



CLEVER
Cities

Belgrade Linear Park NBS Plan

Centre for Experiments in Urban Studies – CEUS

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1. Introduction

The Plan of General Regulation of Belgrade (2016) considered the railway corridor between the Beton Hala and the Panevo Bridge to be a zone for redevelopment from transportation into a green area. Thus, the Linear Park was suggested by the Secretariat for Environmental Protection of the City of Belgrade as a testbed for implementing NBS in urban planning practice, within the CLEVER Cities project.

With that goal, the deployment of the ***Plan of Detailed Regulation (PDR) for the new Linear Park - Belgrade in the Old City and Palilula Urban Municipalities*** was initiated in September 2018, by adoption of the *Decision on development of Plan* by the City Assembly. The contract between Belgrade Land Development Public Agency and the Urban Planning Institute of Belgrade was signed in September 2019.

Old City and Palilula Urban Municipalities are among the most vulnerable ones in Belgrade regarding air pollution, soil pollution and floods vulnerability. The area for re-development (4.6 km long, app. 23.8 ha of surface of the central railway corridor) is close to the river, but was detached from the city centre by the former railway infrastructure.

The major objective of this urban plan was to convert approximately 47 acres of neglected land around the old railway corridor into a demonstration polygon for art and technology and new residential zones, employing NBS and co-creation in a large-scale participatory approach.

In the planning process, it was essential to consider existing and future residents' requirements for leisure and relaxation when designing the park. Citizens demonstrated interest in using open public spaces as skateparks, amphitheatres, multipurpose plateaus, community gardens, artistic pavilions, cultural-historical paths, green creative corridors, eco-educo centers, etc. This was revealed by the results of an online Public Questionnaire conducted before the actual development of the plan. Those interests were primarily taken into account through Co-Creation Design Contest, which resulted in design of ten young transdisciplinary teams and served as the foundation for the production of the plan.

For the first time, NBS elements, such as facilities for birds and other animals, ecological habitats, freshness islands, eco-urban furniture and green sound barriers for transit within the public green space - were included in an official urban planning document. The rules for establishing green areas contain more specific regulations for the provision of such solutions. These rules, among others, specify requirement to use native plant species that are compatible with the local environment, adaptable to those conditions, and to avoid invasive and allergenic species, and maintain the usability of the green space throughout the year.

This plan's measures for environmental protection and climate change adaptation also include sewage and atmospheric wastewater separation, sustainable urban drainage system with natural water collection, utilization of permeable materials, use of heat-reflective materials (light colors), and other similar measures.

2. Preconditions

The legislation on planning and construction was changed in Serbia in 2014, when **Early Public Consultation (EPC)** was introduced as the first official, formal planning milestone when the government communicates the urban plan's initial ideas under development with the broader public. However, by law, EPC does not impose any interactive communication: materials are exposed for public insight but without any presentations, discussions or workshops, although more significant and timely interaction with the public was recognized as a necessity among professionals and was the initial goal of proposing and advocating for an additional instrument/step in the planning procedure. Moreover, inputs from the public, obtained in the EPC, are non-binding and do not require official feedback.

In the first years of the implementation of this legislative change, it cannot be said that the public showed excessive interest in participating in urban planning processes. However, from 2018, the general public became more aware of urban planning enactment procedures. It started to react to announcements, media texts, official elaborations and related documents, and a significant number of community groups emerged in reaction to the government's urban plans intentions.

After realizing that a multitude of interest in post-socialist urban development significantly threatens natural resources, in particular the green infrastructure, leading to missed opportunities for NBS, the wider public raised pressure towards the local authorities and urban planning institutions. As public pressure grew, pro forma public participation in urban planning became insufficient, and it was the right moment to introduce **co-creation**.

The selected **urban regeneration area** – the former railway corridor between the Beton Hala and the Pančevo Bridge - was perceived as a zone for re-development from transit into a green space within the Plan of General Regulation of Belgrade (PGR) adopted in 2016.

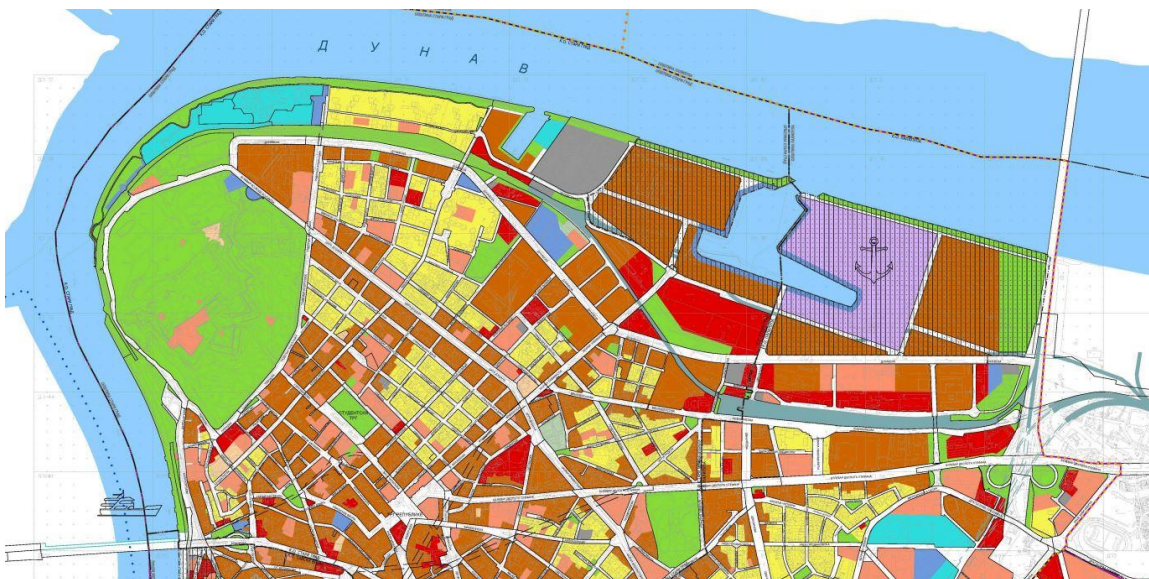


Figure 1: Land-use plan, PGR (2016)

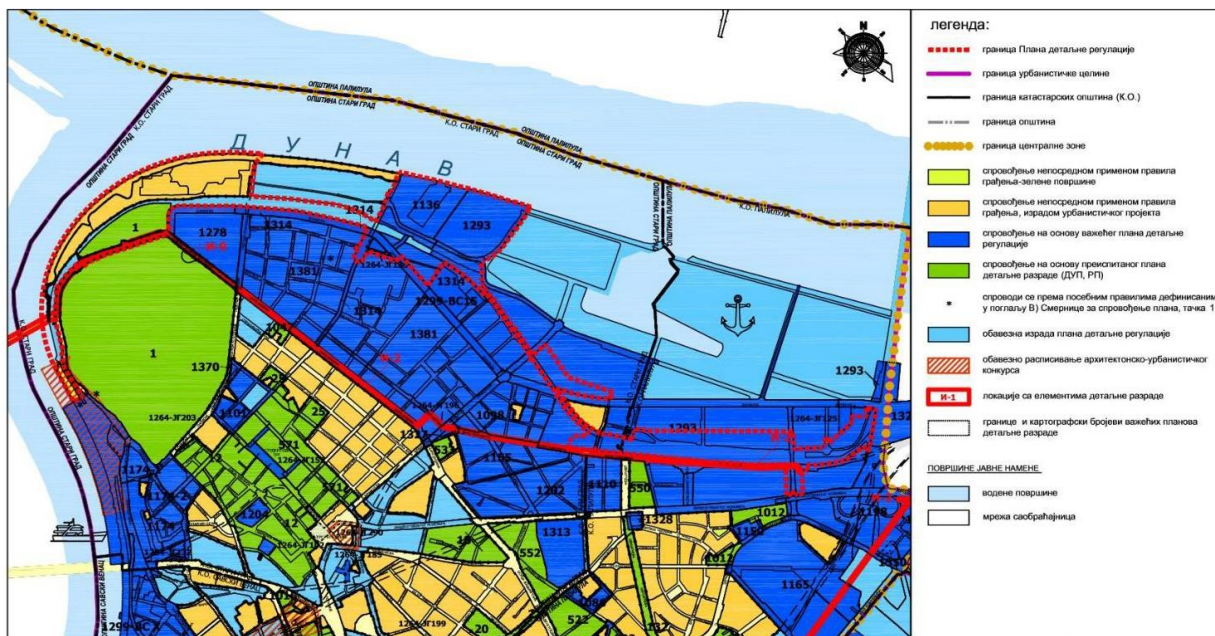


Figure 2: Implementation of the urban plan, PGR (2016)

The deployment of the **Plan of Detailed Regulation (PDR) for the new Linear Park - Belgrade in the Old City and Palilula Urban Municipalities** was initiated in September 2018, by adoption of the *Decision on development of Plan* by the City Assembly. The contract between Belgrade Land Development Public Agency and the Urban Planning Institute of Belgrade was signed in September 2019.

3. Co-Creation in Planning of the Linear Park

3.1 Urban Innovation Partnership - UIP

In November 2019, the official launch of Belgrade Urban Innovation Partnership (UIP) was organized, comprised of several introductory presentations on NBS and co-creation, and a discussion and initial mapping of challenges, opportunities and visions. The invitation to nominate members and attend the meeting was sent to more than 50 institutions, and the meeting was attended by over 60 participants from 35 local and national institutions of the public and private sector, the academia and the civil society:

Secretariat for Environmental Protection, Office of the Chief Urban Planner of the City of Belgrade, Belgrade Urban Planning Institute, Belgrade Land Development Public Agency, [Center for Experiments in Urban Studies - CEUS](#), [Kindergarten "Dečji Dani"](#), [Technical School "Drvo Art"](#), [Electro-Technical School "Stari Grad"](#), [Belgrade First High School](#), ["Lujo Davičo" Ballet School](#), Faculty of Special Education, [Bitef Theater](#), [Nikola Tesla Museum](#), NGO Forest sings, NGO Streets for Cyclists, Belgrade Public Transport Company, PUC "Belgrade Power Plants", PUC "Belgrade Greenery", PUC "Belgrade Waterworks and Sewerage", PUC "Parking Service", PC "Belgrade Fortress", Institute for the Protection of Cultural Monuments of the City of Belgrade, PWC "Srbijavode", "Railway Infrastructure of Serbia", PUC "Belgrade Metro and Train", Belgrade Port, PUC "Urban Green Markets", Faculty of Architecture - University of Belgrade, Faculty of Forestry - University of Belgrade, Faculty of Chemistry - University of Belgrade, Serbian Association of Architects, Green Building Council of Serbia, EnPlus Consultancy, [Strawberry energy](#), [Ministry of Construction, Transport and Infrastructure](#), [Standing Conference of Towns and Municipalities](#).



Figure 3: Belgrade UIP launch, photo credits: CEUS (2019)



Motivated participants proposed numerous high-quality and creative ideas, including the introduction of urban beekeeping, nature sounds in public transport electric vehicles, air pollution alarms in the form of badges, but also the integration of nature-based solutions into medieval and industrial architectural heritage. They were invited to locate their proposals on the map of the future Linear Park area, and they gladly did so.



Figure 4: Co-creative NBS mapping at UIP launch, photo credit: CEUS (2019)

By [the Mayor's Decision](#) from November 29, 2019, Belgrade Urban Innovation Partnership was established as a Task Force, which brought together 41 participants from numerous institutions, from all the sectors. UIP members were divided into seven distinct sections, which included: the Core Project Team, educational and cultural institutions, sport and recreational institutions, public organizations and public utility companies, private sector developers, academia, expert associations and SME's and national-level institutions. Through discussions in focus groups, the members of this Partnership tried to jointly define the common vision for the Linear Park, their needs and wishes regarding the new green area, but also to consider limitations and obstacles for their implementation and ways to overcome them.

Two focus groups followed UIP's establishment in December 2019 and January 2020, organized and facilitated by CEUS, when five new institutions joined the partnership and significantly contributed to its work. Particularly strong interest and proactive inputs and ideas were received from secondary schools and public cultural and educational institutions, namely, future beneficiaries of the Linear Park.

3.2 Focus Groups

The first Focus Group of the Core Project Team with educational and cultural institutions, sport and recreational institutions was held in December 2019, in order to jointly discuss the ideas of the

program, content, activities and design of the Line Park, as well as the obstacles that need to be overcome, and to define the direction of the common vision.

The meeting ended in an excellent mood, and the co-creation led to the initial definition of the vision for the new Linear Park:

“In 2025, the Linear Park will be an attractive, self-sustainable, multi-functional, eco-technological, artistic, research & educational, demonstration polygon, which promotes healthy living, community and cosmopolitanism, via national culture, environmental protection and youth empowerment”.



Figure 5: UIP First Focus Group, photo credit: CEUS (2019)



Figure 6: UIP First Focus Group, photo credit: CEUS (2019)

The Second Focus Group of the UIP gathered representatives of 20 institutions in January 2020, in order to initiate a discussion on the potential and limitations of the future Linear Park.

A number of very important topics for the area were discussed from a highly expert point of view: the problem of regulation of the part of the river-bank and the lack of protection facilities in the context of the Sava river-flooding in the area around the Nebojša Tower, the existence of natural retentions from the past and the historical marina, the legal obligation of archaeological research and the creation of conservation and restoration projects for the ramparts of the Belgrade Fortress, the cultural potential that needs to be activated, the need for soil pollution research and (bio)remediation, the possibility of


expanding the park area towards Ada Huja, priorities and projections of future developments, limitations in defining the content of public green areas, etc




Figure 7: UIP Second Focus Group, photo credit: CEUS (2019)

3.3 Public Questionnaire for Citizens


in December 2019 CEUS launched an online questionnaire for citizens, on desired programs, content and activities, to be planned in the Linear Park. The questionnaire was promoted in organized public events, via social media and TV reportage, and it was filled in by 570 citizens. Its results revealed citizens' interest in using open public spaces: skate-parks, amphitheatres, multifunctional plateaus, community gardens, artistic pavilions, cultural-historical paths, green creative corridors, eco-educo centers, etc. The results also confirmed high interest in urban agriculture: 57.6% of examinees confirmed that they are interested in practicing urban agriculture, but almost 40% of them (22.4% of total responders) were concerned that urban agriculture would be too complicated. Answers to the "open question" about the park content revealed that responders highly appreciate urban biodiversity and simple green spaces and that they prefer landscape design over urban design. They even proposed "nature as the main creator" and renaturing of this urban corridor by ecological succession.




☐ Pejzaž



☒ Urbani pejzaž




☐ Jednostavne intervencije u prirodi




☐ Dinamične intervencije izraženih boja


Sadržaji i aktivnosti Linijskog parka



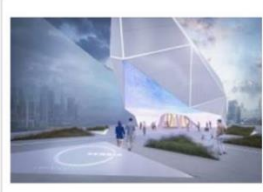
☐ Centar primenjene fizike



☒ Igralište za eksperimenisanje




☒ Eko-eduko centar



☐ Paviljon za mlade (EXPO recycle)

Figure 8: Section of the Linear Park Questionnaire, credit: CEUS (2019)




Da li stanujete u neposrednom okruženju Linjskog parka (videti ilustraciju neposrednog okruženja):

☐ Da

☐ Ne

Linjski park i neposredno okruženje:



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Linjski park u Beogradu: Upitnik za građane

* Required


Sadržaj i aktivnosti Linjskog parka

Parkovsko zemljište (travnjaci, drveće, štorije i cvećari, šetalište, biciklistička staza, vešnja igrališta (santiguljici) i dečji sa posebnim potrebama), urbani mobilijar (stupovi, žardinjere, fuzbierne, rasveta, osvetla) i javni toaleti su potrebni sadržaji parka. Od Vas očekujemo izbor dodatnih sadržaja koji bi opomenili ovaj jedinstveni gradski prostor. Shodno sadržaj u prostoru, njihovo oblikovanje i određivanje investicionih vrednosti bude predmet narednih urbanističko-arhitektonskih projekata, a rezultat ovog upitnika treba da doprinese definisanju programskog zadatka za buduće aktivnosti planiranja i projektovanja ovog prostora.


Koje od predloženih sadržaja i aktivnosti biste voleli da imate na raspolaganju u Linjskom parku? (molimo izaberite do 5 poruđenih odgovora; sve korišćene fotografije su samo ilustracije) *




☐ Muzički paviljon




☐ Akustičko igralište




☐ Umetnički paviljon (uključujući savremenu, primenu, digitalnu i alternativnu umetnost)




☐ Amfiteatar (za plesne i pozorišne manifestacije, filmske projekcije, itd.)




☐ Multifunkcionalni plato (za izložbe, festivale, zimi za klizanje, itd.)




☐ Komercijalni sadržaj (kafae, restoran, umetnički market, suvenirnica, itd.)




☐ Panoramski točak



☐ Mreža osmatračnica i vidikovaca



☐ Putanja kulturno-istorijskog



☐ Zeleni kreativni koridor

☐ Centar primenjene fizike

☐ Igralište za eksperimentisanje

☐ Eko-eduko centar

☐ Paviljon za mlade (EXPO recycle)

☐ Kutak za druženje i društvene igre (sah, bacanje, druženje sa ljubimcima, itd.)

☐ Zajedničke bašte (za urbanu poljoprivredu)

☐ Gradski voćnjak sa punktovima za zajedničku pripremu hrane (zimnice)

☐ Japanski vrt

☐ Sportski tereni

☐ Skejt park

☐ Avantura park

☐ Teretana na otvorenom

Ukoliko želite, predložite još neke sadržaje...

Your answer


Da li ste zainteresovani za proizvodnju sopstvenog začinskog bilja, voća ili povrća u privatnom, zajedničkom ili javnom gradskom prostoru (terase, krovovi, bašte, dvorišta, itd)? *

☐ Da


☐ Ne

☐ Voleo/la bih da probam, ali mi deluje previše komplikovano


U kom od ilustriranih ambijenata biste najviše voleli da boravite u Linjskom parku?




☐ Pejzaž



☐ Urbani pejzaž



☐ Jednostavne intervencije u prirodi



☐ Dinamične intervencije izraženih boja

UPITNIK O SADRŽAJIMA LINJSKOG PARKA

Procedura planiranja i projektovanja Linjskog parka

Da li Vam je poznata procedura izrade urbanističkog plana i institut ranog javnog uvida?

☐ Da

☐ Ne

☐ Znam ponešto, voleo/la bih da saznam više

Da li biste želeli aktivnije da se uključite u izradu urbanističkog plana za prostor Linjskog parka (npr. da učestvujete u radionicama)? *

☐ Da

☐ Ne

Da li mislite da bi u projektovanje ovog parka trebalo uključiti i inovativna ekološka rešenja (npr. nove tehnologije ili ekosisteme koji značajno unapređuju kvalitet vazduha, uštedu energije, prečišćavanje otpadnih voda, itd)? *

☐ Da

☐ Ne

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Opšti deo upitnika

Molimo Vas da nam date osnovne podatke o sebi, koji će se koristiti za segregaciju odgovora i analizu rezultata upitnika. Na osnovu ovog dela upitnika moći ćemo da sagledamo specifične potrebe, beje i druge različitih kategorija korisnika ovog gradskog prostora.

Starost ispitanika:

☐ 6 - 19 godina

☐ 20 - 39 godina

☐ 40 - 59 godina

☐ 60 i više godina

Pol ispitanika:

☐ Muški

☐ Ženski

☐ Ne želim da se izjasnim

Radni status ispitanika:

☐ Zaposlen/a

☐ Nezaposlen/a

☐ Penzioner/ka

☐ Student/kinja

☐ Učeni/ka

Kategorija korisnika:

☐ stanovnik/ca okolnog područja

☐ zaposlen/a u okolnom području

☐ redovni/a posetilac/posetiteljka

☐ povremeni/a posetilac/posetiteljka

☐ ništa od navedenog

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Linjski park u Beogradu: Upitnik za građane

Osiguravate o odgovorima email adresu

Da li ste saglasni da se pri javnom objavljivanju rezultata ovog upitnika Vaša email adresa koristi za identifikaciju Vaših odgovora, ili želite da Vaše odgovore objavimo anonimno?

☐ Želim da moja email adresa bude vidljiva i vezana za moje odgovore.

☐ Ne želim da se moja email adresa objavljuje, neka moj odgovori za javnost budu anonimni.

A copy of your responses will be emailed to the address you provided.

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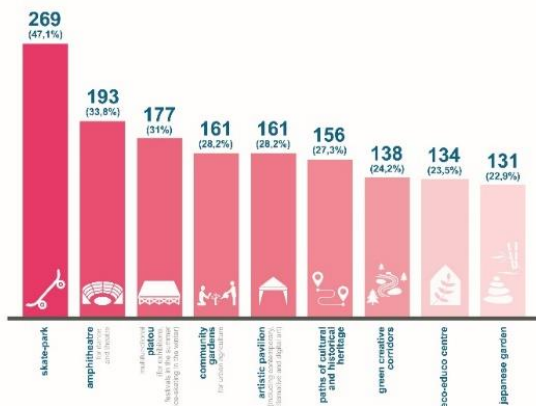
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Figure 9: Overview of the Linear Park Questionnaire, credit: CEUS (2019)

Prioritisation of Amenities / Content

Which of the 22 listed amenities would you like to use in the future Linear Park?



Attitude towards urban agriculture

Are you interested in producing your own herbs, fruits or vegetables - in private, common or public urban space? (terraces, roofs, gardens, yards ...)



Do you live in the marked neighbourhood of the future Linear Park?



Do you think that innovative, ecological, nature-based solutions should be included in the design of this park? (eg new technologies or ecosystems that significantly improve air quality, energy savings, wastewater treatment, etc.)?



Which of the illustrated ambiances would you prefer for the future Line Park?

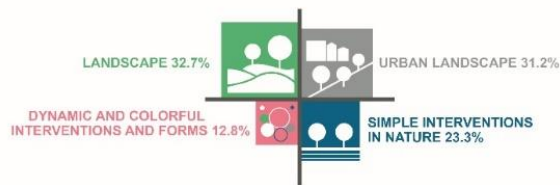


Figure 10: Results of the Linear Park Questionnaire, credit: CEUS (2020)

3.4 Co-Design Contest for Young Trans-Disciplinary Teams

In parallel with previously mentioned activities, a Co-Design Contest for Young Trans-Disciplinary Teams was drafted by CEUS and finalized in collaboration with the Office of the Chief Urban Planner, Association of Belgrade Architects and EuPOLIS consortium. The Contest was announced in December 2019. A total of 145 young people in 28 teams answered to this call, and criteria for selection of ten winning teams were:

- (1) proposed conceptual approach;
- (2) application of NBS;
- (3) previous candidates' experiences, according to CVs and portfolios.

At the end of February 2020, the ten teams were chosen by the Professional Committee comprised of 10 members to develop conceptual designs for 10 sections of the Linear Park. They gathered 49 young authors (architects, landscape architects, civil engineers, electrotechnical engineers and chemical engineers) with 15 collaborators (additional transport engineers, mechanical engineers, spatial and urban planners, biologists, etc.). The programming basis of their designs was the results of the Public Questionnaire.



Figure 11: Co-Design Contest for Young Trans-Disciplinary Teams, The concept of the spatial segment of Linear park - GREEN ARTERY, authors: Aleksandar Branković, Nevena Milošević, Miloš Pašić and Marina Mijatović



Figure 12: Co-Design Contest for Young Trans-Disciplinary Teams, The concept of the spatial segment of Linear park - LIQUID LANDSCAPE, authors: +1 (plus one)

3.5. Belgrade Urban Living LAB (BELLAB)

For communicating and fostering the co-creation process, CEUS established an online platform – BELLAB, which served as a repository of all the materials produced during the conducted discussions. Through the BELLAB platform and the UIP network, and in coordination with the City of Belgrade, Faculty of Architecture - University of Belgrade, Centre for Promotion of Science and Nova Iskra, CEUS applied for registration of [BELLAB \(BELgrade urban living LAB\)](#) in the European Network of

Living Labs (ENoLL). Registration was successful, thus this Urban Living Lab (ULL) was established in January 2021, as the first ULL in the Western Balkans.

BELLAB is a collaborative environment where citizens, the public sector, planning experts, and private companies, all work together in order to co-create solutions in response to complex urban and climate-related challenges, e.g. climate change adaptation, disaster risk reduction and climate resilience, reduction of air and soil pollution, urban biodiversity protection, healthy city promotion, sustainable urban mobility planning, etc.

3.6 Public Workshop for Citizens

In February 2020, the first broader public event was organized, comprised of a panel of presentations of the CLEVER Cities partners, a discussion with citizens, a workshop for community mapping and an exhibition of NBS examples prepared by Master students of the Faculty of Architecture - University of Belgrade.



Figure 13: Public Workshop, photo credit: CEUS (2020)

Over 130 people attended this event, and questions and comments from participants were pro-active, focused and constructive, which evidenced that the local community is dynamic and highly interested and motivated to (self) organize and invest their time, expertise and other resources for the future of this important public space and a new green oasis of Belgrade. Catalogue of NBS for Urban Regeneration, and the Co-creation Guidance were translated into Serbian language and adapted to the local context, in collaboration with the students of the Faculty of Architecture. Based on those

materials, citizens could select the most desired NBS for the Linear Park and place them on the map of the area, as well as any other input from their own, local perspective.



Figure 14: Public Workshop, photo credit: CEUS (2020)





Figure 15: Public Workshop, photo credit: CEUS (2020)

For public spaces interventions, citizens expressed interest, in particular, for NBS such as Infiltration Areas and Porous Paving, Community Gardens, Urban Bee-keeping, Facilities for Birds and Fauna, Butterfly Park, Urban Fruit Trees, Sensory Gardens, Urban Flower Fields, Usage of Treated Surface Water, The Living Garden Concept, Islands of Coolness, Green Noise Barriers, Eco-Urban Furniture, Shade provided by vegetation, etc. For new structures and complexes planning and design, such as Marina Dorćol, citizens believe that plans and technical documentation should integrate the following Building-Scale Interventions: Green Walls, Green Roofs, Urban Rooftop Farming, Rainwater Collection, etc.

3.7 Early Public Consultation (EPC)

The EPC for the Linear Park was announced on the first day of the Planning Committee's work following the COVID 19 lock-down and conducted in the period 13–27, May, 2020. Due to prohibition of public gatherings in May, CEUS organized an online consultation process for the members of the UIP and the broader citizenry using the ZOOM application, with the possibility of sending comments and questions in advance. Since the first COVID 19 pandemic wave had a significant impact on people and shifted their focus and interest, and due to still insufficient general skills for public discussions in an on-line realm at that moment, a total of 25 participants attended this meeting. However, those who did attend the meeting very clearly expressed their doubts, wishes and

suggestions. A poll for prioritising NBS was organized as well, and Community Gardens were voted as the most desired NBS.

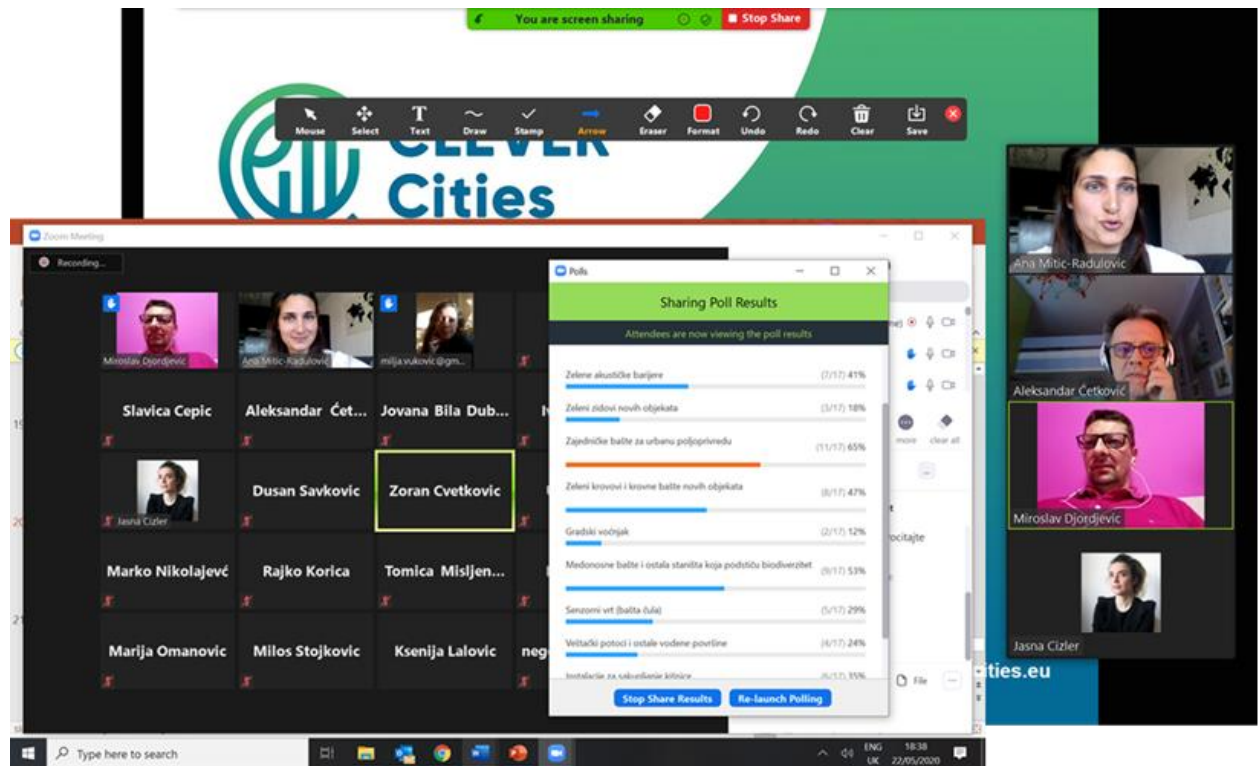
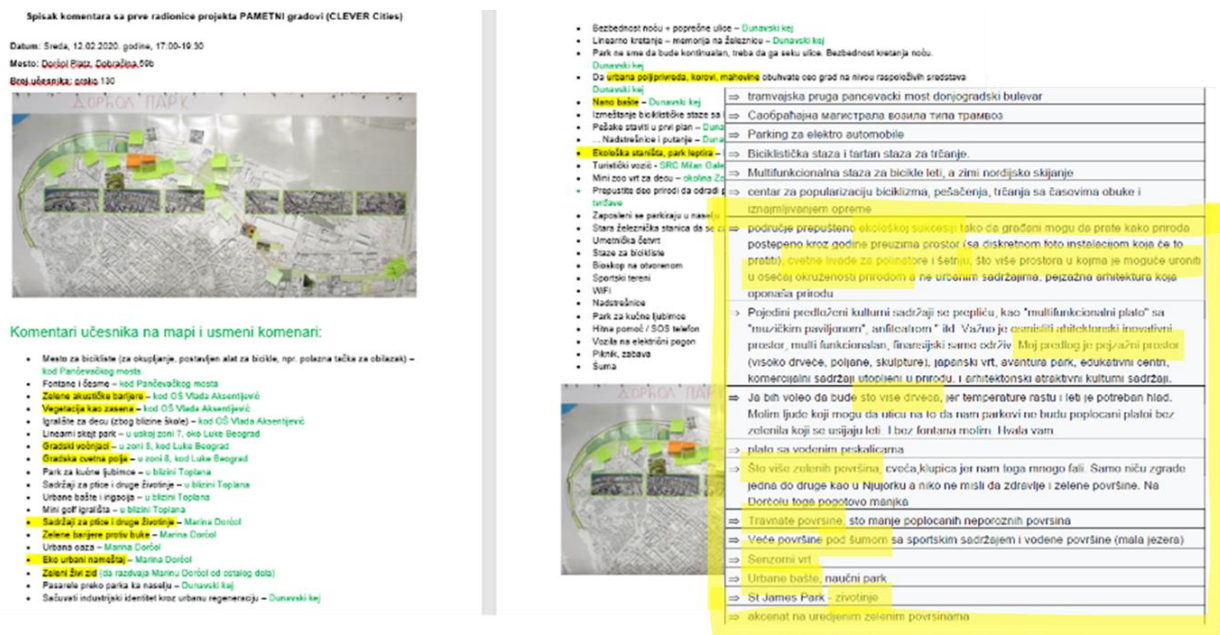


Figure 16: Screenshot from EPC online consultations, photo credit: CEUS (2020)



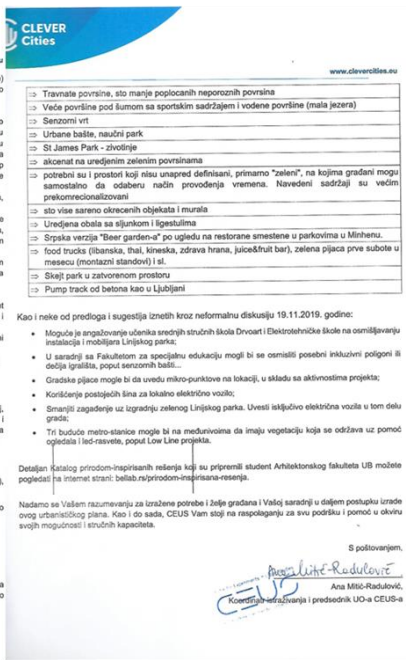
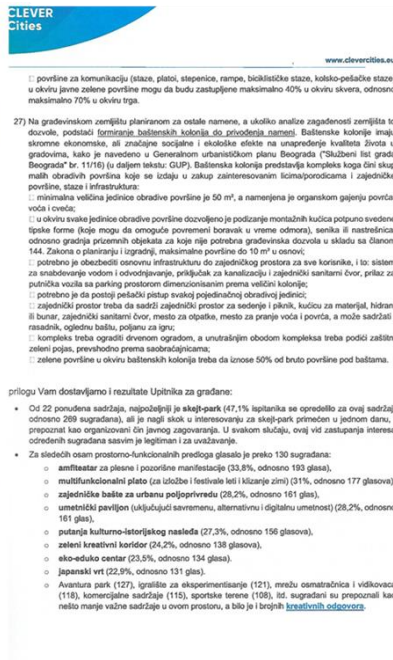
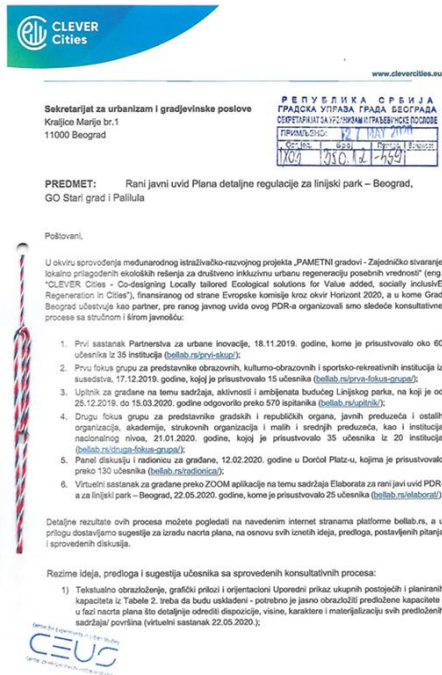


Figure 17: Suggestion regarding EPC Elaborate, credit: CEUS (2020)

On 27 May, CEUS submitted suggestions regarding the Draft Plan development in 27 points to the Secretariat for Urban Planning and Construction, based on the results of all the consultative processes conducted before and during the EPC process. No significant objections were received by the CEUS team nor communicated in the media, including social media. Following this process, CEUS received feedback from City Administration that proactive suggestions were highly useful for issuing the construction conditions in the official procedure.

Elaborate for EPC clearly demonstrated significant real-estate development ambition (over 35,000 m2 of newly constructed structures WITHIN the park were presented), However, due to inputs from Young Trans-Disciplinary Teams and the citizens, concept of the Park development had changed.

17 large real-estate development projects



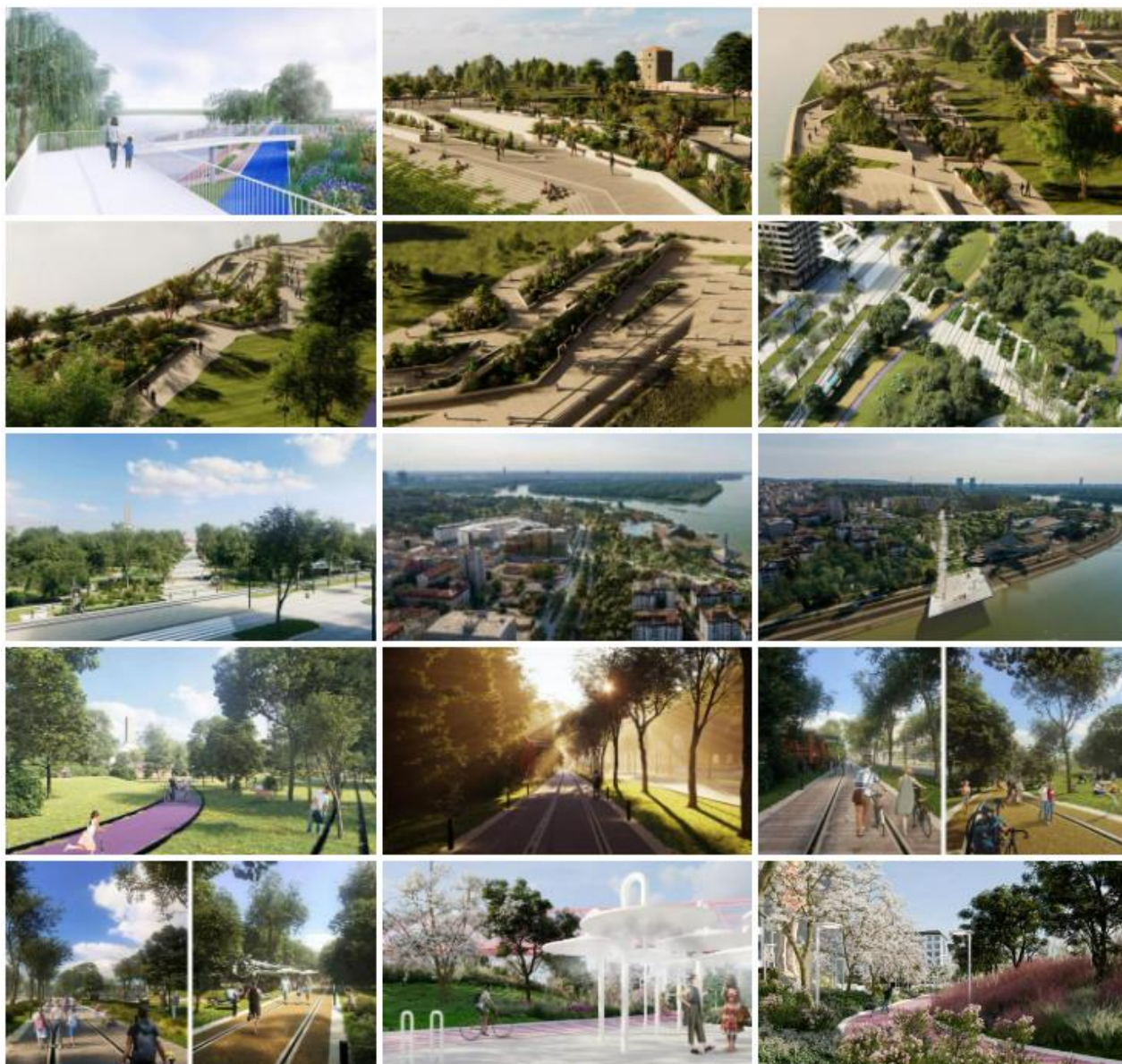
Figure 18: Presentation of the Linear Park as a real-estate development potential from the EPC Elaborate, credit: Belgrade Urban Planning Institute (2020)

3.8 Public Consultation (PC)

During the Public Consultation in May and June 2021, there was a dedicated Exhibition on the results of the work of young trans-disciplinary teams which previously won the Co-Design Contest - organized on the plateau in front of the Beton Hala – on the future Linear Park location itself.



Figure 19: Linear Park Co-Design Exhibition Opening, photo credit: CEUS (2021)



During the PC, CEUS organized Open Doors (live) & Open Windows (online) each Wednesday, for targeted consultations with interested citizens, for addressing specific problems raised.

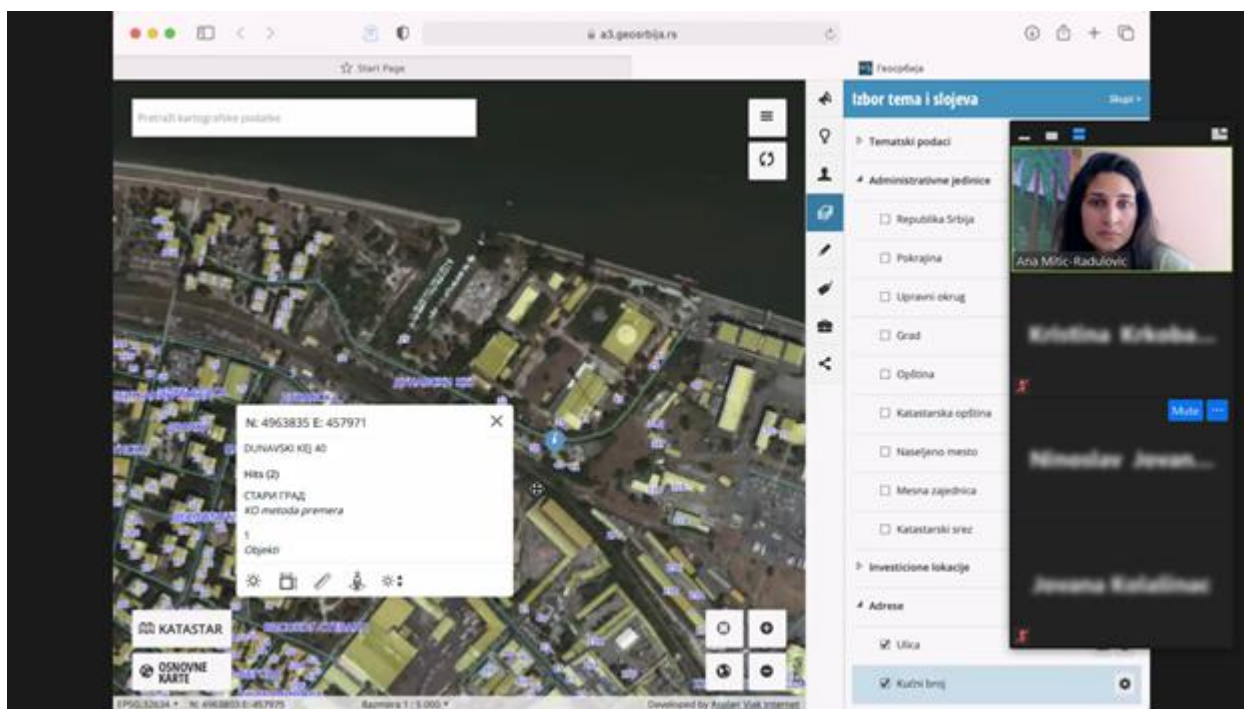


Figure 20: Screenshot from PC online consultations, photo credit: CEUS (2021)

Moreover, CEUS organized a Focus Group with UIP members, to reflect on the PC Draft Plan. Participants talked about the necessary capacities, but also the spatial conditions for our youngest fellow citizens (including modern and inclusive urban furniture, spaces for planting, spaces for group activities, etc.), joint activities of children and proactive fellow citizens from the neighbourhood, as well as children's workshops co-creation (e.g. participatory playground design) and better familiarization with the area of the future park, with all its natural and cultural values.



Figure 21: Linear Park PC Focus Group, photo credit: CEUS (2021)

UIP members also discussed the optimal ways to affirm the value of the Belgrade Fortress and made significant contacts among colleagues. They talked about the presence of higher education institutions in the park zone, the boundaries of buildings and nature, and public and private spaces, but also about innovations in defining urban planning parameters. They resolved dilemmas about specific land-uses and urban regulation parameters. They initiated a conversation about ways to implement urban agriculture, urban beekeeping and city orchards, but also a conversation about the future maintenance and management of the Linear Park and intersectoral cooperation.

CEUS also organized an in-person and online Public Discussion, online crowd-mapping, and a promo video for engaging citizens. The Discussion lasted for almost four hours, but it was constructive and highly beneficial for Belgrade Urban Planning Institute.

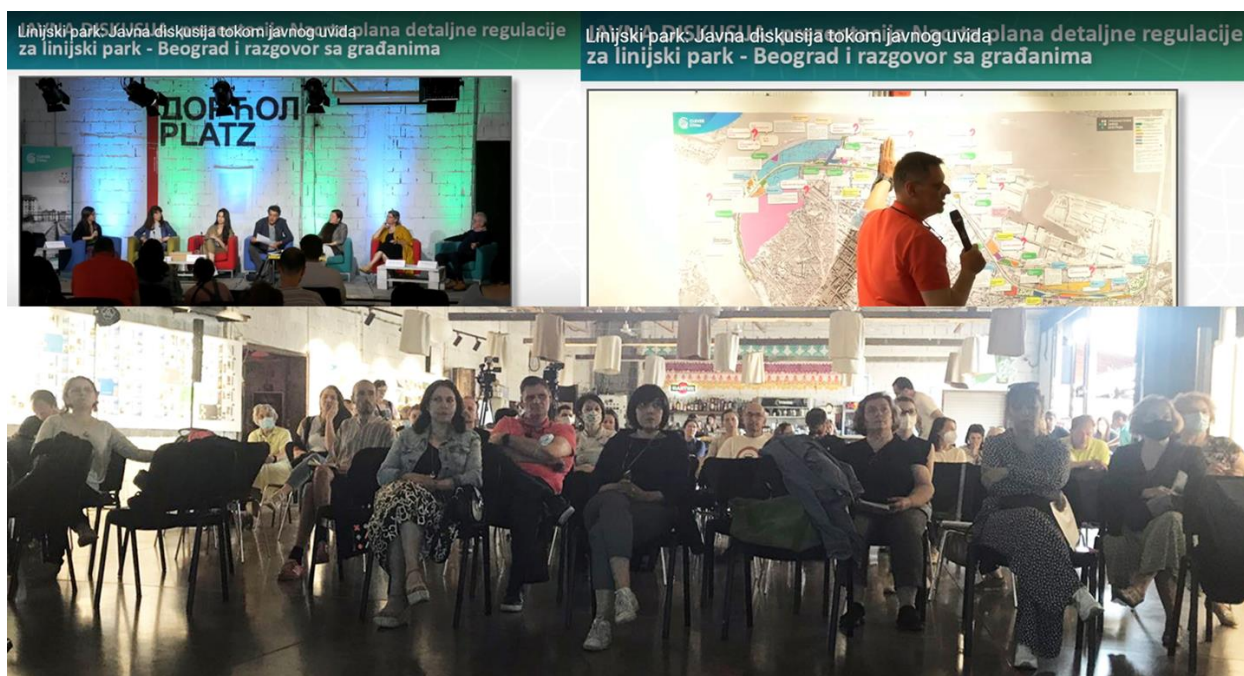


Figure 22: Public Discussion, photo credit: CEUS (2021)

Finally, the first impressions of the results of citizens' participation in the development of this plan had been published on the Gradnja portal, and Linear Park discussions were organized during “symbiotic” events, e.g. Bitef Zone, Mikser Festival, etc.

The Plan was adopted by the City Assembly in August 2021. In November 2021, CEUS organised an online [Public Dialogue](#) on the outcomes of the co-creation process.

4. NBS Plan of Detail Regulation for the Linear Park

4.1 Form of the Plan

During the *NBS Urban Plan* elaboration, development and adoption, clear **objectives for NBS implementation** in the Linear Park - Belgrade were identified:

- formation of public urban space that connects other public spaces with its linear form, which is its peculiarity in relation to other urban matrixes,
- emphasizing the public use of space,
- offering of various public contents (programmes) within the planned green areas,
- suggesting, developing, and networking public green urban spaces as one of the most important factors in the constitution of the urban identity of Belgrade and the realization of direct contact between people and the environment,
- realization of the ecological, social, and economic function of the Linear Park as an ecosystem in urban space, by improving microclimatic characteristics, biodiversity, functional characteristics of space, public health and well-being of citizens, etc., by forming an ecological corridor by continuous planting of various forms of vegetation (tree lines, groups of trees and shrubs, massifs of trees, flower beds, various **nature-based solutions**, etc.),
- creating a single public space that contributes to the common good by including all the principles of gender-responsible planning and design, social inclusion, and accessibility for all, with special care for vulnerable groups.

The final document included the Composition Plan, comprised of Co-Design Solutions from the 10 teams, as well as 3D visualization, which was a novelty in urban planning of Belgrade.



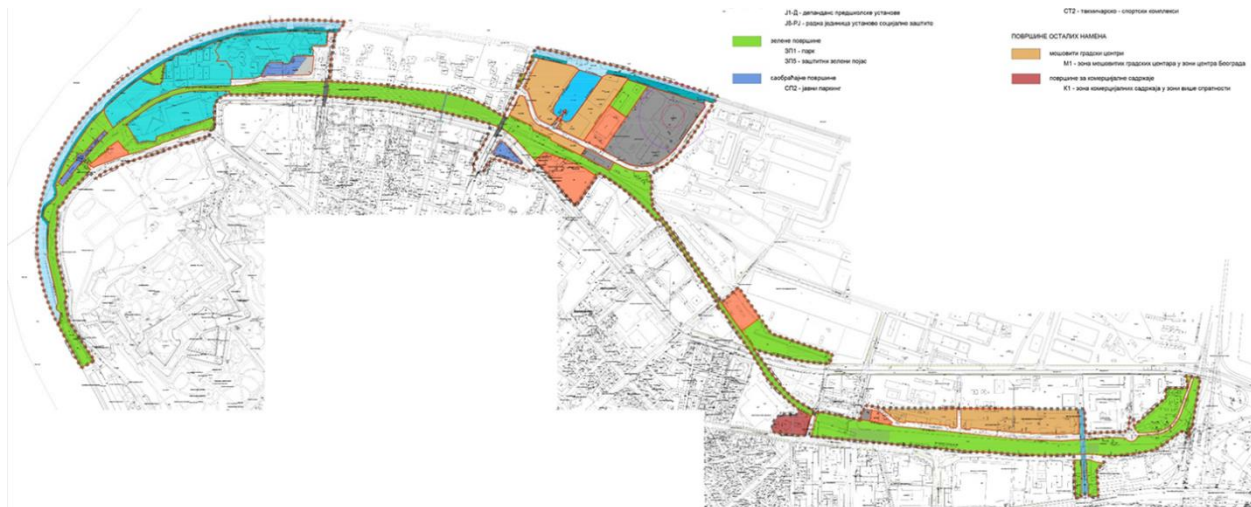


Figure 23: Land-Use Plan of the Linear park, map credit: Belgrade Urban Planning Institute (2021)



Figure 24: Composition Plan of the Linear park - Section 1.4-1.6, with visualisations of the winning teams, e.g. Remorker Architects, map credit: Belgrade Urban Planning Institute (2021)

4.2. Content of the Plan

The *Plan of Detailed Regulation (PDR) for the Linear Park - Belgrade* in its' final scope included an area of approximately 66 ha of the central city zone, and several land-uses were planned within that area. Apart from the central green corridor, the urban plan also integrated surrounding urban tissue and envisaged some urban re-development and transformation.

Within the Plan boundaries seven land-use zones were identified:

1. Public Green Area (Linear Park) with its' diverse contents, divided into 10 sections.

Implementation plan is focused on this area of intervention, as it is mostly a publicly owned land, with public purpose, and it is a vital part of the plan in terms of nature-based solutions.

*"The Linear park is planned as part of a unique green system the area of Belgrade, i.e. the city's green infrastructure, and it is mandatory to be organized in such a way as to achieve ecological, social and economic services (functions) as an ecosystem in urban space. [...] in order to achieve ecological services, it is necessary to achieve the continuity and completeness of the park in continuous different forms vegetation (tree rows, groups of trees and bushes, massifs of trees, flower beds, **various nature-based solutions**, etc.), which will enable natural processes, thanks to the physiological processes of plants and soil porosity, which will be positive affect the quality of air, water, soil, biodiversity, etc., and therefore the quality of life in the city. [...] functional sections should be organized in such a way as to provide pleasant and safe stay of visitors for rest, meditation, recreation, socialization, education (**nature-based solutions**, natural and cultural values in the environment, etc.) and/or others, and in accordance with the permitted facilities in the park. [...] by achieving ecological and social services of the park, raising creativity, innovation and attractiveness of space (according to its carrying capacity), as well as presentation and emphasis the existing natural and cultural values of the city in the surrounding area, the well-founded identity of the city will be additionally strengthened, the tourist offer will be significantly enriched, the value of private property in the immediate environment will be increased, etc., and thus the economic profit will be driven".*

This plan's measures for environmental protection and climate change adaptation also include sewage and atmospheric wastewater separation, a sustainable urban drainage system with natural water collection, the utilization of permeable materials, and the use of heat-reflective materials (light colours).

The Linear Park is designed to improve the microclimate within the park, support biodiversity, and ensure co-benefits for public health and resident well-being. The impact of this Plan extends beyond the Park itself– novel for Belgrade, the Plan listed green roofs and green walls as obligatory elements of any new construction adjacent to the park. These changes are worthy of celebration and are expected to have a positive impact on business opportunities in the area.

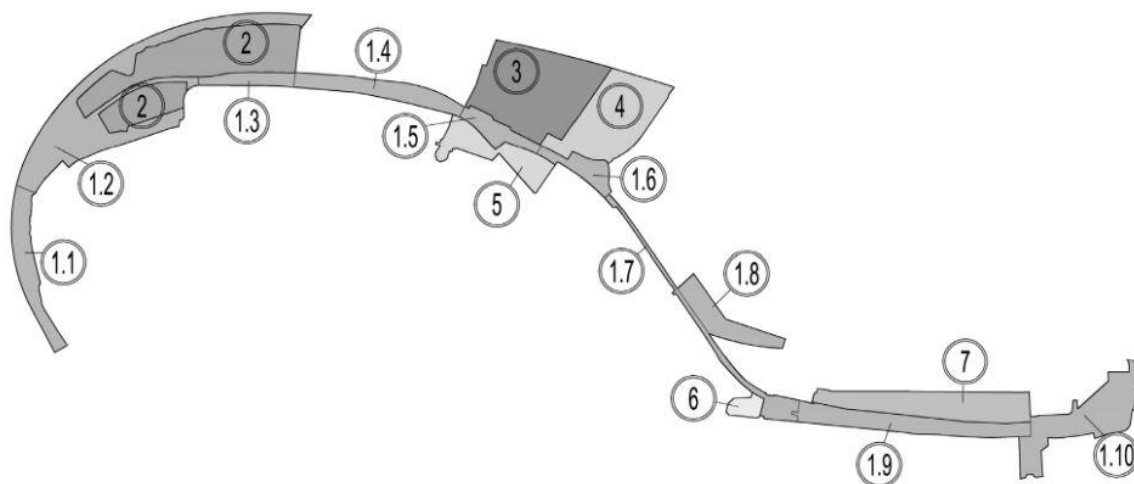


Figure 25: Land-use zones of the Linear Park Urban Plan of Detailed Regulation (2021)

Other land-uses within the Plan are:

2. Sports and Recreation Centres (already existing sports centres, football and tennis courts);
3. The area that is being transformed into a Mixed City Centre – Marina Dorćol (privatized land, with a lot of residential and commercial spaces);
4. Areas for Infrastructure Facilities and Complexes;
5. Facilities and Complexes of Public Services - Higher Education Institutions;
6. Commercial Space with an Existing Hotel;
7. Mixed City Centre (also privatized land, with a lot of residential and commercial spaces).

Within the Public Green Area of the Linear Park, **specific interventions** are planned in four (4) thematically and functionally differentiated, yet spatially related “**functional units**” (FU), represented in the graphic attachment to the Plan: „Composition Plan of the Linear Park”, and in the 3D animations of the winning teams of the public Co-Design Contest.

- **FU1 - thematic green spaces**, consisted of different vegetation compositions (flower garden, aromatic garden, healing garden, sensory garden, wetlands, urban beekeeping, sustainable urban drainage system, small, exemplary urban community gardens for urban agriculture and other nature-based solutions);
- **FU2 - spaces for resting**, sitting, lying down, meditation, etc. on a grassy ground in the shade of a tree canopy, with wooden furniture that follows the configuration of the terrain, from which the landscape in the surroundings can be seen;

- **FU3 - spaces for cultural and educational programmes** in the open air, including plateaus, amphitheatres, water surfaces, pergolas, etc., which provides the presentation of various cultural and educational programs and gathering a smaller number of visitors;
- **FU4 - spaces of concentrated facilities for recreation**, for active and passive recreation and / or children's playgrounds, for various intensity of recreation, age group, etc.

The same functional units are planned at a distance of 500 to 1,000 meters.

Moreover, within the Public Green Area, in the Section 1.6 it is planned to construct a **Demo Centre for Nature-Based Solutions – a pavilion** with underground and ground floor of maximum 4 m high, and with total gross area of maximum 200 m2.

5. SWOT Analysis including Risk Assessment

Table 1 SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • There is a strong political will to implement the Linear Park project; • The Linear Park Plan is aligned with Green City Action Plan (2021). Subsequently, NBS were introduced in Elaborate for the new Belgrade General Urban Plan (Masterplan) until 2041, so there is a scale-up effect. 	<ul style="list-style-type: none"> • Linear Park construction will most probably cause certain gentrification in the surrounding area; • Financing mechanism and various funding opportunities were not analysed enough; thus it may happen that large public investment will be disproportionately lucrative for a small number of private land-owners.
Opportunities	Threats
<ul style="list-style-type: none"> • Linear Park co-creative planning was the first such process in the City of Belgrade; it attracted attention of many citizens, and that creative and constructive involvement and engagement should be kept in implementation as well. • Linear Park case-study provides a unique opportunity for exploring new ways of collaboration with the private sector entities and large real/estate developers. 	<ul style="list-style-type: none"> • There is a lack of knowledge in public utility companies about implementing and maintaining NBS; • Initial trust gained in the planning process of the Linear Park might be severely injured if the implementation and financing procedures become less transparent, or even suspicious.

Table 2 Risk Assessment

Risks	Mitigation Action
<ul style="list-style-type: none"> Operational capacity of the City Administration, Public Utility Companies and the Contractor may be insufficient to implement the Linear Park construction and / or arrangement in a timely manner. Moreover, archaeological sites excavations, soil depollution measures and expropriation of certain plots may cause additional delays. 	<ul style="list-style-type: none"> Adaptive planning and management, with constant and open communication to the public will engage various stakeholders in the long-term process of the Linear Park “constitution”. Novel models of shared governance, co-management, maintenance and programmatic collaboration could speed up certain processes and create stronger ownership of the local community.

6. Stakeholders

There are a number of both key and periphery stakeholders that need to be involved the implementation of Linear Park Plan.

Public sector - key stakeholders, with direct mandates:

- City of Belgrade - Mayor
- City of Belgrade - Main Urban Planner
- City of Belgrade - Secretariat for Investments
- City of Belgrade - Secretariat for Environmental Protection
- City of Belgrade - Secretariat for Public Transport
- PUC Zelenilo Beograd
- Institute for the Protection of Cultural Heritage of the Republic of Serbia
- Belgrade Metro and Train.

Public sector - corrective factor, with no specific role in the process:

- Faculty of Architecture, University of Belgrade
- Faculty of Forestry, University of Belgrade
- Faculty of Civil Engineering, University of Belgrade

Public sector from the surrounding – future users of the space:

- Kindergarten "Dečji Dani",
- Technical School "Drvo Art",
- Electro-Technical School "Stari Grad",
- Belgrade First High-School,

- "Lujo Davičo" Ballet School,
- Faculty of Special Education,
- Bitef Theater,
- Nikola Tesla Museum,
- PUC "Belgrade Fortress",
- Institute for the Protection of Cultural Heritage of the City of Belgrade.

Private sector – Consortium of the Contractor:

- W.D. CONCORDE WEST DOO,
- TEMING ELECTROTECHNOLOGY DOO NIŠ,
- Mašinprojekt KOPRING AD
- AG INSTITUT DOO NOVI SAD
- Premer Savković doo Lazarevac,
- HIDRO-TAN Doo Beograd
- RAS INŽENJERING NISKOGRADNJA DOO
- DC ENERGOCOOP DOO
- NOVKOL AD BEOGRAD
- GP INVEST GRADNJA DOO BEOGRAD.

Private sector – large real-estate developers:

- SEBRE – Marina Dorcol
- UdiGama
- Luka Beograd.

Civil society – professional or neighbouring associations interested in urban development processes:

- CEUS
- Komsije sa Dorcola
- Divlji Beograd
- RERI
- Ministarstvo prostora
- Nova planska praksa
- MIKSER.

7. Timeline, milestones & responsibilities

Adopted urban plans, according to the Serbian Law on Planning and Construction, do not contain any dynamic timelines or “expiry dates”. As the Plan of Detailed Regulation is intended for direct implementation, there is a part of the plan that specifies the procedures to follow:

“This plan is the basis for preparation of the information on the location, location conditions, as well as for the development of the project pre-parcelling and parcelling and the basis for the formation of construction plots for public and other purposes in accordance with graphic attachment”.

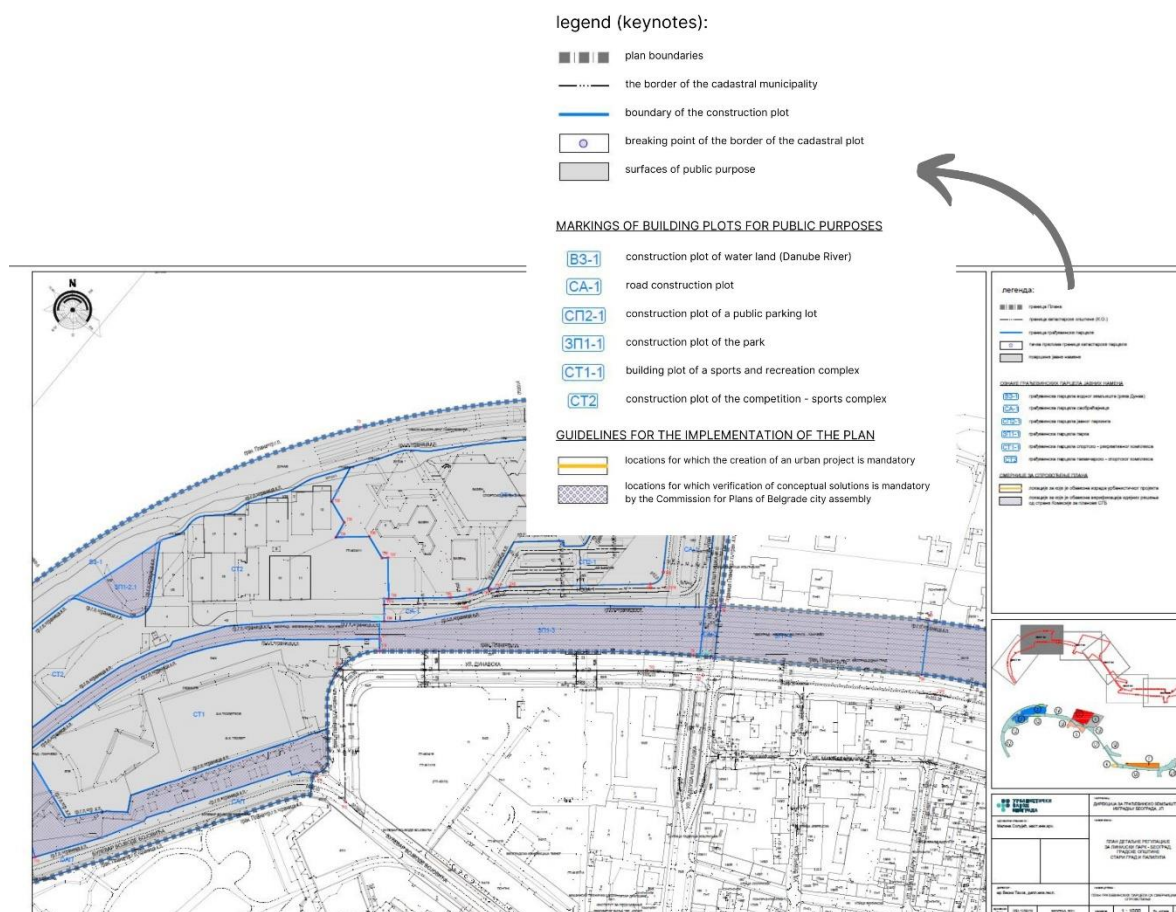


Figure 26 Building plot plan with guidelines for implementation R 1:1000, Page 2

However, in the case of the Linear Park - Belgrade, due to its' public importance, interest and visibility potential, the framework dynamics for the Public Green Area (the Linear Park itself) was set up:

- **In August 2021** - The Plan was adopted by the City Assembly.
- **In November 2021** – An online Public Dialogue on the outcomes of the co-creation planning process was organized by CEUS.
- **In January 2022** – Renovation works began on the realization of the Section 1 of Linear Park by PUC “Zelenilo Beograd” (Public Utility Company).
- **In October 2022** - Public procurement was announced for a “Framework Agreement” for preparation of technical documentation and execution of works for the remaining sections (nine of them) by the Secretariat for Investments of the City of Belgrade. In the procurement

call, it was noted that “*the works will be carried out successively within approximately four years from the date of conclusion of the first individual contract.*”

- **In November 2022** - Decision on concluding a Framework Agreement with consortium which is represented by the head company "W.D. Concord West doo" was published by the Secretariat for Investments of the City of Belgrade.

Complete design and construction of the Linear Park is planned to be finalized by the end of 2026. This completion deadline might be even more important in the context of **Belgrade's hosting of the Specialised EXPO 2027/28.**

8. Cost estimation of the Linear Park implementation

According to the Serbian Law on Planning and Construction, urban plan does not contain information on plan implementation and financing. However, in the ***Background Documentation of the Plan of Detailed Regulation for the Linear Park – Belgrade***, presented at the Public Consultation in May and June 2021, there was an ***Approximative Assessment of the Public Investment in Land Development***, and it amounted to little more than 3 billion RSD, namely a bit more than 25 million EUR. This included transport and traffic infrastructure (streets, bridges, parking, cycling lanes, etc.), all infrastructure works (water and sewage, electric installations, heating infrastructure, telecommunication, etc.), and public green areas (235,000 m² of grass surfaces).

Оријентациона процена улагања из јавног сектора у опремање грађевинског земљишта						
P.6.	Опис	Јед. мере	Количина	Јед. цена	Трошкови (дин)	Учешће
1	Јавне саобраћајне површине	м2				
1.1	Секундарне саобраћајне површине					
	Коловоз		32.045	8.000	256.360.000	8,30%
	Тротоар		15.650	4.000	62.600.000	2,03%
1.2	Подвожњаци + тротоар		1.725	94.400	162.840.000	5,27%
1.3	Мостовске конструкције + тротоар		5.083	82.600	419.855.800	13,60%
1.4	Бициклистичка стаза		11.924	5.000	59.620.000	1,93%
1.5	Отворени паркинг		14.905	4.200	62.601.000	2,03%
2	Водовод	м				
•	Водови					
	Ø300		300	29.000	8.700.000	0,28%
3	Фекална канализација	м				
•	Водови					
	Ø350		400	24.000	9.600.000	0,31%
4	Атмосферска канализација					
•	Објекти					
	Сепаратор	600.000	1	1.180.000	1.180.000	0,04%
•	Водови					
	Ø300		800	21.000	16.800.000	0,54%
	90/135 као Ф 1000		400	84.000	33.600.000	1,09%
	Ф2000		500	126.000	63.000.000	2,04%
5	Електрична енергија					
5.1	Објекти (Тrafo станица, стубови)					
	ТС 35/6 kV		1	10.000.000	10.000.000	0,32%
	ТС 10/0,4 kV капацитета 1000 kVA		27	7.200.000	194.400.000	6,30%
5.2	Водови					
	Подземни водови 35 kV		500	18.000	9.000.000	0,29%
	Подземни водови 10 kV	м	3.000	12.000	36.000.000	1,17%
	Подземни водови 1kV	м	9.000	10.000	90.000.000	2,91%
6	Топлификација	м				
•	Водови					
	Ø813/1000mm		4.975	119.000	592.025.000	19,17%
	Ø406,4/520mm		190	81.000	15.390.000	0,50%
7	Гасификација					
•	Водови	м				
	Челични Ø406,4		92	48.000	4.416.000	0,14%
8	Телекомуникација - тт					
•	Базна станица	број	2	5.000.000	10.000.000	0,32%
•	ТК канализација	м	4.000	7.500	30.000.000	0,97%
9	Јавно зеленило (травнате површине)	м2	235.000	4.000	940.000.000	30,44%
УКУПНО					3.087.987.800	100,00%

The Budget of the City of Belgrade for 2021 (2020)

The similar value of **2,960,500,000 RSD**, namely around **25 million EUR** was reflected in the Budget of the City of Belgrade for 2021, published in 2020, with the 3-years cycle for capital investments 2021-2023:

0701	07015018	6.29	Уређење и поплочавање отворених јавних	342.200.000	0	0
Budget of the City of Belgrade for 2021 (2020):						0
0701	07015018	6.31	Реконструкција главних улица у центру	1.111.000	200.000	34.400.000
Secretariat for Investments				451.603.400	0	0
и Старине				21.353.000	0	0
Новака						
Programming Budgeting for						2021, 2022 i 2023.
0701	07015024	6.35	Реконструкција улице Булевар краља Александра (од Таквске до Рузвелтове) са гаражом	12.000	5.500.000	67.265.000
0701	07015027	6.36.	Реконструкција улица у ужом центру Земуна (Прерадовићева, Косовска, Петра Змиљског, Београдска, Давидовићева, Др Петра Марковића)	6.300.000	0	0
0701	07015001	6.37	Извођење радова на уређењу саобраћајнице Бул. краља Александра од Цветкове пијаце до окретнице Устаника, са припадајућом инфраструктуром	110.000	1.619.448.900	30.000.000
0701	07015002	6.38.	Реконструкција трамвајске окретнице "Пристишнице" са прелазом преко Булеvara Војводе Бојковића, са припадајућом инфраструктуром	231.032.900	98.971.200	0
0501	05015002	6.39.	Термална рехабилитација јавних зграда - унапређење енергетске ефикасности у граду Београду	616.720.000	98.200.000	0
1102	11020005	6.40.	Уређевање, одржавање и коришћење пијаца	175.300.000	0	0
1102	11020002	6.41.	Одржавање јавних зелених површина	132.285.949	184.854.051	0
1102	11025037	6.42.	Линијски парк у Београду	593.500.000	951.500.000	1.415.500.000
1102	11025034	6.43.	Набавка и уградња јарбола са заставама	5.000.000	322.000.000	0
1102	11025041	6.44.	Реконструкција Капенић пијаце	713.000.000	711.000.000	0
Свега за раздео :				5.145.910.614	6.179.758.151	2.514.605.000

3

The Linear Park was also identified in the section of the Budget defining the future loans, namely it was noted that the Secretariat for Investment will take the loan from EBRD for reconstruction of one Belgrade green-market and the works on the Linear Park in 2021 in the amount that was in line with the Capital Investments prediction:

Члан 3.

Град Београд планира да у 2021. години повуче средства кредита од иностраних банака у износу од 3.369.414.524 динара за следеће пројекте:

Budget of the City of Belgrade for 2021 (2020): у дин.

Ред. бр.	Кредитна линија	Банка	Носилац пројекта - буџетски корисник	Износ	
				Дин.	€
1	КЦС Крњача 2 са колекторима ППОВ Крњача и секундарна мрежа у насељу - изградња објекта са израдом пратеће техничке документације	EIB	Секретаријат за комуналне и стамбене послове	740.625.000	6.250.000
2	Пројекат за изградњу моста на Ади и приступних рампи, набавка 30 нових трамваја, реконструкција трамвајских шина и обнављање главних градских булевара	EBRD	Секретаријат за инвестиције	564.754.000	4.765.857
3	Пројекат за реконструкцију улице Краљице Марије, 27. марта, Џорџа Вашингтона, Цара Душана	EBRD	Секретаријат за инвестиције	167.535.524	1.413.802
4	Пројекат термалне рехабилитације јавних зграда - унапређење енергетске ефикасности	EBRD	Секретаријат за инвестиције	593.000.000	5.000.000
5	Изградња и реконструкција комплекса пијаце Калинић и изградња Линијског парка	EBRD	Секретаријат за инвестиције	1.303.500.000	11.000.000
СВЕГА				3.369.414.524	28.429.658

In October 2021, the Decision on the Loan for Capital Investments between the City of Belgrade and a Bank was published, which confirmed the amount of app. 5 million EUR for implementation of the Linear Park in 2021. It was also underlined that the City of Belgrade will finance the loan return from its' own resources, which will be defined with the Budget Decision.

City Decision (October 2021)

Скупштина Града Београда на седници одржаној 25. октобра 2021. године, на основу предлога одлуке, упутити позив за достављање понуде пословним банкама и извршити избор најбоље понуде.

– др. закон, 101/16 – др. закон и 37/19), члана 33. став 1. и члана 34. ст. 1. и 2. Закона о јавном дугу („Службени гласник РС”, бр. 61/05, 107/09, 78/11, 68/15, 95/18, 91/19 и 149/20) и члана 31. тачка 15) Статута Града Београда („Службени лист Града Београда”, бр. 39/08, 6/10, 23/13, „Службени гласник РС”, број 7/16 – одлука УС и „Службени лист Града Београда”, број 60/19), донела је

ОДЛУКУ

О ЗАДУЖЕЊУ ГРАДА БЕОГРАДА ЗА ФИНАНСИРАЊЕ КАПИТАЛНИХ ИНВЕСТИЦИОНИХ РАСХОДА

Члан 1.

Град Београд задужиће се код пословне банке за финансирање пројекта Изградња линијског парка и пројекта Изградња и реконструкција комплекса пијаце Каленић у укупном износу од 1.777.500.000 динара.

Члан 2.

Укупна вредност радова који ће се финансирати средствима кредита за пројекат Изградња линијског парка износи 592.500.000 динара, а за пројекат Изградња и реконструкција комплекса пијаце Каленић износи 1.185.000.000 динара.

Члан 3.

Комисија именована од стране градоначелника Града Београда, ће у циљу реализације пројекта из члана 1. ове

Члан 4.

Град Београд задужиће се по најповољнијим условима, са тим да рок отплате неће бити краћи од пет година не рачунајући период мировања.

Члан 5.

Задуживање из члана 1. ове одлуке извршиће се закључивањем уговора између изабране пословне банке и Града Београда кога представља градоначелник Града Београда.

Члан 6.

Повлачења средстава кредита вршиће се на захтев надлежне организационе јединице и користиће се наменски за финансирање пројекта из члана 1. ове одлуке.

Реализацију пројекта из члана 1. ове одлуке ће спроводити Секретаријат за инвестиције.

Члан 7.

Град Београд ће приликом доношења одлука о буџету Града Београда, обезбедити средства за благовремено и уредно измирење обавеза по Уговору о зајму.

Члан 8.

Ову одлуку објавити у „Службеном листу Града Београда”.

Скупштина Града Београда
Број 4-600/21-С, 25. октобра 2021. године

Председник
Никола Никодијевић, ср.

7

Green City Action Plan (2021)

In spring 2021, in the Media appeared an information that the investment in the Linear Park will be approximately 50 million EUR.

Justification of that figure was for the first time officially provided in the Green City Action Plan, adopted in June 2021, with the explanation that "it is estimated that about **half of that amount will be provided by the owners of the buildings along the park**, whose property value will be increased with its realization". Thus, the document recognized a significant source of NBS financing in "**land value capture**" mechanism, but unfortunately this was **not operationalised** further.

Moreover, this document also spotlighted the OPEX cost of the Linear Park, estimating it at 50,000 EUR per year (1 EUR per m2 of maintenance of the green area).

3.3.3 Циљеви и активности

Green City Action Plan - GCAP (June 2021)

in City Action Plan - GCAP (June 2021)

№	Стратешки циљ	Активност	активности	Укупно (2021-2026)	OPEX (€/год)	Времени оквир
Мобилност – Саобраћај						
T1	S.O.T1. Побољшати мобилност града и смањити загушења у саобраћају	Проширење и развој железничке и трамвајске мреже у Београду	Инвестиција, Студија	200 M 100 M	1.5 M	Q4 2021 – Q4 2030
T6		Политика комерцијалног саобраћаја – градска логистика	Студија, Политика	0.5 M 0.5 M	Није наведено	Q3 2021 – Q3 2022
T4	S.O.T2. Побољшати еколошку мобилност у централном делу града	Систем јавних бицикала	Инвестиција, Студија, Политика	6.45 M 4.61 M	0.2 M	Q3 2021 – Q2 2027
T5		Подстицати пешачење и/или возњу бицикла у граду кроз унапређене пешачке и бициклистичке стазе и садржаје	Инвестиција, Студија, Политика	33 M 16.5 M	0.25 M	Q3 2021 – Q4 2030
T3	S.O.T3. Повећана употреба возила која користе алтернативна горива	Набавка аутобуса на електрични погон и погон из обновљивих извора енергије уз развој инфраструктуре	Инвестиција, Студија, Политика	950 M 475 M	2.0 M	Q3 2021 – Q4 2030
T7		План мреже јавних станица за пуњење возила на електрични погон	Инвестиција, Студија, Политика	10 M 10M	0.2 M	Q3 2021 – Q3 2026
T8		Подстицајне мере и финансирање набавке е-возила за јавни превоз и приватна комерцијална возила	Инвестиција, Студија, Политика	5 M 5 M	Није наведено	Q1 2021 – Q1 2026
УКУПНО				1.204.95 M 611.61 M	4.15 M	
Урбано планирање – Коришћење земљишта						
L2	S.O.L1. Интензивније коришћење постојећег недовољно искоришћених урбаних структура повећањем компактности, густине и општег квалитета на одређеним планским локацијама/зонама (дуж главних коридора јавног саобраћаја).	Програм развоја за изграђене површине (brownfield)	Студија, Политика	0.5 M 0.5 M	Није наведено	Q3 2021 – Q3 2024
L5	S.O.L2. Спречавање ширења урбане средине тако што ће се ограничити непотребно коришћење приградског земљишта и ширења грађевинског земљишта	Инструменти и политике управљања градским земљиштем	Студија, Политика	0 M 0.1 M	Није наведено	Q3 2021 – Q1 2022
L1	S.O.L3. Унапредити значај и капацитет Зелене инфраструктуре и обезбедити приступ јавним зеленим површинама у свим деловима града	Пројекат Линијски парк	Инвестиција	50.0 M 50.0 M	0.05 M	Q3 2021 – Q3 2023
L6		Супер блок Доњи Дорћол	Инвестиција	15.0 M 15.0 M	0.20 M	Q2 2021 – Q2 2024
L7		Зелена пијаца Каленић	Инвестиција	12.0 M	Утврдиће се	Q3 2021 – Q3 2024
L4		Студија за израду програма развоја урбане зелене инфраструктуре Града	Студија, Политика	0.5 M 0.5 M	Није наведено	Q3 2021 – Q3 2023
УКУПНО				78.1 M	0.25 M	

Green City Action Plan - GCAP (June 2021)

Број 45 – 92

СЛУЖБЕНИ ЛИСТ ГРАДА БЕОГРАДА

10. јун 2021.

Активност	Укупне инвестиције (капитални трошкови-CAPEX, или студије) m€	Период имплементације	Додатни годишњи OPEX за град m€	Национални или регионални фондови	МФИ – која се враћају	Донатори	Приватни сектор/ЈПП	Општа јавност/друго
T6 – Политика комерцијалног саобраћаја – Градска логистика	€ 0.50	Q3 2021 – Q3 2022	нема					
T7 – План мреже јавних станица за пуњење возила на електрични погон	€ 10.00	Q3 2021 – Q3 2026	€ 0.20					
T8 – Подстицајне мере и финансирање набавке е-возила за јавни превоз и приватна комерцијална возила (домет 200km/дан)	€ 5.00	Q3 2021 – Q3 2026	нема-покривају власници возила					
L1 – Пројекат Линијски парк	€ 50.00	Q3 2021 – Q3 2023	€ 0.05					
L2 – Програм развоја за изграђене површине (brownfield)	€ 0.50	Q3 2021 – Q3 2024	N/A					
L4 – Студија за Програм развоја урбане зелене инфраструктуре Града	€ 0.50	Q3 2021 – Q3 2023	N/A					
L5 – Инструменти и политике управљања градским земљиштем	€ 0.10	Q3 2021 – Q1 2022	Није наведено у овој фази – можда након студије					

9. Currently planned resources for the Linear Park construction

In October 2022, a significantly higher amount for the Linear Park investment appeared in the public procurement announced for preparation of technical documentation and execution of works for the Linear Park – **around 70 million EUR**, VAT excluded. In November 2022 the Decision on concluding a framework agreement with consortium which is represented by the head company "W.D. Concord West doo" was signed by Secretariat for Investments of the City of Belgrade.

Subsequently, in the Budget of the City of Belgrade for 2023, published in December 2022, with the 3-years cycle for capital investments 2021-2023, the value of the Linear Park investment amounted at **10,874,186,732 RSD, namely over 90 million EUR**:

Редни број	Раздео	Глава	Назив директног буџетског корисника	Програм	Шифра Програмске активности (ПА)/ Пројекта	Ставка	Назив капиталног издатка/пројекта	Износ		
								2023	2024	2025
1	2	3	4	5	6	7	8	9	10	11
				1102	11025037	6.36.	Линијски парк у Београду	1.899.782.732	3.059.404.000	5.915.000.000
				1102	11025034	6.37.	Набавка и уградња јарбола са заставама	100.000	321.400.000	0
				1102	11025041	6.38.	Реконструкција и доградња Каленић пијаце	252.200.000	1.221.000.000	0
				1102	11025042	6.39.	Комплекс зелене пијаце Обреновац	806.146.000	718.400.000	0
				1102	11025043	6.40.	Израда истражно-експлоатационих бунара	34.760.000	0	0
				1102	11025044	6.41.	Изградња градске пијаце у Лазаревцу	394.662.000	130.000.000	0
				1801	18015006	6.42.	Изградња објекта здравствене станице Угриновци, Дом здравља Земун	2.156.350	0	0

This increased expected value of the investment was not reflected in the section of the Budget defining the future loans.

10. Possible alternatives for NBS financing

As proposed in the Green City Action Plan, it would be extremely beneficial if **Instruments generating revenue** - such as „land value capture“ policy approach - would become operational in the case of the Liner Park construction. This would enable local community to recover and reinvest land value increases that result from the public investment and government action.

Possible tool for **land value capture** would be a certain type of revenues from land sales or leases; taxes (aimed at cost-recovery); developer contributions or charges; betterment levies; and voluntary contributions from beneficiaries.

Another option for NBS financing would be to promote the implementation of NBS to other actors for their contribution, such as developing **‘Business Improvement Districts’ (BID)**, and engaging corporations and real estate developers of a defined area to join forces to set up their own

management body to decide on financing improvements, and generate income through diverse instruments.

Finally, there are several modalities for **engaging citizens in financing of the small-scale projects in the future Linear Park – mostly relevant for maintenance and/or programmatic activities**, e.g. via crowdfunding – when a large number of individual participants donate or invest an amount of money selected by themselves, or via **Local Community Foundation** – which can accomplish significant results when it comes to fundraising, connecting and mobilizing the community. The challenge regarding the citizen-based funding is a very high (and constantly raising) public investment, and very low (namely, non-existing) engagement of private funds from real-estate developers and companies. This financing strategy poses a strong risk for public trust, further citizen engagement and co-creation in NBS design and implementation.

11. Reflecting on Replication potential

Enablers of replication

1. The political will, clearly expressed in the Task Force establishment, mobilized a wide range of stakeholders. The fact that CLEVER Cities pilot was the first co-creative effort kept citizens interested in the process.
2. The existence of a strong and active community represented a good basis for the early stages of citizen involvement in planning processes, in order to hear and understand their needs and problems.
3. Adoption of the Green City Action Plan (GCAP) & Sustainable Energy and Climate Action Plan (SECAP) during the CLEVER Cities implementation strengthened the ambition towards greening policies.

Challenges in replication

1. Land owners and big real-estate developers were not sufficiently interested and aware of their role in the process. The City did not adequately communicate their potential role (or even obligation) as co-investors.
2. Insufficient capacities in public administration and political changes were a barrier for a continuous and devoted engagement of all actors,
3. Suspicious attitude of some NGOs resulted in lack of involvement during the co-creation, and subsequent criticism. Certain media additionally misinterpreted the Plan's outcomes. CEUS wrote a [reflection on co-creation](#), for clarification.

Lessons learnt from replication

1. It is essential to establish collaboration with various divisions of public administration and public utility companies, including the politically strong figures, such as Main Urban Planner
2. Co-creation facilitation by an external entity (e.g. CEUS - not part of governance structure) or some „horizontal“ actor – provides more confidence and trust in the co/creation process
3. Not everyone will always be completely satisfied with the result, but it is important that everyone sees the progress.

Recommendations towards replication

1. It is highly beneficial if pilot projects and strategies can feed and support each other.
2. It is very important to test new instruments and tools, beyond the legal „minimum“ for urban plans development, e.g. design contest for youth. It was a creative form of co-creating NBS design, and brought a lot of added value.
3. It would be very good if some small, pilot implementation could follow the planning in very early stages, because they encourage people to stay engaged / they can really see the change and believe in the process. Feedback is very important.

12. Conclusions and co-creation upscaling

CLEVER Cities project provided a Niche for innovation in the Multi-Level Perspective (MLP) Framework of the sustainability transition, and allowed introduction of novelties in the formal planning procedure for the Linear Park. Citizen engagement from the very initial moment of the plan development, active public participation, careful expectations management, articulation of visions and gradual building of trust make this planning practice the first example of co-creation in Belgrade and have the potential to become a role model for future co-creative NBS and greening strategies.

As a result of the UIP and in coordination with the City of Belgrade, Faculty of Architecture - University of Belgrade, Centre for Promotion of Science, and Nova Iskra, CEUS applied for registration of the **BELgrade urban living LAB** (BELLAB) in the European Network of Living Labs (ENoLL). Registration was successful, and this Urban Living Lab (ULL) was established in January 2021, as the first ULL in the Western Balkans. In the same year, essential ideas on BELLAB and NBS were integrated into the **Action Plan of the Serbian Sustainable Urban Development Strategy**.

The process of co-creative plan development, financing, and implementation mapping for the Linear Park was aligned, to the extent possible – with the Draft Guidelines of the European Commission for Urban Greening Plan Development. Replication of this co-creative approach was applied while drafting the new **Belgrade General Urban Plan (Masterplan) until 2041**, in the form of a new public questionnaire and the preparation of a communicative and well-illustrated publication, mentioning nature-based solutions as an economic opportunity.

After finalization of the CLEVER Cities project, this co-creative development approach will be further replicated for the entire territory of the City of Belgrade, in the process of deployment of the **Belgrade Green Infrastructure Strategy** (contracted in June 2023). Moreover, during the CLEVER Cities implementation, Belgrade learned from Malmö's Green Space Factor and London's Urban Greening Factor and initiated the work on the **Ecological Index**, a similar complex urban parameter.

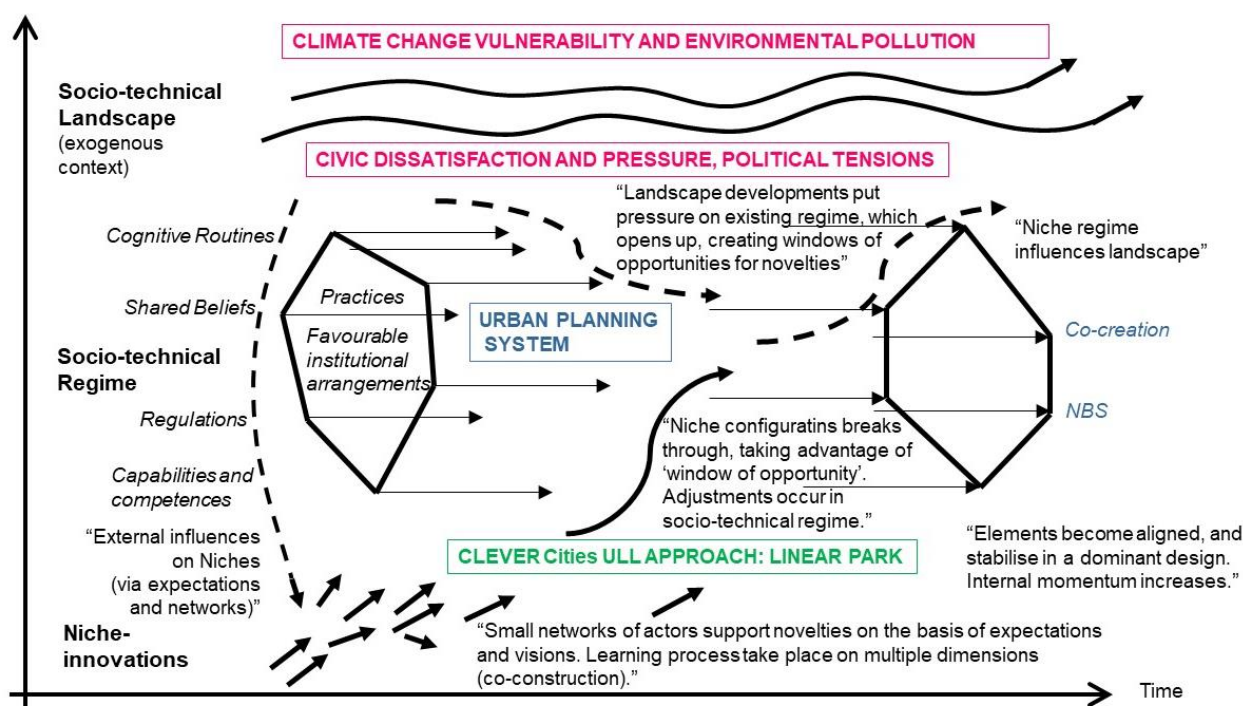


Figure 27: Graphic by CEUS: Interpretation according to Geels (2011): the Multi-Level Perspective on Sustainability Transition regarding Urban Planning in Belgrade, published in *Sustainability*, 2021.