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Anna WOJNAROWSKA*

MODEL FOR ASSESSMENT OF PUBLIC SPACE QUALITY IN TOWN CENTERS

Abstract. Public space is an important element of urban structure, playing various spatial, social and economic roles in towns/cities. Its quality influences the quality of life of the inhabitants and the attractiveness of the town as a whole. Public space located in town center is the most representative of its identity and image, and also serves multiple functions and activities. The quality of urban space depends on different factors, which have been discussed in professional literature for the last few decades. The author of this paper developed a model for assessment of the quality of public space in town centers based on studies of methods already used in Poland and abroad, and the analysis of trends and ideas which should be taken into consideration while constructing a set of criteria for assessment methods. The main goal of this paper is to present the methodology of research on the quality of public space in town centers using this model. An important element of the model is the proposed method of delimiting the research area – the town center – based on identification of *key public space* of a town. The model comprises three methods, which can provide valuable information on the quality of public space, and also serve as a basis for constructing ratings of towns in each of these methods and the model as a whole. The research conducted using this model in chosen medium-sized towns of the Łódź region showed that the results of ratings obtained using particular methods and the whole model coincide with subjective opinions on public space in town centers given by its users and professionals evaluating it.

Key words: public space, key public space, quality of public space, town center, assessment model

1. INTRODUCTION

The main goal of this paper is to describe the model for assessment of the quality of public space of town centers, worked out by the author and tested on a group of middle-sized towns of the Łódź region. It presents the methodology of research, using the outcomes of research in one of the examined towns to illustrate the model and the three methods constituting it. A very important element of the proposed model is delimitation of the research area – the town center. The author's delimitation method

* Anna WOJNAROWSKA, Department of the Built Environment and Spatial Policy, University of Łódź, 90-142 Łódź, ul. Kopcińskiego 31, Poland, e-mail: annawojnarowska365@gmail.com

is based on the new concept of *key public space* of town. The definition of *key public space* and criteria for its identification, the delimitation method and three methods used in the assessment model are presented further below.

Quality is recently becoming an increasingly important topic of research in various fields of urban development. One of the causes of this trend is wide implementation of the sustainable development principle as the basis of human civilization, with improvement of the quality of life as the fundamental goal. This affects the increased interest of researchers and local authorities in the quality of urban space, influencing the quality of life of the inhabitants. Another currently popular topic in planning and managing the development of urban areas is the attractiveness of town/city, often with consideration for the needs of different groups of users – inhabitants, investors and tourists. Improvement of attractiveness is not a goal in itself, but is aimed at increasing the competitiveness of towns, to strengthen their future growth possibilities. A concept connected with attractiveness of towns is the quality of place, which embraces some specific attributes of town, including so called *soft factors*, such as cultural heritage, unique architecture, cultural and recreational offer, and values of townscape and natural landscape. This is directly connected with the quality of urban space, and its most characteristic and legible element of the functional and spatial structure, especially of its center part – public space.

Public space is an important element of urban structure, playing various spatial, social and economic roles in a town or city. Public space located in the town center is the most representative of its identity and image, and also serves multiple functions and activities. Its quality influences the quality of life of the inhabitants and the attractiveness of the town as a whole. Therefore it is important to evaluate the quality of public space in the town center, and to identify the particular factors influencing it, to enable town authorities and other actors to plan further steps to improve it. It is necessary to notice here that competition between towns cannot take on the negative form of wrongly conceived rivalry. Co-operation is crucial in this area, and the ranking of towns generated by the proposed model is seen as an instrument of learning good practices from the leaders, not as a way of stigmatizing the followers.

In order to take into account in all three methods the elements important for assessment of the quality of public space, the author has analyzed the ideas, concepts and processes which influence – or should influence – the planning and designing of public space: sustainable development, sustainable urban development, quality of life, attractiveness of town, quality of place, sustainable urban regeneration, quality of space and quality of public space. Although concerning different spatial scales – of town, its further spatial context, or its particular areas – all of them can directly or indirectly influence the quality of public space located in the town center. Each of these concepts or processes is measured or described by sets of indicators or features. The quality of urban space and the quality of public space has been discussed in professional literature in Poland and abroad for the last few decades. It is seen as an important element

reinforcing public safety, as well as social and economic vitality of towns. There are sets of criteria or characteristic features of the quality of urban space and public space proposed by different authors, which should be taken into consideration in planning, designing and assessment of public space (Lynch, 1960; Jacobs, 1961; Whyte, 1988; Sternberg, 2000; Carmona and Sieh, 2004; CABE, 2004; London Borough, 2004; ETCP, 2005; Chmielewski, 2005; Natland, 2007; Zeren Gülersoy *et al*., 2009; Szewczyk, 2009). A review of these concepts provides material for identifying factors considered in evaluation of these processes or in implementation of the ideas. In the course of synthesis, groups of factors have been recognized to be incorporated into the three proposed methods of the assessment model. Because of the limited volume of this paper, only the final set of factors or criteria is presented here, and not the whole set of analyzed elements. It is necessary to mention that when dealing with indicators or criteria one has to be aware of the fact that science does not offer an objective method of creating one and only proper set of indicators or criteria for measuring the particular phenomenon (Černe, Kušar, 2010, p. 12–13). Therefore every proposed set of indicators is a subjective choice, aiming at creating an easy in handling, effective set of the most important features, adequate for the examined problem.

Each method of the model can give valuable information on the quality of public space, and also serve as a basis for ratings of towns in each method and in the whole model. All the methods are conceived in such a way that they translate qualitative and quantitative elements and features of public space into numbers, enabling quantification of quality factors. The research conducted using this model in chosen medium-sized towns of the Łódź region verified it, showing that the results of ratings in particular methods and in the whole model are convergent with subjective opinions about public space in the town center expressed by its users and professionals evaluating it.

The author's assumption is that the proposed model can be treated only as a starting point in discussions among professionals, practitioners and users, and in further work: theoretical research concerning methods and criteria, and a testing model in the field.

2. PUBLIC SPACE OF TOWN CENTER[1]

Town or city is a system – urban structure, which is composed of distinct spatial and functional elements, bound together as a whole by means of transport and technical infrastructure sub-systems (*Studium ...Wrocławia* 2010, p. 16). Division into systems and determination of their boundaries depends on the aims of

[1] This paper concerns with the physical structure of public space and activities taking place there, not the abstract public space such as the public sphere or public media.

specific analysis, where every system is an element of a bigger one, and itself can be divided into sub-systems[2] (Regulski, 1980, p. 12). Public space is often discussed as a system, being an integral part of urban system (Chądzyńska, 2012, p. 68), which suggests that it is an element of urban structure as a set or sets of elements bound together in units, realizing as a whole a certain paramount function or a set of such functions. This is necessary to define the notion of public space itself and the *key public space,* which is the author's own proposal. Public space is the denotation which occurs in Polish in scientific publications in two different meanings, which have not yet been clearly defined. We can observe the ambiguity of use of plural or singular form by different authors: even in the same text they use it intuitively in one of both forms, adequately to the topic discussed. So the author of this paper proposes to define public space in these two aspects. On the one hand, as the element of urban structure, system, network and certain entity, then used in singular form – *public space*. In this meaning public space is uncountable. On the other, as the elements constituting structure, system or network, manifesting themselves as specific areas of urban space – *public spaces* – plazas, squares, streets, parks, paths, promenades etc. In this case this notion is used in plural form, as a set of particular elements being parts of the whole system/structure/network of public space.

In literature, public space is usually defined on the grounds of functions it serves, land ownership form and spatial form. The fundamental feature of public space is its character of open area, accessible for all users, spatial form as urban interior and potential for different kinds of activities and interactions (Gruszecka *et al*., 2009, p. 49). In the research on the quality of public space of town center, the author assumed that public space includes only **open urban areas** (Wejchert, 1984; Chmielewski, 2001), not the accessible for public use interiors of public utility buildings, as the interpretation by some authors suggests (Lorens, 2007; Mierzejewska, 2011).

We can recognize two categories of public space: **technical public space** and **cultural public space** (Gehl, 2001, [in:] Chmielewski, 2001, p. 204). Technical public space fulfills transportation functions, and owing to this fact there is a continuity of network structure of this category of public space, due to the continuity of the road system. Because cultural public space is closely related to the pedestrian movement, we can acknowledge as the elements of cultural public space these parts where pedestrian movement dominates. B. Hiller claims that the natural flow of pedestrians is determined by an adequate configuration of public space, interpreting natural flow of pedestrians as such which

[2] J. Regulski (1980, pp. 15, 21) describes spatial development as an adequate adjustment of a place to the needs of a certain activity, changing in a permanent way the physical features of the land surface. Town or city as a system consists therefore of two sub-systems: sub-system of functions and sub-system of spatial development.

can come about without certain generators of flow and attractions which can activate it (Hiller, 1996, p. 161, [in:] Szewczyk, 2009, p. 77). From this point of view, a feature of outstanding value is continuity of urban interiors, which creates connected sets composed of streets and squares, encouraging walking (Wejchert, 1984, p. 146).

In the central area of town public space plays a particular role because of the concentration of functions of local and supra-local level and multifold human activities. It also has an important share in creating the image of the city. We may state that town center is largely composed of public space areas of different form, spatial development and function, and the elements of public space situated in this area have *key* significance[3]. It is necessary to mention that in many scientific papers the downtown area, or center was stipulated as the *key area* of a town.

The author of this study made an assumption that the elements of cultural public space, which create a continuous network and are situated – at least in part – in old town zone[4] and downtown, encompassing the elements of the public space system of utmost importance for the town, offering the richest mixture of functions and enjoying the biggest number of users, can be recognized as the ***key public space*** of a town. *Key public space* has a character of network structure – it consists of linear and areal elements – *axes* and *nodes* (where *nodes* are not interpreted as points but areas). *Axes* are: streets, boulevards, promenades, alleys, paths, walkways or waterfronts, while *nodes* are: squares, plazas, areas near public utility buildings, parks and green or recreational areas, playgrounds, and sport utilities. *Nodes* can be comprised of more than one functional element. They can contain several areal elements, for example: square plus green area or areas, playground, sports facilities and recreational area, all creating together a multi-functional complex (Wojnarowska, 2015, pp. 36–37). Another inspiration for the idea of the axial-nodal structure of the *key public space may* be found in concepts of elements of urban landscape creating the image of the city – of K. Lynch (1960) or K. Wejchert (1984), or the latest concept of nodes and axes of *Netzstadt* by F. Oswald and P. Baccini (2003).

Depending on the size of a town or city, *key public network* can have a simple or complex form. We may speak of *stemming* of network structure of *key public space* by adding new nodes and new axes, joining them to the existing structure. In small and medium-sized towns *key public space* usually has simple structure,

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[3] A notion of downtown areas as *key areas* occurs in the paper of D. Kochanowska (2002) entitled: *Śródmiejskie przestrzenie publiczne – współczesne przekształcenia*, [in:] Kochanowski, M. (ed.), *Przestrzeń publiczna miasta postindustrialnego*, Wydawnictwo Politechniki Gdańskiej, Gdańsk, p. 27–59. Town center is named the *key area of urban space* also by A. Wolaniuk (Wolaniuk, 2008, p. 303).

[4] The role of the stability of localization of town center in urban structure for its cultural and social values was strongly underlined by A. Wallis (1977, 1979).

often with only one node – a historic town center comprising a market square, nevertheless in some of them it evolved already into multi-nodal and multi- axial structures. In big cities there can occur fragments of continuous network outside the old town and downtown area, being the expression of a multi-center spatial and functional structure of these cities.

In research on the quality of public space in centers of medium-sized towns it was assumed that identification of *key public space*, including the most significant elements of the cultural public space system, enables delimitation of town center. This assumption was based on the following features of town, town center and public space:

– City (or town) is a cultural existence, culture is an essence of the city. Its presence is manifested by patterns of cultural behaviors and features of urban form (Zuziak, 2008, p. 27);

– Town or city center is as a rule identified as its most important part, focusing the urban life and being the area of the highest attractiveness (Wallis, 1977, p. 208);

– Town or city center is usually the place of location of the majority of elements which foster the cultural life of the city. Usually, it contains within its space the oldest part of the city and the most important material monuments of culture (Nowakowski, 1990, p. 13);

– Town or city center is a place of unique concentration of functions and activities as well as economic, social and cultural life, which attracts the biggest number of users, who in turn contribute to arising in public space of multiple social and cultural interactions;

– Town or city center is a place of unique value for its identity, a place where the most representative public spaces, monuments and symbols are located, creating the image of the city;

– Town or city center is an area in the city which is most visited by inhabitants (besides place of residence and workplace) and visitors (Chmielewski, 2001, p. 204). This is a meeting place for people from inside and outside the city, used by them for different activities, at the same time serving inhabitants for identification with their city;

– Dominating form of traffic in city center is pedestrian movement (Juchnowicz, 1965, p. 45). We can observe that this form of traffic is at the same time specific to the cultural public space – streets and passages with the greatest congestion of services are intended for pedestrians.

– Experiences of many cities and towns demonstrate that well-functioning downtown areas are those where pedestrian movement is prevailing, concentrated in cultural public spaces (Chmielewski, 2001, p. 266);

– It is a big advantage of a city when public space forms explicitly continuous sets of urban interiors of cultural value, whose ideal pattern is home as well as shrine (Wallis, 1979, p. 13);

– Central parts of big cities were places of implementation of urban regeneration programs as an instrument of increasing their attractiveness – on this basis the idea of urban marketing has arisen. Today also small and medium-sized towns are following this pattern, implementing revitalization programs in their centers, aiming at improvement of the quality of public space located in town center as a measure of increasing the attractiveness of the town as a whole.

3. A PROPOSAL FOR DELIMITATION OF TOWN CENTER AS A RESEARCH AREA

The goal of the research was an assessment of the quality of public space of chosen medium-sized towns in the Łódź region. To fulfill this aim a model of assessment was worked out. The assumption was made, considering the presumptions listed above, that the representative public space for a town is its *key public space*, where *key public space* is interpreted as the continuous network consisting of *nodes* and *axes*, situated in the central part, and encompassing its old town area. The author proposes that the area structured around the *key public space* should be recognized as the center of town.

The methods of town center delimitation used this far were based on numerical data, describing land use and its intensity, transport relocations and economic value (Juchnowicz, 1965; Parysek *et. al.*, 1995, pp. 33–37). In all these methods it was necessary to obtain detailed data, specific for each method, and on their basis to identify the city center area. It should be noted that all delimitation methods were quantitative, not qualitative, so they neglected the question of qualitative differentiation of phenomena, which are of fundamental significance while analyzing the city center and public space located there. These methods, while optimal for the needs of geographical or economic research, and in some cases also for town planning, in the author's opinion were not adequate for description of the quality of public space. For the needs of assessment of the quality of public space in the town center it was necessary to figure out a delimitation method which would take into consideration all elements of public space and adjacent areas which influence this quality.

As J. Parysek claims, nowadays one of the most important research or rather methodological problems regarding town centers is working out the unified, and the same time easy and effective method of delimitation of these areas (Parysek *et al*., 1995, p. 31]. In his considerations on methodology of delimiting town centers J. Parysek takes as a starting point the concepts of centrality and peripheral areas, being the subject of spatial and economic research, such as J. H. von Thünen's agricultural location theory, W. Christaller's central place theory, or economic

region theory, finding there analogies for the relation center – town. Each of these theories points out a certain area which is its core (node) and the rest of the area, which is defined as peripheries. In relation to urban area, delimitation of the center is therefore a procedure of delineation of the center and peripheries, and the basis for their distinction is possession of certain features by the center and lack of these features in peripheries (Parysek *et. al.*,1995, pp. 25–27).

Delimitation of a city center, which means the delineation of its borders, is a procedure of classification, in which we accomplish the division of a set of objects into sub-sets, which generalizes features of objects in such a way that the objects which compose one class are more similar to each other than to objects from other classes. Classification is not an arbitrary division, but one which fulfills the conditions of adequacy and decoupling (Parysek, 1982; after: Parysek *et. al.,* 1995, p. 26). Within the frame of this procedure the following phases can be indicated:

– *selection of objects,*
– *identification of their qualities and measurement of them,*
– *choice of classification criteria (similarity function),*
– *selection of classification methods and*
– *interpretation of similarities and identification of classes* (Parysek *et. al*., 1995, p. 26).

Objects of classification aiming at delimitation of town or city center are spatial units – urban blocks, which are delineated by streets adjacent to a given urban block. For such units sets of characteristic features must be obtained by determining and measurement of their qualities (Parysek *et. al*., 1995, p. 26).

In the author's research on the quality of public space in town center, the method of town center delimitation was based on the identification of *key public space*, which was recognized in field research and studies on urban structure of towns, in line with assumptions described above. The area of the center was delineated according to the following criteria:

– As *key public space* in each town was recognized the network of axes and nodes of the public space system, which, in addition to the transport function, serve also other functions. It means that such areas have to perform also social, cultural and/or economic roles (compare – *center as the cultural area*, Wallis, 1979). *Key public space* should be characterized by a significant share of pedestrian movement, which enables establishing social contacts and contributes to different kinds of activities and events, as well as use of services. Characteristic forms of traffic organization in such public space areas are therefore different kinds of solutions friendly for pedestrians: calmed traffic zones, *woonerf* and *winkelerf* zones, pedestrianized streets, plazas and squares, paths, and sidewalks of commercial streets, open areas and sidewalks in the vicinity of public utility buildings.

– Urban blocks adjacent to *key public space* were included into the delimited town center area. It was assumed that buildings adjacent to *key public space* should at least in basements have *downtown functions* – trade, services, administration, gastronomy, finances, culture, entertainment (Juchnowicz, 1965; 1971). The required share of these functions in basements was determined as 100% of the length of house fronts adjacent to *key public space*. There can occur discontinuities in development (undeveloped plots, temporarily unused buildings or basements, buildings under construction or renovation). The development does not need to have continuous frontage line character, especially in the case of public utility buildings located on bigger plots.

– Green and recreational areas were also included in the town center area in cases where they were directly adjoining *key public space*, urban blocks or plots adjacent to *key public space* (this criterion was formulated differently by M. Nowakowski (1982), who proposed not to consider large, independent green areas as a part of the town center area).

– The border of town or city center was delimited by the axes of streets being the borders of urban blocks (Parysek *et al.*, 1995, p. 39), green or recreational areas adjoining *key public space*, urban blocks or plots adjacent to *key public space*, along the borders of plots adjoining *key public space* or along borders of downtown or non-downtown land use forms.

– In the case of elongated plots adjacent to *key public space*, the border of the center was led parallel to the buildings' frontages in such a way that the most rear buildings were included. Undeveloped parts of plots were not included in the center area.

– The border of thus delineated center runs along the axes of streets being the border of urban block (Parysek *et al*., 1995, p. 39) or green/recreational area adjacent to *key public space*, along the borders of adjoining plots, and also along the borders of downtown and non-downtown forms of land use.

– If areas with different forms of land use listed above as downtown functions (like housing, education, health care) were surrounded from all sides by downtown functions and/or *key public space*, they were included into the delimited area of the town center. If such areas were not surrounded from all sides, they were not included in the center area.

4. THE QUALITY OF PUBLIC SPACE

Quality of public space is closely related to the quality of life of the inhabitants of a city. Streets and plazas which are full of different forms of human activities and interactions not only can sustain the economic and social life of the city, but also add positively to public safety (Jacobs, 1961; Whyte, 1988; Crowe, 2000).

Attractive public space is also an important instrument in competition between towns or cities, because open spaces of high quality, like parks, gardens, squares, plazas, are so called *soft locational factors* important for location decisions of investors and workers. For this reason the city's material heritage which is its unique and unmistakable characteristic also has great value:

> Cities try to enrich their aesthetical identity of areas of high symbolic value, especially their centers. They try to find stable traditions, which can be continued in the future – as the retrospection of the past, and the way of defining their future (Lorens, 2007, p. 84).

Nowadays, a town (or city) center has to cope with growing competition not only with other towns, but also within the town itself, with new commercial, recreational and cultural centers, offering attractive conditions of customers' handling (Gachowski, 2004; Dziubiński, 2014). This is also the case with medium-sized towns in Poland, in which during the last years such commercial centers were often located. To manage this challenge, a town center has to be provided with well designed, well cared for, and living public space. Designers and managers of big malls, taking into consideration elements which should be provided by the town center, provide new commercial centers with elements and features which decide of their unique attractiveness, threatening central zones of towns. Big malls offer better parking possibilities, shelter from atmospheric inconveniences, higher level of service and trade organization, higher level of conveniences (e.g. clean public restrooms), better adjustment of the offer to clients' needs, additional attractions, modern outfit and aesthetical surroundings (Domański, 2001; Gachowski, 2004, p. 89).

The instrument of counteracting the competition from commercial centers can be urban regeneration process of the town center area. High quality of public space increases the economic efficiency of the town center, therefore investments in improvement of the quality of public space often form the basis for revitalization strategies for these areas. Well developed, of high aesthetic value and well managed public space increases the number of visitors to the center and contributes to the growth in the number of clients for business entities operating there. The outcomes of research conducted in Great Britain show that on average the revenue in commerce grows about 40%, and private investments, too, increase as a result of well implemented urban regeneration programs in city centers, aimed also at revitalization of public space located there. These programs should include creation of attractive pedestrian zones, introduction of new development with elements of small architecture, legible and aesthetical signage and monitoring system (CABE 2004, p. 5).

Latest reports on city centers show that the growing sector in these zones is gastronomy (Dziubiński, 2014, p. 121). It is followed by the arrangement of public space so as answer such needs, e.g. making it friendly for pedestrians, with coffee gardens

and arcades – so called *soft edges* of public space (Gehl, 1980, p. 12; Dziubiński, 2014, p. 127). An important factor for augmentation of the vitality of public space is a proper mixture of functions. In urban regeneration programs for old towns centers in Germany, there were specific requirements concerning the desirable mixture of functions in such zones and instruments to achieve it, assuming that it is impossible to solve this problem only by market forces, which are insufficient in the case of degraded areas [SES 2003]. Poland still is lacking such solutions – some cities introduce certain provisions regarding limitation of some functions in central zones in local development plans (like Wrocław), but they do not suggest preferable services in such areas, which could have a positive effect on creation of the character of public space and stimulation of everyday activities (Dziubiński, 2014, pp. 129–132).

Another important group of factors influencing the quality of public space is related to the sustainable development idea. To create sustainable urban environment means in a large degree to arrange a city's open spaces in a way that allows meeting the needs of all groups of users, with concern for inclusiveness and respect for the environment.

We should also notice that public space – especially the areal elements like plazas or squares – should be ready to house a large number of users in case of different events, concerts, fairs or demonstrations – so there is a need to have open empty spaces, dedicated only to pedestrians, without permanent forms of development (Hołub, 2002, p. 19), with flexibility to fit different forms of activities and functions.

5. A MODEL OF ASSESSMENT OF PUBLIC SPACE QUALITY

For assessment of the quality of public space in the town center, a model is proposed, consisting of three elements:

– graphical valorization method,
– checklist valorization method,
– interview method.

This model was used in research on the quality of public space in town center, encompassing the center area delineated in the course of implementing the proposed delimitation method. But it is necessary to stress that such a model can be used for evaluation of different elements of the public space system, e.g. particular *nodes* or *axes* of public space, like commercial streets, plazas, squares or parks.

In all three methods it was assumed that semi-public spaces which were available for public use, and private areas – visible from public space – were taken into account in assessment of the quality of public space. Semi-public spaces were interpreted as those situated between the public and private zone, used by private persons, but

also accessible for foreigners (Cegłowska, Matykowski, 2010, p. 244). It was also acknowledged that, according to arrangements adopted by *Karta Przestrzeni Publicznej* (2009), decisions of private investors also influence the quality of public space, shaping the urban landscape by fencing the plots, building fronts or different forms of spatial development of private outer spaces (Mierzejewska, 2011, p. 89).

It is necessary to explain the use in the model of three different methods. The main cause of such a structure of the model was the need to consider different kinds of factors in the process of assessment of public space quality. Qualitative elements play the main role in the assessment, and the area indicated for research is the individually delineated town center. No data concerning the subject of the research (spatial composition, cultural values, technical condition and aesthetic value of public space development) is available, so it was necessary to obtain such data directly in the field, on the basis of criteria and research tactics worked out for each of the three methods listed above. Carrying out the research according to the checklist and graphical valorization methods requires a certain level of professional knowledge in urban or spatial planning – experience in valorization of urban composition, quality of different forms of development not only in respect of their technical and functional values, but also aesthetic, cultural and social characteristics. So these two methods can be employed by students of architecture and town planning or spatial economy, or professional planners. These methods mainly provide information on objective factors of the quality of public space. The interview method can be used by non-professional (in the field of urban planning) contractors, e.g. public opinion research companies. The group of respondents to the questionnaires consisted of non-professionals – everyday users of public space in the town center. Their opinions provide information on subjective elements of the quality of public space.

As the final result in all three methods scores for each town examined are obtained, which enables making a rating in each method (in interview method on the basis of second part of it), and the final result of the model are final ratings of towns. Of course the outcomes of each method provide a lot of research material, which should be studied from many points of view, considering certain features of public space. The rating of towns can also be analyzed using different criteria, which may influence a high or low position of a town – a proposal of such criteria is given in conclusions of this paper.

6. THE GRAPHICAL VALORIZATION METHOD

This valorization method creates a possibility to assess the quality of public space of different towns using the same criteria and procedures, and as a final result to obtain a synthetic indicator (index) of the quality of public space of a given town center, and on this basis to construct a rating of towns. This method also

facilitates monitoring the state of public space of a town – by obtaining comparable numerical data for all elements of valorization (features) at different points in time, as well as an index. The index enables rating the towns in respect of the quality of public space. The other goal is to obtain a clear visual image of the situation, which is legible even for unprofessional viewers thanks to its simple graphic form, thus allowing its use as the material for public discussions on the quality of public space of the analyzed area. The graphical valorization method, despite subjective assessment made by researchers, has an objective character of space valorization. All elements taken into account are numerical and represent the existing state of development, and even some qualitative values are translated into quantitative scores, giving countable numerical result.

The graphical valorization method was worked out using the analogy to the method used in Germany in urban regeneration programs, called *diagnosis of deficits and conflicts* (Kozłowski, Wojnarowska, 2011, pp. 34–35). Such diagnosis is prepared in written and graphical form, and the map of deficits and conflicts in the analyzed area is produced. It often serves as valuable material in public discussions and workshops in revitalization programs. In the proposed graphical method the analogy mainly exists in the general way of identification of spatial elements and sometimes their graphical way of recording, and the difference stems from the range of problem encompassed by the analysis. This method employs research tools traditionally used in urban planning for preparing the inventory of existing spatial development of the area. The graphical symbols are partly color codes used in urban planning, some based on the diagnosis of deficits and conflicts mentioned above, and some proposed by the author of this paper. The difference from the diagnosis mentioned above is that the aim of the graphic valorization method is to identify not only negative, but in the first place – positive features of an area.

The graphical valorization method consists of following phases:

1. Identification of *key public space* of a town – on the basis of field research and studies of urban structure of the town;
2. Delimitation of the center part – as the research area – on the basis of proposed delimitation method, on maps (in GIS format, then exported to the AutoCAD program);
3. Preparing material for field research: printing maps of delimited centers of towns and a set of the graphic code used;
4. Field research – graphic record of existent state of development according to the adopted graphic code;
5. Transducing graphic record of field research to the AutoCAD program;
6. Preparing a chart serving juxtaposition of numerical outcomes of research;
7. Measuring and counting areas, lengths and amounts of certain factors – *stimulants* and *destimulants*, putting the results into the chart;
8. Translating obtained values for examined factors to indicators, according to adopted rules (described further below);

9. Calculating indices (synthetic indicators) for towns by summing up the values for given indicators;

10. Making a rating of towns on the basis of indices.

An example of a graphical valorization map for a chosen town – Wieluń – is presented below (Fig. 1).

Fig. 1. An example of a graphical valorization map of Wieluń, made on the basis of field research in Wieluń in June 2015
Source: own research

Data are accumulated in two groups: *stimulants* (boosters) – factors of the positive effect for the quality of public space and *destimulants* (inhibitors)- factors of the negative effect.

Positive factors *(stimulants)* are denoted with symbols S1 to S16:

– S1 Historic development zone (encompassing plots and areas with buildings erected before 1945) – area of the zone in square meters;

– S2 Residential buildings – aesthetical value and technical condition – built area in square meters in specific categories of quality (Good/Medium/Bad);

– S3 Public utility buildings – aesthetical value and technical condition – built area in square meters in specific categories of quality (Good/Medium/Bad);

– **S4** Interiors of downtown urban blocks and backyards accessible for public, with services (gastronomy, commerce, services) – number of them;

– **S5** Pedestrian zones – plazas, squares, calmed traffic zones, pedestrianized streets, pathways, sidewalks – aesthetical value, spatial development and technical condition – built area in square meters in specific categories of quality (Good/Medium/Bad);

– **S6** Public green areas (parks, open recreational areas) – area in square meters in specific categories of quality (Good/Medium/Bad);

– **S7** Sports areas and playgrounds for children and adult people – area in square meters in specific categories of quality (Good/Medium/Bad);

– **S8** Commerce and services in basements of residential buildings – length of fronts in meters;

– **S9** Spatial and functional dominants (buildings) – number of them;

– **S10** Landmarks – characteristic spatial elements other than buildings (monuments, statues, obelisks, expositions etc.) – number of them;

– **S11** Viewing axes – number of them;

– **S12** Recreational and cultural utilities and objects – (amphitheaters, temporary stages, skate parks, climbing walls, fixed places for organizing feasts or fairs) – number of them;

– **S13** Elements of water (ponds, fountains, watercourses, waterfronts, water axes etc.) – the number of them;

– **S14** Coffee gardens – number of them;

– **S15** Stops or stations of public transport means (bus, tram, trolleybus, metro) – the number of them;

– **S16** Public parking lots – number of them;

Negative factors *(destimulants)* are denoted with symbols D1 to D8:

– **D1** Empty buildings – built area in square meters;

– **D2** Wastelands, brownfields, unbuilt plots – area in square meters;

– **D3** Degraded or neglected private or semi-public/semi-private areas, visible form public space – area in square meters;

– **D4** Deficits in parking solutions – undeveloped lots used for parking – area in square meters;

– **D5** Functional gaps in building fronts (unused basements for public utility functions) – length of fronts in meters;

– **D6** Spatial gaps in frontages, blind side walls of buildings visible from public space – length in meters;

– **D7** Transportation barriers (main arteries of big nuisance) – length in meters;

– **D8** Disharmonizing elements (spatial or functional) – the number of.

Graphic codes for both *stimulants* and *destimulants* are shown in the valorization table (Fig. 2).

	GRAPHIC SYMBOL	STIMULANTS															DESTIMULANTS								
	DESCRIPTION	HISTORIC ZONE- AREA IN M2	RESIDENTIAL DEVELOPMENT - AREA OF BUILDINGS IN M2 IN QUALITY CATEGOR.	SERVICE DEVELOPMENT - AREA OF BUILDINGS IN M2 IN QUALITY CATEGOR.	ACCESSIBLE SEMI-PUBLIC INTERIORS WITH SERVICES - NUMBER OF	PEDESTRIAN ZONES - AREA IN M2 IN QUALITY CATEGORIES	PUBLIC GREEN AREAS - AREA IN M2 IN QUALITY CATEGORIES	PLAYGROUNDS AND SPORT FACILITIES - NUMBER OF	TRADE AND SERVICES IN BUILDINGS - LEHGHT IN METERS	SPATIAL AND FUNCTIONAL DOMINANTS (BUILDINGS) - NUMBER OF	CHARACTERISTIC ELEMENTS OTHER THAN BUILDINGS - LANDMARKS - NUMBER OF	VIEWING AXES - NUMBER OF	RECREATIONAL OR CULTURAL UTILITIES - NUMBER OF	COFFEE GARDENS - NUMBER OF	PUBLIC TRANSPORT STOPS - NUMBER OF	WATER ELEMENTS - NUMBER OF	AUTHORIZED PARKING LOTS ACCCESSIBLE FOR PUBLIC - NUMBER OF	UNUSED BUILDINGS - AREA OF BUILDINGS IN M2	UNDEVELOPED, UNUSED PLOTS - AREA IN M2	DEGRADED PRIVATE PLOTS VISIBLE FROM PUBLIC SPACE - AREA IN M2	HAPHAZARD , UNAUTHORIZED PARKINGS - AREA IN M2	LACK OF SERVICE FUNCTION IN BASEMENTS - LENGHT IN M2	INCONTINUITY OF FROTNAGES, BLIND WALLS VISIBLE FORM PUBLIC SPACE - M	TRANSPORTATION BARRIERS - LENGTH IN M	SPATIALLY OR FUNCTIONALLY DISHARMONIZING ELEMENTS - NUMBER
		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	D1	D2	D3	D4	D5	D6	D7	D8
OZORKÓW		55573	3571 4943 5908	2030 2946 0	5	9224 9640 0	0 10730 0	0	715	1	2	2	0	0	2	1	150	0	2408	0	4323	0	0	0	460	-4
PIOTRKÓW TRYB.		102472	10940 13717 392	16771 5559 0	7	16497 3622 0	13671 12819 3809	0	1606	7	5	6	1	13	2	1	148	2945	0	4323	0	403	206	650	-3
WIELUŃ		54344	12927 9299 0	12050 3001 0	11	12837 0 0	63334 5859 0	4	1168	7	12	4	1	3	2	1	313	0	0	0	0	0	42	968	-7
BEŁCHATÓW		20516	1763 1010 0	18220 2308 0	7	16855 0 0	3484 1263 0	1	156	6	3	3	1	7	2	2	252	117	0	470	0	28	21	557	-3
ZDUŃSKA WOLA		26739	1343 4650 1172	4776 1566 155	0	2998 4404 0	4134 0 731	0	463	1	2	3	0	1	2	0	75	52	4497	7535	600	0	502	760	-11
RADOMSKO		44383	3645 12380 700	3353 6110 0	7	1790 9756 243	1993 3973 0	0	1188	2	5	3	0	1	3	2	140	0	3398	12070	0	0	608	818	-14

Fig. 2. Example of a chart with measured (from maps) values for *stimulants* and *destimulants* in graphical valorization method
Source: Own research

Stimulants can – in some cases – obtain negative values, depending on the assessment of the quality of particular factor as *bad*, or '0' while assessment is *medium*. *Destimulants* can get only negative values. Each factor in both groups (*stimulants and destimulants*) was measured in adequate measurement units (meters, square meters or numbers). All factors should be counted in the program, in which the graphical valorization map is prepared (e.g. the AutoCAD).

Because all numerical values obtained from calculation are of different order of magnitude – quantitative factors have values from single units to hundreds, while linear and areal ones are expressed in thousands, and even dozens and hundreds of thousands (meters and square meters), to obtain the same order of magnitude of indicators, it is necessary to adopt certain principles of calculation from values of factors to indicators:

– Historic zone areas (S1) were divided by 10 000,

– Areas of residential development (S2) and services (S3), pedestrian zones (S5), green areas (S6), and recreational and sport areas (S7) were divided by 1 000,

– Lengths of frontages of buildings housing commerce and services in basements (S8) were divided 1 000,

– Areas of unused buildings (D1), undeveloped plots (D2), degraded areas (D3) and haphazard parking (D4) were divided by 1 000,

– Lengths of functional deficiencies in frontages (D5),lengths of blind walls (D6), lengths of transportation barriers (D7) were divided by 1 000,

– Number of parking lots (S16) was divided by 100.

– Values of remaining factors were divided by 1.

The matrix of the chart to calculate the indicators and then the sum of points for each town is shown below (Fig.3).

Because towns are very differentiated regarding their delimited center part, it is necessary to count the graphical valorization index regarding the size of the delimited town area – the sum of points of graphical valorization is therefore divided for each town by its area in hectares (Fig. 4).

Town	Graphic valorization score (points)	The area of delimited center (ha)	Graphic valorization index (points/ha)	Rank
Town 1				1
Wieluń	**146,9**	**21,2**	**6,93**	**2**
Town 3				3
Town 4				4
Town 5				5
Town 6				6

Fig. 4. Ratings of towns on the basis of the graphic valorization method with exemplary values for Wieluń
Source: Own research

	STIMULANTS																DESTIMULANTS								SUM S	SUM D
GRAPHIC SYMBOL		G/M/B	G/M/B		G/M/B	G/M/B			●	★		R/C	CG	B		10 PL										
DESCRIPTION	HISTORIC ZONE- AREA IN M2	RESIDENTIAL DEVELOPMENT - AREA OF BUILDINGS IN M2 IN QUALITY CATEGOR.	SERVICE DEVELOPMENT - AREA OF BUILDINGS IN M2 IN QUALITY CATEGOR.	ACCESSIBLE SEMI-PUBLIC INTERIORS WITH SERVICES - NUMBER OF	PEDESTRIAN ZONES - AREA IN M2 IN QUALITY CATIEGORIES	PUBLIC GREEN AREAS - AREA IN M2 IN QUALITY CATEGORIES	PLAYGROUNDS AND SPORT FACILITIES - NUMBER OF	TRADE AND SERVICES IN BASEMENTS OF BUILDINGS - LEHGHT IN METERS	SPATIAL AND FUNCTIONAL DOMINANTS (BUILDINGS) - NUMBER OF	CHARACTERISTIC ELEMENTS OTHER THAN BUILDINGS - LANDMARKS - NUMBER OF	VIEWING AXES - NUMBER OF	RECREATIONAL OR CULTURAL UTILITIES - NUMBER OF	COFFEE GARDENS - NUMBER OF	PUBLIC TRANSPORT STOPS - NUMBER OF	WATER ELEMENTS - NUMBER OF	AUTHORIZED PARKING LOTS ACCCESSIBLE FOR PUBLIC - NUMBER OF	UNUSED BUILDINGS - AREA OF BUILDINGS IN M2	UNDEVELOPED, UNUSED PLOTS - AREA IN MZ	DEGRADED PRIVATE PLOTS VISIBLE FROM PUBLIC SPACE - AREA IN M2	HAPHAZARD , UNAUTHORIZED PARKINGS - AREA IN M2	LACK OF SERVICE FUNCTION IN BASEMENTS - LENGHT IN M2	INCOTINUITY OF FROTNAGES, BLIND WALLS VISIBLE FORM PUBLIC SPACE - M	TRANSPORTATION BARRIERS - LENGTH IN M	SPATIALLY OR FUNCTIONALLY DISHARMONIZING ELEMENTS - NUMBER OOF		
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	D1	D2	D3	D4	D5	D6	D7	D8		
OZORKÓW 22,5 pkt	5,6	-2,3	2	5	9,2	0	0	0,7	1	2	2	0	0	2	1	1,5	0	-2,4	0	0	-0,1	-0,2	-0,5	-4	29,7	-7,2
PIOTRKÓW TRYB. 97,6	10,3	10,6	16,7	7	16,5	9,9	0	1,6	7	5	6	1	13	2	1	1,5	-2,9	0	-4,3	0	-0,4	-0,2	-0,7	-3	109,1	-11,5
WIELUŃ 146,9 pkt	5,4	13	12,1	11	12,8	63,3	4	1,2	7	12	4	1	3	1	1	3,1	0	0	0	0	0	0	-1	-7	154,9	-8
BEŁCHATÓW 72,9 pkt	2	1,8	18,2	7	16,9	3,5	1	0,2	6	3	3	2	7	2	2	2,5	-0,1	0	-0,5	0	0	0	-0,6	-3	77,1	-4,2
ZDUŃSKA WOLA 5,9 pkt	2,7	0,1	4,6	0	3	3,4	0	0,5	1	2	3	0	1	2	0	0,8	0	-4,5	-0,8	-0,6	0	-0,5	-0,8	-11	24,1	-18,2
RADOMSKO 9,0 pkt	4,4	2,9	3,4	7	1,6	2	0	1,2	2	5	3	0	1	3	2	1,4	0	-3,4	-12,1	0	0	-0,6	-0,8	-14	39,9	-30,9

Fig. 3. An example of a chart with indices for towns and sum of plus and minus points (shown under the names of towns in red colour)
Source: Own research

It is important to consider possible objections to this method. One has to be aware of the fact that it is difficult to compare the quality of spatial or functional elements of different towns, and even elements of the same kind in one town are incomparable. This solution – transducing quality values into numbers, the quantification of them – was chosen to facilitate translating the research result into comparable sets of numbers. Because of that, quantitative interpretation of certain features of urban space, like viewing axes, dominants or landmarks, does not reflect their specifics or beauty. But for the quality of space also the quantitative aspect is important – the number of elements having positive or negative influence on the observer and user of public space. Also the third dimension – which stands for the unique value of townscapes – is lacking in this method. All these shortcomings are the result of the necessity to adopt simplifications for the clearness of the method, but as they apply to all examined towns, there is no difference in the evaluation of them. In many assessed elements the qualitative aspect was taken into consideration, such as aesthetics and technical condition. All elements of the graphical method were described clearly near their graphic and letter symbols. Only the extent of the historic development zone needs specifying – it was assumed that the border of such a zone should go along the frontages of historic buildings and encompass all the plots where such buildings are located. In the situation when such a zone is present on both sides of the street, this street is also incorporated into it. It is also necessary to explain why S4 indicator – interiors of downtown urban blocks and backyards accessible for public, with services (gastronomy, commerce, services) – are only counted in numbers, neglecting their quality. This is because of the assumption that all such areas have positive effect on public space, which means that their existence enriches it in economic, social and spatial terms – giving more possibilities for location of trade and services, new kinds of social interactions, and also creation of unique spaces of special character, increasing the aesthetic and compositional values of public space of the center part of the town, providing new ways and new interiors for the pedestrians and opening new viewing axes.

7. THE CHECKLIST METHOD

The second element of the proposed model is the checklist valorization method. The form of the table and evaluation system was based on the proposal of J. Natland (2007), who used it for valorization of the quality of public space of a commercial street in New Westminster, USA. A similar system of evaluation of public space was already used in Poznań in Poland (Cegłowska,

Matykowski, 2010). The evaluation criteria were taken from the synthesis mentioned above in this paper, and from the analysis of methods already used in Poland and abroad, as well as the author's own proposals based on the practice of urban regeneration programs.

In this method criteria were formed in the checklist, grouped in six areas:

– **C:** composition/legibility/image/character/continuity and enclosure;
– **V:**vitality/flexibility/adaptability/use and activities/diversity;
– **N:** comfort/fulfillment of needs/convenience;
– **A:** accessibility/permeability/linkages/ease of movement;
– **S:** safety/control;
– **SD:** consistency with sustainable development idea.

In each area 7 criteria/factors were included, each of them assessed with adopted system of evaluation, shown in the table below (Fig. 4.). Each criterion could obtain from 0 to 5 points, depending on the degree in which it was fulfilled, where 0 score meant complete lack of fulfillment of criterion, and 5 points score meant excellent fulfillment (Natland, 2007). Therefore, the maximum amount of points possible to obtain in one area was 35.

Evaluation system

0	1	2	3	4	5
Complete lack of fulfillment of criterion	Very small degree of fulfillment of criterion	Small degree of fulfillment of criterion	Moderate degree of fulfillment of criterion	Good degree of fulfillment of criterion	Excellent degree of fulfillment of criterion
(0%)	(1 to 20%)	(21 to 40%)	(41 to 60%)	(61 to 80%)	(81 to 100%)

Criteria

C: COMPOSITION/LEGIBILITY/IMAGE/CHARACTER/CONTINUITY AND ENCLOSURE

Ind.	CRITERIA/FEATURES	Score
C1	Legibility of space simplifying orientation in the area and finding the right way, thanks to specific features and character of spatial elements, including unique places and buildings	
C2	Emphasizing local identity – continuation of historic form of development, urban structure, detail, highlighting of townscape and natural landscape	
C3	Open spaces closed by buildings or other structures (like greenery), frontages, urban blocks. Attractive use of spaces in front of buildings in case of withdrawn frontage line, spaces of public and private character explicitly defined	

Ind.	CRITERIA/FEATURES	Score
C4	Viewing axes, closed by landmark, characteristic building or other interesting object	
C5	Corner buildings of urban blocks designed in unique way (architectural form, detail)	
C6	Attractiveness, durability and detail – seen from afar and closely – wealth of lines, textures, colors. Rich impressions by different sensual experiences: images, touch, smells, sounds	
C7	Quality of directional and other signage – to facilitate orientation in the area and emphasize legibility and identity	
	SUM:	

V: VITALITY/FLEXIBILITY/ADAPTABILITY/USE AND ACTIVITIES/DIVERSITY

Ind	CRITERIA/FEATURES	Score
V1	Mixture of functions, mutually complementing and stimulating, fulfilling needs of inhabitants and attractive for visitors, additional attractions	
V2	Buildings constructed of materials economic in maintenance. Buildings and areas enabling adaptation for new functions	
V3	Big open area without fixed spatial development, which enables organization of different events for large groups of users	
V4	Coffee gardens, playgrounds, water, recreational places which enliven the space and allow different activities to be undertaken	
V5	Diversity of trade and services offer of varying standard for different social groups	
V6	Diversity of cultural and entertainment offer of varying standard for different social groups	
V7	Revitalization and reuse of cultural and postindustrial heritage	
	SUM:	

N: COMFORT/FULFILLMENT OF NEEDS/CONVENIENCE

Ind.	CRITERIA/FEATURES	Score
N1	Awnings, sunshades, canopies, trees and other elements of spatial development providing shade and shelter from unfavorable atmospheric conditions	
N2	Noise level low enough to allow conversation	

Ind.	CRITERIA/FEATURES	Score
N3	Small elements improving the comfort of using the space, like trash bins, bicycle racks, seats, benches and ledges arranged in space in convenient places and at appropriate intervals	
N4	Diversity of seats: movable and fixed benches, chairs, stairs to seat, in different configurations – convenient for conversation or enabling isolation of user	
N5	Tables and benches arranged near seats, places to play table games	
N6	Arrangement of seats in proper relation to generators of activities in the area, directed to interesting views, landmarks or connected with pedestrian movement system	
N7	Public spaces designed with consideration for needs of elderly and disabled people	
	SUM:	

A: ACCESSIBILITY/PERMEABILITY/LINKAGES/EASE OF MOVEMENT

Ind.	CRITERIA/FEATURES	Score
A1	Good accessibility by public transport, stops near important destinations	
A2	Adequate number of accessible parking lots, not colliding with pedestrian and bicycle traffic	
A3	Pedestrian movement having priority over car traffic, no physical or perceptive barriers for pedestrians, streets easy to pass by pedestrians	
A4	Bicycle routes safe and easy to use. Good permeability of the area for pedestrians and bicycles	
A5	Pedestrian routes and public spaces visually and physically linked with adjacent areas, such as entrances to buildings and commercial areas	
A6	Equal and integrated access for people of different physical ability	
A7	Multiple routes to choose, which is important because people prefer to have alternative, different routes which are not boring. This stimulates activity and enhances the attractiveness of townscape	
	SUM:	

S: SAFETY/CONTROL

Ind.	CRITERIA/FEATURES	Score
S1	All areas have designated uses, visibility of property ownership structure and control of space. There are no degraded or unused areas or buildings	

Ind.	CRITERIA/FEATURES	Score
S2	Pedestrians can see all fragments of the area, there are no nooks or places hidden from view	
S3	Adequate lighting of streets and pedestrian routes, frontages of buildings, plazas and squares and other elements, people and their activities after dark	
S4	Natural surveillance by passers-by and inhabitants of adjacent apartment blocks, having a view into the street	
S5	Presence of facilities and services providing monitoring and protection, giving the sense of safety but not being oppressive, also by their design, which should correspond with the character of place	
S6	The area makes a good first impression as aesthetic, clean and well cared-for	
S7	No persons endangering public safety and hygiene are present in the area (aggressive, dirty or drunken persons)	
	SUM:	

SD: CONSISTENCY WITH SUSTAINABLE DEVELOPMENT IDEA

Ind.	CRITERIA/FEATURES	Score
SD1	Sustainable public transport, good accessibility by public transport, calmed traffic solutions, pedestrian and bicycle routes creating continuous systems	
SD2	Parking systems – underground or parking buildings	
SD3	Air and noise – elimination of burdensome issuers of noise, division of loud and silent functions, shelter from strong wind by screens or greenery	
SD4	Greenery – for improvement of urban climate, aesthetics, composition, identity, recreational functions. Maximum infiltration –pedestrian routes and parking lots with surfaces penetrable for water, use of domestic species of greenery, adequately planned places for trees	
SD5	Water – as an element improving urban climate, attractiveness of space, identity, used for different forms of activity and functions	
SD6	Energy saving solutions (lighting, monitoring and other utilities powered by renewable energy sources)	
SD7	Adequate insulation and aeration of public spaces	
	SUM:	

Fig. 4. Checklist method of assessment of the quality of public space
Source: Own research

This assessment method also yields numerical data – scores in certain areas and an index for the whole checklist (sum of points given in each area). This again – as in the graphical method – makes possible monitoring changes in public space in each town, or making a rating of towns and comparison between towns in particular areas (Fig. 5).

Town	Composition	Vitality	Fulfillment of needs	Accessibility	Safety	Consistency with SD
Town 1						
Wieluń	**67,52%**	**70,98%**	**62,83%**	**67,82%**	**80,15%**	**50,98%**
Town 3						
Town 4						
Town 5						
Town 6						

Fig. 5. Results of the checklist method assessment – example of Wieluń (percentage of maximum scores in each evaluation area)
Source: Own research

The maximum score for each town is 600%, which means 100% for each of the six valorization areas. The index is obtained by dividing the sum of results obtained in all evaluation areas by maximum score (600%). The bigger the result, the higher the town's position in the ranking (Fig. 6.).

Town	Sum of results obtained in all evaluation areas (in %)	Maximum score (in %)	Index	Rank
Town 1		600		
Wieluń	**400, 31**	**600**	**0,67**	**2**
Town 3		600		
Town 4		600		
Town 5		600		
Town 6		600		

Fig. 6. Chart showing final results of the checklist valorization method with values for Wieluń as an example
Source: Own research

8. THE INTERVIEW METHOD

The interview method is designed to obtain the opinions of non-professional users of public space. Besides, it is necessary to note that the graphical and checklist methods provide the assessment of existing elements of spatial development of public space, while bringing no information on lacking elements or functions. The interview method fills this gap, giving respondents an opportunity to point out the shortages in existing development and suggest changes. It is important to stress that the information on different social groups of users (gender, age, education, employment) was gathered only for general orientation, and was not regarded as a criterion in analyzing the survey results. This was also the case with the division into internal (inhabitants) and external users (tourists and visitors), which is often used in research on attractiveness of cities or quality of place (Piotrowska, 2010, p 222). The reason for such an approach was the assumption that public space should be planned and function in a way that serves all groups of users and fulfills their expectation and needs, not depending on their social characteristics.

The survey questions were formulated as multiple choice questions of conjunctive character (answers do not exclude one another, so it is possible to choose more than one answer), which enabled respondents to mark more than one answer regarding the existing and proposed way of public space development. The questionnaire was structured into six parts – main questions, whose objective was to determine some crucial issues concerning public space of the town center. The first part of the interview was designed to establish which area of public space in the town center is the most visited one: the main market square, main commercial street, green areas located in town center or other places. The second part of the interview was concerned with some specific features of public space of the town center, such as accessibility by different means of transport, aesthetics, safety, cleanliness and organization of different events. This part of the questionnaire was planned to give an overview of the respondents' opinions regarding main features of public space. The sum of percentile results of positive answers – *very good*, *good* and *satisfactory* – for each town made it possible to assign ratings to towns concerning the main features of public space (Fig. 7), which was the third element of the model, serving along with the ratings of two previous methods to calculate the final ranking. As these features were generally similar to those being research areas in the checklist valorization method, there is also a chance to compare how particular areas, like accessibility, aesthetics (composition) or safety are assessed by professional town planners and everyday users. The sum on the right shows the level of satisfaction with particular features in all towns and allows a comparison between them to be made.

	Town 1 (%)	**Wieluń (%)**	Town 3 (%)	Town 4(%)	Town 5 (%)	Town 6 (%)	**Sum**
Pedestrian accessibility		**99**					
Bicycle accessibility		**88**					
Car accessibility		**81**					
Public transport accessibility		**92**					
Aesthetics		**100**					
Safety		**98**					
Cleanliness		**100**					
Organized attractions		**75**					
In total		**733**					
Percentage of positive answers		**91,6**					
Rating		**1**					

Fig. 7. Positive percentile results of specific features of public space, with results for Wieluń as an example
Source: Own research

The next four parts of the questionnaire were aimed at identifying functions, activities and factors attracting users to the center, negative features impeding it, as well as desirable elements of spatial development and functions which could increase the attractiveness of the town center. These questions did not have an evaluative character, but their goal was the identification of behaviors and preferences of public space users, providing valuable information about preferred functions and elements of public space development. Such information could be useful for investments or other activities planned and implemented by local authorities or other actors operating in public space of town centers.

9. CONCLUSIONS

Research made using the model of assessment of quality of public space of town center brings a lot of information regarding positive features and shortcomings of public space. This information enables the diagnosis of existent state of

development and functions, and formulating proposals aiming at increasing the quality of public space of town center.

As the final result of research using the model of assessment of quality of public space, the final rating of towns is obtained (Fig. 8).

	Town 1	Wieluń	Town 3	Town 4	Town 5	Town 6
Graphical method rating		**2**				
Checklist method rating		**2**				
Interview method rating		**1**				
Sum		**5**				
Total rating		**2**				

Fig. 8. Chart showing ratings of towns in all three methods of public space quality assessment
Source: Own research

Assessment of public space for one town made at determined time intervals may enable the monitoring of changes in various respects, while assessment for different towns gives a possibility to track similarities and differences concerning both the existing state and the state desired by public opinion. It also facilitates ratings of towns concerning the quality of public space in the town center – the aim is not just classification, but rather establishing which towns are leaders and what features which determine their high position. This can be a significant clue for towns which are striving to improve the quality of their public space.

The results of the research can be analyzed using the following criteria:

1. Age of town – new or old town;
2. Size of town (in the group of medium-sized towns) – number of inhabitants;
3. Location of central town in region – distance to it;
4. Size of delimited town center;
5. Size of historic zone in delimited center;
6. Size of green areas in town center;
7. Revitalization of town center – whether implemented and to what extent.

This analysis makes it possible to identify features affecting the quality of public space in town centers. Some of them are stable, e.g. as the age of town, its location in region, or the size of historic zone. Some of them change in the course of time, e.g. population, or can be changed, like the size of green areas in town center or its revitalization. So local authorities can draw conclusions and take appropriate measures to enhance the quality of public space in the town center.

The model of assessment of the quality of public space presented in this paper was tested on a group of chosen medium-sized towns of the Łódź region. The results of ratings obtained using particular methods and the whole model turned out to be convergent with subjective impressions of users and professionals visiting the

centers of towns, which confirms that the model has succeeded in quantification of the quality factors and yielded objective results reflecting subjective impressions concerning the quality of public space in town centers.

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