Buychik, A. (2023). The relevance of creating a scientific and educational complex for training specialists in revitalization. *Culture and Arts in the Context of World Cultural Heritage. Klironomy*, *1* (7), 71-81. Ostrava: Tuculart Edition and European Institute for Innovation Development.

DOI: 10.47451/her2023-03-01

The paper will be published in Crossref, ICI Copernicus, BASE, Zenodo, OpenAIRE, LORY, HSLU, J-Gate, Academic Resource Index ResearchBib, ISI International Scientific Indexing, ADL, JournalsPedia, Mendeley, eLibrary, and WebArchive databases.

Alexander Buychik, Doctor of Science in Economics, PhD of Social and Political Sciences, Specialist in Cultural Heritage, Chief for Science, Tuculart Holding. Ostrava, Czech Republic.
ORCID 0000-0002-2542-4198

The relevance of creating a scientific and educational complex for training specialists in revitalization

Abstract: At the present stage of development of the advanced society of the planet, a more careful attitude to the objects of the past, which have the value of cultural heritage, becomes relevant. One of the problems is the lack of uniform norms for the interpretation of objects as cultural heritage units. Consequently, in each society the fund of such objects is formed according to different principles. Some of these units, which become objects and structures of cultural heritage, fall into significant disrepair or lose harmony with the renewing environment, landscape, and buildings over time. The relevance of their existence or the profitability of their restoration is under threat. The way out of this situation was the process of revitalization, i.e., giving an object or structure a new life while preserving the part of the authentic appearance (exterior) survived to this day. The study subject was the processes of evolution and transformation of klironomical thought in revitalization of cultural heritage objects and objects. The study object was a scientific and educational complex for the revitalization of cultural heritage objects and objects. The study purpose was to identify the evolutionary regularity of the actualisation for creating a scientific and educational complex to train future specialists in revitalization. To achieve the set purpose and solve problems, historical, logical, and comparative methods were used in the study course. In the study course, the works of scientists and researchers in the history of urban planning and architecture, in revitalization, culture and cultural heritage (Klironomy) were used. The author concludes that the study revealed an evolutionary need for the emergence of a new specialty that would represent specialists in revitalization, who will have a broader professional view of the principles, processes and conditions for the revitalization of cultural heritage objects and structures. For the emergence of specialists in revitalization in state, municipal, and commercial structures, it is necessary to create a scientific and educational complex for training specialists on the basis of universities and research institutes that deal with the problems of urbanisation, urban planning, architectural and landscape design. However, the fundamentally distinctive feature of such a scientific and educational complex should be an approach from a klironomical worldview, i.e., the main mental activity of a specialist should be the maximum preservation of the cultural and historical forms of an object or structure and the desire to adapt the environment to the historical appearance of the revitalized object using the latest technologies and new art forms.

Keywords: revitalization, cultural heritage, scientific and educational complex, specialist in revitalization, urbanistic, urban renewal.

Introduction

At the present stage of development of the advanced society of the planet, a more careful attitude to the objects of the past, which have the value of cultural heritage, becomes relevant. One of the problems is the lack of uniform norms for the interpretation of objects as cultural heritage units. Consequently, in each society the fund of such objects is formed according to different principles. Some of these units, which become objects and structures of cultural heritage, fall into significant disrepair or lose harmony with the renewing environment, landscape, and buildings over time. The relevance of their existence or the profitability of their restoration is under threat. The way out of this situation was the process of revitalization, i.e., giving an object or structure a new life while preserving the part of the authentic appearance (exterior) survived to this day. For more than 100 years, in various countries of the world, revitalization has been saving individual significant cultural heritage sites from complete destruction or disappearance, which are applicable by society in new forms and types of their activities. However, the revitalization era can be divided into three time periods:

1) the Epoch of Engineering Revitalization, which was characterised by a simplified vision of the adaptation of objects and structures with the priority of building codes and economic profitability;
2) the Epoch of Urban Planning (Urbanistic) Revitalization, which began in 1960-70s, focused on the architectural and construction harmonisation of a revitalised object in the appearance of a city or its quarter, i.e., harmonisation of a revitalised object or structure with its environment;
3) the Epoch of High Revitalization should come in the 2030s to replace urban revitalization due to the complexity of the complex of revitalization works, the requirements for it, the rapid development of technologies and a comprehensive understanding of the essence of revitalization.

Therefore, there is an urgent need to create a scientific and educational complex for the training of specialists in revitalization, who will come with broad and comprehensive knowledge and skills to replace narrow-profile specialists in order to more effectively and professionally approach the creation, development, examination and implementation of projects for the revitalization of cultural heritage objects and structures.

The study subject was the processes of evolution and transformation of klironomical thought in revitalization of cultural heritage objects and objects.

The study object was a scientific and educational complex for the revitalization of cultural heritage objects and objects.

The study purpose was to identify the evolutionary regularity of the actualisation for creating a scientific and educational complex to train future specialists in revitalization.

Based on the study purpose, the following tasks were set:

- give a comprehensive description of revitalization;
- analyse the state of the practical base of revitalization projects through landmark projects in various countries of the world;
- substantiate the evolutionary pattern in the need for the emergence of specialists in revitalization;

– to determine the basic requirements for the inclusion of basic disciplines and scientific fields of culture, art, and cultural heritage in the scientific and educational complex for the training of specialists in revitalization.

To achieve the set purpose and solve problems, historical, logical, and comparative methods were used in the study course.

In the study course, the works of scientists and researchers in the history of urban planning and architecture, in revitalization, culture and cultural heritage (Klironomy) were used.

Revitalization as social activities in the field of cultural urban renewal

Revitalization in the context of urbanism refers to the process of recreating and revitalizing urban space. The main principle of revitalization is to open up new opportunities for old territories and buildings. In the process of revitalization, an integrated approach is used to preserve the originality, authenticity, identity and historical resources of the urban environment (*Barabanov, 2013*). The Cambridge Dictionary offers the definition that it is the process to give new life, energy, activity, or success to something, and "of making something grow, develop, or become successful again" (*Revitalization, n.d.*).

The main revitalization principle is to open new possibilities of old forms considering their modern functions. The revitalisation process uses an integrated approach to preserve the identity, authenticity, identity, and historical resources of the urban environment. The revitalization of the surviving buildings of industrial complexes, located within the city, are very popular in the modern world from the position of cultural heritage preservation (*Buychik, 2021*). This is due to the contradictions between the needs of society and the existing structure of the urban environment in the three ways of preservation:

1) restoration of the object to resume production activity;
2) restoration of the object to preserve its original appearance as an object of cultural tourism;
3) conservation of the object to preserve the existing state of the object for restoration in the future (*Buychik, 2019a, pp. 111-112*).

There are five main stages in the procedure of object revitalization:

- stage 1 is development of the concept of territory revitalization including the business model and ways of its monetization;
- stage 2 is landscaping of the former plant, zoning, and navigation;
- stage 3 is creation of infrastructure spaces, i.e., venues for events, design workshops, trading platforms;
- stage 4 is formation of the community within the object and identification of the main tools of its communication;
- stage 5 is development and implementation of the object promotion strategy (*Buychik, 2019a, pp. 115-116*).

Urban renewal, also called urban regeneration in the United Kingdom and urban redevelopment in the United States, is a programme of land redevelopment often used to address urban decay in cities. Urban renewal involves the clearing out of blighted areas in inner cities to clear out slums and create opportunities for higher class housing, businesses, and other developments.

Urban decay, also known as urban rot, urban death, or urban blight, is the sociological process by which a previously functioning city, or a city quarter. Urban decay can include the such aspects as industrialisation and deindustrialisation, depopulation and overpopulation, counter urbanisation, economic restructuring, abandoned buildings or infrastructure, etc.

Since the 1970s and 1980s, urban decay has been a phenomenon associated with some Western cities, especially in North America and parts of Europe. Cities have experienced population flights to the suburbs and exurb commuter towns; often in the form of white flight (*Jackson, 1985, p. 522*). Another characteristic of urban decay is blight – the visual, psychological, and physical effects of living among empty lots, buildings, and condemned houses. Urban decay has no single cause. It results from combinations of inter-related socio-economic conditions, including the city's urban planning decisions, the poverty of the local populace, the construction of freeways and railroad lines that bypass or run through the area (*Caro, 1974, p. 522*), depopulation by suburbanisation of peripheral lands, real estate neighborhood redlining, and immigration restrictions (*Grogan & Proscio, 2001, 139-145*).

A primary purpose of urban renewal is to restore economic viability to a given area by attracting external private and public investment and by encouraging business start-ups and survival (*Caves, 2004, p. 710*). It is controversial for its eventual displacement and destabilisation of low-income residents, including African Americans and other marginalised groups.

Modern attempts at renewal began in the late 19th century in developed nations, and experienced an intense phase in the late 1940s under the rubric of reconstruction. The process has had a major impact on many urban landscapes and has played an important role in the history and demographics of cities around the world. Urban renewal is a process where privately owned properties within a designated renewal area are purchased or taken by eminent domain by a municipal redevelopment authority, razed and then reconveyed to selected developers who devote them to other uses. The concept of urban renewal as a method for social reform emerged in England as a reaction to the increasingly cramped and unsanitary conditions of the urban poor in the rapidly industrialising cities of the 19th century. The agenda that emerged was a progressive doctrine that assumed better housing conditions would reform its residents morally and economically. Another style of reform – imposed by the state for reasons of aesthetics and efficiency – could be said to have begun in 1853, with the recruitment of Baron Haussmann by Napoleon III for the redevelopment of Paris. In the 20th and 21st centuries, the practice of urban regeneration is normally completed with one (or more) of three goals, economic renewal, social and cultural renewal, or environmental renewal (*What is…, 2021*). Many cities link the revitalisation of the central business district and gentrification of residential neighborhoods to earlier urban renewal programmes.

The urban renewal purpose evolved into a policy based less on destruction and more on renovation and investment, and today is an integral part of many local governments, often combined with small and big business incentives. If it is monitored the main purposes of the urban renewal, they are:

- tackling barriers to economic growth;
- decreasing the level of unemployment;
- increasing the level of attractiveness for both local residents and investors;

- increasing residents' satisfaction in where they live;
- creating opportunities for deprived communities;
- unlocking potential in deprived areas (*What is…, 2021*).

The process of urban regeneration is often performed in rural areas, referred to as village renewal, though it may not be exactly the same in practice (*Chigbu, 2012*). In some cases, urban renewal may result in urban sprawl when city infrastructure begins to include freeways and expressways (*Lobbia, 2008*). Urban renewal is a widely discussed and controversial programme. It has been seen by proponents as an economic engine and a reform mechanism, and by critics as a mechanism for control (*Pan, 2010*). The controversy often involves the use of eminent domain, demolition of historic structures and direct displacement brought by slum clearance. Poorly conceived designs can lead to the destruction of functional neighborhoods and the creation of new ones which are less desirable. Areas are often cleared in order to construct highways, which bring pollution and heavy vehicle traffic to surrounding neighbourhoods, or replaced with experimental new development patterns which prove undesirable or not economically sustainable.

In terms of utilising the eminent domain as a legal method to take private property for city-initiated development, Kelo case is the real-life example of the resistance against eminent use. The U.S. Supreme Court upheld the taking by a 5 to 4 vote, but nothing was built on the taken property. In many US cities, especially those in the Rust Belt, huge areas of productive buildings were demolished to enable speculative future development which never materialised. Syracuse, Cincinnati, and Niagara Falls, among many others, cleared entire neighborhoods under urban renewal plans only to have the cleared areas end up as surface parking lots, sparse industrial uses, and vacant land (*Knight, 2007*).

Thus, revitalization, which has been developing in practice for more than 130 years, has proved its viability and practicality for a society striving, on the one hand, to preserve the cultural heritage, on the other hand, to feel an urgent need to present old forms in a new shell, modern or even futuristic.

Modern experience of effective activities of in the field of revitalization

Projects for revitalizing historical buildings, structures, and places have been actively implemented for several decades in all the leading countries of the world on all continents of the planet. Major revitalization projects have been implemented, e.g., in China, Hong Kong, Japan, South Korea, Singapore, India, Israel, Egypt, Morocco, European Union countries, Great Britain, Argentina, Brazil, Mexico, USA, Canada. Then below, several markable revitalization projects are shown.

The revitalization of industrial and ex-industrial objects is gaining momentum. The former manufactury "Manufactura" located in Lodz (Poland) (*Figure 1*) is one of the most interesting examples of revitalization in Europe. Thanks to a good marketing component, the manufacture became one of the most successful projects for the restoration of ex-industrial objects. The complex with a total area of 110 thousand square meters including 300 conceptual spaces, became the main cultural attraction of the small town of Lodz. Due to the revitalization and change of the concept of one industrial complex, the city is one of the most popular tourist centers in Poland.

Sheffield cultural industrial quarter (*Figure 2*), where the creative companies, was created on the territory of the industrial complex in the UK. There are Yorkshire Studio space arts, audiovisual enterprise Center, night club Leadmrll, Studio Management, scientific Sheffield Park, the Site Photography gallery, the complex of Cinema in the quarter. Also, about 300 companies of specialization connected with movies, music, television, design and information technology, rent spaces there.

Moscow design plant "Bottle" (*Figure 3*) can be cited as a successful example of the Russian revitalization. It is a former factory for the production of glass products of the Crystal Factory named Kalinin in the Butyrsky district of Moscow, which existed from 1865 to 2000. Production was organized by Joseph Duthoy to meet the needs of Russia's first full-fledged perfume factory founded in 1843 together with Alphonse Rule. Accordingly, the whole complex of buildings was defined as a cultural heritage. However, the restoration of the buildings was a huge investment, and the urban environment has changed for the last 20 years. The preservation of manufacturing has become almost impossible in terms of the harmony of the environment.

Revitalization of the object was performed by the holding "Realogic" under the leadership of Russian entrepreneur Nikolai Matushevsky. In 2009, the holding bought the factory and made a creative space that had to combine design, fashion, architecture and other ways of the creative business. For four years, the organizers were making a creative cluster in the field of industrial design within the office center in the style of loft.

Stony Island Arts Bank (*Figure 4*) was designed and built in 1923, a formerly vibrant community savings and loan bank, situated in Chicago's south side, had become vacant and abandoned by the 1980s. In 2012, Chicago-born artist, urban planner and professor Theaster Gates purchased the 17,000-square-foot ruin. Gates transformed the bank into a contemporary art gallery, media archive, library, and community center. Though it's entirely renovated, details of the bank's age and history, such as peeling paint and damaged ceiling tiles, have been preserved to physically merge the past and present. The bank has become an institution of and for the south side of Chicago, that celebrates and preserves African American culture.

Infra-Space 1 in Boston (*Figure 5*) is a pilot project of a state-wide Massachusetts Department of Transportation led study to revitalise landscapes under elevated highway viaducts. These areas commonly have detrimental characteristics, being inaccessible, foreboding, dark, loud, and interrupting the urban fabric. Infra-Space 1 introduces multimodal connections and increases safety and comfort through new uses and lighting. It is converted the under-highway landscapes into a green stormwater infrastructure to treat the vast amounts of runoff from the highway that would otherwise contaminate local waterways. Combined, these features re-organise and re-purpose transportation infrastructure into a quality urban realm and public access landscape.

Winner of the Passageways 2.0 international design competition, City Thread (*Figure 6*) transformed a formerly neglected 6,200-square-foot alley in downtown Chattanooga, Tennessee into an active, public space. The project was developed by River City Company, a non-profit economic development organization, and designed and built by SPORTS, a multidisciplinary architecture and design collaborative. The project serves as a social connector where people can come together for both unique public events and informal gatherings. The corridor breaks from the surrounding urban fabric with a neon green, zig-zagging steel tube and painted graphic

surfaces. These features also function to segment the space into a variety of smaller enclaves or "urban rooms", which supports different types of activities. Furthermore, its design is intended to allow all users to discover varying ways of utilizing the space.

Prone to natural disasters, Japan invests heavily in infrastructure and training to ensure the safety of its citizens. High flood defense walls, e.g., protect cities like Osaka from the risk of flooding. However, they simultaneously disconnect citizens from their coastlines and waterfronts. Tocotocodandan (*Figure 7*) remedies this by reimagining infrastructure as public space. It provides a public space and waterfront promenade that also functions as flood defense. It's converted the hard, engineered infrastructure of the original flood defense wall into a terraced landscape with room for varied interpretation, inhabitation and appropriation. Greenery has also been integrated into the space, which softens the concrete structure and creates a more inviting atmosphere.

A finalist in the 2019 A+ Awards, the Idea Exchange Old Post Office (*Figure 8*) is Canada's first "bookless" library, providing an array of spaces for public learning and creation. The original structure, a post office dating back to 1885, features a new 9,000-square-foot transparent pavilion that wraps around the original building and stretches over the water. The character of the historic building and the new, contemporary space are in constant dialogue as a result of this openness. RDHA has created a bastion of creativity for the surrounding community while simultaneously preserving the heritage of the site.

Thus, modern urban planning, renewal, and redevelopment already has a fairly large and long experience in implementing theoretical knowledge and developments in practice of modernising the external appearance of outdated and partially destroyed buildings, structures and urban landscapes.

The relevance of creating a scientific and educational complex for training specialists in revitalization

At the present stage of development of society, it becomes relevant to create a unified scientific and practical base for revitalization, which would include not only aspects of various sciences of urban planning, but the foundations of cultural heritage in various directions.

If we consider revitalization from the viewpoint of urban planning and architecture, then more practical industries, e.g., mathematics, mechanics, materials science, construction and others take the leading positions. It should note that all these industries are very important for a competent approach to the technical possibilities of revitalization of buildings and architectural structures. However, from the viewpoint of Klironomy, the Science of Cultural Heritage Preservation, revitalization contains a more extensive set of knowledge and skills that help the specialist to correctly perceive the object of renewal and modernisation, as well as to effectively use the appearance of the object (*Buychik, 2019a*).

Therefore, it should not talk about a specialist in urbanisation as a representative of some combined direction of construction and architecture, but about a specialist in revitalization, who received a professional education, including the scientific areas of culture, art, and cultural heritage (*Buychik, 2015*).

From the viewpoint of Culture, a specialist in revitalization has to master such scientific areas as the history of culture, the cultures of the peoples of the world or region, cultural

philosophy, semiotics, and intercultural communication. These areas of cultural sciences will form in the future specialist an understanding of culture, its universally recognised values, regional and national traditions, features of national communication, reflected in art history forms.

From the viewpoint of Arts, a specialist in revitalization has to master, additionally to architecture, such scientific fields as art history, colouring, painting and graphics, raster and vector graphics, two-dimensional and three-dimensional design (*Buychik, 2017*). This will contribute to the combination of classical and modern art history education, which is so necessary for understanding the principles and laws of revitalization.

From the viewpoint of Klironomy, the Science of Cultural Heritage Preservation, the revitalization specialist has to master Landscape Klironomy, Urban Klironomy, Architectural Klironomy, Sculptural Klironomy, Inauthentic Klironomy, Geographical Klironomy, and Historical Klironomy (*Buychik, 2019a*; *Buychik, 2020*). These scientific fields, or individual sciences in Klironomy, will contribute to the formation of a correct understanding of the specialist about the cultural heritage, varieties and territorial features.

Consequently, the need to create a scientific and educational complex of disciplines for training and graduating specialists in revitalization of cultural heritage objects, which can be called a "revitalizer", is actualised. This specialist will have a wider range of professional knowledge that will help him in one person manage projects for objects' revitalization, control the creation of project documentation, evaluate and examine objects for the need for revitalization, and most competently assess the professional level of specialists of a narrower format, e.g., urbanists, architects, designers, planners, etc.

At the present stage of transformation of the society of developed and rapidly developing countries, the revitalization of an increasing number of cultural heritage objects will increasingly be required to adapt them to the needs of the new time, new views on the ancient and ancient, eliminate the risks of the absolute loss of the most dilapidated objects, organic inclusion in new modern and even futuristic landscapes.

Thus, a specialist in the field of revitalization, or revitalizer, can become an extremely sought-after profession in the first half of the 21st century. Therefore, the development of a scientific and educational complex for the training of specialists should begin today so that the society receives the first experienced specialists in the early 2030s.

Discussion

The main problem of creating a scientific and educational complex for training future specialists in a new direction remains a clear understanding of the breadth and depth of knowledge that the student should receive. Therefore, three questions are proposed for the scientific world and methodologists, which will contribute to the compilation of a scientific and educational complex of more or less similar content, i.e., contributing to the future unification and recognition of diplomas:

1. Determination of equity relations of the main blocks of disciplines.
2. Determination of the professional competencies and skills of a specialist in revitalization at each of the three or four levels.

3. Determination of basic attestation topics that determine either the content of examination questions or final design work.

Conclusion

Thus, the study revealed an evolutionary need for the emergence of a new specialty that would represent specialists in revitalization. These specialists will have a broader professional view of the principles, processes and conditions for the revitalization of cultural heritage sites and structures. For the emergence of specialists in revitalization in state, municipal, and commercial structures, it is necessary to create a scientific and educational complex for training specialists on the basis of universities and research institutes that deal with the problems of urbanisation, urban planning, architectural and landscape design. However, the fundamentally distinctive feature of such a scientific and educational complex should be an approach from a klironomical worldview (*Buychik, 2021*), i.e., the main mental activity of a specialist should be the maximum preservation of the cultural and historical forms of an object or structure and the desire to adapt the environment to the historical appearance of the revitalized object using the latest technologies and new art forms.

References:

Barabanov, A. A. (2013). Socio-cultural and semantic principles of industrial heritage revitalization. *Eco Potential*, *3-4*, 237-248. (In Russian)

Buychik, A. (2013). Pedagogical aspect of cultural heritage: new perception of restoration. *The Proceedings of the 5th International Scientific and Practical Conference "Education. Science. Culture"*, 163-165. November 22, 2013. St Petersburg. (In Russian)

Buychik, A. (2015). Philosophical and cultural aspects of cultural heritage preservation: destruction and restoration. *Anthology: Culture. Art. Restoration*, *1*, 19-21. St Petersburg. (In Russian)

Buychik, A. (2017). The relevance of the positioning of the restored cultural heritage objects by means of web-design. *Online Electronic Scientific Journal "Vestnik GSU"*, *3*. Gzhel. (In Russian). https://doicode.ru/doifile/regdoi/2015-2020/Buichik-AG-DOI-3.pdf

Buychik, A. (2019a). *Klironomy as a science of preservation of cultural heritage*. LAP Lambert Academic Publishing. Mauritius-France-Germany.

Buychik, A. (2019b). Philosophical understanding of the value of historical and cultural heritage. *Series of Cognition. Modern Science: Actual Problems of Theory and Practice*, *6*, 103-106. Moscow. (In Russian). https://doicode.ru/doifile/regdoi/2015-2020/Buichik-AG-DOI-2.pdf

Buychik, A. (2019c). The problem of formation of klironomy as a science of the preservation of cultural heritage. Science in the Modern World. *Collection of publications of the multidisciplinary scientific journal Archivarius in Kiev: collection of articles (standard level, academic level)*, *12*(45), 28-31. Kiev. https://doi.org/10.31618/2524-0935-2019-45-12-2

Buychik, A. (2020). Allocation of basic research in the field of cultural heritage preservation in a separate scientific direction. *Eurasia: Current Issues of Cultural Heritage. European Scientific e-Journal*, *3*(3), 4-14. https://doi.org/10.47451/her2020-12-005

Buychik, A. (2021). The formation of klironomical thinking in the system of the social outlook. *Eastern European Humanitarian Collection of Mini Monographs*. *European Scientific e-Journal*, *1*(7), 108-154. https://doi.org/10.47451/phi2020-12-001

Caro, R. (1974). *The power broker: Robert Moses and the fall of New York*. New York: Knopf.

Caves, R. W. (2004). *Encyclopedia of the City*. Routledge.

Chigbu, U. E. (2012). Village renewal as an instrument of rural development: evidence from Weyarn, Germany. *Community Development*, *43*(2), 209-224.

Glaeser, E., & Shapiro, J. (2003). City growth: Which places grew and why. In B. Katz & R. Lang (Eds.). *Redefining urban and suburban America: Evidence from Census 2000. Volume 1*. Washington DC: The Brookings Institution.

Grogan, P., & Proscio, T. (2001). Comeback cities: A blueprint for urban neighborhood revival. Basic Books.

Jackson, K. T. (1985). *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press.

Knight, A. C. (2007). Urban renewal, the 15th ward, the Empire Stateway and the City of Syracuse, New York. *Honors Capstone Projects*, 590.

Lobbia, J. A. (March 17, 2008). *Bowery Bummer: Downtown plan will make and break history*. The Village Voice.

Lupton, R., & Power, A. (2004). The growth and decline of cities and regions. *CASE-Brookings Census Brief*, 1.

Pan, J. (2010). *The United States outer executive departments and independent establishments & government corporations*. Xlibris.

Revitalization (October 7, 2015). Electronic Cambridge Dictionary. https://dictionary.cambridge.org/dictionary/english/revitalization

What is urban regeneration? (April 12, 2021). NetraTex. https://www.natratex.co.uk/knowledgehub/what-is-urban-regeneration/

Appendix

Figure 1. Ex-industrial complex "Manufactura" in Lodz (Poland) after the revitalization activities

Figure 2. Sheffield cultural industrial quarter (old industrial complex after revitalization)

Figure 3. Design plant "Bottle" on the site of the Crystal Factory named Kalinin after a complex of revitalization works

Figure 4. Stony Island Arts Bank in Chicago, revitalized by Rebuild Foundation

Figure 5. Infra-Space 1 in Boston, revitalized by Landing Studio

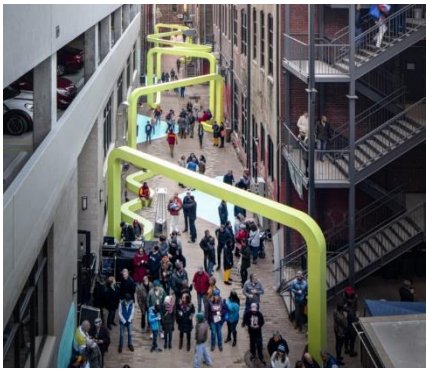

Figure 6. Infra-Space 1 in Boston, revitalized by Landing Studio

Figure 7. Tocotocodandan: Flood Defense as Waterfront Public Space in Osaka, revitalized by Ryoko Iwase

Figure 8. Idea Exchange Old Post Office in Cambridge, revitalized by RDHA