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BRIEFS

Green Systems and Resilient Cities

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Ali Faruk Göksu develops strategies, innovative models and suggestions for the future of cities. As a urban planner, he took part in many participatory projects that brought together the public, private sector and local organizations, especially the “Batkent Project,” the “Zafertepe Gecekondu Improvement Project” and the “Portakal Çiçeği Valley Project.” Having worked as the manager of Doğuşkent Company affiliated to Doğuş Group for a period of time, Göksu has experience in the public, private and civil sectors. He has established cooperation platforms and workshops, taking into account the importance of the concepts of urban vision, design and cooperation. He brings young designers to develop programs and projects, and provides employment opportunities for youth. He has many national and international publications on issues such as Transfer of Development Rights, Urban Vision, Reconciliation Management, Strategic Design, Urban Transformation and Neighborhood Organizations. Göksu, who also teaches part-time at Mimar Sinan University, is the founding partner of Urban Strategy Company.

Introduction

Green system design principles and urban resilience strategies should be prepared in order to increase resilience to risks and reduce the potential effects of natural disasters in all our settlements, especially in our big cities. Green space system can be considered as the redesign of public space and the management of the organizational capacity of life while urban resilience can be considered as the capacity to reduce possible risks and also the system’s capacity to reorganize itself. While green systems can be considered as a response to the restructuring of future cities, urban resilience can generally be thought as a response to other more immediate impacts.

Comprehensive and participatory solutions that take into account the inadequacy of familiar approaches and methods in the solution of global problems such as climate change, migration, poverty, epidemic etc. should be developed with an approach that focuses on designing the process. The process should embrace steps towards understanding the current system and problems well; planning strategies within the framework of future



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predictions, and designing solutions to primary problems and strategies.

In the contemporary world where limits of the living capacity are being pushed limits, new narratives should be created that address the expectations of the new generation while constructing green systems, and developing resilient urban strategies, programs and projects with a particular focus on the discourse, “there is a lot to learn from natural systems”. The main theme of these new narratives should be ‘change’. Change should be constructed upon sharing, and sharing should be defined not only on the basis of economic values, but also on such notions as trust and neighborhood identity.

Future Predictions

Reports prepared by the United Nations mention a rapid change: “Today, 55% of the world’s population lives in urban areas, a proportion that is expected to increase to 68% by 2050. Projections show that urbanization, the gradual shift in residence of the human population from rural to urban areas, combined with the overall growth of the world’s population could add another 2.5 billion people to urban areas by 2050, with close to 90% of this increase taking place in Asia and Africa.”

“Vision 2050: New Agenda for Business Report” prepared by the World Business Council for Sustainable Development (WBCSD) is based on the following questions: “What does a sustainable world look like? How can we realize it? What are the roles business can play in ensuring more rapid progress toward that world?” This study, which was carried out by taking into account climate change, global population growth, urbanization megatrends and the efforts of the business world, governments and society, evaluates the best possible results for the next four years regarding the humanity and the planet they live on. According to the report, in 2050, “the outcome would be a planet of around 9 billion people, all living well – with enough food, clean water, sanitation, shelter, mobility, education and health to make for wellness – within the limits of what this small, fragile planet can supply and renew, every day.”

According to Prof. Kenan Mortan who comments on Oxford University professor P. Dasgupta’s report on Economics of Bio-Diversity in an article, the report describes an extinction: “To meet the current world population’s demand (not the need) for material goods and services, we use 1.6 times more than the world’s current

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resources. In our world, whose population will reach 10.9 billion people by 2100, it is foreseen that we will increase the exploitation of nature by at least 30%. Nature doesn't have the potential to handle it and that's the main issue. Humans are just one part of the biosphere. On the other hand, nature is unsteady and slippery. The destruction of nature in one place spreads to the entire biosphere with a butterfly effect. The material values we have allegedly gained in the name of growth in the last 70 years are actually a price paid by being stolen from the future's account. The concept of 'economic growth' is completely wrong. What we call balance consists of sustaining the current wrong tendencies and we need to put an end to it. We should not produce anything without calculating the shadow price of destruction. The oceans and rainforests should be included in public property and protected as 'commons.' The international financing structure should be completely greened.”

The main concern of all the projections, approaches and innovative concepts regarding the future of our planet is to raise awareness and find solutions with respect

to the dangers that threaten our planet and have become systematic in recent years. Most importantly, time is running out and the life capacity of our planet is diminishing for us to achieve all of these.

Systemic Solutions should be Brought to Systemic Problems

What has recently been added to the list of global dangers that threaten our planet, such as climate change, migration, disaster, war and poverty, is a pandemic. Besides these global crises, settlements in our country are also under the threat of such disaster risks as earthquakes, floods and tornadoes.

These days, the triggering effect of the pandemic on changes regarding issues such as the relationship between work and home life, individual and social behavior patterns, education and the health system, economic, political and social order is under discussion. Accompanying the former discourse of “Nothing will ever be the same” are currently the answers to such questions as “What will change in the future?” and “Is an awareness of the nature's messages beginning to emerge?”



Relationship systems should be strengthened between strategies and planning approaches to be developed that will render cities resilient, and the design mentality and way of behavior to be executed by the local perspective.

Since the 1999 Marmara Earthquake, it has been repeatedly said that the earthquake will also trigger changes in many topics such as settlement policies and the urban planning system, building and life risks, planning and design principles etc. However, instead of focusing on basic questions like, “How to reduce building risks?”, “How to create open assembly spaces and evacuation corridors?” and “How to make settlements durable?”, discussions are mainly dominated by questions with respect to the intensity, timing and location of a potential earthquake, and the potential earthquake faults that will become active.

Relationship systems should be strengthened between strategies and planning approaches to be developed that will render cities resilient, and the design mentality and way of behavior to be executed by the local perspective. Considering that our planet has reached its ultimate capacity, production-oriented behavior patterns should be designed rather than consumption-oriented systems. Production and consumption should be balanced by designing new economies that will ensure social growth.

Reinterpreting the concept of economy in her book, *Doughnut Economics*, Oxford University professor Kate Raworth talks

about the balance between the social and the ecological ceiling, which she considers similar to a doughnut ring: “The doughnut of societal and global boundaries is simply a visualization of two (social and ecological) conditions based on people’s collective well-being. The social foundation draws attention to the inner boundaries of the doughnut and designates the basic needs that no one should be deprived of. The ecological ceiling, on the other hand, points to the outer boundary of the doughnut. When this boundary is exceeded, the pressure that humans put on Earth’s life support systems reaches a dangerous level. What matters is to create an ecologically safe and socially just space between these two boundaries, which is suitable for the improvement of humanity.” According to the writer, the social ceiling includes 12 of the 17 basic principles outlined in the UN’s Sustainable Development Goals. As for the ecological ceiling, it comprises of the global limit such as climate change; acidification of the oceans; chemical pollution; nitrogen and phosphorus loading; fresh water withdrawal; soil transformation; loss of biodiversity; air pollution, and the destruction of the ozone layer.

It should be acknowledged that planning does not merely consist of a zoning plan, and that design does not just refer to an

architectural, or product design but instead a system design, and future projections deriving from research should be evaluated in our attempts to construct the future. Design and systems thinking that explores natural systems should be the guide for new planning. In this framework, public systems should be redesigned, what is known must be rediscovered, and fading natural traces should be transformed into new lines.

Public Systems Should Be Designed

Networks within nature can provide important clues for setting up new systems, especially when it comes to the creation of “public spaces” and the utilization of existing ones. In order to make our settlements resilient to economic, spatial and social risks, first there is a need to discuss how the systems should be constructed. In the design of public systems, familiar principles such as equality, accessibility, interaction, diversity and identity should be prioritized.

Prof. İlhan Tekeli has recently brought up the idea of constructing a new public space for our cities on the basis of the concept of community: “Since the current system has reduced the community to the level of neighborhoods, it comprises of disconnected city parts. However, it is necessary to create a community that is not disconnected from the parts of the city. A new strategy and use of public spaces

should be developed. Strategy for an urban area should include green areas, roads and coastlines. Participatory urban and public space administrations should be established in their focal points. Rather than shaping this space, the new approach should organize how activities will be carried out in that space.”

The reuse of limited public and semi-public spaces in our cities should be a priority both for politicians and designers. Experiences in five basic subjects will contribute to the establishment of a new framework for publicness:

- Resilience: Whether the social, economic and physical resilience of settlements against risks can be enhanced, or not.
- Mobility: Whether public spaces will be designed for the use of walking, cycling and new generation transportation vehicles due to the potential risks of public transport vehicles, or not.
- Proximity: Whether ecosystems in close relationship with digital platforms will affect public life positively, or not.
- Diversity: Whether public and semi-public spaces can be used for different purposes in moments of risk.
- Continuity: Whether hygiene rules will be applied continuously in public and open spaces.

Green systems will constitute the basis for the formation of a new framework for publicness. For the creation of these systems, new narratives that include new generation expectations should be created. Besides, vital issues such as climate change, food security, and carbon emissions should also be included in these narratives. A strategy envisaging the transformation of the European Union industries until 2050 has been put forward. Within the Horizon 2020 Programme, the European Green Deal Call was published in September 2020. Member states set achievable goals to neutralize carbon emissions.

What is Known should be Rediscovered

The basic principles of access to public uses at different scales should be rediscovered within the “walking distance” that regulates the relationship between the “public interest” and the settlement system of planning. The “15 Minute City” Project, developed by Professor Carlos Moreno from Paris Sorbonne, aims to facilitate residents’ access to local health facilities, work, internet, schools and mixed uses within a short walk or bike distance from home. Today, the “Paris 15 minutes program” implemented by Paris Mayor Hidalgo can be

mentioned as an example of this principle.

The “collective work” (*imece*) culture which continues as a tradition of voluntary and cooperative work in Anatolia should also be rediscovered, and codes of conduct based on the motto of “common solutions to common problems” should be experienced in the arrangement of public spaces. Design Atelier Kadıköy (TAK Kadıköy) and Design Atelier Kartal (TAK Kartal) developed by Urban Strategy, of which I am a founding partner, bring together designers and residents of the neighborhood as important initiatives on the basis of the urban community approach. The most important feature of these initiatives is the principle of discovering and producing solutions to problems collectively, according to the concepts of Design, Research, Participation (*Tasarım Araştırma Katılım*) within the scope of the motto, “rediscovering neighborhoods.”

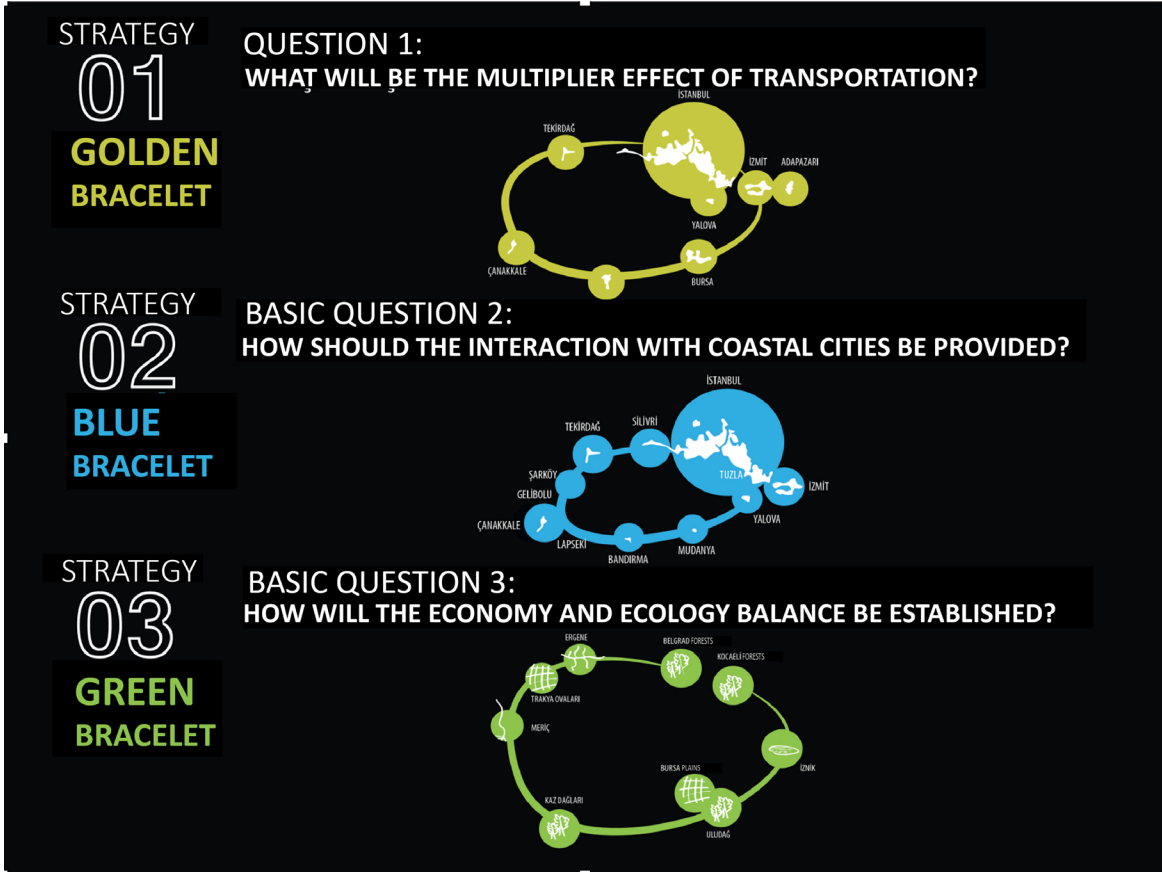
Examples such as the “*Kıyı-Köşe ve Şok Kıyı Köşe*” collaboration programs, in which designers and neighborhood residents come up with designs and implementations for public spaces in line with the 6H approach (fast, active, light, affordable, with everyone, for everyone) during Design Workshops, should become more widespread.

In the Vision Workshop, which we established in cooperation with Urban Strategy and NEF, we developed the green road project to design urban green systems, and especially to make Istanbul an earthquake resilient city. As Urban Strategy, we also designed a green belt project to render the Bursa-Yildirim neighborhoods more resilient. Such projects are examples based on reinventing the basic principles of planning.

Old Traces should be Transformed into New Lines

Natural traces in our cities should constitute the foundations in designing the future of our cities with new lines. The blue and green traces of nature should be rediscovered, an integrated open space systematic should be designed, and “blue and green” covers should be designed for our cities. Design and systems thinking that explores natural systems should be the guide for new planning.





its solution together with those affected by that problem. The process should be developed in participatory, investigative and empathetic environments through the use of innovative and creative methods from multiple perspectives. An approach that considers design not only as a product but as a system design is adopted in design workshops.

The networks of nature can provide important clues for setting up new systems, especially in creating “public spaces” and utilizing already existing ones. In order to make our settlements resilient to economic, spatial and social risks, what initially needs to be discussed is the way in which the systems should be constructed.

Policies and programs supporting strategies that will balance social, economic and environmental components and build resilience through the use of green systems should be established in cooperation with government executives, designers, local stakeholders and experts. To ensure urban resilience, new ecosystems need to be designed by taking into account the unique value of existing natural systems.

Green Road Project should be Developed

“Urban blue and green cover” should be a new planning strategy in the construction of green systems. In the implementation of this strategy, the “green road” and “green belt”

projects should be prioritized in the agenda by the local government. Thus, instead of market-oriented urban transformation, the “green-oriented urban transformation” approach should be opened for discussion. For instance, the “green road project” we have developed for Istanbul with young designers and shared with the public at the Vision Workshop offers a new vision both for designing green systems and developing urban resilience strategies.

Assuming that 1/4 of the population will be greatly affected by the wreckage of a possible earthquake in Istanbul, 4,000 hectares of open space will be needed. Thus, there is an urgent need to add 2,000 hectares more to the existing 2,000 hectares open space. This corresponds to an area that is the same size as Bağcılar, twice the size of Şişli, or thrice the size of Güngören districts. In order to meet this need for open space, the most risky area with a length of 50 km and a width of 200 m has been selected between Küçükçekmece Lake and Pendik, and the E5 and E6 highways. Within the scope of the project, a design has been proposed to demolish all risky structures in this area; reconstruct new structures within a 100-meter area, and include open and closed public areas in the remaining 100-meter area. In the project, the valleys and waterways of Istanbul were discovered, and a blue and green network was created with new roads in the north-south and east-west directions, which treats the Green Road as the main spine of. In other words, a blue and green cover was designed over Istanbul, which transforms old traces into new lines.

Considering the lack of open space and the limited amount of green space per capita, which are among the most fundamental problems of our big cities, the most important project to be developed as a priority should be green-oriented projects that will enable the inhabitants to breathe. Projects such as the green road and the green spine will not only create public spaces but also serve as assembly areas and evacuation corridors during an earthquake. For this reason, green space transfers should be made in order to create open spaces in neighborhoods with high disaster and life risk, and high building density, and a Zoning Bonus should be given to those who accept to leave their risky buildings to green use.

In sum, strategies, programs and projects to be developed in building green systems and making cities resilient to risks should be part of the existing ecosystems. We must rethink the future of our cities within the framework of such concepts as vision, design and impact, and reinvent our neighborhoods with the context of such concepts as design, research and participation. In the last sixty-five years, Turkish cities have entered their third cycle of transformation. Therefore, today, the risk of life and building quality posed by the real estate economy based on the mentality of demolition and rebuilding for the third time gives the message that in order to rethink cities and projects, we need to develop different codes of conduct. It is time that the familiar institutional codes of conduct practiced by decision-makers and designers need to be renewed with alternative concepts and approaches.

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