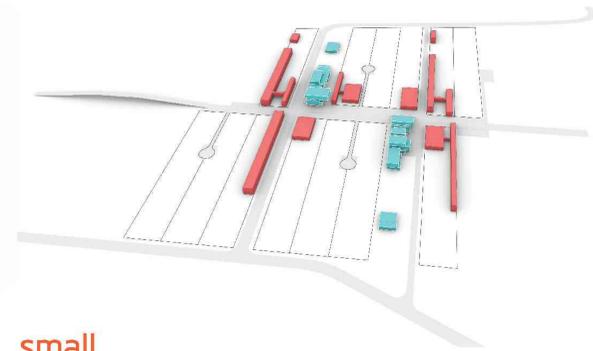
*hot spot public and urban logistics*



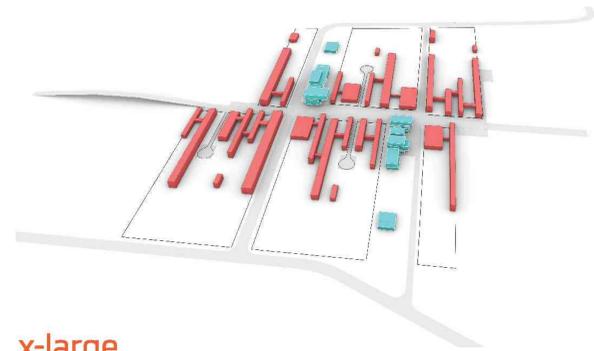
- DISPERSED
- CONCENTRATED
- REGULATED
- UNREGULATED
- WATER ACCESS
- WATER ACCESS



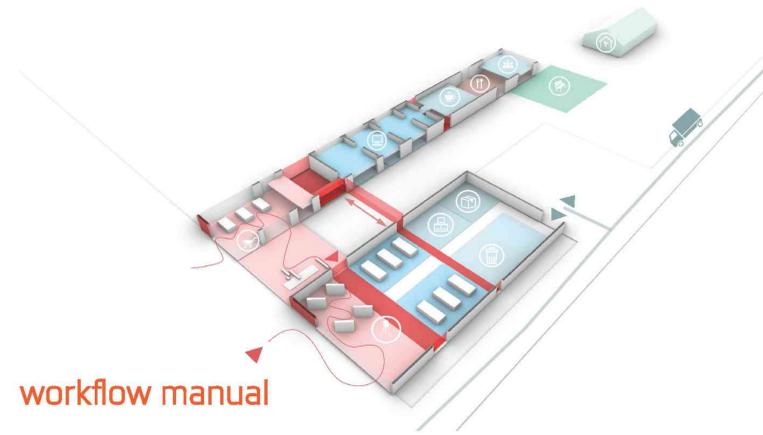
*how to start with an information exchange network for a worldwide success of ITMO production*



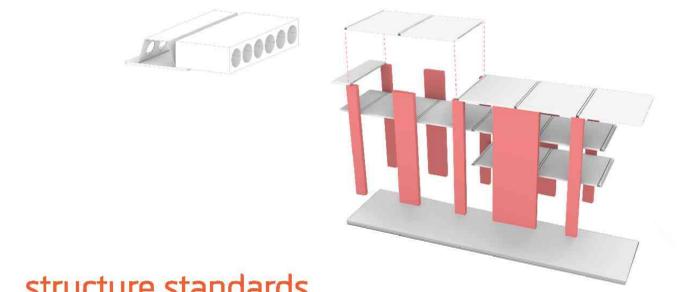
small



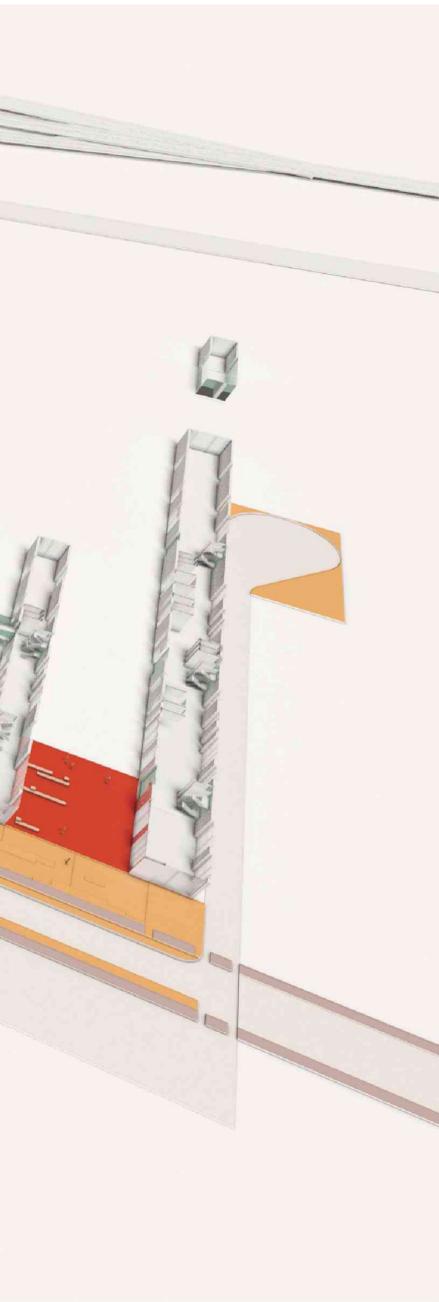
x-large



workflow manual

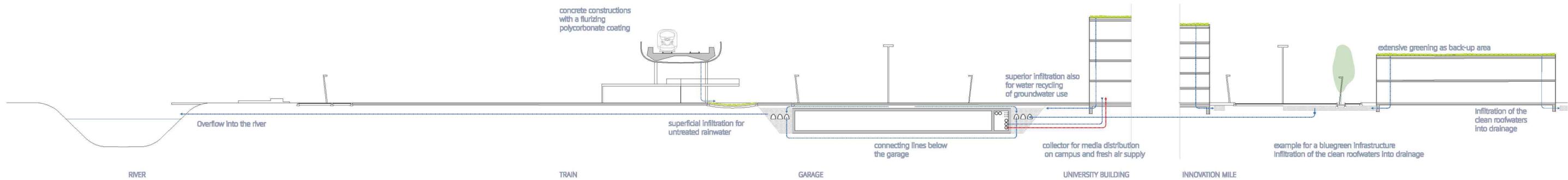


structure standards



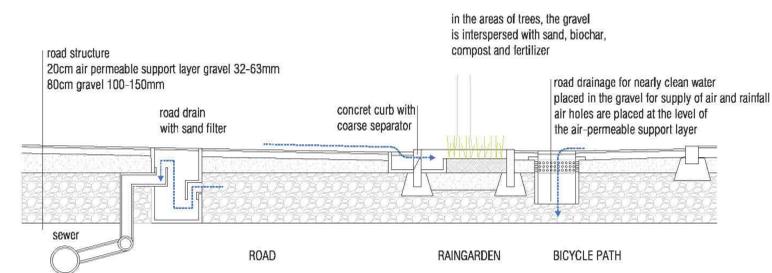
**innovation mile ITMO**





## WATER SENSITIVE URBAN DESIGN

## BLUEGREEN INFRASTRUCTURE



### HEATING / COOLING SYSTEM

An optimum use of energy resources can be derived from the groundwater, which is found under the site. This is achieved by utilizing the heat storage capacity of the entire mass of the building site. The difference in thermal energy between heating and cooling demand is stored in the ground and flows back to the tapping point with a 6-month frequency shift, resulting in a substantial improvement in energy efficiency.

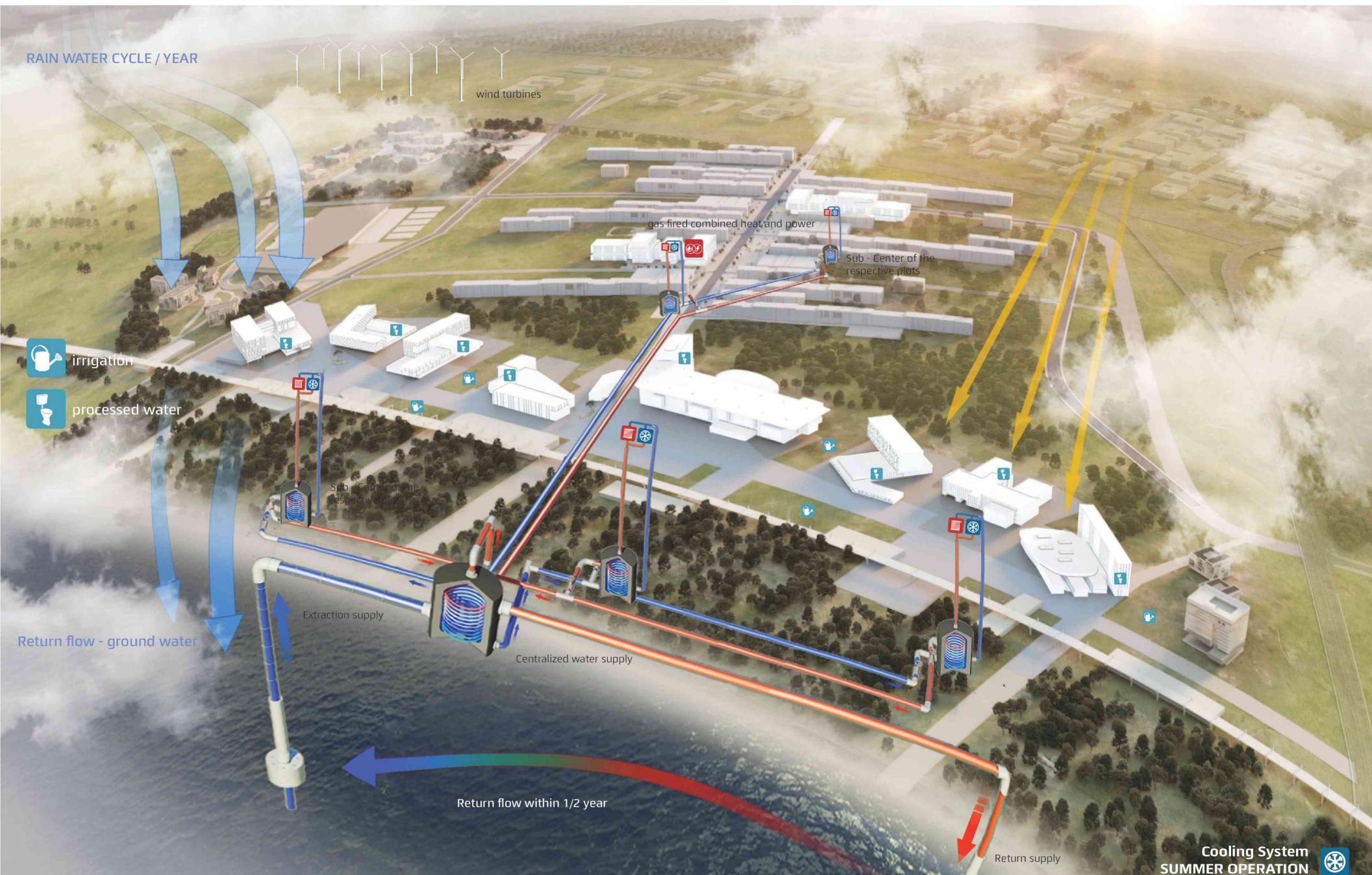
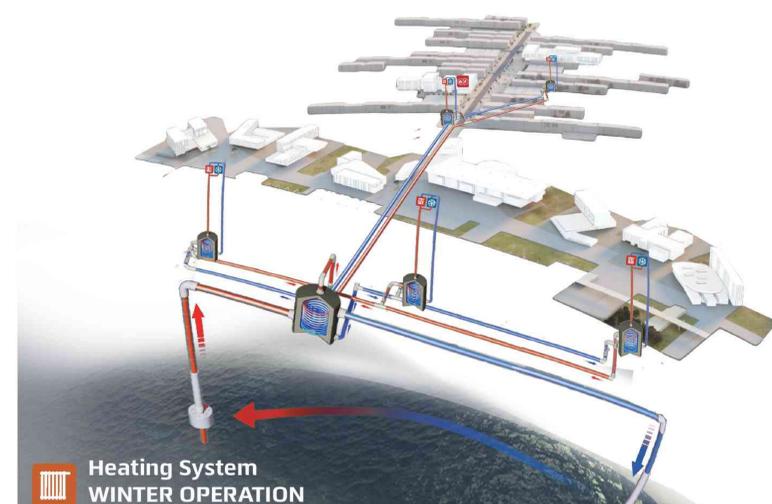
During the heating season, waste heat from the gas-fired combined heat and power plant and groundwater will be primarily utilized for supplying energy for the low-temperature heating. Only peak loads ( ~20% / year ) are covered by short-distance heating.

During the summer months, dissipation of operational waste heat and cooling of the buildings happen almost exclusively with groundwater. Due to the required temperature level, only the dehumidification of the ventilation systems and the redundancy of the heat dissipation are assured by compression refrigeration.

### TECHNICAL FACTS

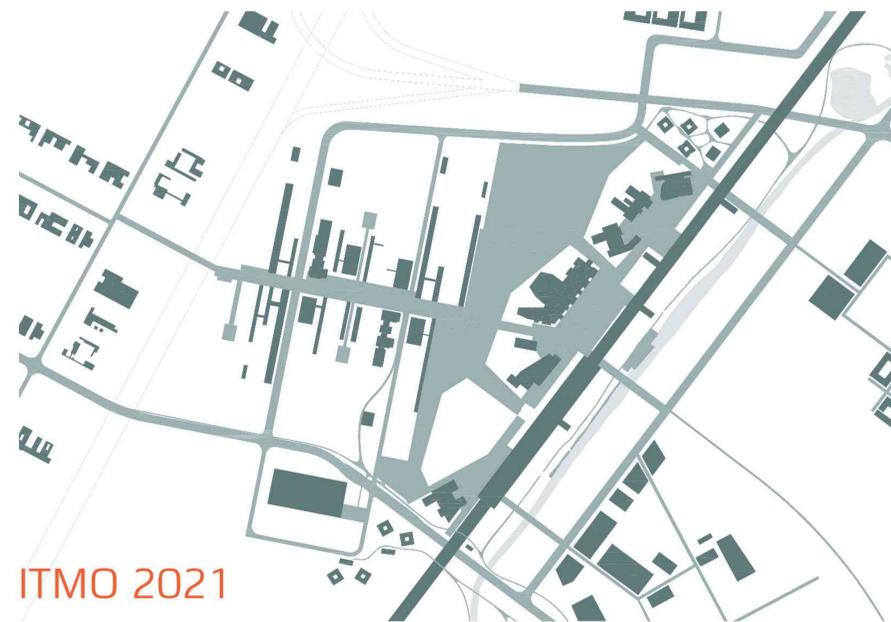
for the planned project on the basis of an ecological and economic consideration. In addition to the groundwater usage described above, which covers most of our required energy, a cogeneration unit with gas operation is planned at the Innovation Center. This makes it possible to ensure the peak coverage in winter and to provide the power for the system. The distribution of this energy takes place via a high-temperature network between the Innovation Center and the University to the respective sub-centers. A low-temperature network is planned in the buildings.

The underfloor heating systems and cooling ceilings are planned as a change - over system, which enables cooling in summer and heating in winter. The ventilation is basically carried out without humidification and dehumidification. In the lecture halls a CO<sub>2</sub>-dependent ventilation with variable volume flow controllers is provided. The exhaust air is led from all areas via a highly efficient heat recovery. A night cooling, which is controlled by the existing weather station, can save further cooling capacity. The fresh air required is passed through a collector so it is already pre-conditioned according to the season before reaching the ventilation control centres. The building envelopes receive effective sun protection and corresponding thermal protection. In addition, correspondingly tight building envelopes are being built. In order to be able to reduce energy cost, there is a presence and daylight-dependent control of the planned LED lighting. Furthermore, attempts should be made to increase the percentage of renewable energy in addition to generating electricity by the gas-fired combined heat and power plant through wind energy.





ITMO 2019



ITMO 2021



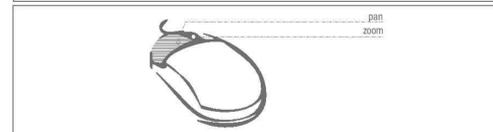
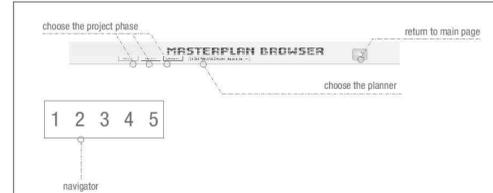
ITMO 2025

In light of the Center being a living Organism, it surprises me every time I visit it, either because a new building was inaugurated or because some of the Squares finally implemented the Light and Sound shows with the Ecological Artificial Rain that they had promised since we moved in. There is no doubt my family and I do not know which will be our first stop to visit next time. I think we will start during the warm hours of the noon, sit down and have lunch, enjoying these events at the Science Center, since today there will be a show of Mimes of Instability accompanied by the new Robots of the ITMO.

## CAMPUS ITMO HIGH-PARK MASTERPLAN INTERACTION TOOL: URBAN MENUS

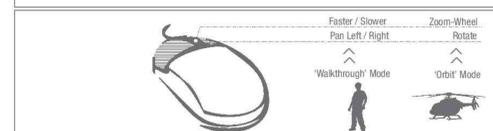
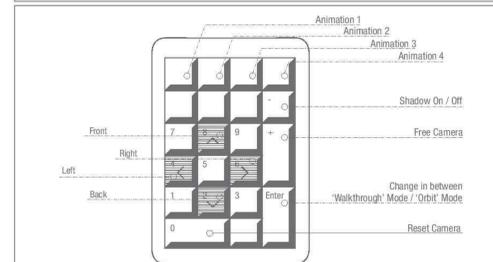
### MASTER PLAN BROWSER

The MASTER PLAN ITMO Highpark allows you to immerse yourself into the wide scope of projects submitted for the MASTER PLAN realization. Entries are being presented in their original format. Feel free to choose in between different project, studies or competition phases and a variety of architectural offices if you wish.



### CONFIGURATOR

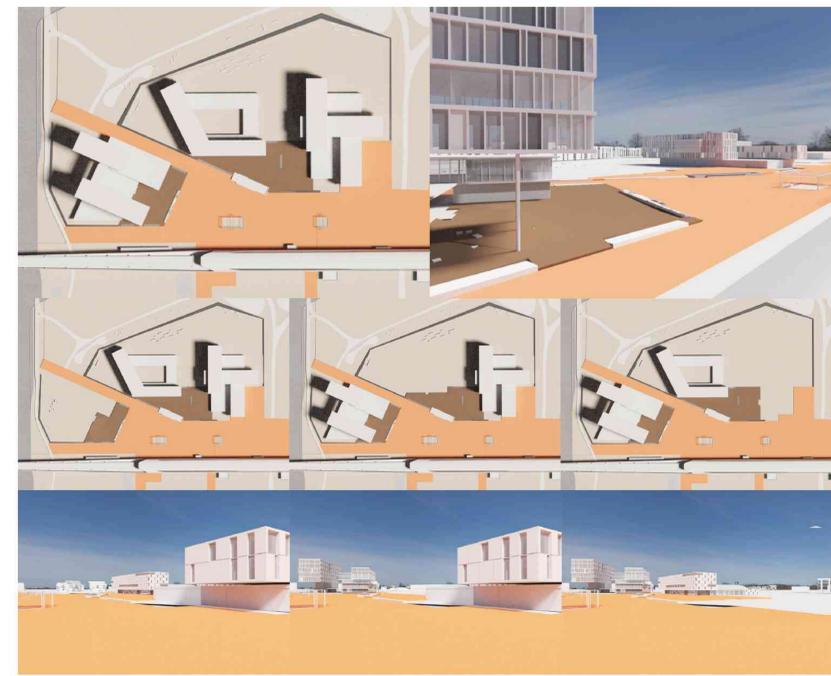
Especially designed for complex developments or international competition, the ARCHITECTONIC CONFIGURATOR allows to experience all possible combinations of project variations and competitions entries. For each building plot there is a choice out of many building proposals that then can be seen and evaluated within the entire setup of the ITMO Highpark Campus. By the use of a 3D real-time engine an immersive environment is created to turn a possible future into something tangible and real.



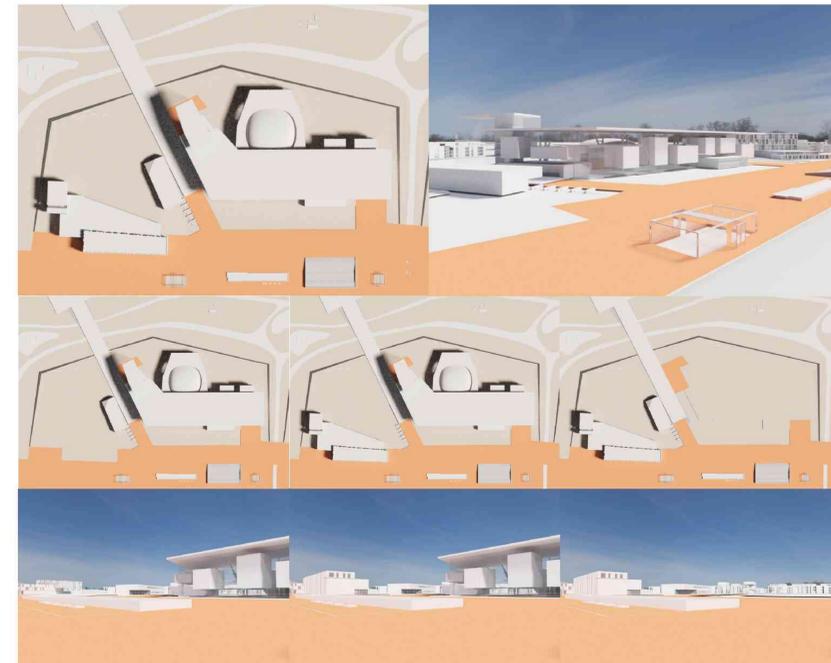
To present and assess the outcome of different project stages or for a holistic evaluation of architectural competition, an interactive 3D visualization interface – the “Master Plan Browser” – was developed. It allows to combine the competition entries for the nine building plots and to visualize the architectural situations. Open space concept, entrance situations and in-between spaces are examinable from 4 different viewpoints.

For a next step of developing of the urban fragments to the realisation projects or different competitions a standalone application was developed. It incorporates the possibility to virtually walk through the campus at particular times of the day and to assess natural lighting situations from arbitrary angles.

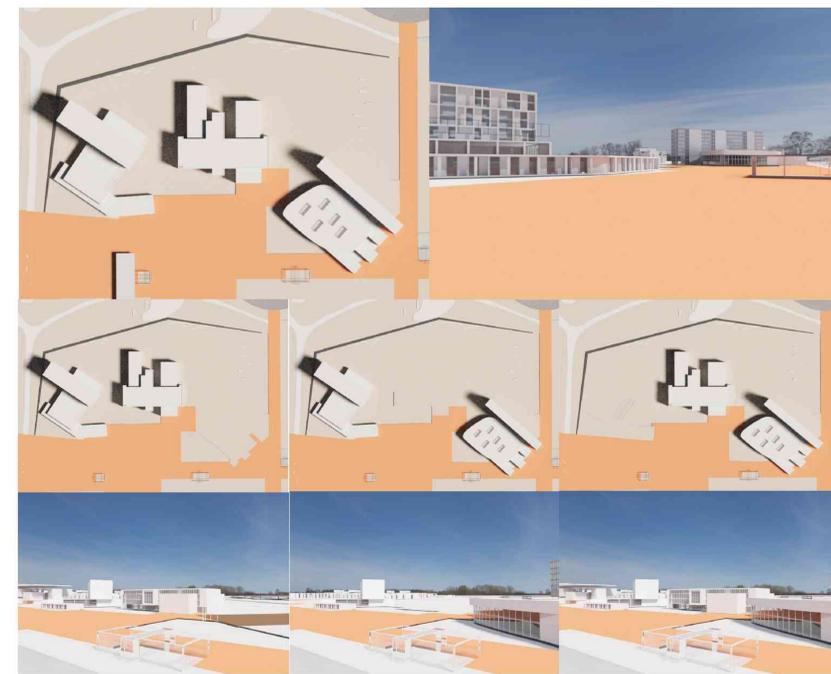
PIAZZA FORUM



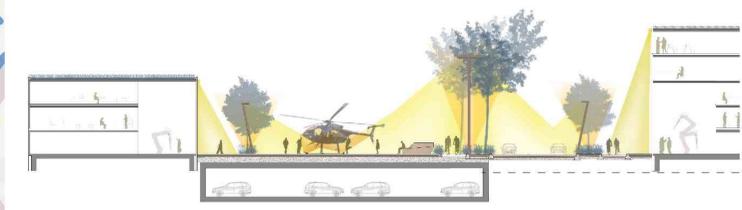
PIAZZA STAGE



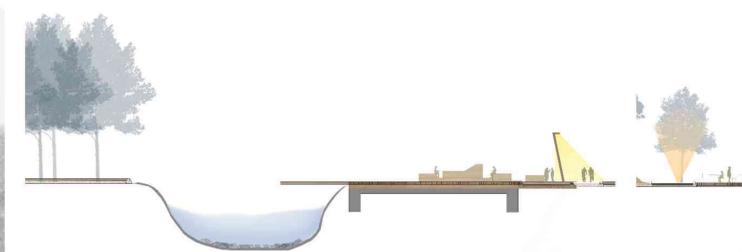
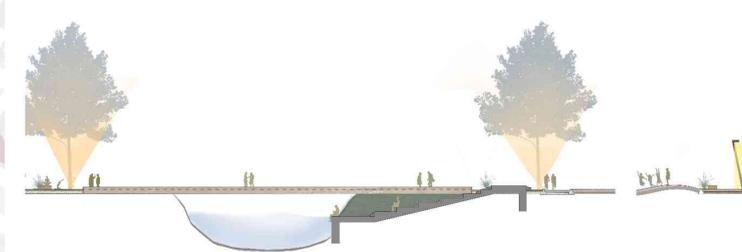
PIAZZA EXPO



ecosystem ITMO highpark

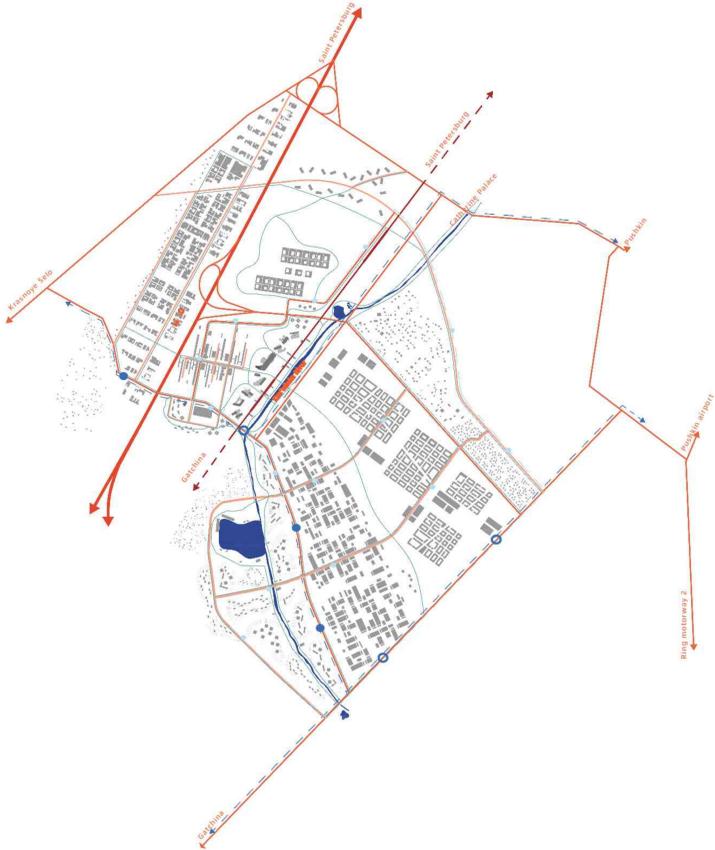


making visible to have urbanity 24/7

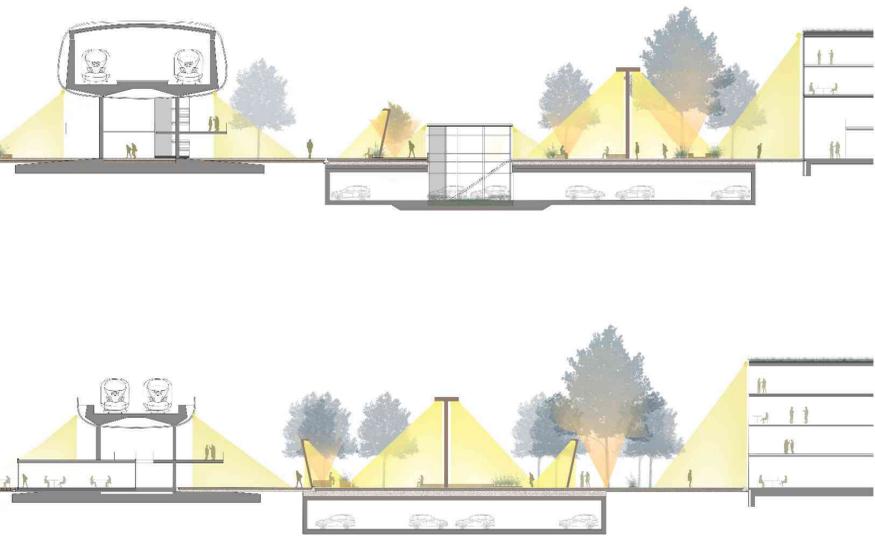
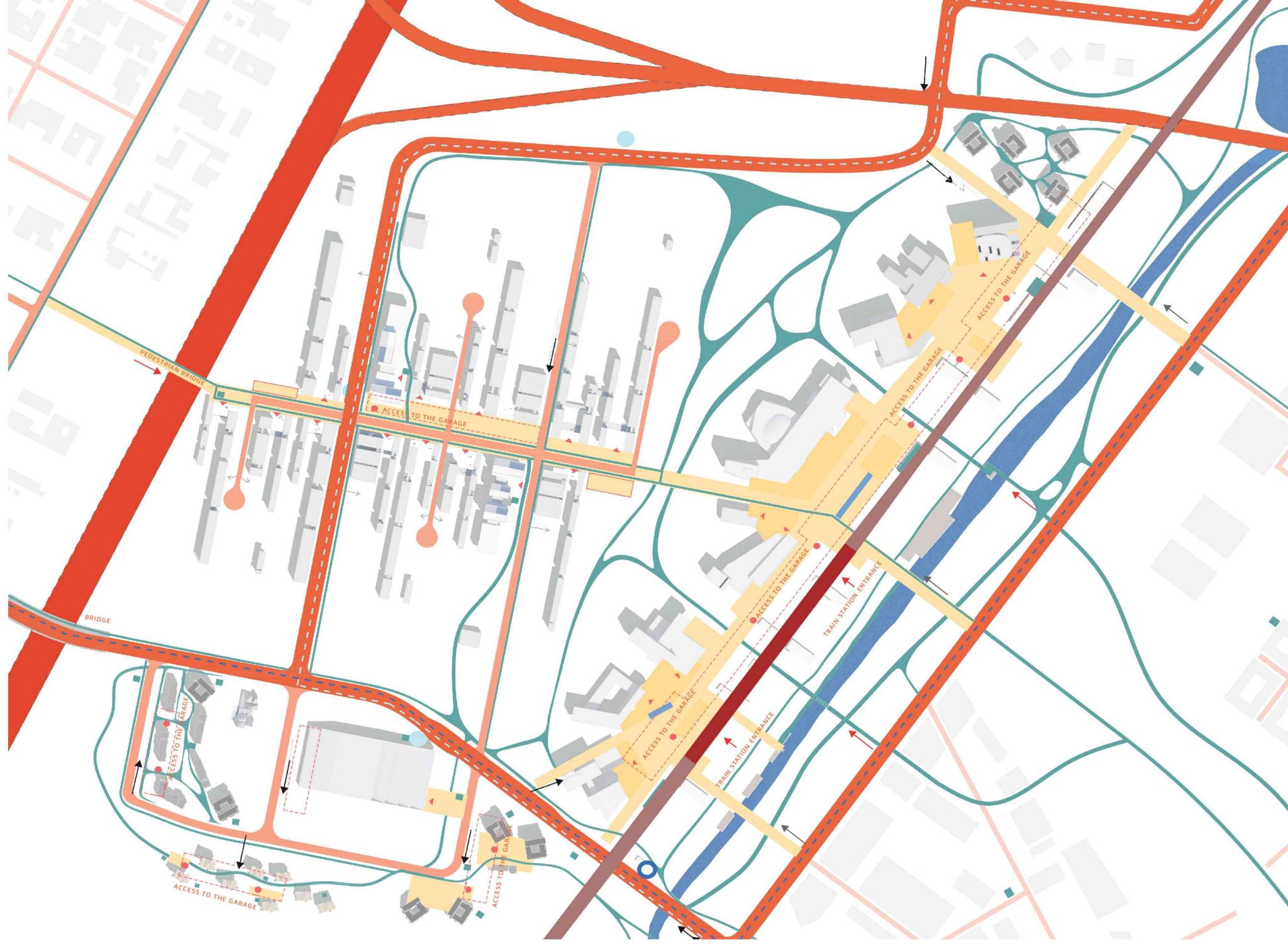


sequence of community spaces between the





mobility between the urban islands of yuzhny

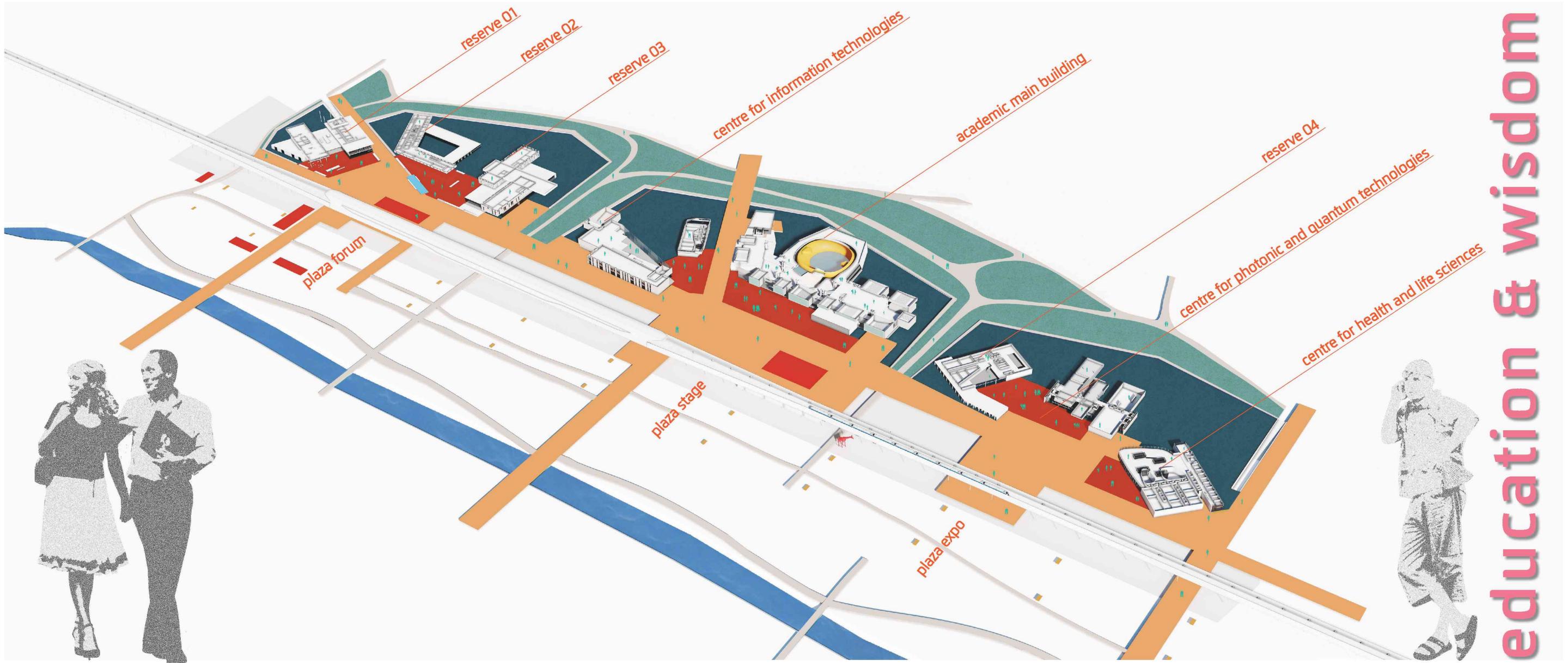


Kuzminka River and the Campus of ITMO University

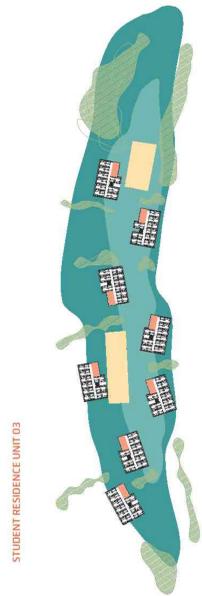
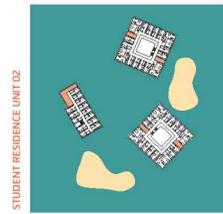
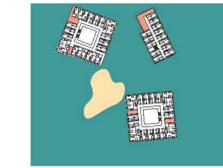
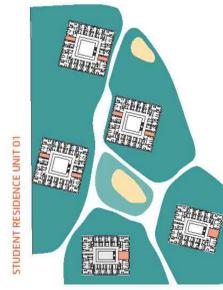
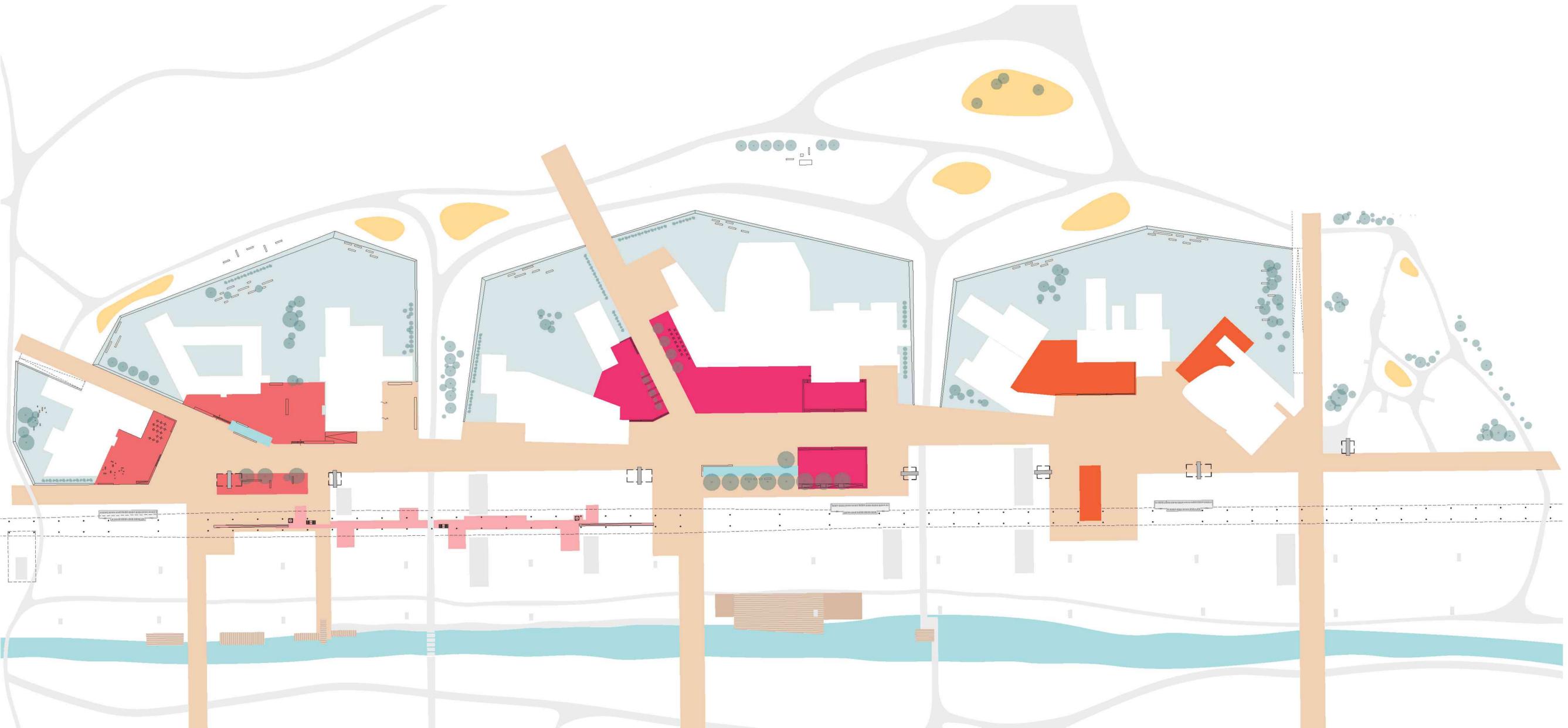
green movement

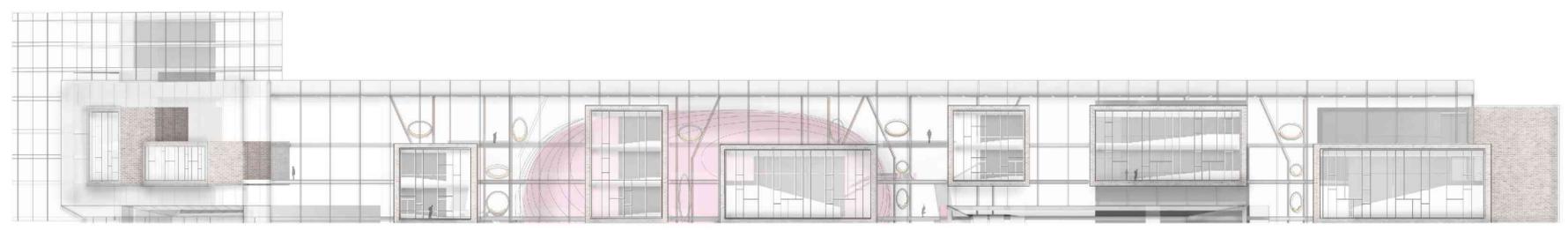
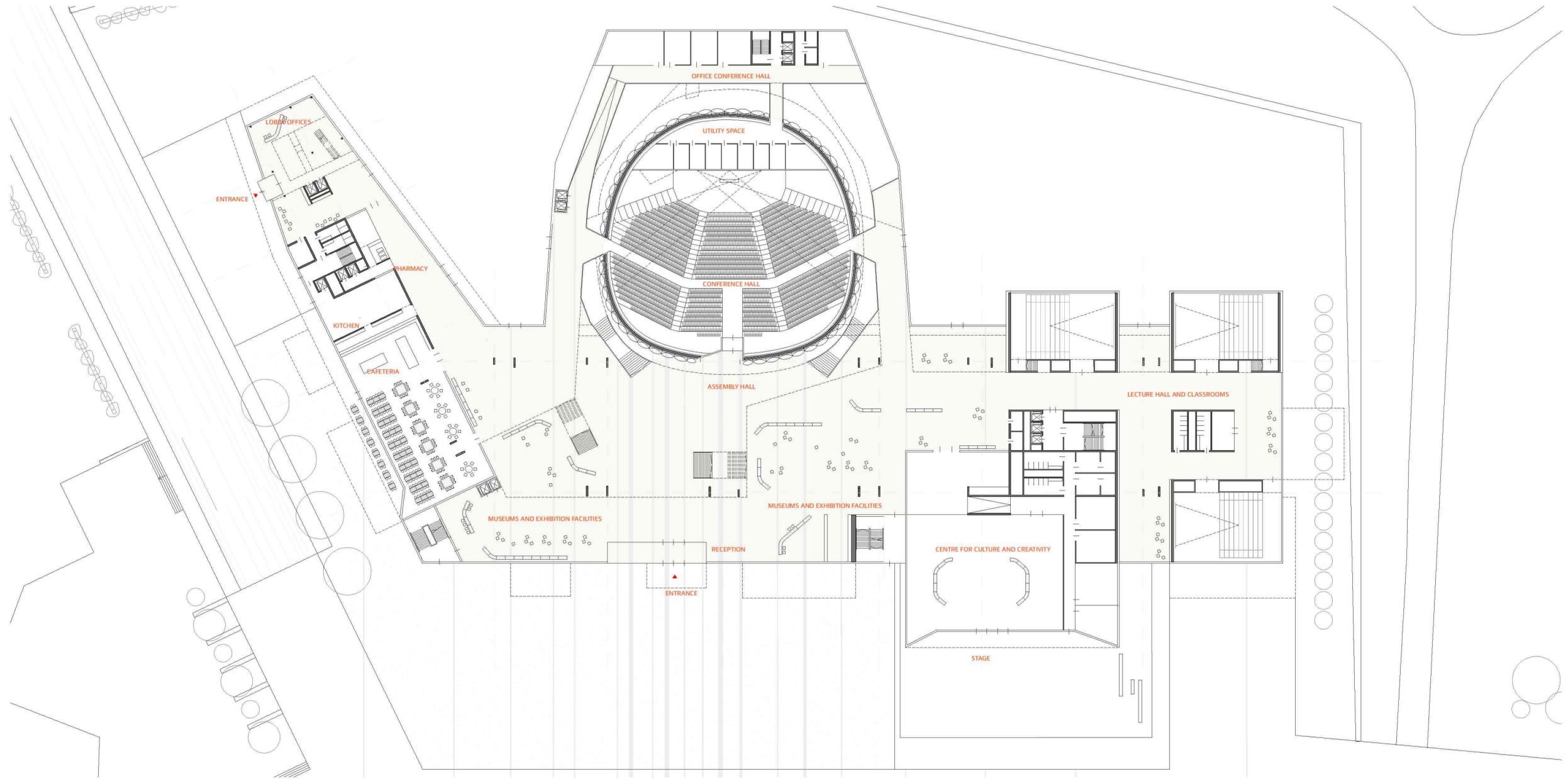
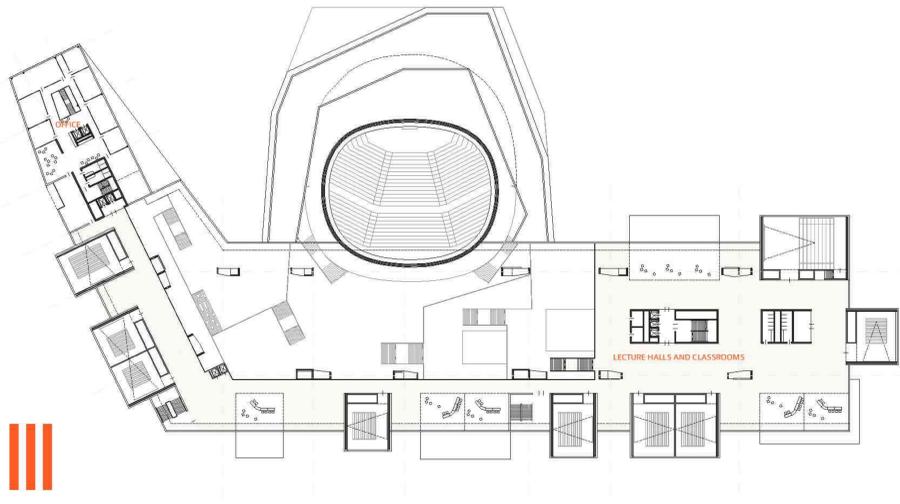
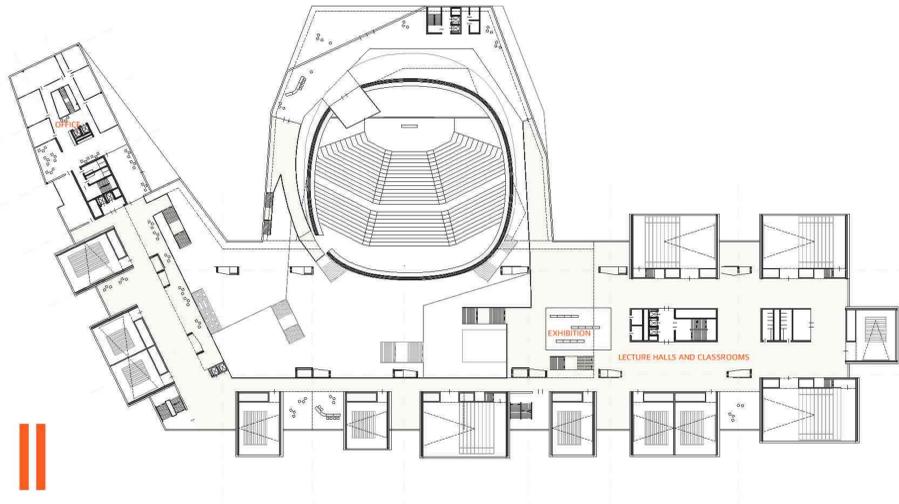
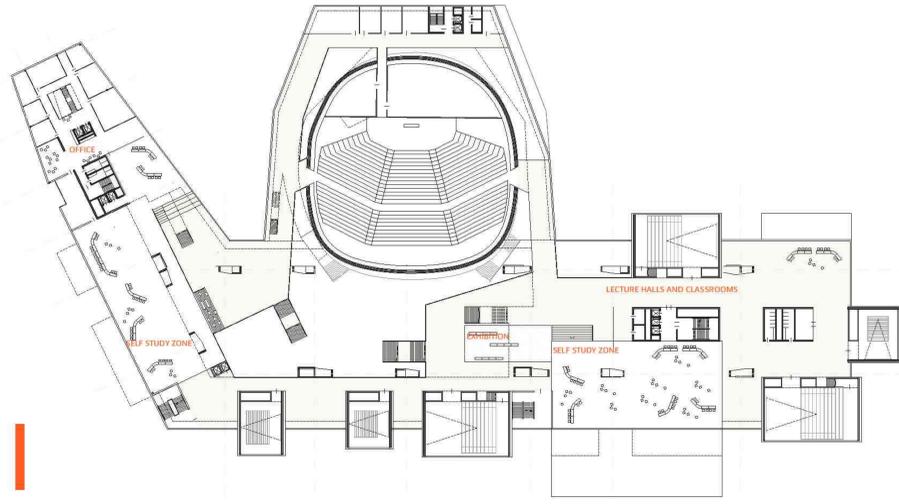


Inventing ITMO Highpark and its own built environment based on little amount of data forced us to work as Architects like SCOUTS OF REALITY. With this I mean, to go out and look for clues or hints in those many non-urbanized hectares. It was not an easy task but we decided that the FOUNDATIONAL STONES (Foundations) of the Vision we want to develop had to come from THIS specific place and not from the Virtual or Global World. Thus, the first TRACE aims to celebrate the CONNECTIVITY role that the railway plays in ITMO Highpark. Therefore, we decided to elevate the train so that it is not a barrier between the future campus and the City of Yuzhny anymore, but that it becomes part of its identity. This is the origin of the ARCHES that enable the access to all sectors of the new urbanization in Yuzhny and to its centrality at the ITMO Highpark.



education & wisdom





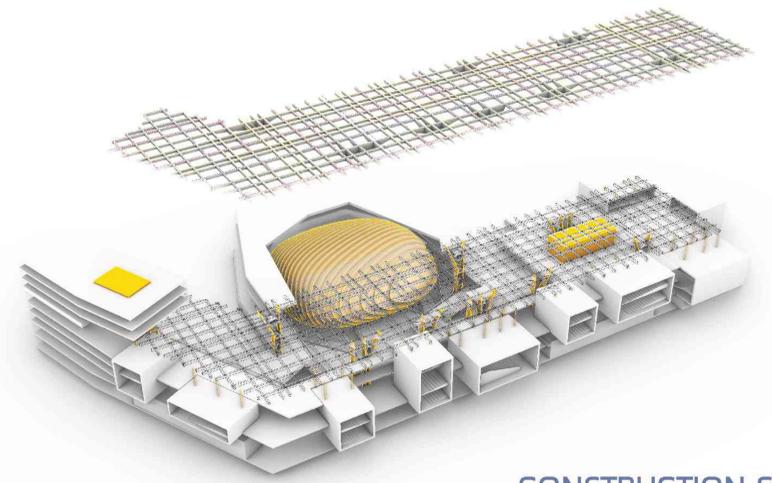
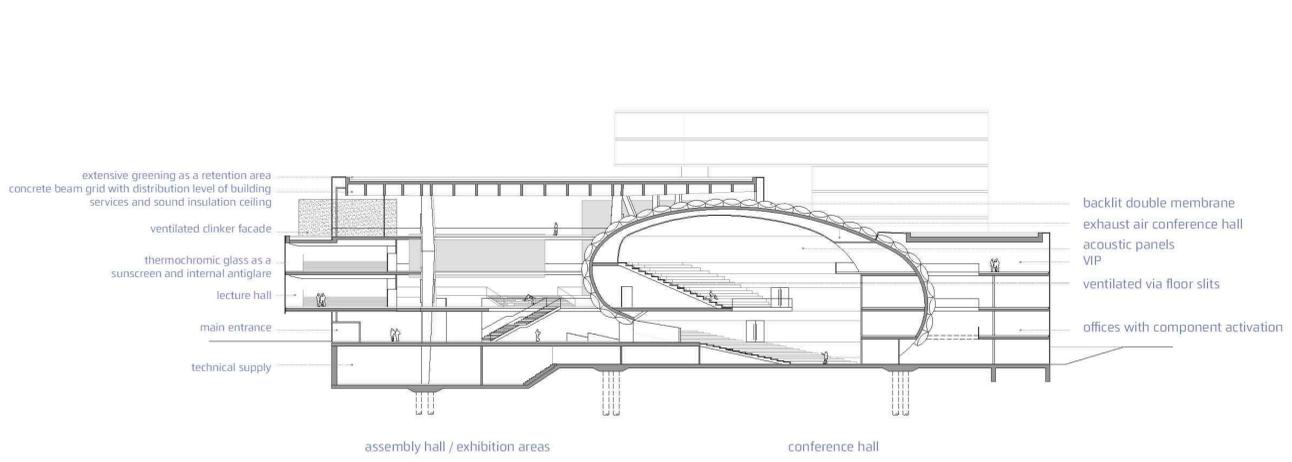
Who were the architects, **TROUBADOURS OF A BETTER WORLD** that achieved planting these seeds to create this **MAGICAL PLACE**? I do not know if it matters, as I really feel that it has been a collective effort of thousands of people that allowed us to believe in a **BETTER WORLD**.

And what happens when we want to go to the **CENTER**? We can go walking through the **BOULEVARDS**. We can go with the **SHUTTLE BUS** through the **Avenue of the Novelty**, or by skating or biking along the **Boulevard of the Youth Olympics** that show us the best **LOCAL, REGIONAL** and **WORLDWIDE INVENTIONS** to live in **HARMONY WITH THE COSMOS**.

Whichever path we decide to take in the everyday life, we will arrive at the **ARCHADES OF YUZHNY** with all its bars and meeting places before going through the new **EXHIBITIONS** of the **DIPLOMAS** and **DOCTORANTS** of the **ITMO University**. Did you know that each **PLAZA** has a **SPATIAL INSTALLATION TRIBUTE** to the **NOBEL PRIZE Laureates** that have studied or taught at **ITMO**? I do not know if that exists in the most prestigious universities in the world but I am proud to know that my children can be part of this **URBAN MIRACLE!**



I AM A M O W U M E N T



CONSTRUCTION & STRUCTURE



# ITMO HIGH PARK IS THE HOLISTIC FUTURE

Maybe we should go through the Aula of the “Waterfall of Wisdom” at the main Building before walking to the Innovation Park. I have been told that it is very attractive from the Transversal pedestrian street to see the Scientists and scholars discussing about the Future of Science on those Capsules that are suspended from Heaven. It’s very nice that ITMO has decided to build buildings that share the development of knowledge with people like us. I really feel part of a community in which I can participate by leaving messages about my free associations in the mailboxes of the Plaza based

on what I do. Maybe this will help my children to feel proud on how we have contributed to the development with a little grain of sand.

Every time we enter the Main Building, I feel the greatness and meaning of the “Cascade of Wisdom” and it elevates me to other levels of consciousness. Will the same happen to everyone who studies and works here? I believe it will, mainly because during the day and throughout the four seasons, being in a building that is so open to the cosmos, makes you feel alive as an integral part of the PLANETARY ECOSYSTEM. That is

good. I do not know how we will manage not to stay at the “Concert of the Forgotten Inventions of the World” that the New ITMO Graduates are announcing on the access screens. The Auditorium is so wonderful that one really manages to forget everything by immersing in those scientific and cultural views.

As Architects, ARGONAUTS OF THE WORLD OF FANTASIES, we are very happy to have been able to share with you this ambitious dream that we produce for your Earth and that could only materialize if we all unite and push together in the same direction. Thank you!

