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Form-based codes versus urban revitalization of historical city centers. Opportunities and dangers

Introduction

The inspiration for the consideration of the spatial form-based codes was, on the one hand, a reflection on the current directions of revitalization activities and transformations of specific areas in Polish cities and available design tools, and on the other hand, willingness to lean on – repeated in the ongoing debate on urban development – arguments regarding the need to develop new methods of integrated planning that respond to the high dynamics of multidimensional transformations [1]. Also contributing to the topic was the widespread belief that [...] the revitalization of Polish cities is a lagging process compared to the practice of other countries [2, p. 10], as Piotr Lorens¹ points out, which provides an opportunity to learn from the experience gained and to modify it, if necessary, for adaptation in local solutions. Interest in the above-mentioned issues also stems from general – national and European – urban planning guidelines, formulated, among others, in The Agenda 21 [3], The Habitat III Agenda [4], The New Athens Charter of 2003 [5] or Krajowa polityka miejska 2023 [National Urban Policy 2023] [6]. The cited documents emphasize the need for multidimensional revitalization based on the assumptions of sustainable development, and also draw attention to the need for appropriate action in historical city centers, pointing to their crucial importance for the preservation of the European cultural heritage. The analysis of opportunities and threats arising from the use of the spatial form-based codes in urban revitalization, carried out in the course of the research, also results from the citation of these issues in the publication by Michał Domińczak – Nowa urbanistyka. Metodyka i zasady projektowania według SmartCode [New Urbanism. Methodology and principles of design according to the SmartCode] [7]. Reflection on the assumptions of this methodology and its universality and applicability also in Polish local conditions is the main objective of this study. The author draws attention to the challenges associated with the search for effective tools and methods used in the urban planning, designed for activities related to contemporary transformations of historical urban areas. The author’s considerations are based on the questions: Can the spatial form-based codes be an effective tool in the revitalization of urban space? Is there a potential for this solution – what opportunities and what risks does it bring?

Challenges of revitalization

Cities and, above all, historically formed urban complexes are currently undergoing extremely intensive transformations. This process is particularly evident in the face of the dynamic technological development, ongoing demographic processes, widespread disintegration of urban structures, and new circumstances related to changes caused by the climate crisis or pandemic, among others. Among other things, it is becoming a challenge to reorganize the space and functioning of cities so that they provide comfort, safety and a high quality of life for residents. In the field of urban planning and architecture, the directions of these multidimensional transformations in spatial terms can be assigned to two main zones of activity:

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¹ As Lorens points out: [...] The revitalization of Polish cities is a lagging process compared to the practice of other countries, especially Western European or North American ones. As a result, the authors of revitalization projects can benefit from the methods and experience already developed, although, as the first experiences indicate, it is rather necessary to build our own model of planning and implementation of revitalization activities, specific to our economic and political realities, on the basis of the knowledge developed in other urban centers [2, p. 10].
1) in the existing urban structure, and 2) in previously non-invested areas, often arising in the suburbs of urban organisms (as a result of the “urban sprawl” and the so-called sub-urbanization). In terms of strategy and group of program activities, the conservation and revitalization activities undertaken in the existing urban complex occupy a special place. The urban revitalization itself […] is becoming an increasingly important element in the process of development and transformation of Polish cities, as Loren points out [2, p. 19]. By the historically and culturally defined context, however, many of the revitalization activities require very careful identification of problematic issues and addressing appropriate organizational and spatial solutions. As numerous examples show, only coordinated and unit-directed solutions can successfully revitalize a degraded space by […] redefining the attractiveness of a place through functional, socio-economic and aesthetic adjustments [8, p. 27].

The revitalization, in spatial terms, should be understood as the restoration of urban values, including (often lost in a degraded area) significance in the city structure, providing the basis for revitalization on many levels of activity, including social and economic. Izabela Mironowicz points out that […] revitalization does not necessarily mean the restoration of previous development, but only the value restoration to a specific place in the entire functional and spatial structure of the city. Thus, the transformation of a certain urban structure affects the transformation of the entire functional and spatial structure of the city [9, p. 103].

Planning and design tools

In view of the challenges indicated above, it is reasonable to search for and identify effective design and planning tools used in the revitalization activities. They could contribute to improving the quality of the space of Polish cities, especially their historical downtowns². These issues are widely taken up in the works on the Polish ground by, among others, Sławomir Gzell [10], Piotr Loren [11], and Zbigniew Zuziak [12]. As a result, it becomes necessary, also in the field of urban planning, to recognize emerging innovative models of action, represented by the parametric urban design³, space syntax⁴, and many others. Also included in this group are the form-based codes [14], popularized since the 1980s⁵, and represented by the SmartCode [15], promoted, among others, by the founders of the New Urbanism. The subject of these considerations is an attempt to analyze the possibility of their application on the Polish ground, especially in the revitalization of downtown complexes. These considerations will be supplemented by a reflection on the application of spatial form-based codes in the renewal of historical urban space.

The New Urbanism

To outline the issue at hand in a bit more detail, it is first necessary to recognize the circumstances that contributed to the establishment of the New Urbanism methodology, as the context of its emergence is of great importance. To do this, it is necessary to go back to the 1970s, when a movement called the New Urbanism was beginning to take shape in the United States, riding the wave of postmodernism⁶ and modern historicism⁷. It was associated, as the name suggests, with a new way of thinking about the city, caused by negating the principles of the modernistic space design. It manifested itself in a declared opposition to uncontrolled suburban sprawl and the common model of the city spatial structure – based on mono-functional zones. The common model of American cities emerging at the time consisted of a service and business center (the so-called downtown, Central Business District – CBD), little supplemented by intensive residential and mixed-use buildings, with suburbs with extensive single-family housing stretching to the horizon, without any identifying elements. And it was the desire to find solutions to reduce and, in a sense, order this spatial chaos and extensive, amorphous urban structures that lay at the genesis of the New Urbanism.

To this end, the movement’s creators, starting from the inspiration of the Ebenezer Howard’s garden city model and adding further modifications, proposed a return to the planning and architectural tradition of the late 19th and early 20th centuries – both in the functional and spatial layers of city planning, i.e., the quarter development with an accompanying model for organizing the life of the local community. Eventually, a model referred to as the neotraditional planning was created, defined on two levels: 1) the urban planning and 2) architectural planning. The first one refers directly to the forms of traditional urban layouts, i.e., primarily quarter buildings. The second one refers to the formal layer of the development itself – through references to the local building patterns. The combination of these elements was one of the solutions to increase the effectiveness of multidimensional actions taken in the urban space – both in the creation of new urban layouts and the revitalization of existing ones. All the principles and guidelines that guided the founders of the New Urbanism were cataloged in

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² Among other things, in addition to the municipal revitalization program, the local revitalization program, and in the face of widespread urban planning regulations in local development plans.
³ Parametric urban design using computer tools (CAD, GIS, databases, etc.).
⁴ The theory of space syntax proposed in 1984 by Bill Hillier and Julienne Hanson. Cf. [13].
⁵ The idea of creating a code of spatial forms is associated with the development in 1981 of an urban layout project in the spirit of New Urbanism – Seaside in Florida.
⁶ Postmodernism – in its program cutting off from modernist concepts of a space organizing, emphasizing in architectural forms the need to freely juxtapose various cultural themes and simplified, redefined contemporary historical forms, so as to compile them and give them new meaning. Cf. [16].
⁷ Modern historicism, associated with the negation of the principles of modernism, it postulates the search for local values in the way of creating spaces associated with a given place. A distinguishing feature is the narrative nature of the structure, evident in the numerous references to traditional forms, which are specific to a given city, region, community, among others. In architectural creation, it manifests itself in the continuation of themes inherent in the existing natural and cultural context of the place, such as the Stągiewna Street in Gdańsk.
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It translates into a direct relationship between building façades and the urban space (Fig. 1). This was implemented, among other things, not only by defining in detail the location of the building on the plot, but also through precise guidelines for the solution of the front façade – in the spatial layer – such as the composition of the porch, the choice of a specific color scheme, the way of arranging the front space within the plot, or the proportions of the individual elements of the building body: the height of the individual floors, the attic, the form of the roof, etc. (Fig. 2).

This non-standard model, which is a juxtaposition of architectural and urban solutions, was intended by its creators to contribute to more effective construction of

the 27 points of the New Urbanism Charter [17]. It defines a list of urban actions to be considered in relation to the various elements of action, grouped in relation to the main urban and architectural issues: the scale of the region (metropolis, large and small city), district, quarter, street or, finally, individual buildings. The overriding goal of such a multifaceted action was to seek optimal forms of organization of urban layouts: settlements and neighborhoods – both in the spatial, functional, communication, and social layers.

**SmartCode**

The next step to realize the aforementioned assumptions was the development of integrated design, planning and architectural methods, which were then solidified in the form of the spatial form-based code model – the SmartCode [14], [18]. It was to be understood as an innovative, creative method of spatial and urban planning, which relates to the use of the relationship between architecture and urbanism. It translated into a direct relationship between building façades and the urban space (Fig. 1). This was implemented, among other things, not only by defining in detail the location of the building on the plot, but also through precise guidelines for the solution of the front façade – in the spatial layer – such as the composition of the porch, the choice of a specific color scheme, the way of arranging the front space within the plot, or the proportions of the individual elements of the building body: the height of the individual floors, the attic, the form of the roof, etc. (Fig. 2).

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the desired spatial structure, […] The “New urbanists” recommend that when constructing such architectural codes, local history and architectural identity should be studied, and typical, valuable elements of past developments should be identified. This is because it is assumed that buildings in the New Urbanism settlements must be of the same style (preferably with the historical origin), justifying this with “the need to [ensure] functional and visual coherence” which is a guarantee of “protecting the quality of a public space” [21, p. 188].

Proposing such a different approach was to be a kind of remedy for the common amorphous structure of American cities. The first realizations, including those in Seaside or Celebration, Florida, were well received by the public, and over time contributed to the spread of this method of shaping the suburban structures of many other American cities (cf. [22]). Among the several hundred layouts implemented using the SmartCode and supported by another project tool transect (Fig. 3), those within the United States predominate, and outside the US. […] it mainly covers English-speaking countries or those remaining in an English-speaking cultural circle [22, p. 89]. As Hanzl pointed out: […] this confirms the thesis [that – M.W. note] it is a distinctly American movement, responding to the problems there [22, p. 89]. Nevertheless, over time, the very idea and models proposed by the New Urbanists crossed geographical boundaries and found adherents also in Europe, e.g. in the projects of Leon Krier, Robin Manager and Marcus Axelsson, Rob Krier and Christoph Kohl, François Spoerry, and many others9. It should be pointed out that also in Poland there was the first realization taking into account the principles of the New Urbanism, i.e. the establishment of the Siewierz Jeziorna eco-town10.

Spatial form-based codes and revitalization

The spatial codes dominate in two main types of urban areas. The first is the suburbs area, the so-called suburbia – planning in these areas lies at the genesis of the entire movement and it is directly related to countering suburban sprawl. The second type of areas came within the scope of interest of the New Urbanists a little later, and is related to the revitalization and development of inner-city areas. The issue of revitalization and the idea of implementing the New Urbanism principles resounded in this regard directly at the 7th Congress of the New Urbanism11 in Milwaukee in 1999 [24]. At that time, two types of activities in the existing urban structure were distinguished: 1) projects that lead to the revitalization of downtown areas financed by private funds, 2) highly subsidized urban projects supported by government programs [24].

Since the New Urbanism also makes use of the revitalization term, it should be noted that the term itself is interpreted differently: […] not as the transformation of an existing structure, but as the creation of new structures that are “better” in concept [21, p. 183]. The revitalization of the suburbs12, therefore, was and is supposed – according to the representatives of the movement – to take place through an integrated approach to the neotraditional urban design. As Hanzl points out, […] most projects are the practical implementation of the assumptions of introducing into the existing amorphous development a defined structure of urban character – a grid of streets and squares – enclosed by compact buildings [22, p. 88]. The application of the New Urbanism principles to the revitalization of downtown spaces in practice includes a wide range of activities: from the modernization of public

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9 The New Urbanism-inspired layouts have been realized, among others, in the Poundbury development complex in southern England, the Nikolaiviertel in Berlin, the Karow-Nord and Potsdam Kirchsteigfeld in Germany, Cergy-Pontoise [Port Cergy] in France, or Puerto de Mogan in Gran Canaria.

10 Siewierz Jeziorna eco-town – designed by a team under the direction of Maciej M. Mycielski. Due to the fact that it concerns a premise created from scratch, on the so-called raw root (the first stage of the premise was realized), in this paper it was only mentioned in the context of the application of the movement methodology itself. Cf. [23].

11 The 7th edition of the annual New Urbanism Congress, its theme was the richness of cities [24].

12 In this context, the example of urban revitalization of Portland, Oregon, USA, is often cited.
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Urban areas, such as the Leon Krier’s plan for the Berlin suburb of Tegel district, or projects by Duany Plater-Zyberk & Company [22, p. 88].

The SmartCode and references to local traditions in Polish architecture and urban planning

In the context of the universalism declared by the creators of the New Urbanism, and the potential of the SmartCode model to be applied to existing spatial structures regardless of their location [16], it is reasonable to recognize the possibility of its implementation in the urban revitalization of historic downtowns of Polish cities, taking into account the neo-traditional planning.

Paradoxically, turning to the traditional form of layouts based on the idea of historical references is not a new phenomenon in the land of Poland, and over the epochs it has recurred many times in the domestic building tradition. Therefore, reaching back to examples from history over the past few decades, it is possible to make a theoretical recognition in an indirect way – how such actions were and are evaluated from a temporal perspective, and, as a result, what is the SmartCode potential for contemporary application.

Several main circumstances can be distinguished for the emergence of the concept of reference to local building traditions and historical patterns in the space of Polish cities: 1) through the search for solutions in the reconstruction of cities after the destruction of war, where it appeared as one of the possible scenarios of action (popularized, among others, by Zachwatowicz as an attempt to restore cultural values), 2) as a concept of socialist realism promoted by the authorities of the time (evident in the

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13 The representatives of New Urbanism, apart from the code of spatial forms, often use the transect as a complement (Fig. 3). They took this concept from the natural sciences, where it is used to describe the form of development of ecosystems. In urban planning, the transect describes a model of spatial organization – from green areas delineating the layout boundaries, through the form of rural buildings to the city center, it is divided into six zones: core (T6), center (T5), city (T4), suburban (T3), rural (T2) and natural (T1). Duany Plater-Zyberk & Company describes this concept as follows: Transect organizes the elements of urban planning into a useful order, classifying them from village to city. Each urban element finds a specific place on this continuum [24].

14 Transit Oriented Development (TOD) – interpreted as a planning model oriented to the optimal use of public transport accessibility.

15 On the CNU website, which maintains a database of projects completed according to the New Urbanism principles, there are only 7 projects indicated in the field of revitalization.

16 This approach was inspired by the mentioned Domińczak’s publication [7].
construction of Nowa Huta, the Marszałkowska Housing District, or the Palace of Culture and Science in Warsaw) (Fig. 4) and 3) through the spread of the idea of postmodernism in the 1970s and 1980s and the reconstruction of cities using historical styles.

The rationale behind reaching for historical styles, mainly in the first period of postwar reconstruction, was the emotional need to recreate the atmosphere of destroyed cities. For this reason, the prevailing attitude at this stage was that of prescribing proper reconstruction and restoration of historical centers. Over time, however, this approach was questioned, primarily because of the “artificiality” and the creation of an image that was incompatible with the historical context.

A special case of reconstruction understood in this way is the rebuilding of a non-existent object in its original spatial form.
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The result of these treatments was the creation of a kind of “caricature” and […] variations on the historical form and old solutions from different eras and styles, adapted to the requirements of modernity\(^\text{19}\) and the emergence of thematized building complexes. Drawing on such a rich and centuries-old tradition, it was and is not […] possible to make a precise assessment or valuation of which of these eras is the most valuable \[21, \text{p. 199}\].

Another impulse to reach for traditional architectural and urban planning forms was the fascination with the postmodernism assumptions, which in Poland fell in the 1980s, applied both in new realizations and in the reconstruction of cities. Examples of new realizations in this context include the Zielone Wzgóra development complex near Murowana Goślina, or multi-family developments solved in the form of closed quarters with internal courtyards in the National Education Commission Avenue in the Ursynów housing development in Warsaw (Fig. 5a, b). In Polish realities, these activities are concentrated on the urban level, without interfering in the architectural level as much as the representatives of the New Urbanism propose. The solutions used in Poland are much more simplified in relation to the SmartCode and limited to a repetitive architectural form, looking for references in a traditional, freely interpreted detail, which is distant from its historical prototype.

In this activity, at the level of reconstruction of historical downtowns, this approach coincided with a reflection related to the rejection of reconstruction or re-building in the spirit of modernism, and the search for new solutions in the name of the genius loci unique building process and the culture of a place in reference to local traditions. The flagship example cited in this context was the reconstruction of Elbląg’s Old Town (Fig. 6). The model of reconstruction applied there became popular under the name of retroversion\(^\text{20}\). It consisted in exposing the value of the

\(^{18}\) Such an attitude was argued by the difficulty of obtaining comprehensive inventories that would allow faithful restoration and reconstruction of destroyed objects and their fragments.

\(^{19}\) Cf. [21, p. 195] [note – M.W.]

\(^{20}\) The author of the concept of retroversion was Maria Lubocka-Hoffmann. Examples of the use of retroversion in Poland also include the Old Town in Głęów, Kołobrzeg and Granary Island in Gdańsk.

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**Fig. 6.** Elbląg’s Old Town, an example of a retroversion implemented according to the general conservation and planning concept under the direction of M. Lubocka-Hoffman (photo: courtesy UM Elbląg)

**Il. 6.** Elbląska starówka, przykład retrowersji realizowanej według ogólnej koncepcji konservatorsko-planistycznej pod kierunkiem M. Lubockiej-Hoffman (fot. dzięki uprzejmości UM w Elblągu)
historical spatial layout, based on the restoration of the original urban structure of Elblag’s Old Town – the former parcel division or height of buildings, but in a postmodern spirit – with a free treatment of details, colors and using a large amount of ornamentation loosely referring to historical styles. As the author of the concept pointed out, [...] defining the method of retroversion, it can be said that it is a type of conservationist creation that respects historical conditions, but does not reproduce the former development and aims that the newly developed historical area should recreate the former urban landscape and serve modern needs in accordance with the conservation principles [30, p. 62]. The development of this unique solution for revitalization and preservation activities was preceded by comprehensive scientific research, including archaeological research on an unprecedented scale at the time. And although the arguments indicated in favor of adopting such a model of action seem valid, due to the fact that the result is far from the initial assumptions, it is also often criticized [21]. Opponents of such an action emphasize that the concept was implemented on the basis of [...] a conservation theory that was superficial and ambiguous in interpretation, ostensibly referring to the history of the place [31, p. 103] and considerable freedom in the design of buildings using postmodern principles of shaping the development form. The result was a chaotic, ahistorical, mainly stenciled and homogeneous architecture, which not only failed to restore the historical silhouette of the Old Town, but introduced a new, in a sense artificial and alien quality (cf. [31]). Because of the above, the retroversion and related approach to rebuilding the urban structure, according to the historical layout of buildings and according to postmodern codes, is treated by some as the so-called urban kitsch, although it is often well received by the public. This dissonance is due to the fact that retroversion is a method that, on the one hand, reaches for contemporary means of expression – by creating a new value, and on the other hand, it freely draws references to a historical detail, which, however, has no actual historical value (cf. [32]). Retroversion thanks to this is well received by users, because it uses familiar, culturally close formal elements that evoke positive associations. A similar approach and the desirability of searching for references in building forms to local traditions and place identity is also contained in the idea of critical regionalism21. Its creators justify this attitude with the need to create individualized, modern architecture that takes into account regional and cultural references. In this way, at the level of architectural and urban planning solutions, in the formal layer, it is possible to build unique spatial relationships between the past and the present.

Conclusions

The issues raised in these considerations are related to the search for an answer to the question of whether reaching for a design tool in the form of spatial codes, both in the urban and architectural layers, can be treated as universal and adaptable also in Polish conditions, especially in view of the challenges associated with the dynamic transformation of historical structures.

Analyzing the assumptions that guided the originators of the New Urbanism and the SmartCode methodology, it can be concluded that they form a comprehensive and consistent method. This was achieved by implementing the principles formulated in the New Urbanism Charter and developing tools in the form of SmartCode, transect or charette workshops, among others, in projects of American layouts. As a result of the compilation of these elements and thanks to the application of appropriate legal solutions in the field of architectural and urban planning regulations, a model more complete than the one prevailing in the Polish planning documents was created.

First of all, the creators of this movement in their concepts refer to a catalog of architectural activities and tools related to, among other things, the form of shaping space at the interface of the scale of the city and the scale of architecture (forms of façades, porches, courtyards at the front of the plot), much more precisely defining them in the planning system22. The foundations of such an approach are rooted in the American legislation, and therefore not only at the level of design methodology, historical tradition, but also relevant legal regulations, significantly different in this regard from European and Polish realities.

Moreover, reaching for architectural references, referring to traditional and historical patterns, embedded in the SmartCode model is not a new concept. It has recurred in various forms several times in the history of urban planning and architecture, as it is evidenced by the examples presented above (including postwar reconstruction, socialist realism, postmodernism, historicism, retroversion or various forms of architectural regionalisms). Analyzing this aspect of the code of spatial forms, today its application seems risky. At the level of implementation, it means, among other things, focusing on the form of the façade using a historical creation.

The cited examples showed that this approach often led to [...] pastiche and “façadism” falsifying spatial ensembles, as Jan Zachwatowicz already pointed out in the 1960s [21, p. 200]. This thought is now continued by, among others, Lorens and Martyniuk-Pęczek, who also point out the high risk of creating thematized spaces in this way, [...] without the [natural] effect of growing structure, with a false history and tradition of the place [21, p. 190]. At the same time, they emphasize that it is extremely difficult to draw a subtle line between thematic creation and historical reference that [...] designers very often cross [21, p. 201], which, in the author’s opinion, only confirms the fears of such an application of this model in practice in Polish conditions, especially in downtown buildings with a strong historical tradition23.

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21 A concept related to the modern interpretation of regional architecture and “new regionalism”, appeared in the 1950s, it was reconstructed in a multifaceted way by Lewis Mumford, and defined by Alexander Tzonis and Liane Lefaivre, then propagated by Kenneth Frampton [33].

22 Such actions are possible also thanks to a different legal system, which enables many of them.

23 Cf. Lorens and Martyniuk-Pęczek: [...] Thus, we are witnessing the birth of a new and extremely vital trend in the reconstruction of
Another argument promoting the model of activities proposed by representatives of the New Urbanism is also its inclusion in the concept of sustainable development. Nevertheless, in Polish and European conditions, it seems that these activities are somewhat differently understood. In Europe, they focus on maximizing the use of space within the city limits and countering chaotic and uncontrolled sub-urbanization, while in the US they focus on a chaotic structurization and extensive single-family housing. The most important challenge for shaping urban areas in Poland is sustainable urban development in the form of a balance between activities in the existing structure and controlled development of suburban areas. These measures are implemented by studies, urban planning projects and local development plans, i.e., the viable tools for shaping urban space in terms of urban composition, which, however, should be constantly supplemented by urban policy solutions.

In view of the above, it seems that perhaps instead of directly copying this model, it would be more appropriate to treat the methodology proposed by the New Urbanism and SmartCode as an inspiration to seek new solutions, e.g., by improving imperfect indigenous solutions and being more detailed in the shaping of common spaces, transportation centers or pedestrian and road communication, as well as seeking administrative ways and tools to carry out more integrated activities. Such considerations should be supported in each case by a broad discussion of the role of cultural heritage in contemporary transformations of urban space or the search for contemporary references to the tradition of a place.

References

The aim of the article is the presentation of new methods and tools applied in city planning and revitalization projects. It is also a result of the wide interests and recognition of contemporary city spaces condition and methods which can be used to successfully shape harmonious urban space and create desirable living conditions for residents that will go forward their everyday needs.

The article draws attention to the challenges related with searching for new, effective tools and methods used in the urban planning in the face of contemporary transformations of historical downtown space, as well as in connection with the need to efficiently revitalize urban spaces in many Polish cities. It shows the complexity of activities undertaken on many levels, focusing on aspects of urban renewal and revitalization processes with the special context of cultural and historical heritage. It is also an attempt to recognize the assumptions of the SmartCode, a special type of form-based code proposed by the New Urbanism, and considers the possibility of the application of the method in local regulations – taking into account the cultural and spatial context of Polish cities. Author searches for an answer to the following question: Can form-based codes be an effective tool in the revitalization of urban, historical space? What is the potential of this tool – what opportunities it offers and what risks it entails?

The reflection on these issues is based on the analysis of the written sources, literature on the subject and analysis of case studies of selected architectural and urban cases. The selected examples are presented in the aspect of application of the local building tradition over the years, and how it can refer to that category in the context of the SmartCode methodology.

For this purpose, selected references were based on the explanations done by town planners and architects to apply the local building and historical tradition in, e.g., the post-war reconstruction of the city spaces, promotion of socialist realism, popularity of postmodernism, historicism, and retroversion. The analyses of this approach led us to look over the similar aspect of the SmartCode methodology. As a result, it is found that this approach [supported by a transect, charette workshops, and by relevant local legal regulations] is a coherent and comprehensive tool in urban planning, successfully applied in the American countries, both in newly designed city spaces and in the transformation of the existing ones.

The important aspect of the undertaken research was the recognition whether it is possible to simply copy that methodology in Poland. After acknowledgment of the subject it should be noted that due to significant cultural differences (e.g., a centuries-old and complex history of urban planning) and a different tradition of building, it can be defined that there is number of threats and fears related to the attempt to apply them directly in the revitalization of the historical space of Polish cities. However, it should be indicated that following on the SmartCode methodology, it can be a valuable inspiration to look for appropriately modified local solutions and it can also be an interesting starting point for a discussion on the role of cultural heritage in contemporary transformations of urban space and the purposefulness of contemporary references to historical forms.

**Key words:** urban revitalization, SmartCode, planning tools, form-based codes, retroversion

**Abstract**

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The article draws attention to the challenges related with searching for new, effective tools and methods used in the urban planning in the face of contemporary transformations of historical downtown space, as well as in connection with the need to efficiently revitalize urban spaces in many Polish cities. It shows the complexity of activities undertaken on many levels, focusing on aspects of urban renewal and revitalization processes with the special context of cultural and historical heritage. It is also an attempt to recognize the assumptions of the SmartCode, a special type of form-based code proposed by the New Urbanism, and considers the possibility of the application of the method in local regulations – taking into account the cultural and spatial context of Polish cities. Author searches for an answer to the following question: Can form-based codes be an effective tool in the revitalization of urban, historical space? What is the potential of this tool – what opportunities it offers and what risks it entails?

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**Streszczenie**

Kody form przestrzennych a rewitalizacja urbanistyczna śródmieścia miast historycznych. Szanse i zagrożenia

Niniejszy artykuł powstał w wyniku zainteresowania możliwościami i aktualnymi uwarunkowaniami rewitalizacji, które mogą prowadzić do kształtowania harmonijnej przestrzeni miejskiej, stwarzającej dla mieszkańców pożądane warunki do życia i realizacji ich codziennych potrzeb. Autorka zwraca w nim uwagę na wyzwania związane z poszukiwaniem nowych, skutecznych narzędzi i metod stosowanych w urbanistyce do trans-
formacji historycznej przestrzeni śródmiejskiej. Wskazuje aktualność i złożoność działań podejmowanych na wielu poziomach, koncentrując się na rewitalizacji urbanistycznej. Artykuł jest także próbą rozpoznania założeń SmartCode’u – kodu form przestrzennych – i rozważaniem możliwości jego zastosowania w warunkach lokalnych przy uwzględnieniu kontekstu kulturowego i przestrzennego miast w Polsce. Celem autorki jest znalezienie odpowiedzi na pytanie o to, czy kody form przestrzennych mogą być skutecznym narzędziem w rewitalizacji przestrzeni miejskiej.

Refleksja nad powyższymi zagadnieniami została oparta na analizie źródeł literackich i analizie studiów przypadku wybranych założeń architektonicznych i urbanistycznych na przestrzeni kolejnych epok i kierunków, w zestawieniu z realizacją postulatów nawiązania do lokalnej tradycji budowania w metodologii SmartCode’u. W tym celu odwolano się do przesłanek podnoszonych przez urbanistów i architektów, a przyświecających powojennej odbudowie założeń miejskich, propagowaniu socrealizmu czy upowszechnianiu postmodernizmu, historyzmu, retrowersji. Doproponowało to do ukazania metodologii SmartCode’u (uzupelnionej przez transekt oraz warsztaty charrette) jako spójnego i kompleksowego narzędzia w urbanistyce. W artykule podniesiono, że jest ono stosowane z powodzeniem w realiach amerykańskich, zarówno w założeniach nowo projektowanych, jak i w transformacji już istniejących. Ze względu na znaczne różnice kulturowe i odmienną tradycję budowania wskazano zagrożenia i obawy związane z próbą ich bezpośredniego przełożenia i zastosowania w rewitalizacji przestrzeni polskich miast – cechującej się wielowiekową i złożoną historią. Podkreślono jednak, że metodologia SmartCode’u może być cenną inspiracją do szukania odpowiednio zmodyfikowanych rozwiązań lokalnych i punktem wyjścia dyskusji na temat roli dziedzictwa kulturowego we współczesnych przeobrażeniach przestrzeni miejskiej i celowości współczesnych nawiązań do form historycznych.

Słowa kluczowe: rewitalizacja urbanistyczna, SmartCode, narzędzia planistyczne, kody form przestrzennych, retrowersja