

SELECTED ASPECTS OF THE DIGITISATION OF SPATIAL PLANNING IN THE CONTEXT OF LEGISLATIVE CHANGES IN POLAND

Anna Michalik✉

Department of Spatial Planning, Ministry of Economic Development and Technology, Warsaw, Poland
Faculty of Civil Engineering and Geodesy, Military University of Technology, Warsaw, Poland

ABSTRACT

Digitisation of spatial planning can be considered multi-dimensionally. The more comprehensive the approach, the better the solutions will be. The idea of a step-by-step approach should bring the best end result. The obligation to create spatial data, which was introduced in Poland, in a way, forced municipalities or urban planners to acquire knowledge and skills in geoinformation and GIS software. The main objective of this article is to present the assumptions and propose a framework and further stages of digitisation of spatial planning in Poland. The specific objective is to present the legislation in the process of digitisation of spatial planning, which has been initiated or significantly modified by the author, and the procedure of which has started or was ongoing in the Department of Spatial Planning within the Ministry of Economic Development and Technology in June 2021. Thus, in addition to the implemented measures, the author also indicates the potential and benefits for urban planners, resulting from the creation of the graphic part of acts in vector form, but also outlines the importance of such studies for various groups of recipients and public administration. At the same time, the people for whom any solution is created – the general public – should not be forgotten.

Key words: spatial planning, urban planning, digitisation, legislation, reform, spatial planning acts

INTRODUCTION

The issue of digitisation of spatial planning in Poland is largely a consequence of the European Union 2007 so-called INSPIRE Directive (Directive 2007/2/EC), as well as the adoption of the Act of 4 March 2010 on Spatial Information Infrastructure (Ustawa z dnia 4 marca 2010 r. o infrastrukturze informacji przestrzennej). The separation in the third thematic group of the subject of spatial planning was one of the many factors that started the changes, from the activities of government administration bodies, through local government administration, to the users – the citizens.

It was assumed that changes in the approach to the spatial planning document in practice must and will happen very quickly (Jaroszewicz, Kowalski &

Głazewski, 2016). This publication indicates that a systemic approach to the organisation and publication of spatial planning documents can not only facilitate the activities of local and central authorities, but above all, through planning participation portals, will help activate local communities, investors and individual citizens. Recently, the role of new technologies used in public participation process and the interdependence between data and their application in spatial planning and the idea of a smart city has been emphasised (Janczar, 2021). Siemiński (2008) indicates the need of standardisation including web services that returns data about spatial plans. He also presents the concept of data transfer based on best practices from German cities and concludes that lack of vector data is a major technical problem. Izdebski, Michalik, Zwirowicz-

-Rutkowska and Malinowski (2020) underline the sooner uniform for the country assumptions for execution and publication of local plans in vector form are established and implemented, the less financial resources will be lost for (anyway necessary) vectorisation. That process should be standardized and associated with development of technical specifications describing among others data formats, data model, reference data and links to the descriptive parts of spatial documents (Jaroszewicz, Denis & Zwirowicz-Rutkowska, 2013; Izdebski & Malinowski, 2017).

As digitisation of spatial planning can be considered multi-dimensionally there is a need for more comprehensive analysis of that process taking into account the issues of both the the spatial planning system, spatial policy and the structure of planning documents, and also the interoperability framework of public registries.

The main objective of this article is to present the assumptions and propose a framework and further stages of digitisation of spatial planning in Poland. The specific objective is to present the legislation in the process of digitisation of spatial planning, which has been initiated or significantly modified by the author, and the procedure of which has started or was ongoing in the Department of Spatial Planning within the Polish Ministry of Economic Development and Technology in June 2021. In addition to the ongoing or completed legislative processes, the next steps to be taken are presented. Thus, in addition to the implemented measures, the author also indicates the potential and benefits for urban planners, resulting from the creation of the graphic part of acts in vector form, but also outlines the importance of such studies for various groups of recipients and public administration.

RESEARCH METHODS

Empirical, qualitative and quantitative research was used to achieve the objectives of the research.

The starting point was the expert knowledge and practical experience of the author of this publication in the field of planning studies using geoinformation technologies (Michalik, Zwirowicz-Rutkowska & Wojtkiewicz, 2017), as well as organising and co-conducting trainings in the field of broadly understood

digitisation of spatial planning or discussing the issues at congresses, meetings of thematic councils (<https://www.gov.pl/web/zagospodarowanieprzestrzenne/wiadomosci>).

In addition, consultation surveys were carried out among urban planners and stakeholders of planning procedures.

The research process was organized as follows. In the first stage, the assumptions and dimensions of digitisation of spatial planning in Poland were formulated. The presented concepts were then referred to the current activities carried out by the Ministry of Economic Development and Technology. The last stage was the analysis of legal regulations in terms of the possibility of implementing the spatial planning reform towards the implementation of geoinformation technology.

FRAMEWORK AND ASSUMPTIONS OF SPATIAL PLANNING DIGITISATION

The concept of spatial planning digitisation in the broadest possible perspective is presented in Figure 1, which shows relations and links between specific issues. The starting point for the author's considerations was the theory of urban planning, and above all sustainable development, the urban-rural continuum, environmental protection, air protection, and optimisation of the selection of land predisposed for development. Directly related to these concepts are selected problem issues, among which it is worth distinguishing the use of geoinformation technologies, standards and guidelines, criteria for GIS analyses or dedicated (but universal, nationwide) application solutions improving planning tasks. The effects of these activities resulted from the possibility of verifying the usefulness of IIP Geoportal and the possibility of using open data, up to the development of IIP applications.

The second core element is a set of issues related to spatial policy and, more specifically, the spatial planning system. This is complemented by an analysis of the structure of planning documents. These issues, together with a broad concept of spatial information infrastructure, have a significant impact on the created planning database maintained in the ICT system. The background to these issues is interoperability with a group that includes geographic information theory,

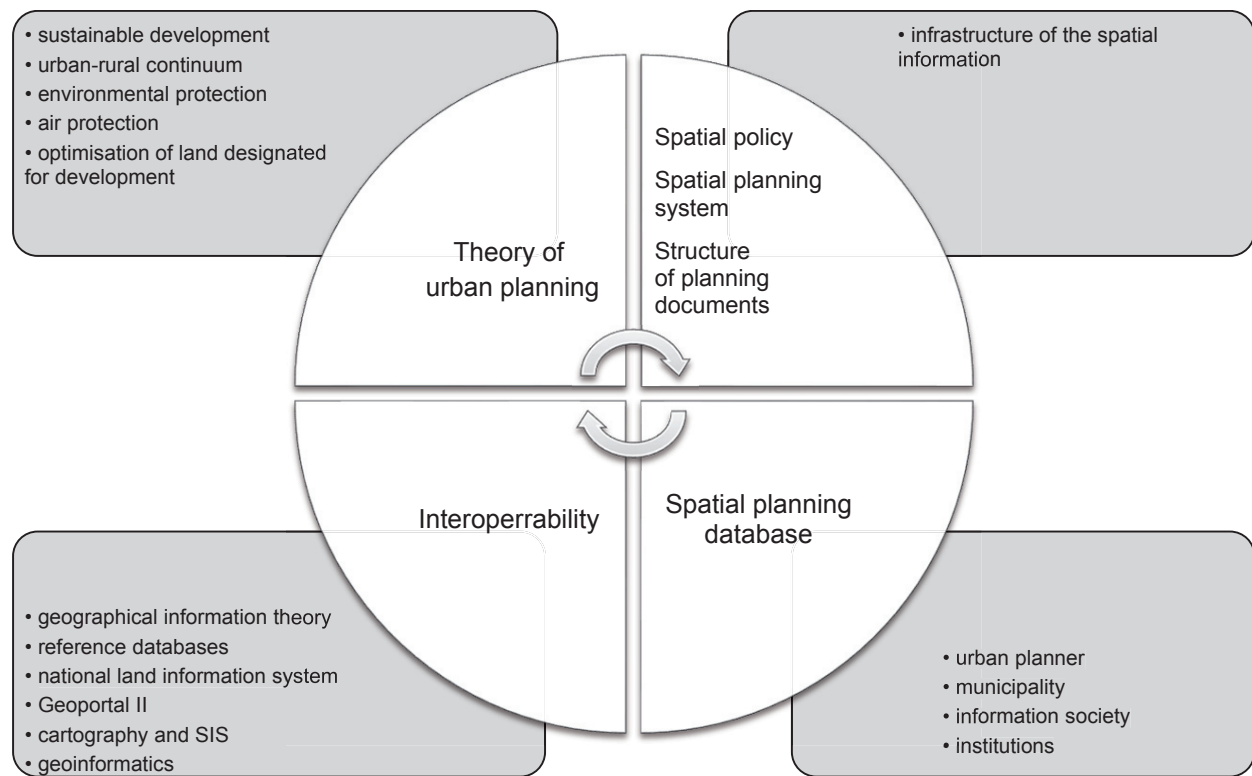


Fig. 1. The concept of digitisation of spatial planning (own elaboration)

reference database, along with the National Land Information System and the IIP Geoportal, Cartography and Spatial Information System (SIS), and finally Geoinformatics. The main pillars of digitalisation of spatial planning are presented in Figure 1. The pillars such as Theory of urban planning and Spatial planning system with Structure of planning documents are the subject issues. The lower part of Figure 1 refers to the basic assumptions of digitisation, i.e. Interoperability and Spatial planning database. Technical issues allow to implement the main assumptions of digitisation of spatial planning, at the same time they diffuse the domain aspects. These relations are two-sided. This means that the technology aspects extends concepts and terminology used in spatial planning and create a new perspective on interpretations of multi-dimensionality and interdisciplinarity of shaping spatial order and policy along with the possibility of taking into account new criteria. The problem areas resulting from the last group focus on the creation, updating, storage, management, presentation, and sharing of spatial data.

In addition, it is worth noting the important role of legal regulations, organisational and technological perspectives, as well as standards and guidelines.

An important step in the process of optimising the creation and sharing of high quality spatial planning data will be to make it ‘open’. The idea of open data is increasingly promoted and applies to many different public administration resources in Poland (Izdebski, Zwirowicz-Rutkowska & Nowak da Costa, 2021). Open data is very important for the development of various industries especially when its quality is adequate. The measures proposed by the author will allow not only efficient and reliable data creation, but (which is of particular importance) also updating and sharing of spatial data. As the emergence of big/open urban data in recent years, there have been lots of transformations going on in urban study and planning (Long & Liu, 2016). According to Toogood (2021), open data has been gaining momentum in recent years across the world as citizens expectations of their governments evolve. As technological revolutions prevail, service delivery must

change concurrently to ensure governments provide the best possible service to their residents.

Among the stakeholders, urban planners, municipalities and institutions involved in the procedure play a special role. At the same time, the people for whom any solution is created should not be forgotten – the general public, which on the one hand takes an active part in the procedures, and on the other hand is the recipient and most important user of the entire system.

Assumptions of digital spatial plans

The assumptions of the scope of the spatial planning act were presented on the ministerial website: <https://www.gov.pl/web/zagospodarowanieprzestrzenne> with a division into three stages: basic, optimal and target. The basic scope including the spatial scope and the illustration with the assigned georeferencing was included in the previously discussed amendment to the act by adding Chapter 5a in its original wording. Subsequent stages involved the addition of the creative part of the spatial planning act resulting from the planning authority. The target scope was to cover external conditions understood as ‘additional regulations’ defined as the manner of development resulting directly from separate provisions (e.g. areas / areas of nature conservation, cultural heritage).

The original scope was modified by the author, partly because there was no need to duplicate the presentation of the graphical part. The illustration was intended to be a graphical presentation of spatial data. However, there were doubts especially when there would be a difference between the spatial data and its visualisation. Considering the substantial amount of work that local governments have to undertake in connection with the implementation of subsequent stages of digitisation, the author initiated the adaptation of a new planning tool – the general plan of the municipality – to the new guidelines. The assumption was to simplify it as much as possible and to eliminate the consequences of possible errors.

Another fundamental issue changed in the original concept is the lack of presentation of spatial data related to conditions as an appendix to the act. According to the author’s assumptions, such data should be included in spatial data sets, and not as a determination of the act.

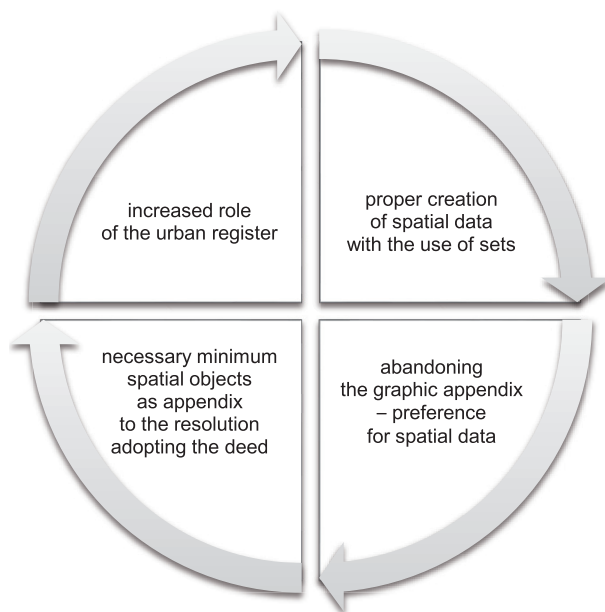
It may seem that the proposed solution shown in Table 1 is more difficult due to the lack of uniformity. However, the justification for this separation is the need to progressively reach the target solution. As a result of this assumption, in the case of a general plan of a municipality, spatial data will be created only for:

Table 1. Scope of spatial data according to spatial planning act (own elaboration)

Group	No	Keyword	No	General municipal plan	Local plan (zoning)	Other spatial planning act
I	1	multipolygon	spatial location of the area covered by the act in vector form in the applicable national spatial reference system	+	+	+
	2	attributes	attributes containing information about the act	+	+	+
	3	raster	graphic part of the act in the form of a digital representation with georeferencing in the existing national spatial reference system	–	+	+
II	4	multipolygon	spatial location of planning zones, building-up area, downtown development area and areas for which separate standards have been established for the availability of social infrastructure in vector form in the current state spatial reference system	+	–	–
	5	attributes	attributes containing information about spatial objects	+	–	–
III	6	multipolygon	spatial location of spatial areas with different use or development rules in vector format in the current national spatial reference system	–	+	–
	7	multiline	spatial location of building lines in vector format in valid national spatial reference system	–	+	–
	8	attributes	attributes containing information about spatial objects	–	+	–

act boundary, planning zones, building completion area, downtown development area, areas for which separate standards of social infrastructure availability have been established. In fact, only the general plan boundary and planning zones will be obligatory.

As shown in Figure 2, the author made four main assumptions about how spatial data should be created. The first one is the increased role of the register,



including the creation, update and sharing of spatial data, sets, and even metadata. The second assumption was to limit the spatial objects attached to the adoption resolution to the necessary minimum – only the arrangements, without additional regulations. Another was based on the proper creation of spatial data, i.e. using spatial data sets and services. The last point concerned the target abandonment of the graphical appendix to the act, which implied a preference for spatial data only as an appendix to the act.

To develop the technical aspects presented in Figure 1 there is a need to include assumptions concerning spatial data creation (Fig. 2) and definition of the spatial data structures. Successive increase of the volume of datasets and inclusion of another features

types (not only the border of the act) may lead to more complex analysis.

Extremely important is the assumption initiated in the amendment to the Act of 2021, so the appropriate course of the geometry of the created spatial data (which referred only to the administrative boundary and the registered parcels). This assumption was significantly extended by the author. Therefore the geometry of the spatial objects (which are the determination of the spatial planning act) should be created in accordance with the geometry of the spatial objects from the register of land and buildings (not only the plots, but also the land uses and buildings), and even any spatial objects within all spatial data sets submitted to the register of spatial data sets and services (according to the Act on IIP). The above applies only if the designer had such an intention, and without consequences in case of a later change in the geometry of the underlying objects. The main purpose of the proposed solutions is to provide a target scope for at least one type of spatial planning act – the general municipal plan.

In turn, in order to apply the same scheme to other spatial planning acts, and in particular to local plans, a closed catalogue of arrangements should be precisely defined. Thanks to the adoption of the regulation on the scope of the draft local plan and the author's involvement in the work on classifying designations, it is possible to compile spatial data for designations (which are defined as the most important determination of the local plan).

Scope of digitisation

The stages shown in Figure 2 have been modified by the author also in terms of scope. The new approach assumes a strong separation of the creation part from the external part, which even eliminates the need for marking the external conditions. This practice allows, above all, to shorten the procedures for creating spatial planning acts. But not only time is important. The need to increase the flexibility of spatial planning, also in the context of dynamically changing conditions, is repeatedly raised. Radical change in this respect, however, requires increasing the involvement of all bodies responsible for spatial data sets used in spatial planning.

Digitisation of spatial planning can be considered multi-dimensionally. The more comprehensive the approach, the better the solutions will be. The specificity of work in the state administration often does not allow for radical and quick adoption of solutions. All actions require time: the legislative process, testing of proposals in many variants, finally presentation to stakeholders and detailed analysis of submitted comments (often many thousands of separate issues). Adopting a universal solution on a national scale is definitely more difficult than on a local or even regional scale.

The idea of a step-by-step approach should bring the best end result. Moreover, most of the actions should be developed in parallel, so that once decisions are taken, they are not changed later. Figure 3 presents different approaches to digitisation of spatial planning divided into five different dimensions: legal, technical, data model, organisational and competence. The first of these concerns concrete solutions in the form of regulations, i.e. laws and ordinances, but also developments in the form of e.g. specifications. This part is of particular importance due to the necessity to create regulations in such a way as to create obligations for specific stakeholders. In the event that the measures taken do not have the character of legal norms, their implementation may turn out to be unrealistic. On the

other hand, it is also important to introduce legislation early enough, with a sufficiently long entry into force. Far-reaching changes related to spatial planning at the local level, which directly affect 2,477 municipalities in Poland, may require significant changes in the functioning of specific, often different solutions.

The second dimension, technical, is related to the proposed idea of creating a system based on a central solution including both hardware and software. At present, municipalities finance (from their own resources or with external support, including European Union) their own systems based on dedicated solutions or one of many geoinformation companies. Such a model is not optimal also from the financial point of view. Providing a system that allows both the creation and sharing, and ultimately the analysis of data will allow municipalities to optimise their activities.

In the technical dimension, data is important, including spatial data. This is the dimension of the data model that focuses on data creation and visualisation. Creation is understood as the proper preparation of both the features, attributes, and form of spatial data. Visualisation, on the other hand, refers to the way data is presented, displayed in a unified way.

The last two approaches refer to elements that indirectly affect the state of digitisation. The organisational dimension in the sense of both standards and guidelines (which do not derive directly from regulations) and good practices and recommendations (which can only be guidelines of an optional nature). Non-universal guidelines and recommendations are particularly important in the case of personnel or organisational changes in local government units. Those of national, central character should be unchangeable.

The last issue worth mentioning is the competencies of the persons involved in the process of digitisation of spatial planning. Improving competencies should be understood as systematisation of education (before starting a professional career), in particular: first and second degree studies and postgraduate studies. Successive further training is equally important. Of the changes proposed by the author, it is worth emphasising the great role of the planned comprehensive further training courses for urban planners, municipalities, provincial governors, consulting bodies, and

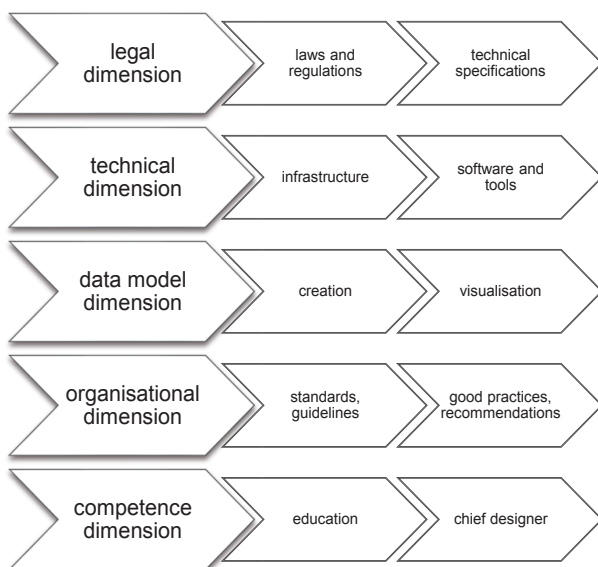


Fig. 3. Digitisation of spatial planning in individual dimensions with keywords (own elaboration)

at the beginning of a term of office for new heads of villages, mayors, presidents, and councils. The aim should be to develop the minimum requirements to be met by both an experienced urban planner (with emphasis, for example, on changes in the law and digitisation) and a person starting their studies (emphasis on practical experience, including internships outside studies).

Digitisation would, of course, be only one of many elements of these activities, nevertheless this aspect cannot be separated from theoretical preparation. Separately, it is worth considering the growing need to give proper prominence to principal designers. The author initiates changes and predicts that in the next stages of the spatial planning system reform the strengthening of the role of urban planners will be considered by defining formal conditions for leading the author's team.

ANALYSIS OF LEGAL REGULATIONS

Taking into account the conditions, it is reasonable to focus on the boundary of the planning study, as from the investor's point of view the most important issue is first and foremost a reliable and unambiguous verification whether a particular area is located within the boundaries of a valid planning act. The sooner uniform for the country assumptions for execution and publication of local plans in vector form are implemented, the less financial resources will be lost for (anyway necessary) vectorisation (Izdebski et al., 2020).

It was assumed that changes in the approach to the spatial planning document must and will happen very quickly (Jaroszewicz et al., 2016). This publication indicates that a systemic approach to the organisation and publication of spatial planning documents can not only facilitate the activities of local and central authorities, but above all, through planning participation portals, will help activate local communities, investors and individual citizens.

It is beyond question that the digitisation stage of spatial planning in mid-2021 did not force the implementation of the target scope. Full scope in this context means not only the presentation of a finished project, but above all the creation of the whole in geo-information technology. This means that in order to fulfil the

obligation under Chapter 5a of the Act (i.e. only with regard to the act's boundary), a scope that includes the creation and presentation of all design elements in vector form is not required. What is more, many municipalities or urban planners perform the reverse order of activities. This means that often a spatial planning act project is prepared in any technology (often in graphical or CAD software without identification of the coordinate system), a raster is generated and only such created graphic file is georeferenced. This state of affairs results not only from the fact that urban planners are accustomed to well-known software, but also from the lack of extensive training in this field.

Taking into account the legal status of planning and spatial development in 2020–2021, it is worth mentioning that at the moment, spatial data in vector form only covers the boundary of the area covered by the act. As a result of the analysis of the legal and organisational conditions of the Ministry of Economic Development and Technology, the legislator decided that the original scope of the reform, which included the creation of a new law, would be divided into precisely planned stages. The author advocates dividing the reform into stages. As part of the first tranche of the amendment to the Law on Planning and Spatial Development, efforts have been made to further digitise, which includes not only the boundary, but also zoning and even other planning regulations containing arrangements for the use and conditions of development of land resulting from the planning authority (finally deciding on building lines).

As of March 2022, the proposed spatial data scope in the draft amendment to the Planning and Spatial Development Act has been clarified for both the general plan and the local plan.

The proposed scope of spatial data for both the local plan and the general plan lacks designations which result e.g. from the need to take into account separate regulations. Instead, all the provisions of the general plan appear, while in relation to the local plan it was decided to introduce land use and building lines. Due to limited time and specification of priority actions, further spatial objects will be completed within the second tranche of the reform. At this point, it should be clarified that one of the important changes, which indirectly result from the state of digitalisation

in public administration, is the need to clearly separate planning arrangements (resulting from planning authority) from additional regulations (resulting from the need to take into account separate provisions).

Taking into account the needs of further standardisation, it will also be necessary to prepare appropriate regulations taking into account the way in which spatial data will be created both for designation and building lines. Certainly the work on the first element should make use of the regulation on the scope of the draft local spatial development plan with Appendix 1. Having the list of designations and the application standards, the drafting of the final wording of the regulation will be much simpler. It is also worth noting that the staging of such a large scope of work is important, both for the designer and the institutions involved in the application of the regulations.

Activities related to broadly understood digitisation are, on the one hand, expected by a part of the urban planning community, but also by later, potential users of this data. On the other hand, a considerable part of designers identifies subsequent stages using geoinformation systems as unnecessary and additional duty. Taking the above into account, it may turn out that non-legislative activities can become a factor strengthening the role of digitisation in spatial planning.

As early as 2018, it was argued (Michalik, 2018) that the institutions responsible for the drafting of documents should already stipulate at the stage of the order, model contract and specification how the final materials will be handed over. However, these elements will be implemented immediately before the provisions of the master plan come into force. This is because digitisation as a whole requires the definition of standards and their enforcement throughout the process of preparing a planning study. In this way, if those responsible for spatial planning in individual local government units are supported at each stage of their tasks, the end result will be studies of higher quality.

From the point of view of public administration, it is important to point out some limited human and organisational capacities. All activities described in this part of the article are important, but nevertheless 'complementary' to the legislative activities. With such a large number of tasks related to the digitisation

of spatial planning, additional activities, supporting the created or modified legislation, are often marginalised for obvious reasons.

At the same time, the idea of a smart city should be transferred or slightly modified in such a way that it can be implemented regardless of the size or wealth of the administrative unit.

The issue of active public participation, including above all the statement that the right to the city, in the context of spatial planning, implies that the urban space is a common thing. It is also emphasised that in the process of spatial planning, a special role falls to the municipal authorities – it is up to the local self-government units on a local scale to ensure that the participation of the inhabitants is active and real (Olejnik & Terlega, 2018).

Each time, the assumptions made are worth adapting to current ideas that can guide future action. In terms of current global issues, urban green infrastructure (UGI) is extremely important. Urban green infrastructure planning is a new approach to planning that aims to develop multifunctional networks of green and blue spaces designed and managed to deliver a wide range of ecosystem services, and thereby, to improve quality-of-life in cities. However, moving current practice in urban green space planning towards the UGI planning approach will require higher quality information about a wider array of ecosystem services than currently measured and more spatially detailed social valuation methods (Rall, Hansen & Pauleit, 2019). It is emphasised (Feltynowski et al., 2018), that effective urban planning, and urban green space management in particular, require proper data on urban green spaces. At the same time, better understanding of green space data sources is necessary in urban planning, and especially when planning urban green infrastructure.

Any action that changes the current status quo, i.e. that focuses on day-to-day services to stakeholders, can be radically altered if augmented digitisation is applied in a systems approach, from data acquisition and creation to analysis and data sharing. The tasks of creating an optimal model and urban planning project have been stretched for years: the cost of the mistake was very high. Significant cost of time, money, resources limited the number of alternatives, caused some superficiality of decisions and lack of calcula-

tions of project details (Klushnychenko & Savchuk, 2020). Taking into account the dynamics of changes in the surrounding reality, including, above all, a complex geopolitical situation or a pandemic, it is necessary to focus on data analysis. In turn, in order to carry out a reliable analysis, including spatial, it is necessary to have data of sufficient quality. The development of tools or workflows will therefore make it possible to take the right planning decisions more quickly. Space is a non-renewable resource of our planet, so coherent and well-planned actions should be approached with particular care.

SUMMARY AND CONCLUSIONS

Assumptions and scope of digitisation of spatial planning in Poland proposed in this study consider multi-dimensional aspects of the activities including spatial planning system, spatial policy and the structure of planning documents, as well as the interoperability issue of public registries. Both the described framework and the legal regulations change process are the base for standardisation in the area of spatial planning. They also provide a solution to repair spatial planning system. In this way the presented proposals extend the directions indicated by Śleszyński (2015) and describe the process of spatial planning integration with information and geospatial technology postulated by Izdebski and Malinowski (2014).

The UE INSPIRE Directive and the Polish Act on Spatial Information Infrastructure set the framework for further stages of digitisation of spatial planning in Poland. Gaździcki (2007) underlines that when implementing the state policy in the field of geoinformation, special attention should be paid to coordinating activities carried out by public administration at all levels and appropriate conditions for public cooperation with private entities participating in the development of the infrastructure. However, the planning of activities and their efficient implementation is the key to achieving the intended purpose. Radical and far-reaching changes are not desirable especially from the perspective of users responsible for the implementation of specific solutions.

Recently, special attention has been paid to increasing the flexibility not only of the spatial planning sys-

tem, but also of the planning documents themselves. This is of particular importance in the context of the dynamics of the surrounding reality.

In government work it is important to use the already developed solutions as much as possible. The concept of the solutions described in the article has been under consideration by the author since at least 2016. However, theoretically the most important thing was missing – the introduction of a wide range of regulations. Taking into account these particular conditions, the author, using her experience as an urban planner, GIS specialist, but also her previous scientific work, proposed the next steps and undertook their implementation. The vast majority of the proposed solutions were consulted with municipalities, geoinformation companies and other interested parties. The work on the regulations that were promulgated in late 2021 and early 2022, including those on the application form, the scope of the draft plan along with the classification of uses, allowed the final work on the draft reform to be framed differently. The proposed order of work undertaken was driven by the timetable, including the need to amend the regulation on the scope of the draft local plan by December 2021 and the decisions taken on simplifying procedures, including the possibility of continuing work on the application form. The application form for determining the location of a public purpose investment or development conditions is important because it assumes further digitisation. According to the assumption, in addition to optimising the working time of the office employee, it is also important to include spatial data covering the investment area, and not the entire cadastral plot.

As emphasised by Pawłat-Zawrzykraj and Swornik (2010), investments implemented on the basis of decisions on land development conditions, which are preceded by urban planning analysis, are an attempt to ‘it in’ with the existing order, but do not guarantee the creation of spatial order. In view of the possible risks, the author deliberately did not declare the scope of the solutions adopted, but despite extensive consultation the tasks to date have been completed on time and to the full extent. The work on the urban register is slightly different. In this case, the most important thing was not so much the regulations, which as a rule provide general principles for the implementation of the register,

but the implementation of a pilot scheme. It is by developing detailed rules and testing the adopted assumptions on a small group of users that optimal solutions are created. Previous assumptions of the Ministry of Economic Development and Technology were based on the creation of spatial data by local government units using a plug-in to QGIS and on their own updating and sharing without additional support. All the author's work is based on maximum support for local governments, not only in creating planning documents, including spatial data, but also in keeping them up to date and making them available. Thanks to these assumptions, digitisation of spatial planning should be associated with rational funding, as local government units will not be obliged to organise and finance it on their own. One of the obstacles of implementation of spatial planning digitisation process in Poland are some stakeholders, mainly employees of offices or planners who do not have the knowledge or skills that can benefit from spatial analysis. From their point of view, the creation of spatial data is too compact, and the possibilities of using spatial data sets are negligible. Nevertheless, the digitisation process is going on. The boundary of spatial planning acts is planned for successive vectorisation, at the moment the emphasis is on further elements of local plans, i.e. planned land use and building lines. In parallel, although with a much higher priority in relation to the new spatial planning act – the general plan of the municipality.

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WYBRANE ASPEKTY CYFRYZACJI PLANOWANIA PRZESTRZENNEGO W KONTEKŚCIE ZMIAN LEGISLACYJNYCH W POLSCE

STRESZCZENIE

Cyfryzacja planowania przestrzennego może być rozpatrywana wielowymiarowo. Im bardziej kompleksowe podejście będzie realizowane, tym lepsze rozwiązania zostaną wdrożone. Idea stopniowego podejmowania kolejnych działań powinna przynieść najlepszy efekt końcowy. Wprowadzenie w Polsce obowiązku tworzenia danych przestrzennych niejako zmusiło gminy czy też urbanistów do zdobywania wiedzy i umiejętności dotyczących geoinformacji oraz oprogramowania GIS. Celem głównym niniejszego artykułu jest zaprezentowanie założeń oraz zaproponowanie ram i dalszych etapów cyfryzacji planowania przestrzennego. Celem szczegółowym jest przedstawienie przepisów prawnych w procesie cyfryzacji planowania przestrzennego, które zostały zainicjowane lub znacznie zmodyfikowane przez autorkę, a których procedowanie rozpoczęło się lub trwało w Departamencie Planowania Przestrzennego, w polskim Ministerstwie Rozwoju i Technologii w czerwcu 2021 roku. Zatem oprócz działań zrealizowanych autorka wskazuje także potencjał i korzyści dla urbanistów, płynące z tworzenia części graficznej aktów w postaci wektorowej, ale także nakreśla znaczenie takich opracowań dla różnych grup odbiorców oraz administracji publicznej. Jednocześnie nie należy zapomnieć o osobach, dla których wszelkie rozwiązania się tworzy – o ogóle społeczeństwa.

Słowa kluczowe: planowanie przestrzenne, urbanistyka, cyfryzacja, legislacja, reforma, akty planowania przestrzennego