

Historical environment experience as a megapolis regeneration strategy

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Abstract. In the article the concept of interrelation of historical architectural heritage of Samara with territories of the former areas of industrial building is considered; key aspect of this interrelation in the idea of transfer of positive qualities of the traditional city in mass building of an industrial era, as well as on absolutely new vacant territories moves forward. The reason of the similar initiative developed by staff of Institute of the City Samara for the non-profit expert organization including architects, town-planners and city activists consists in the revealed advantages of the historical environment (HE) in relation to modern mass construction. Presence of these advantages only at one small part of the city does not resolve the main problem – sustainable development of all megalopolis in general. The research of historical quarters allowed formulating the basic principles testifying to universal characteristics of the post-industrial environment providing a city way of life and successful city economy. The transfer task of "lessons of the historical environment" is not resolved out of a number of important changes in the town-planning strategy and professional beliefs of architects and without a certain correction of town-planning norms. The Institute of the City Samara together with the Dutch architects develops an initiative of updating the unique typology "the Samara yard!", the integration accumulating the HE key positive codes and allowing to build the concept and interpretations of these codes in gradually degrading space of residential districts for the purpose of their full regeneration in the future in borders of all city as a uniform system.

1. Introduction

Old and new city. Two types of environment. Superficial difference. Attractiveness of the visual environment of the old city. All over the world, more and more attention is paid to the development of the city in unity with measures to preserve and regenerate the historical environment (HE). Samara, in this regard, is no exception. Samara has a unique historical environment, formed mainly in the 19th century. It is mainly in relation to this type of environment that the categories of "historical, cultural and architectural heritage" are applied. Samara is an expanding metropolis, constantly growing in new areas, which are built up of leveled areas with standard high-rise residential buildings. A visual comparison of these two contrasting types of environment - relatively speaking: the "old city" and the "new city" - instantly shows the difference in the architectural image, while the old city is in a better position.

This is evidenced by the increased interest of tourists. Most of the guests of Samara find it important to see the old city, the historically formed streets, courtyards and quarters. It seems unlikely that these people would be interested in areas where typical houses are built; perhaps only a few



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specialists who study the city as a paradoxical whole will want to visit a new city in Samara. We think that a similar situation arises in other cities and megacities around the world.



Figure 1. The unique grid of quarters of Catherine the Great – 1786. View of the historic city of Samara.



Figure 2. Areas of high-rise residential development (new city). No neighborhood, isolation of family life inside the apartment.

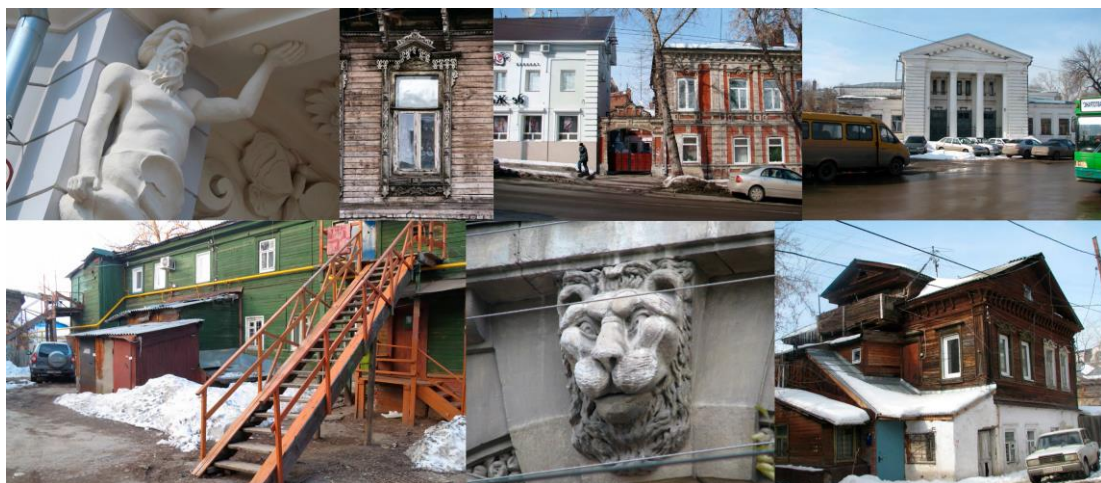


Figure 3. Historical environment of Samara (old town): streets and yards. Diversity of architectural language, hierarchy of private and public spaces.

Old and new city. Awareness of the fundamental differences between the old and the new city. Two different lifestyles. Respect for the exceptional properties of historical heritage - the “old, traditional city” - has multiplied precisely as a special type of urban environment since the second half of the 20th century. It was during these years that the cultural community realized that a traditional city that developed slowly - step by step - has priorities that determine a special lifestyle, which we tend to define as “the life of a city dweller” [1, 2]. The connection that we have been exploring over the past few years has manifested itself in special relationships, as it turned out, between the type of buildings, generally referred to as traditional urban fabric, and events from the life of a city dweller inside and outside these urban areas. Inside the traditional city there was a specific fragmentation of human actions, a mixture of cultural processes, free maneuvering of small retail outlets and workshops, a concentration of customs, rituals, close neighborly relations, and behind its perimeter, in the so-called “new city”. The whole scenario was reduced to the inhabitants of the metropolis to several large, but monotonous processes: trips in transport, visits to the supermarket and overnight. The key content of the life of the inhabitant of a new city is an isolated existence inside the apartment, a concentration on ensuring the household comfort of family members. The absence of an intermediate - half-private, half-public space - minimizes neighborly relations. As a result, communication is replaced by evening watching TV, the effect of social apathy and the disappearance of the city dweller as the subject responsible for the place (the fate of the locality) arises.

As a result, we note that the old and new cities differ not only in their level of external attractiveness, but also in their deep meanings, and this deep meaning implies the formation of two ways of life, and two types of personality. In the old city, where a person shrinks with the territory and neighbors, participating in cultural and economic projects, a “truly urban way of life” arises, and, accordingly, the personality of a city dweller. In a new city, in areas of high-rise buildings, where a person is forced to close within the spatial boundaries of his apartment, a different way of life is emerging, which can be called the “life of the average man.” A comparison of these two meanings suggests the formulation of a dilemma: does the strategy for the sustainable development of the metropolis need to be strengthened precisely by the urban way of life, or will we insistently consider financing the prevailing typologies of the environment as sustainable development? And, accordingly, it is quite natural to maintain the trend of the expansive development of the new city with all its attendant habitats in him?

2. Materials and methods

Statement of the task. Of course, there have been efforts of the authorities and the communities in recent years, the principles of the “Athens Charter” and the city, based on rigid zoning and compartmentalization “of sleeping areas with high-rise typical building”, there is not yet expressed a very critical position, contributing to a gradual shift in the typology inherent in the “new city.” More votes are dealt with the requirements of the humanization of architectural and social ideology of the districts, including such funds which may be borrowed from the experience of the historic environment. Drawing on the experience of the historic environment, of course, does not mean copying an historical typology, but seeks to transfer to new city basic structural principles to ensure reasonable playback level of the urban lifestyle of the inhabitants of the metropolis. So, we see the rational version of the problem in the effective use of experience of the historical environment for sustainable development of the city as a whole. Our idea of needs in self-development, in fact, lies the concept of the efficiency of the urban economy. The course of its prosperity, in addition to institutional factors (independent judgment, the inviolability of private property, etc.), should be routed on the basis of public dialogue, integration of resources of the environmental subsystems of the natural development and the appropriate type of environment. The historic environment, as indicated by the experts, is just built on the principles that put forward the concept. A study of the values of HE is increasingly recognized as preparing creative resource, able to show its effectiveness in identifying strategies that contribute to the development of the city as a whole. Historic environment, where heritage sites, applied primarily to Samara, is a total “mass city” takes no more than 4%, but this

relatively small part of the focus of the city's cultural facilities and – accordingly - place the most significant city events. It tells us that "small" is quite able to produce "big". The task now is to, on the one hand, not to lose in this environment because of misconceptions about the benefits of the construction business in relation to cultural values, and with another – to have a "key structural principles" of the historical environment on the territory of the new city ("to transmit the lessons of HE").

Search similar environmental approach in Samara makes non-government expert Association "of the City Institute _Samara" (CIS), founded by the authors of this report in 2012 during the development of the city master plan strategy. CIS is a design and research platform, an interdisciplinary meeting of experts working method non-conflict reconstruction and regeneration of the urban environment. Thanks to the initiatives of the CIS we investigated and determined the main meaning features of the environmental approach, identification of the underlying benefits of the historic environment, its key structural and system characteristics. They helped to define methodologically sound strategy of translation and interpretation of these characteristics in terms of solving the problems of harmonization of the environment of the new city.

The total model of the structural and systemic characteristics of the historic environment as a resource and prototype for sustainable development. The historical center of Samara – that's 140 neighborhoods based on orthogonal mesh, in turn, each of the blocks has historically been divided into approximately 20 parcels that formed the extent of their development "phenomenon of the genome" sustainable urban environment under the name "Samara yard". That is, Samara yard, or, as it is correct to define "house-yard" is an evolutionary form a "unit" of the old town, accumulating key priorities of the historic environment.

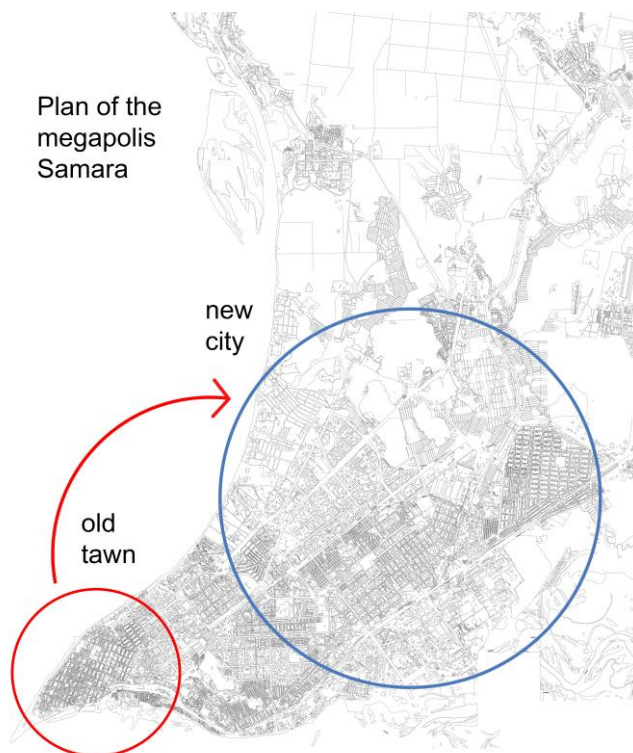


Figure 4. Symbolic scheme of transfer of "lessons of historical environment" (old city) to the territory of mass high-rise residential development (new city).

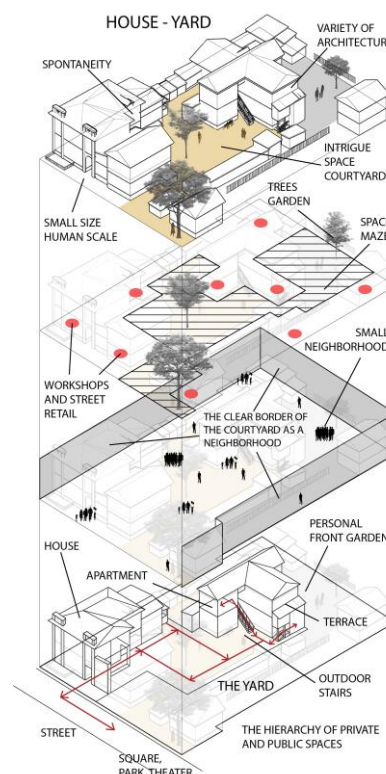


Figure 5. The total model of the structural and systemic characteristics of the historic environment as a resource and prototype for sustainable development.

We can represent graphically a kind of the total model system and the structural characteristics of the historical environment of Samara, highlighting the axonometric image of the Samara court in its conventional layer-by-layer projection. Each layer of this model in general refers to the most important priorities of the Samara court as a pattern of sustainable urban environment. The principal characteristics of the model the priorities of the HE – fixed human scale, small in size, limited by the size of the neighborhood, ecological balance, the diversity of functions and small business, the hierarchy of private and public space, street space, self-development. These properties can be further interpreted to create environmental typology applicable for the regeneration of the new city.

At the conceptual level architectural modeling new typologies, based on identified priorities Samara house yard as the environmental genome, includes the following main features:

- 4.1. Rational grid of the town plan, the structure of the quarters (blocks), the division of blocks on parcels (house- yards-).
- 4.2. Humane scale, compact development.
- 4.3. Functional diversity, development of street retail.
- 4.4. The revision of the standards, ideology and spaces of public facilities to be integrated into the structure of the quarter.
- 4.5. Bodily holistic form of the house-yard, due to the combination building yard, and its longitudinal boundaries in the form of firewalls (or external facades, when there is no need to lock).
- 4.6. Reasonable limits of the objects and neighborhoods. House-yard suggests a typology of the dimensions of approximately 60 x 30 (40) meters, and the number of inhabitants forming the neighborhood of 5 to 10 families.
- 4.7. Morphological characteristics of the labyrinth that allows you to create a lovely private area for each apartment, but to save the common space for meetings and children's games.
- 4.8. Ecological balance and economic feasibility of the house-yard from the standpoint of saving resources for expensive engineering services compared to high-rise buildings.
- 4.9. Tolerant atmosphere in relations between the neighbors, the prerequisites for theatrical contacts, reaching agreements in respect of common problems and plans.
- 4.10. Organic adaptation of town-planning norms in force at the same time developing the capacity of inhabitants to sensitive self-regulation in relation to external constraints, and in terms of their own ambitions.
- 4.11. The hierarchy and integration of private and public spaces.
- 4.12. The variety of architectural language, deviance original forms of development and States of surfaces and textures; informality architectural statements; adaptability forms of the unpredictable initiatives for the development of new features, including street retail, and workshops of various kinds, and – as a consequence - the potential of cultural attraction of investors and tourists.
- 4.13. Live city street.

3. Results

The concept of regeneration of the megapolis. An important consequence of this work was the conviction that the Samara yard, which has a number of positive generating qualities at an invariant level, has a future in the form of an initiative interpretation of it as a morphological and semantic genome of a new building. The revealed characteristics of the Samara yard allow us to judge the possible meaningful translation of these properties to the level of new developing typologies of architectural design in new, historically developed territories, or to use the tactful integration into the mass of typical building development with the aim of its regeneration as a post-industrial environment. The problem is that on the threshold of such pilot initiatives there are no insurmountable obstacles in the system of standard urban development regulation. Additional problems in the implementation of this humane strategy may arise due to the conservative beliefs of investors and professionals who are not ready for a significant change in the legally established standards.

The general thesis of most initiatives is universally recognized not so much as the protection and preservation of historical monuments in themselves. But these are the value aspects of the historical heritage as an evolutionarily developing environment, co-scaled with the modest resources of the ordinary city dweller, and thus forming an environment of a truly urban lifestyle, effectively adapting to the tasks of collective survival. The study of HE values is increasingly recognized as preparing a creative resource that can be effective in identifying strategies that drive the development of the city as a whole.

From our point of view, the concept of the sustainable development strategy of Samara can be based on the developed methodology for transferring HE experience to new urban areas. The implementation of such a strategy (master plan) involves four main **phases**. **Phase 1:** experiments on conflict-free renovation of the old city, designed to update the existing resource and provide convincing arguments about the economic, social and cultural effectiveness of the historical environment as a prototype of the transformation of the entire megapolis environment. **Phase 2:** identification of potential localities (quarters), construction of a new quarterly grid in compliance with the principles of the original model - a pattern of a sustainable urban environment. **Phase 3: Formation of the main street; low-rise continuous building along the main street with the placement of street retail facilities in the first level and residential apartments in the second level.** **Phase 4:** transformation of the existing multi-story buildings of the new city into low- and medium-floor buildings, taking into account the system of courtyards and courtyard neighborhoods developing in new quarters.

Phase 1: Conceptual projects conflict-free renovation of the historic environment, demonstrating the effectiveness of its basic characteristics.

In general, actions aimed at maintaining the health of the historic environment as a unique pattern of cities is based on maintaining and enhancing their own genome: namely, urban life, the unique structure of neighborhoods and buildings. The method of this positive impact on HE is a non-conflict reconstruction, and tool – the City Institute Samara – an expert platform for the implementation of the dialogue between residents, experts, business and government.

The Quarter Liverpool. The project demonstrates in the form of game prediction, how could the future look small and historic locality in the case of realization of scenario development. The script provides personalized initiatives, after which comes the stage of agreements between the initiators and neighbors. Each initiative for self-development of locality based on the personal history of the resident of locality, that is created and implemented, thanks to his personal history, and resources. As a result of this process in the quarter there were no significant, but significant and positive changes, culminating in the construction of two small hostels, construction of the income module in the depths of one of the courtyards, and the reconstruction of houses facing the street, placing them in the music club, cafe and art Studio. The process of such reconstruction was a slow transformation with the preservation of "biographical discourse" of the inhabitants of the locality.

Quarter No. 79. Every yard in this neighborhood were studied with the aim to get acquainted with all the inhabitants, their dreams and problems. Residents were also shown the range of possible destinations for a hobby or small business to conduct on the territory of the quarter. The study found evidence that each parcel (house-yard) gradually planning their own future, with a particular eye on the neighbors, that is, respecting the idea of cautious promote their own interests, not to provoke internal conflicts within the community. Simultaneously with the research and architectural team project proposal was developed, involving the compaction of the quarter at sites within the yards, which could become investment shares residents in the dialogue with foreign investors. The project showed the effectiveness of the environmental approach in the historically formed structure, it is quite reasonable look action to find a compromise between the general idea of building block and design of simultaneously occurring developments within individual parcels. Currently the project is at the feasibility study stage of the investment program.



Figure 6. Phase 1: conceptual projects conflict-free renovation of the historic environment, demonstrating the effectiveness of its basic characteristics. *Quarter №79*: perspective projection of regenerated buildings



Figure 7. Tolerant atmosphere inside the yard neighborhood.

Quarter No. 13. The live energy this regeneration project give an independent initiative of the inhabitants of the quarter. One of the key figures of this process is Vyacheslav Vershinin, independently reconstructing the yard and the house of the former estate of merchant Potosin. Close to his initiatives, residents of the other farmsteads of the quarter recently approached. The ongoing process of self-development combines officially regulated design and construction initiatives with the self-interpreted by the public. As a result, the quarter gets a solution in the form of living environmental forms that are attracted by architects, and the residents themselves. An architectural group "of the City Institute Samara" takes an active part in the development of this project, engaged in surveying the territory, the inventory of buildings and cultural values, counseling and integrate in building small projects. Among these small projects for the quarter was the community center - "the Kiosk of the Architect", which includes the museum of the quarter, the architectural office, amphitheater and children's playground.

4. Discussion

Phases 2 and 3. The concept of transformation of the new city on the basis of the structural and systemic principles of quarterly development of the historical part of Samara.

At the level of the general strategy adopted in Samara in 2013, we proposed a number of actions that can optimize the strategic course for sustainable development of the urban environment in general. We present here those of these alleged actions, correlated with the principles of the above models.

7.1. The identification of epicenters of identity: cultural, industrial, architectural, nature, - any other.

7.2. Identifying identical localities based on the identified epicenters, the uncoupling of the continuous fabric of the new city of neighborhoods - independent of the island, kind of policies, the articulation of the boundaries of localities, their shape and spacing.

7.3. The alignment of the overall strategy of regeneration of the new city taking into account the gradual transformation of the environmental code, which involves the introduction of building the neighborhood of a quarter type structure, pedestrian streets, low-rise continuous buildings perimeter blocks with well-developed street retail, limiting the size of yards and neighborhoods, surveying responsibilities and possessions.

7.4. The development of a new economic model of self-development of localities, to validate the profitability of investment in projects conflict-free regeneration medium on the basis of new social and cultural scenarios.

7.5. Introduction in the structure of a typical building's main pedestrian street with low-rise building and occupying the first floors of street retail.

7.6. The gradual replacement of typical high-rise development in a balanced environment quarterly type and education of many authentic neighborhoods on the basis of invariant of the typology of "house-yard».

7.7. Revision and development of typologies of public buildings and spaces in favor of individualization of spatial scenarios, sizes, programs, activities, and environmental sustainability.

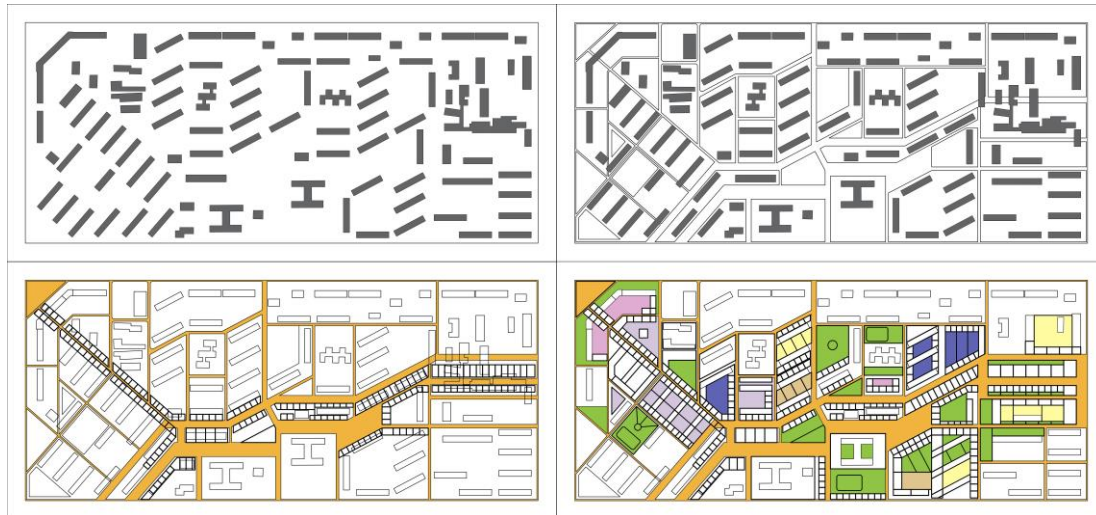


Figure 8. *Phase 2.* Creation of a quarterly grid (locality detection) in the structure of the existing standard development of the new city. *Phase 3.* Formation of the main street; low-rise continuous building along the main street with the placement of street retail facilities in the first level and residential apartments in the second level. *Phase 4:* Gradual transformation of the structure, objects and scale of the locality environment of the new city. Surveying neighborhoods in the yards and the creation of buildings based on the typology of the house-yard. *Phase 3.* Formation of the main street; low-rise continuous building along the main street with the placement of street retail facilities in the first level and residential apartments at the second level.



Figure 9. Pedestrian street with low-rise buildings and street retail - built inside the existing multi-story residential buildings in the third stage of regeneration of the new city.

5. Conclusion

The study of the historic environment, undertaken during several years by the City Institute Samara identified the key characteristics of evolutionary formed for neighborhood development. These characteristics determine Samara and Samara quarter yard not only as the object of protection of the cultural heritage status, but also as a resource that is able to predetermine important methodological bases for creating a model of sustainable development all areas of the metropolis. The proposed model is considered as a tool for structural and systemic changes developed in Samara extensive areas with large-scale model building, own perspective of well-being which raises serious concerns. The most important deficiency of the expansive strategy of the "new city" lies in neglect of the principles of socio-spatial balance, linking the size of the neighborhood the principle of its municipal organization with a human scale, cultural identity, hierarchy, private and public, the architectural typology of the house-yard and natural needs of residents in self-development and self-government [3, 4]. The choice of the researchers and authors of this communication is leaning toward recognition of the value of cultural and architectural heritage as a priority of the traditional city, its polyvalent and scale in relation to the pragmatic attitudes of the technocratic wing. The epicenter of the considered methodology is, as stated in our report, the man leading the "urban lifestyle", giving the history of the city the continuously growing cultural resource. Historic environment, in particular – Samara quarter house yard is an architectural and functional methodology of the present city, providing for the citizens the realization of itself as a subject of cultural and economic history of the city.

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