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INNOVATIONS FOR TACKLING POST-PANDEMIC RELATED CHALLENGES - A COLLABORATIVE RESEARCH TO DISCOVER NEW SOLUTIONS FOR HYBRID WORK IN THE CONTEXT OF 15-MINUTE CITIES

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Abstract: *Recently we have developed a public-private partnership initiative call: UrbanLink15' which aims to identify healthier lifestyles and sustainable facilities that support residents of economic, social, and environmental impact; The initiative focuses both on promoting hybrid work developed as a relationship between organizational workspaces, living spaces, and co-working spaces in the neighborhood, and the (re)connection with sustainable mobility solutions of the concept of '15 minute city'. The article presents the research results (a survey, two focus groups and solutions of application projects) achieved with the support of researchers, practitioners, and students from different specialties such as architecture, engineering, management, applied science organized in two main topics: (1) work relationships, living spaces within the framework of "15-minute city"; (2) alternative mobility through green-blue corridors and gardens. The discussion of the research results refers to the metropolitan area of Timisoara, Romania.*

Key words: *Hybrid Work, 15-Minute City, Green Wetlands, Community Project, COVID-19 Pandemic.*

1. INTRODUCTION

The SARS-CoV-2 pandemic has accelerated the megatrends manifesting in the labour market and, especially, the increase of shared workspaces (or working from anywhere) and the digitization solutions to support remote work. Hybrid work, both at home or in other places, including the spaces of employer organizations or collaborative ones, will remain an important working way, due to the positive implications, from economic and ecological perspectives, but also due to the better balance created between personal life and professional life. Remote working and learning have become more widely accepted during the pandemic and is likely to be accepted in the post-pandemic era (defining the new normal way of life) [1]. Therefore, the high cost of living in many cities around the world (e.g., related to housing, utilities, facilities) has forced people to move in the suburbs, exurbs or in other metropolitan areas altogether [2; 3]. During this period, flexible working conditions and the availability of more affordable housing outside the city were shown to be preferred to balance the working and social conditions of life; population of living areas placed approximately 15 minutes from the city centre becomes more and more obvious. Thus, this concept has become of great interest not only for inhabitants in the urban areas but for other actors (stakeholders as local public communities, transport companies, real estate companies, architecture companies, designers, etc.) who are interested in the concept development.

On the other hand, climate change and ecological imbalances are still the main challenge of the 21st century, and here modern approaches of social, urban organization have and will have major responsibility. In the nearest past, practical approaches based on planning paradigms (for example, 'car-friendly city' [4] have created the field for new urban models, the most used are 'city of short distances' [5],

'compact city', 'walkable city' or 'Cities for People' initiatives and solutions [4; 6]. The models are based on the intensive use of green mobility and the growth of green areas, wetlands that have recently been recently accelerated due to the context of work and living; an emerging implemented is '15-minute cities' (as supported by [7]). It has been recognized that "in a number of cities, novel planning concepts are being introduced that go some way to address urban planning issues: compact city, superblocks, 15-minute city, car-free city, or a combination of these" [8; 9]. Therefore, optimizing and improving car traffic had been the core idea of urban transport planning for decades, but nowadays environmental aspects have increasingly been considered and concepts for traffic calming [10], pedestrian zones [7], or car-free inner cities (e.g., the case of Oslo municipality [11]), as well as car-free or car-reduced neighborhood design have completed approaches to more sustainable metropolitan area. Furthermore, the actual context of the digital transformation era has imposed a wide use of smart technologies and intelligent devices, all of which are associated with smart mobility [7].

The positive aspects revealed in the pandemic for many people are the rediscovery of nature, people (communities), and architecture from proximity. At the same time, the disadvantages of working from home became more pronounced from the perspective of psychological and sociological effects. The worthy actions were related to the promotion of the 'culture of fear" through the fake media and social networks that focus on isolation, solitude, and loneliness [12; 13; 14]. For the active population, deprivation of direct socialization with the professional community and the disappearance of the routine of training and moving from home to work and back have also induced changes in the way professional life is developed. Physically, going to work requires movement and going outside, essential elements for human health [14].

The pandemic has shown new levels of inequalities and vulnerabilities and a need for social innovation, most of which is in urban areas. Therefore, at the level of public and non-governmental bodies related to urban and metropolitan areas, there has been a perception that the COVID-19 pandemic has caused "a critical reassessment of urban spaces and creates an era of unprecedented change and uncertainty with the urban environment under the spotlight" [13].

However, during the actual post-pandemic period, the increasing importance of public outdoor recreational space (e.g., public backyards, parks, bike paths, riverfronts, greenways, pick-nick areas) has been observed. The city's inhabitants have intensively used public green spaces during the pandemic and soon after the restrictions have been lifted "balancing the risk of infection with the physical and mental health benefits these spaces are expected to confer" [15]. It has been observed that despite the high population density, many European urban areas have large areas of green spaces such that there are approximately 18 sqm/urban resident of public green spaces in Europe, which represents twice the value recommended by the World Health Organization [16]. The situation is present in different cities, such as: Freiberg in Germany, Vienna in Austria, Valencia in Spain, Nantes in France, and others. Furthermore, statistics are not sufficient if they are not correlated with only residents to green spaces that facilitate the easy and frequent connection of people with nature, with psychological and physiological benefits [15; 17; 18].

Furthermore, during the pandemic, some cities have transformed public space for recreational purposes, providing additional space for cyclists to walk while keeping the physical distance. In addition to these initiatives, many cities have temporarily closed some streets to traffic (not only in the historic area, but also on boulevards or streets that already recreational facilities such as coffee shops, restaurants, bike roads) to promote physically distanced pedestrians with physical activities, thus taking pressure off local parks [15].

More recently, the idea of having 'parks' in the city areas has spread in many cities, more related to busy boulevards that have intense traffic because miniature public spaces act as protective barriers and improve outdoor air quality (usually placed on the sidewalk) [19]. "They are often decorated with planters and

seating areas that often function as aesthetic elements and protective barriers"; such spaces are dedicated to a wide variety of activities such as business meetings, such as seating, dining, or retail pick-up areas [15; 20]. These places are often designed and developed in public-private partnerships with the participation of "local businesses that help fund and maintain the park in exchange for enhancing and expanding their outdoor commercial space". The limited use of these parks depends on the climate conditions; in the late autumn and during winter, the areas are less used, but in several cities, they have been redesigned by installing outdoor heaters, tents, and other tarp solutions [15].

Thus, green-blue corridors of cities have become an important part of daily life of the citizens. They are part of the resilient city concept, which can be defined as "a city capable of alleviating the natural and the environmental impact and population and development pressure on its social, economic and technological systems and physical urban infrastructures, while providing fundamental urban services and maintaining functional structures and characteristics" [21]. The idea has been supported and debated in the Joint Research Center study entitled "Enhancing Resilience of Urban Ecosystems Through Green Infrastructure (EnRoute)" [16]; the important role played by the community of practice in the design, construction, and development of green urban infrastructure. The key activities that should be promoted and supported by such communities are the following.

- Evidence-based planning for greener cities;
- Nature-based solutions: (1) by supporting urban planning with scientific knowledge the urban planning; (2) by providing guidance for the urban green infrastructure; (3) by promoting collaboration between all urban stakeholders;
- Enhancing urban biodiversity and ecosystem services to make cities more resilient through novel and innovative ideas on nature-based solutions and clever urban planning.

In this context, the article will present UrbanLink15' research aiming to define healthier lifestyles and sustainable facilities that support them, considering the economic, social, and environmental impact of human activities. The focus of UrbanLink15' research is on the relationship between organizational workspaces, living spaces, and local coworking spaces that meet the need for professional relationships, outdoor activities, natural ways of green wetlands, and the need for community improvement. UrbanLink15' is a public-private initiative that has been designed and developed at the level of the Timisoara city in Romania. The structure of the article consists of the following chapters: (1) the presentation of the UrbanLink15' approach, the research methodology, and the achieved results; (2) a debate on some good practices in the field that could inspire future measures to be implemented in the city of Timisoara, Romania.

2. THE RESEARCH METHODOLOGY (METHODS AND TOOLS)

2.1 Brief description of the UrbanLink15' initiative and project contest

UrbanLink15' initiative (first launched and presented on the ErgoWork Society website, https://UrbanLink15'.wordpress.com/2021/02/08/competitia-urban-link-timisoara-15/) has been designed to discover innovative ways and ideas for post-pandemic hybrid work, and to implement the concept in the metropolitan area of Timisoara, Romania. The target group envisaged by the project consists of students from different specializations as: architecture, design, engineering and management, environmental sciences, etc. enrolled in different bachelor and master programs in universities located in Timisoara (they are familiar with city life and living and could express pertinent, feasible solutions to the actual problems).

The partners involved in the UrbanLink15' initiative are the following:

- GreenForest ltd. (which ensures financial support for the organized project competition),
- ErgoWork Society (https://ergoworksociety.com/),
- Politehnica University of Timisoara (www.upt.ro) with two faculty members (Faculty of Management in Production and Transport Engineering and Management

Research Center, EcosEc Laboratory and Faculty of Architecture),
- Timisoara Community Foundation (https://www.fundatiacomunitaratimisoara.ro/), "FOR Team" (https://f-o-r.ro/) and
- "Association of 4" (https://www.facebook.com/asociatiadela4/).

The general topics of UrbanLink15' were established to collect innovative ideas and projects in three fields of interest:

1. Work and housing solutions within the UrbanLink15' concept; The projects will focus on the impact of hybrid work on the workspaces of companies, on living and organizing work at home, and in relation to neighborhood co-working spaces;
2. Mobility and urbanism solutions in the context of 'Timisoara 15' based on corridors and green-blue gardens - Starting from the hypothesis that there will be a major behavioral change through hybrid work (working from home and in co-working spaces in neighborhood co-working spaces). In this topic context, urban solutions will be identified to integrate the 'built environment' into the natural environment, through green and/or blue canals, corridors and gardens to create an alternative to mobility infrastructure (walking, cycling, scooter, and even sailing), outdoor movement, and leisure to serve the generically determined range of "15-minute" motion;
3. Ergonomic furniture design for work - The projects can refer to office furniture, except for the ergonomic office chair, for company headquarters, organizations, coworking spaces, home office but there can also be applications for outdoor laptop use (e.g., solutions for open air working, in gardens). This theme is dedicated exclusively to architecture students from Timisoara.

The UrbanLink15' initiative consists of four stages for knowledge capitalization, tutoring, documentation, etc. Before the participants submitted their final projects (Figure 1).

2.2 Methods and Tools

The first stage of UrbanLink15' research, has been developed using two main tools:

- First, there was a questionnaire (a designed tool associated with a developed survey) through which there have been capitalized opinions on factors that influence the individual well-being of respondents in general and how the pandemic changed this perception, particularly. There were anonymous respondents participating in the research, the respondents consisting mainly of students from different universities of Timisoara, Romania. The survey has been developed online, distributing in different groups of students the questionnaire link (https://forms.gle/V8V1Vey9eHeAMq4AA) and asking them to distribute it to other colleagues and friends (snowball techniques for collecting responses from a randomly created sample);
- The second tool used was the focus group technique, applied to two groups of eight participants each. Each focus group session had two topics of debate: (1) apply the analysis of the '5 Whys' analysis in the case of two items of debate: 'Why should we work?" and 'Why we should not work?" The '5 Whys' technique involves reflecting on the essential causes of problems, asking 'Why?' Five times to find potential solutions with the support of the participants in the group that need to quickly express their opinions; (2) participants were asked to express their opinions on the best way they work, how they live, and spend extraprofessional activities (social tasks to be accomplished, how leisure and relaxation time are consumed) with maximum satisfaction. Each focus group session had one hour duration and participants were asked to act and react under time pressure.

The purpose of applying both tools was to create a correlation between the perception of the well-being of personnel and the need for new sustainable ways to work and live according to the emerging adaptation to climate changes and urbanization (facing the growing population of the urban area of Timisoara).

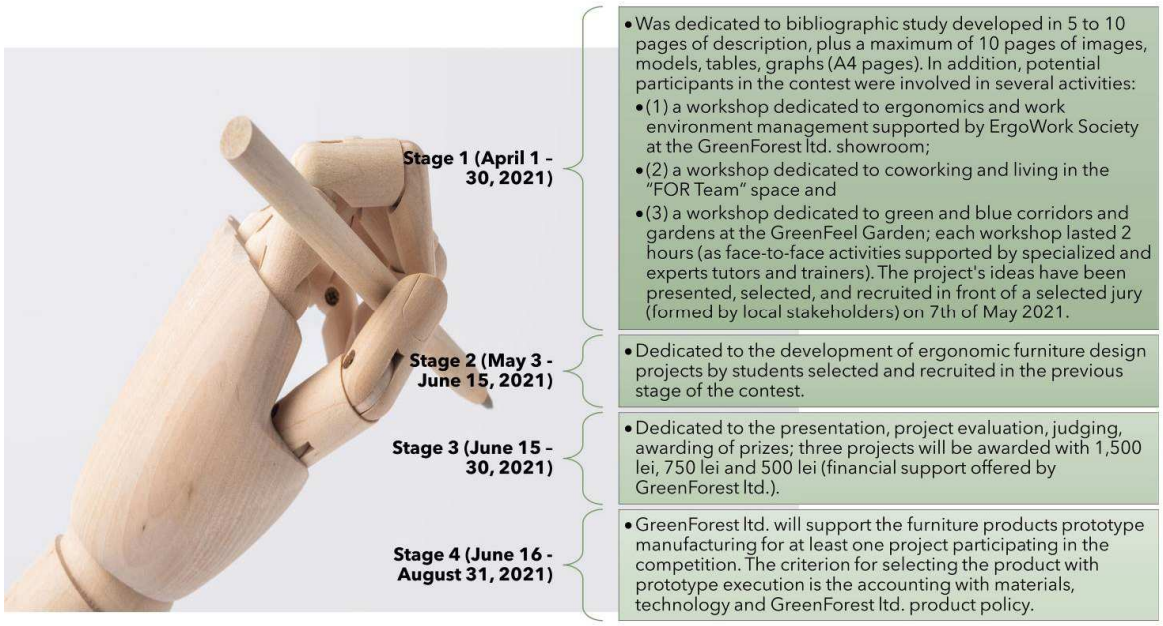

Fig. 1. UrbanLink15' initiative schedule.

Therefore, the proposed approach defines qualitative research; the results are not available at the level of the entire city population, but it is a first pilot study exploring the proposed correlation. Furthermore, it is necessary to consider two aspects of the presented research: a) the sample consists of participants with a predominant work performance behavior, which are students belonging to the Z Generation; b) The social desirability bias is mostly associated with the answer about task orientation and personal development/way of life than was provided by the answer regarding individuals 'oriented to relax behavior".

3. URBANLINK15' INITIATIVE RESULTS

3.1 Results of the Individual Questionnaire

The limit of the research is related to the dimension and demography of the research sample (178 respondents, who were students of the Politehnica University of Timisoara and the West University of Timisoara, Romania). Therefore, the present research is considered representative of the population of designers and ergonomists located in the West Region of Romania and because the methods and tools are considered well defined and pretested.

The introductory question is an open and descriptive situation, and it is about "the happiest moment of your life'. Respondents were asked to fill in the sentence: "One of the happiest moments of my life was when...". Most of the answers were about professional situations and some about personal life. The research results are represented in a graph in Figure 2.

The second question is closed, with defined items, where the respondents were asked to make a hierarchy of the situations that made them feel good (see Table 1). Research results show that the first two situations identified by respondents are related to social needs (belonging and recognition) followed by three situations that relate to professional achievement. Situations related to well-being, not related to others, or connected with the need to have a positive contribution to the community and the planet, generally, are in lower positions of the presented hierarchy.

A question to test the interest of the respondents in the "meaning of life" and "meaning of work", as components of personal perception and feeling, was referring to the Ikigai concept ("a reason for being") [22]. Ikigai (Figure 3) is a Japanese concept that refers to having a direction or purpose in life, providing a sense of fulfilment and towards which the

person can take actions, giving them satisfaction and a sense of meaning [22; 23]. The concept of Ikigai is often represented as a Venn diagram (as a conceptual model) with four overlapping qualities [22]: What do you love? What are you good at? What do you need from the world? What can you get paid for?

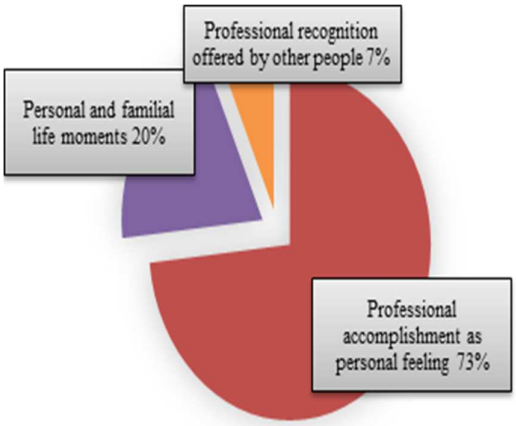

Fig. 2. UrbanLink15' research – preferences about the "happiest moment of my life".

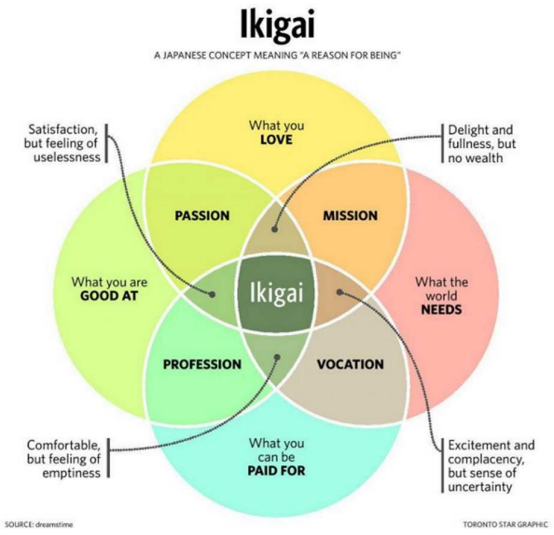

Fig. 3. Ikigai Venn diagram [22].

The survey results underlined that 27% of the respondents knew about the Ikigai concept and were able to develop definitions, in their own words, that correctly reflect the concept. Furthermore, a question in the designed questionnaire was "What *do you miss the most during the pandemic?"*

Most of the responses (129 from a total of 178, which leads to a percent of 72.47% of the respondents) were about social life – direct interaction (see Figure 4). Other important responses were about lack of physical activities, such as university and cultural interactions, participation in restaurants and club events, and other physical spaces (most related to the lifestyle of students).

Table 1

The hierarchy of situations that make the respondents feel good (based on the collected responses).

Hierarchy	Situation that makes it well (survey research results)
1	To be with my friends and with people who make me feel comfortable
2	To be appreciated by the people that are around me
3	To have good results in what I do and to be richly compensated richly for the results of my work
4	To work in a good quality working environment, well equipped from technical and technological point of view
5	To work alongside other people who share the same values and principles
6	To be able to travel and meet new people and see new places, without any limitations
7	To have the needed living conditions and to be able to do my hobbies with my friends, without worries about tomorrow
8	Opportunity to be in a team / organization where I feel appreciated and feel that my work and contributions are recognized
9	To be able to afford long walks and various activities outdoors, in nature
10	Other situations such as • To be able to contribute to the improvement of living conditions for people who are suffering and, in general, to have a positive impact on humanity. • To have the necessary living conditions and to do only as I wish, without having too much interaction with other people. • To be able to meditate and practice a spiritual life, without material concerns, and with a minimal invasive impact on other people and the Earth in general. • To be able to contribute to the preservation of biodiversity and to the sustainable management of the Earth's resources

The last question of the survey was about "pandemic lessons learned". Three responses were associated with the idea of enjoying every moment, friendship limits, and human kindness and patience; two responses were associated with each idea. In Table 2 the rest of the answers can be found; each idea left was associated with one answer.

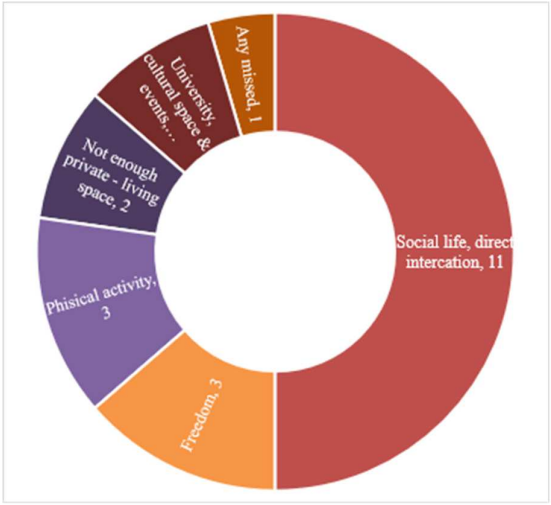

Fig. 4. Urban Link research – aspects missed during the pandemic (answers code).

Table 2

Pandemic lessons learned.

Pandemic lessons learned	%
Enjoy every moment	32.01
Friendship limits	20.11
Human kindness and patience	17.09
Humanity limitations	5.11
Purposefulness whatever happens	5.09
In the worst conditions, you can still find opportunities	4.97
A deeper spirituality feeling	4.91
Importance of the Balance between individual work and human interactions	4.89
Importance of the domestic facilities (ergonomic chair, a good couch and bed, etc.).	4.01
Better body care and a healthy lifestyle through hygiene rules, healthy food, and outdoor exercises.	1.22
Other opinions	0.59

3.2 Focus group results

The first answers related to the reasons to 'do the work' are for money (financial support for living) and to have a certain material life standard. Following Artificial Intelligence (AI) and robotics development looking in the future, the workforce demand will be reduced, and probably Guaranteed Minimum Income (GMI) will be a usual solution applied by governance.

Table 3

Focus Group 'Why to work'.

Why to work answers	Motivational levels
For money	1
To have a life standard	2
To follow your passion	3
for human and environment contribution	3
For a useful feeling	4
A way to express yourself to the others	4
Personal growth and self-esteem	5

Table 4

Focus Group – "Why don't work".

Why to do not work answers:	Motivational levels
To don't get from comfort zone	1
To not deviate from follow your passion	2
Do not affect your freedom of choice	3

The maximum interests are how motivation to work goes beyond the first level of reasons. As seen in Table 3, the survey results show that there are all categories of work motivations expressed by respondents, factors that are not related to money and that cover basic needs mentioned during the UrbanLink15' focus group.

In Table 4 are presented the reasons associated with the attitude of 'do not work' that are not related to money and cover basic needs, mentioned during the UrbanLink15' focus group.

Even if the topic was "15-minute cities" with the bibliographical research and youth following our project purpose, there were some cases where the preferred personal option as a dream for life and work was classical patterns based on a house outside the city, nature, a job in the city and mobility between them based on a car. Furthermore, the research results showed that young people believe in having a choice (dream) to live in a model of life, work and mobility

based on the "15-minute concept", hybrid work, developing urban communities, alternative mobility through green wetland ways.

3.3 Relations between workplaces and living spaces in the context of a "15-minute city"

If we look at our UrbanLink15' study of the wellbeing factors, work motivations, missing, and lessons from pandemics, the key concept is the relations between self and others, these mean community, sharing, belonging, recognition, growth with others through common purpose. Material facilities and natural elements are important but are secondary comparative to social needs.

In the modern age, the successful social pattern was based on the verb in relation to the verb 'to have', as private possession, which determines the verb 'to be'. These means 'to study' for a successful educational degree that is the basis of a successful urban office job with higher income used to express yourself regularly through a luxury suburbia house and an expensive car to move, the 'to have' verb, in the evening, to the office at home, only to sleep, because early in the morning it should return to the office for hard work to afford such a lifestyle. This social model was and still is, in many cases, appreciated as a successful one, even if it has some shortcomings as wellbeing but even more as environmental impact through consumerism, polluting and negative nature impact of car traffic and build environment, infrastructure, in general. The motivation of such a lifestyle was first, following social recognition if you have such a lifestyle even if the true social needs are poor and based mostly on the professional results and admiration of the material goods, including the house and car as the supreme label of success. This expresses yourself, who you are, the verb 'to be' verb.

The "15-minute city" pattern is based mainly on a relationship between the verb 'to do' that determines the verb and, finally, the verb 'to have', but mainly 'to have', as a common social, economic, cultural, and natural heritage, with a lower emphasis on private possession. Intergenerational studies [24; 25; 26], including our current limited quantitative UrbanLink15' current study, based on students, showed a lower interest of young generations in hard educational programs, hard work jobs and materially rich possessions.

On the other hand, they have a higher interest in the final meaning of work and are motivated to be involved in professional projects, mostly if they are similar or close to the personal passions and interests of them and in the teams where they are listened to and appreciated. They are oriented, in general, mostly to the quality experience of life and work, with life - work balance and a large nonprofessional social life.

According to the above trends, in recent years, including the time before the pandemic, there was an evolution in workplace management to adapt workspaces to the young generation, with a focus on office quality experiences and flexible workplaces and work schedule [24; 25; 26]. The time of the pandemic accelerated these trends. Hybrid working has become a way of working that looks like a must for a large category of young office workers in the future. At the same time, especially executives, they are concerned about the lack of connection between organizational culture, knowledge sharing, negative impact on organizational innovation, and know-how development.

The "Office flexibility" research published in 2018 [24] and the "Generations@Work" research published in 2019 [25; 26] also showed that working people, in general, but also young generations of workers and students appreciate direct interaction at the workplace of the employer's workspace if it is a suitable physical and social psychological environment.

At the same time, most workers from all generations have the desire to have part-time, also for flexible work, to have the freedom to work from anywhere. Most of the surveys conducted during the pandemic have similar results, and a quite high expectation is for three days of work per week on the employer's workspace and two days of flexible work from anywhere.

A consequence is that the worker can stay longer in the living area, to develop a better community involvement generally, and particularly to find ways of working in the neighbourhood co-working spaces. Mobility in this way can be an alternative through walking

and cycling. Part of the current road infrastructure can be transformed into green wetlands that can be used for alternative mobility, outdoor exercise, leisure, and relaxing outdoor time.

3.4 Innovative solutions provided by students

As a result of the organized student idea and project contest, some innovative ideas will be presented to tackle challenges related to the post-pandemic.

3.4.1 Proposed furniture solutions

Different innovative solutions of furniture proposed in the contest are shown in Figures 5, 6 and 7. The original designed solutions were interesting because of the functionalities created and the materials proposed to be used (e.g., recycled plastic and wood, glass, etc.). The innovative solutions proposed have been analysed by the company representatives and they will decide which will be the manufacturer solution.

Fig. 5. A "desk with a small garden" solution.

Fig. 6. A "desk-to-go" solution.

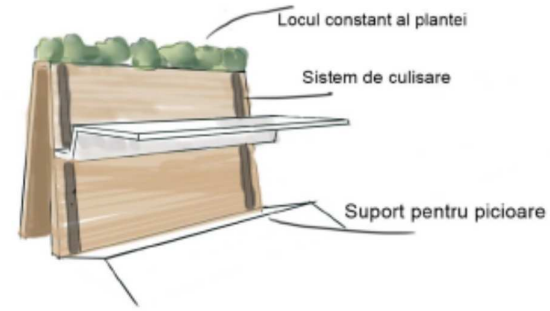

Fig. 7. Desk with bibliophilic solution incorporated.

3.4.2. Redevelopment of the green space on the university campus in Timisoara, Romania

A group of students was concerned about offering solutions to redesign the green spaces on the student university campus of students. The research context was related to the dynamics of Timisoara city and, particularly, the area of the campus. Timisoara is, like the big cities, in an extensive modernization process that tries to consider the various needs of people, but also the multiple issues related to sustainability. One of the objectives proposed by the Romanian government, in the 2030 Agenda, supports sustainable, safe, and resilient city development, and this document tries to propose such a development by organizing "green-blue" corridors within the university campus.

Following multiple trips to the field and the analysis of satellite images offered by Google Earth and Google Maps, the design group of students has observed the acute lack of green spaces within the area of the university campus, which brings many disadvantages for both the environmental and the urban area, among which can be listed: high pressure on essential resources, increasing pollution, decreasing biodiversity, increasing the risk of disease, creating 'heat islands' within the city, increasing the risk of floods, the desolate appearance of the place, etc. (Figure 8 and the solution proposed in Figure 9).

The research group of students noticed that even if rain gardens are not as common in Romania, their degree of plasticity is high, so

they can be implemented quickly and easily anywhere, solving many of the problems mentioned above. After preliminary observations, it was concluded that the most suitable area for the installation of rain gardens would be the Students' Alley, from dormitory 11C to dormitory C4 (Figure 8), due to: larger areas covered with green spaces, the importance of this alley (it being the main alley where students travel to universities) and the large congestion of dormitories on this street.

The innovative solutions proposed have been analyzed by representatives of the mayor of Timisoara (Environment Protection Department), and they have already decided to implement the solution as the first urban rain garden (and created a blue-green corridor on the university campus).

Fig. 8. Potential alley on which rain gardens could be built (marled red area in the image from Google Earth).

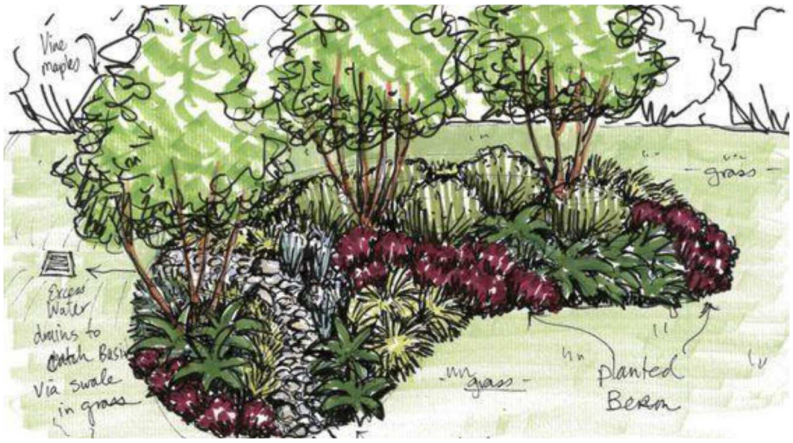

Fig. 9. Sketched of the proposed idea.

4. CONCLUSIONS AND FINAL REMARKS

Despite the proliferation of public health regulations and advances in medical technologies in recent years, the COVID-19 pandemic has shown that many cities around the world were weak in tackling this challenge; physical and institutional infrastructure was not prepared to quickly adapt to life with sanitary and social restrictions.

Therefore, it is time for city managers, architects, and other local stakeholders (e.g. public services providers) to collect and implement innovative ideas to make cities more resilient and robust by elevating the importance of public health and sustainable development, in the context of digital transformation (considering the local context defined by the variety of landscape use, mobility conditions, public space design decisions, etc.).

As discussed in the present article, UrbanLink15' is a feasible approach to capitalize on innovative solutions for Timisoara in Romania. Applying a coherent research scenario (one survey, two focus groups and the review and selection of the proposed projects by experts), there have been capitalized opinions on young people (Belonging to the Z Generation) who feel happy in the city, would like to work, and live in the city and neighbourhood areas. Finally, we conclude that the research objective was achieved on a small scale and few innovative ideas were identified for healthier lifestyles and sustainable facilities that support the economic, social and environmental impact; All participants in the UrbanLink15' initiative have profited from interactive discussions on hybrid work developed as a relationship between organizational workspaces, living spaces, and neighbourhood co-working spaces, and the (re)connection with the sustainable mobility solutions of the concept of "15-minute city". From the perspective of the research results of UrbanLink15' cumulated with formal discussions with different groups of participants, the following conclusions and recommendations have been provided.

Hybrid work will be preferred even by students of the Z Generation because they need to balance the professional life with the social life dimension (like the findings of [25; 26]). The ideas of the projects of working and housing solutions within the UrbanLink15' concept and the ergonomic furniture design for the ideas of work projects ideas (capitalized until the moment of writing this article) have provided interesting solutions, easily adapted to the lifestyle and working style in Timisoara, Romania;

In the field of mobility and urbanism solutions in the context of "Timisoara 15" based on corridors and green-blue gardens, the strong need for sports facilities in the Timisoara city, pedestrian, and bicycle routes to allow proper social separation and improve the capacity for active transportation; maintaining public green spaces and corridors near residences will allow residents to exercise and maintain a healthy lifestyle (as presented and supported also by [7]).

Furthermore, the students have been more 'aggressive' in proposing concrete solutions for green-blue gardens (more extended near the Bega River and the sanitation channels of the swampy area in the local area), water gardens in the campus area, and which they can continue, with long-term support as LAB. The findings of the presented research are like those presented by [12; 13; 14; 21];

In the same context, another solution that emerged from UrbanLink15's research was the expansion of outdoor sidewalks/walk spaces and parklets near businesses, restaurants, and shopping areas on main roads to allow businesses (especially restaurants) to use these spaces for deidentified business activities, simultaneously with an increase in outdoor air quality.

Private developers (companies in the area) should also be encouraged to implement design elements that prioritize indoor air quality and outdoor private space to make multi-unit housing both safer and more competitive with detached, single-family housing. This may be particularly crucial in the immediate post-pandemic period when anxieties about contracting the virus, coupled with greater workplace flexibility, may drive a new era of de-densification; a potential anti-new urbanism. The consequences of this demographic shift could be severe and long-lasting; future research should investigate the magnitude and consequences of such changes.

Additional design recommendations and guidance from researchers and academic specialists should be provided to local stakeholders, including those from the metropolitan area of the city to plan, promote, fund, build, and maintain public green spaces and corridors to allow people to participate in sports activities and maintain a healthy and happy lifestyle. In general, the design of resilience municipal strategic plans for resilience will need to be based on strong stakeholders' management accompanying by mitigation strategies, resource allocation, information provision, and coherent intergovernmental cooperation not only at the city level but also in the West Region of Romania (a good practice has been provided in [16]).

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Inovații pentru susținerea provocărilor post-pandemice - o cercetare colaborativa pentru a descoperi noi soluții pentru muncă hibridă în contextul inițiativei UrbanLink15'

Articolul de față prezintă o inițiativă, susținută de un parteneriat public-privat, denumită generic: UrbanLink15'. Aceasta care își propune să identifice soluții pentru un stil de viață sănătoasă care includ și facilități durabile și care sunt destinate de a sprijini rezidenții din zona metropolitană a Timișoarei (prin oferirea unor soluții cu impact redus, echitabil și pozitiv din punct de vedere economic, social și de mediu). Inițiativa prezentată (conceptul de legătură urbană la 15 minute) se concentrează atât pe promovarea muncii hibride dezvoltate în relație cu spațiile de lucru aferente organizațiilor angajatoare, cu spațiile de locuit și cele de coworking existente în comunități (oraș,

comune, zona metropolitană, cartiere) și ține seama de (re)conectarea activităților cu soluții de mobilitate durabilă. Articolul prezintă rezultatele cercetării (un sondaj, două focus grupuri și un set de soluții oferite prin proiecte aplicative) realizate cu sprijinul cercetătorilor, practicienilor și studenților din diferite specialități precum arhitectură, inginerie, management, științe aplicate. Demersul de cercetare a fost organizat pe două teme principale: (1) relații de muncă, spații de locuit în contextul promovării conceptului UrbanLink15'; (2) mobilitate alternativă prin coridoare și grădini verde-albastre. Discuția asupra rezultatelor cercetării se referă la zona metropolitană Timișoara, România.

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