STRATEGIC PLANNING IN POLISH MUNICIPALITIES AND THE QUADRUPLE HELIX APPROACH: AN ANALYSIS OF THE RELATIONSHIP BETWEEN LOCAL STAKEHOLDER INVOLVEMENT AND STRATEGY DEVELOPMENT METHODS

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Abstract: This article focuses on the tools used in the strategic planning process and the involvement of various stakeholder groups based on the results of a survey. A computer-assisted web interview (CAWI) survey was conducted for the purposes of this study. Of the responses received, 150 were used for the analysis in this article. The most commonly used methods for developing strategies within the study group are SWOT analysis, whilst the most popular techniques for gathering information are open and internal workshops, statistical data analysis and surveys. An attempt to verify three hypotheses indicates that the broad involvement of stakeholders (quadruple helix approach) favours the diversity of methods used, but it is still unknown whether it influences the use of the scenario approach. The analysis also did not confirm a statistically significant relationship between the size of the municipality and the use of advanced planning techniques. The results of the study indicate the need for further exploration of this subject area in order to clarify the basic relationships.

Keywords: strategy, methods, quadruple helix, development, planning

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Introduction

Strategic planning at local level is a relevant topic from both an academic and a practical perspective. In the Polish context, the subject has gained significance in recent years in the light of the ongoing reform of the spatial planning system, although its academic roots go back several decades. Nevertheless, the existing literature has so far focused mainly on comparative analyses of strategy content (Mazzara et al. 2010, Ignacy, Kopyściański 2011), evaluation of strategy quality (Guyadeen et al. 2023), and research on the motivations behind strategy development (Sztando 2017), while quantitative research on the methods used to develop them is lacking. As an exception to the rule, it is worth noting the quantitative studies conducted in seven countries: France, Russia, Turkey, Romania, Hungary, and the United States (Hinţea et al. 2019). Its results, presented in the institutional and social settings, make an important contribution to discussions both on the mechanics of applying strategic planning and on the general understanding of

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this approach in different contexts. In Poland, the analysis focused primarily on case studies and comparative analysis (Dziemianowicz, Cybulska 2019, Martela et al. 2023). An exception is the study by Guzal-Dec et al. (2020), which examines the use of consultation methods by local authorities among residents in two regions in relation to the concept of good governance. Although there are numerous practical guides for local authorities, research on the methods used in developing municipal local strategies in relation to the quadruple helix concept is lacking, and our article fills this gap.

Strategic planning at local level has been gaining importance both in theory and in practice, particularly in the context of the ongoing reform of the spatial planning system in Poland. The current institutional and legal context in Poland makes the issue of local development strategies particularly timely. According to the binding legislation, all municipalities are required to prepare development strategies by 1 July 2026, and the new spatial planning reform strengthens the interdependence between strategic and spatial planning instruments. Although recent reforms and mandatory annual reporting have strengthened the role of strategic documents, the quality and methodological sophistication of strategies still vary significantly across municipalities.

This paper addresses a problem of relationship between the methods used by municipalities in the process of building development strategies and the stakeholder involvement in it. The main research question of this study concerns whether the level of stakeholder involvement and municipality size affect the choice of strategic planning methods in local government units. The article formulates and examines three research hypotheses:

H1. The extensive involvement of the quadruple helix in development planning processes favours the diversity of techniques for obtaining information used in the work on strategies.

H2. The extensive involvement of the quadruple helix in development planning processes favours the use of scenarios in development planning.

H3. Methods: Delphi, design thinking, and horizon scanning are statistically significantly more common in the largest municipalities than in the smallest ones.

The selection and construction of research hypotheses refer to the involvement in the strategic process and the use of specific methods, both in strategic and scenario planning (e.g. van der Heijden 1996). The first hypothesis relates to the strategic process in general. The second and third hypotheses consider the specific nature of the foresight approach as an element of the strategic process (Cybulska, Dziemianowicz 2024). The scenario method is often classified as a methodological approach, as it combines various types of techniques (van der Heijden 1996, Magruk 2012). For this reason (as the most complex), it has been identified in a separate hypothesis.

The source of the research is the results of a computer-assisted web interview (CAWI) survey addressed to all Polish municipalities in 2023. We analyse 150 responses obtained in the survey. The structure of the article is organised into an analysis of theory in a broad context, a description of methodology, a presentation of the research results and hypothesis verification, and a discussion of the results and conclusions. Overall, this study contributes to the emerging body of knowledge in the field of strategic planning in Polish municipalities, offering insights into how stakeholder engagement shapes methodological practices.

Literature review

Development strategies for organisations are considered in the literature as a multifaceted issue. Beyond eclectic attempts to describe strategy as an element of strategic management (de Wit, Meyer 2010), specific issues related to strategy and the strategic process are discussed (Kaplan, Norton 1996). At least three key topics concerning the organisation's strategy can be identified. The first is related to the role of strategy in the organisation's development. A fundamental question is 'whether the organisation needs a strategy?' This fits in with the trend of strategic management and, for example, making strategic choices (Ansoff 1985), but also the proper implementation of the strategy (Kaplan, Norton 2008). The second line of inquiry concerns the various approaches to strategy. The literature on the subject refers to strategic schools (perspectives), including planning, evolutionary, positional, and

resource-based (Obłój 2007). Within this line of inquiry, it allows the organisation to make its own choices regarding strategic actions. Therefore, the concept of strategy may be perceived from different perspectives, including as: a resource, a process, creativity, learning, and participation (Tighe 2019). The third topic we draw attention to concerns the role and involvement of stakeholders in the strategic process. The group of stakeholders involved in the strategic process can be very broad and diverse. The issue of the leader and leadership comes to the front here (Maxwell 2012), because leaders and their ways of operating are often seen as a key driving factor in strategic actions.

The strategy, initially adopted in the military context, found its application in business, and then in the operations of government and public administration. The evolution of a strategic approach in public administration (obviously excluding war strategies and plans) occurred with the emergence of New Public Management (NPM), that is, the transition from traditional (Weberian) administration towards results-oriented administration (Kjr 2004). The administration obviously tried to adopt good practices from the business world. This even resulted in the comparison of administrative units to companies and the respective local authorities to corporate management boards. It turned out that simply translating business principles into the principles of public institutions is neither easy nor, in many cases, even justified (Dziemianowicz 2016). Hood (1991) emphasised that increasing efficiency in administration in line with this trend may come at the expense of integrity and resilience, and the results of the literature review by Funck and Karlsson (2019) illustrate, among other things, the insurmountable difficulties in measuring this efficiency. Difficulties in implementing NPM and the clear weaknesses of this approach in administration resulted in a search for new forms of operations. The main approach that emerged in this search was governance (Mazur 2015). It addresses the dissatisfaction with public authorities acting 'above citizens' and, at the same time, involves various stakeholder groups in the implementation of administrative tasks. Of course, governance also has its disadvantages, but it seems to be the current leading approach in public administration, resulting in inclusion of residents and other stakeholder groups in participation processes.

This topic is directly related to the concept of the quadruple helix, which was developed as part of the theory of innovation systems involving cooperation between different sectors. The original concept of the triple helix, described by Etzkowitz and Leydesdorff (2000), involved the exchange of knowledge between universities, industry, and the government. Its evolution was proposed by Carayannis and Campbell (2009), who added to the original model a relationship with the 'media-based and culture-based public', which they associate with culture in general and even the creative class. In the evolution of this definition, the fourth helix can be interpreted more broadly as the inclusion of social partners, without a strictly defined subjectivity. Going beyond the innovation system, this pattern of cross-sectoral relations also becomes relevant in the general conduct of territorial development policy at various levels, where actions taken by government and local government structures benefit from the inclusion of the voices of business, science, and society representatives in the discussion on development. Taratori et al. (2021: 18) states that "the evolution of innovation ecosystems models (i.e. from Triple to Quintuple Helix) yields for the parallel to the evolution of smart urban governance approaches. (…) At the same time, the conceptualisation of most appropriate, dynamic and customised frameworks to the smart city transitions or even to the specific smart project to be envisaged". Leydesdorff and Deakin (2011), who linked the helix model to smart urban development, believe that it is neo-evolutionary in nature and, through the creation and exchange of knowledge, has the potential to adapt to new global conditions.

However, particular attention should be paid to how different stakeholders are involved in processes based on knowledge exchange between different sectors, especially in processes requiring a long-term perspective (Schütz et al. 2019). Although the literature indicates the need to involve different stakeholders, especially citizens, in planning processes (e.g. Sanoff 2000, Meschede, Mainka 2020), some case studies indicate that this is an element that may be poorly translated in strategic documents (Guyadeen et al. 2023) and projects (Taratori et al. 2021).

Depending on the course of strategic planning processes at local level, they may use different methods of analysis and information gathering techniques, which may (but do not have to) involve the participation of representatives of the quadruple helix.

The shape of the process is important for the subsequent implementation of the strategy. By design, it often includes the following: 1) analysis, 2) draft, 3) formal resolution, 4) implementation, and 5) evaluation (Meschede, Mainka 2020). Polish good practices from the scientific literature and practical guides indicate both the chronology of the individual stages of work on strategies and propose the tools to be used during the process. For example, Dziemianowicz et al. (2012) and Sztando (2013) distinguish, among others, diagnosis of the current situation and strategic analysis, setting of mission, vision, and strategic goals, or public consultations as key stages of the process. Each of these steps can be based on a number of proven methods and techniques. For the purposes of this article, it is worth distinguishing that information gathering and analysis techniques are the tools used and actions taken within the framework of more broadly outlined methods, that is, ways of proceeding aimed at achieving a given purpose (Dzwigoł 2015). This translates into the methods and techniques used in the process. Among the key methods of strategic analysis, Kałkowska et al. (2010) mention strategic analysis of the macroenvironment, competition environment, strategic potential, and comprehensive methods of strategic analysis. These include elements such as trend extrapolation, the Delphi method, environmental scenario planning, value chains, and SWOT analysis.

When it comes to information gathering and analysis techniques, a distinction can be made in terms of third-party involvement – into internal and external processes (both in relation to the person, team, and organisation) as well as in terms of the purpose of application. The first distinction depends on the nature of the process, as many of the techniques can be successfully applied with the involvement of a wider group of stakeholders (e.g. Warner 1996, Meschede, Mainka 2020), even if this is not their original mechanism. The second distinction, namely the purpose of application linked to the structure of strategic processes, also varies but appears to be more robust. Based on this, the methods and techniques can also be divided into four groups (Table 1 provides examples and descriptions of specific methods within these groups).

The first group of commonly applied methods consists of research-oriented information gathering processes aimed at diagnosing the past, current, and future conditions of development, in order to form an empirical foundation for subsequent analytical and decision-making stages (Guyadeen et al. 2023, Kilonzo, Ojebode 2023). These methods include, e.g., surveys, structured and semi-structured interviews with one person or more people, and desk research based on the literature, statistical databases, or plans and policies.

A second group of methods refers to participatory processes, which have become a central element of local development strategies under the governance paradigm, as one of the good governance principles (Commission of the European Communities 2001). These processes typically include workshops, focus groups, public meetings, deliberative forums, and stakeholder panels, designed to involve residents, local businesses, non-governmental organisations, and public institutions in shaping strategic directions. Participatory methods serve not only as a mechanism for collecting contextual and experiential knowledge but also as a tool for building consensus, legitimacy, and shared ownership of strategic goals (Quick, Bryson 2016). Such interactive formats support social learning, community building (Ruano 2019) and enhance the adaptability of strategies, although they require careful facilitation, sufficient amount of time, and resources to be productive (Sanoff 2000).

The third category encompasses diagnostic and analytical tools used to structure information, evaluate alternatives and support strategic decision-making. Among the most frequently applied instruments in local development strategies are SWOT and TOWS analyses, which enable the synthesis of internal and external factors and the formulation of strategic options (Weihrich 1982, Leigh 2010). Increasingly, more advanced multi-criteria decision-making (MCDM) techniques are employed to prioritise projects, assess policy scenarios, or compare development paths using both quantitative and qualitative criteria (Shrestha et al. 2004, Basset et al. 2018).

Table 1. Examples of the methods used for developing local strategies.

Method	Short description
Research	
Interviews (eg. IDI)	In-depth interviews are structured and flexible research interactions aimed at obtaining detailed insights into respondents' knowledge, experiences, perceptions, and interpretations of a given issue. They enable the researcher to explore factual information, meanings, motivations, and subjective evaluations attached to specific phenomena (Mears 2012).
Survey (eg. CAWI)	Survey research is a systematic method of collecting data from a defined population through questionnaires. Developed as a rigorous research approach, it is based on clearly defined principles concerning instrument design, sampling procedures, data collection, and statistical analysis. Central methodological requirements include ensuring validity and reliability of measurement (Ball 2019).
Delphi	The Delphi method is a structured, multi-round procedure designed to obtain and refine expert judgments on complex issues. It involves independent assessment by experts, followed by anonymised feedback summarising the group's responses. Participants are given the opportunity to revise their views in subsequent rounds, with the process continuing until a predefined level of consensus is reached. The method is particularly useful for forecasting and strategic planning in situations of uncertainty (Jorm 2025).
Participation	
Workshops (as an example of group interaction methods [Sanoff 2000])	Workshops are planned, time-limited events designed for a specific (usually small) group of participants, facilitated by experienced practitioners within the relevant domain with the expectation of a concrete outcome. They can aim to stimulate interaction, solve problems, learn, or perform other actions leading to tangible outputs in a specific domain (Ørngreen, Levinsen 2017).
Public hearings (as an example of open-ended methods [Sanoff 2000])	Public hearings are formal, open meetings that bring together public officials and citizens to discuss specific policy issues. They provide participants with an opportunity to express opinions, comments, or concerns in a public setting, although decision-makers are not necessarily required to provide responses. (Williamson, Fung 2004).
Analysis and decision-making	
SWOT	SWOT is a strategic diagnostic tool that structures analysis around four categories – internal strengths and weaknesses, and external opportunities and threats. Typically presented in a 2 × 2 matrix, it supports a comprehensive overview of internal and external factors affecting an organisation or territory. While the matrix format encourages holistic reflection, the method primarily serves to identify and organise key determinants (Leigh 2010).
PEST	PEST analysis is a framework for examining the context in which an organisation operates. It focuses on four categories of external factors: political, economic, social, and technological. The method is used to identify broader trends and contextual conditions that may influence development processes (Vasileva 2019). The acronym can be expanded – names such as PESTEL or STEEPS are also used in literature.
MCDM	Multi-criteria decision-making (MCDM) refers to a group of analytical approaches designed to support decisions involving multiple, often conflicting criteria. The method may aim at selecting the most preferred alternative, ranking available options, grouping them into preference categories, or identifying non-dominated solutions (Taherdoost, Madanchian 2023).
Futures exploration	
Scenario building	Scenario building is a foresight-oriented method used to construct coherent and plausible representations of alternative future developments. It explores possible and desirable futures in order to inform present decision-making. For scenarios to be analytically useful and credible, they should meet criteria such as pertinence, coherency, likelihood, importance, and transparency, including clarity regarding assumptions, methods, and conclusions (Durance, Godet 2010).
Visioning	Visioning is a strategic approach focused on defining a desirable future state towards which development efforts should be directed. By articulating long-term aspirations, visions provide orientation for operational planning, policy design, implementation, and subsequent monitoring or adaptation processes. In this sense, visioning serves as a normative framework guiding collective action and strategic alignment (John et al. 2015).
Backcasting	Backcasting is a planning approach that begins with the formulation of a desirable future outcome and then works backward to identify the steps required to achieve it. Backcasting is particularly suited to situations where transformative change is needed or where existing trajectories are considered unsustainable. It supports proactive and goal-oriented strategy design by linking long-term objectives with present policy choices (Bibri 2020).

CAWI – computer-assisted web interviews; IDI – in-depth interviews; PESTEL – political, economic, social, technical, environmental, legal; STEEPS – social, technological, economic, environmental, political, spatial.

We can also identify methods and techniques that can be used both analytically and participatively, depending on the chosen course of action. This group includes elements of exploring the future, including visioning, building future scenarios, and their subsequent analysis (Phdungsilp 2011). In this sense, a vision "represents a view of the ideal community toward which the group is working" (Gordon 2005: 27) and scenarios are "descriptions (usually of a possible future) which assume the intervention of several key events or conditions which will have taken place between the time of the original situation and the time in which the scenario is set" (Durance, Godet 2010: 1489). This group also includes approaches to translating images of the future into actions and strategic goals, such as backcasting.

Methodology

The centrepiece of the study was an online questionnaire survey (CAWI). In order to design the part of the questionnaire concerning strategic planning and management, an analysis of the literature was carried out, covering mainly handbooks on management and strategic planning in Polish municipalities, including publications commissioned by the Ministry of Development Funds and Regional Policy/Ministry of Regional Development (Dziemianowicz et al. 2012, Górniak, Mazur 2012, Hoinkis et al. 2021) and legal acts – the Act on development policy, Act on municipal self-government and Act on spatial planning. The information that contributed to the survey from these sources included the following: methods used in the strategic process, information gathering techniques, mandatory and voluntary elements of the strategic process, mandatory and voluntary inter-sectoral relations in the strategic process, and mandatory content of the new generation strategy (after the amendment under the Act of 7 July 2023, amending the Act on spatial planning and development and certain other acts).

The above sources were used to construct a part of the survey contained in the questions, which covered the existence of a strategy, the techniques used in its development to collect and analyse information, and the methods and frequency of consultation with various stakeholder groups. In this article, we discuss the findings from two matrix questions in the survey, concerning the methods and techniques used in the strategy preparation process and the frequency of involvement of various stakeholder groups (Table 2).

The first question asked was, 'What information gathering and analysis techniques did you use during the strategy development process?' The answer to the question consisted of responses regarding the use of each of the eight methods: internal workshops (only for office employees), open workshops (involving representatives of other entities and residents), online or stationary survey, Delphi survey (multi-stage survey with experts), statistical data analysis, design thinking, horizon scanning, and other methods. For each method, it was possible to select multiple answers from the following: 'Analysis of external conditions – e.g. PEST/PESTEL', 'Analysis of strengths and weaknesses – e.g. SWOT', 'Trend analysis', 'Building development scenarios', 'Other'.

The second question was, 'How often during the last two terms (since 2014) when planning and making development decisions in your municipality, did you refer to the opinions of…'. The question had six extensions: '…residents?'; …experts?', '…officials or representatives of other local government institutions?', '…business representatives?', '…non-governmental organisations (NGOs)?', '…other public entities?'. For each of these, the respondent could choose from the following options: 'Never', 'Rarely (in single cases)', 'Usually (in most cases)'; 'Always'.

In addition, the part of the survey that is not discussed in this article concerned the approach to exploring the future and the perception of the future, leadership, and development among local decision-makers. These elements are beyond the scope of this paper and are therefore not described here.

The initial assumption was to survey all municipalities in Poland (2477 units). The CAWI survey was conducted using Google Forms in November 2023. The survey was distributed by email to the email addresses of municipalities listed in the public contact database of local government units provided by the Ministry of the Interior and Administration. The assumption was that one person from each municipality would respond, who held a decision-making or

specialist position aimed at planning the development of the unit. The CAWI survey was used to identify municipalities that had prepared or were in the process of preparing a strategy of development. These municipalities were asked about their approach to the strategy process.

The survey was structured around 15 questions, including closed-ended questions (single and multiple choice) and open-ended questions. Four questions used a Likert scale to determine the views of local government representatives on specific issues (by their agreement with the statements provided). The questions addressed topics such as the techniques used in the strategic process and stakeholder involvement.

The hypotheses raised in the article refer to the differences between the types of municipalities that participated in the survey. In order to verify them, non-parametric tests (Mann–Whitney *U*, Kruskal–Wallis) were carried out to statistically evaluate the observed trends. Non-parametric tests were used due to the unequal size of the groups being compared and the lack of normal distribution in the responses obtained (Norcliffe 1986). A significance level of 95% was adopted.

In order to verify Hypothesis 1, two comparative groups of survey respondents were created. The first group consisted of respondents from municipalities with the broadest involvement of the quadruple helix in development planning processes. The second group comprised respondents from municipalities with the weakest involvement of the quadruple helix. For this purpose, a 'helix' and 'anti-helix' indicator was constructed, where weights were assigned to the answers to the survey question regarding the frequency of consultation with stakeholders on decisions. For the first group, the indicator expressed the sum of the weights assigned to the answers 'always' (weight = 1) and 'usually' (weight = 0.5). In the second group, the indicator expressed the sum of the weights assigned to the answers 'never'

Table 2. The structure of questions whose results are analysed in the paper.

Q1: What information gathering and analysis techniques did you use during the strategy development process?						
Internal workshops (only for office employees)	Analysis of external conditions – e.g., PEST/PESTEL building development scenarios	Analysis of strengths and weaknesses – e.g., SWOT	Trend analysis	Building development scenarios	Other	None (technique was not used)
Open workshops (involving representatives of other entities and residents)						
Online or stationary survey						
Delphi survey (multi-stage survey with experts)						
Statistical data analysis						
Design thinking						
Horizon scanning						
Other						

Q2: How often during the last two terms (since 2014) when planning and making development decisions in your municipality, did you refer to the opinions of...				
	Never	Rarely (in single cases)	Usually (in most cases)	Always
...residents?				
...experts?				
...officials or representatives of other local government institutions?				
...business representatives?				
...non-governmental organisations (NGOs)?				
...other public entities?				

(weight = 1) and 'rarely' (weight = 0.5). In this way, a group of 24 respondents was selected for the HELIX TOP24 group, with a score of the first indicator from 3.5 and above, as well as a group of 25 respondents for the HELIX WORST25 group, with a score of the second indicator from 3 and above. The assigned weights were used solely to form the two comparison groups. The weights were not taken into account in the statistical tests. The groups were constructed in a way that prevented the same units from being included in both. The data for both groups were statistically analysed using a non-parametric test. The test compared the total number of techniques used per municipality in both groups.

Comparative groups were also used to test the second hypothesis, which examined whether respondents in one group more often indicated the use of scenario planning than those in the second group. To verify Hypothesis 2, a Mann–Whitney *U* test was performed.

In order to verify Hypothesis 3, the participating municipalities were divided into five size groups according to percentiles[1]. The data described above were then statistically analysed using non-parametric tests. The tests took into account an indication of whether the municipality used at least one of the techniques mentioned. This hypothesis was tested in two steps. In the first step, a Kruskal–Wallis test was performed to compare all five groups of municipalities. To complement the above analysis, a Mann–Whitney *U* test was also performed. The test compares only two groups of municipalities, which allows a more accurate analysis.

Results

Analysis of political and legal conditions influencing the formulation of local development strategies in Poland

The issue of strategy development by local authorities in Poland can be placed in the context of the phenomena described above. Local development strategies will soon become an obligatory element of the country's development management system, or rather, they already are, as municipalities must have a strategy in place by 1 January 2026 (Journal of Laws 1990, No. 16, item 95). Local governments are currently working on both strategies and spatial plans (general plans – as part of the spatial planning reform [Journal of Laws 2003, No. 80, item 717]). In the emerging system, the key strategic document is the medium-term development strategy of Poland, with which both government documents (so-called horizontal strategies – including the national regional development strategy) and development strategies of voivodeship governments should be coherent. The boards of these voivodeships assess local and supra-local strategies in terms of their coherence with spatial policies. Therefore, local strategies must be consistent with the voivodeship strategy, but also with the supra-local strategy, if one has been developed.

The strategic planning system in Poland responds flexibly to the territorial development instruments used in the context of European Union (EU) policies (see Regulation (EU) 2021/1060 of the European Parliament, of the Council 2021). This territorial approach to development results in many different experiences in regions and at local level across Europe (Pertoldi et al. 2022). Also in Poland, the issues of strategic planning at local level are a subject of interest not only to practitioners, but also to academics (Klasik, Frenkel 1993).

For a long time, the issue of local authorities having a strategy has been a concern in the context of local government activities. Throughout the period of economic transformation from 1989 to the present day, municipal strategies have not been a mandatory document, although it is important to note that having a strategy made it easier for municipalities to apply for European funds (Dziemianowicz et al. 2012). Therefore, the non-binding document adopted by the municipal council could give the impression that local authorities want to act strategically and are therefore more aware of the importance of strategic management than those that do not have these documents. However, it turned out that there are few municipalities without a strategy (a definite minority). Nevertheless, numerous problems were identified in the creation and use of these documents, which were used almost exclusively as attachments to applications for European

[1] The groups are unequal, as the breakdown into quintiles was done on the full group of 161 municipalities.

funding. Although in opinion polls of local authorities, the awareness of having a strategy, a vision of development, an idea for development and conducting strategic management seemed to be high (Dziemianowicz 2016). A positive instrument increasing the importance of strategy was the obligatory reporting on strategy implementation in an important political document, which since 2018 has been the 'Report on the State of the Commune'. This report, prepared annually, is adopted by municipality councils, and if it is not adopted twice, a motion for a referendum on the dismissal of the municipality governor can be made. Thus, referring to a strategy has become a necessity, but it is still difficult to implement a strategy with the help of appropriate implementation programmes.

As early as the beginning of the 1990s, because of the aid flowing into Poland from developed countries, manuals on strategy preparation were created, drawing on Western experience (Bończak-Kucharczyk et al. 1996, Kłosowski, Warda 2001), but later also on domestic experience (Dziemianowicz et al. 2012). Recent reforms, which bring the development planning system closer to combining strategic and spatial planning, have resulted not only in provisions that local strategies will be obligatory, but also in the fact that the manner of preparing the document and its minimum scope have been defined by law. Manuals for strategic planning at local and supra-local levels therefore take into account the interpretation of the laws, but also refer to good practices, including the building of a network of stakeholders involved in the strategy development process and subsequent implementation (Hoinkis et al. 2021, Churski et al. 2022). As part of the strategy preparation, a process of public consultation on the draft document is necessary, but none of the statutory provisions mention tools and methodology for strategy preparation. This should not be considered a legal loophole, as it allows for a certain degree of freedom in the actions of document creators, which does not limit their inventiveness.

At the same time, since 2020 the strategy (its draft) must be consulted (with: "neighbouring municipalities and their associations, local social and economic partners, residents of municipalities – in the case of a supra-local development strategy, or a municipality – in the case of a municipal development strategy, and with the appropriate director of the regional water management board of the State Water Holding Polish Waters" [Journal of Laws 2006, No. 227, item 1658, own translation]). However, the rules regarding these consultations are very general and leave room for a passive position on the part of local government, which is only required to allow the possibility of submitting comments after the draft document has been made available to the general public. The scope and frequency of stakeholder involvement during the preparation of the document is not defined. Therefore, the inclusion of stakeholders in the process of creating a municipal development strategy document is dictated by good practice rather than statutory pressure (with the exception of those documents that are prepared within the framework of EU territorial instruments – here the involvement of stakeholders is already defined at the stage of document creation).

Given the social and economic partners, other municipalities, and the residents themselves, it can be assumed that all elements of the quadruple helix should be involved in the process of creating documents. Unfortunately, this is not easy due to the partners' perception of the strategy as a document with little power. Considering the fact that a wide range of research tools can be identified, including those based on group work and the high socialisation of local strategies (at least in theory), we try to verify three research hypotheses in this article.

Respondent structure

Responses were received from 223 different entities, of which 161 respondents provided the name of the municipality. Most responses came from rural municipalities (45%), followed by urban–rural (34%) and urban (21%) municipalities. The largest number of responses came from the Małopolskie (18 responses), Śląskie (17 responses), and Mazowieckie (17 responses) Voivodeships (Table 3). Owing to the relatively low number of responses in the regions, we did not conduct comparisons between them. The difference in the number of responses from the regions makes a comparative analysis impossible. Among the 161 respondents, the largest group were Deputies/Secretaries/Treasurers

Table 3. Distribution of responses by voivodeship.

Voivodeship	Number of responses	Number of municipalities in voivodeship	Response share by number of municipalities
Dolnośląskie	6	169	3.6%
Kujawsko-Pomorskie	11	144	7.6%
Lubelskie	16	213	7.5%
Lubuskie	2	82	2.4%
Łódzkie	11	177	6.2%
Małopolskie	18	182	9.9%
Mazowieckie	17	314	5.4%
Opolskie	1	71	1.4%
Podkarpackie	9	160	5.6%
Podlaskie	11	118	9.3%
Pomorskie	8	123	6.5%
Śląskie	17	167	10.2%
Świętokrzyskie	9	102	8.8%
Warmińsko-Mazurskie	10	116	8.6%
Wielkopolskie	8	226	3.5%
Zachodniopomorskie	7	113	6.2%
Total	161	2477	6.5%

(78). The next largest groups included employees of the department responsible for municipal development planning (28), other municipal office employees (24), directors or managers of departments/divisions in the municipal office (22), and mayors (9). A total of 150 respondents stated that their municipality either had a development strategy or was in the process of preparing one. This group answered questions regarding development strategies, so their responses are subject to further analysis.

Techniques used in the process of building strategy of development

Based on the survey respondents' answers, two groups of information gathering and analysis techniques stand out, with techniques in each group receiving a similar number of indications (Table 4). The first group consists of techniques that are commonly used, with 126 responses (84%) or more respondents indicating their use. These are, in order, open and internal workshops, statistical data analysis, and surveys. The second group of techniques are elements used occasionally, which were indicated by less than 33% of respondents. This group includes design thinking, horizon scanning, Delphi survey, and other methods.

Among the methods used, most respondents indicated the analysis of strengths and weaknesses (139 responses) (Table 5). The differences between the number of indications of other methods are small – 96 people declared the use of trend analysis, 85 – the analysis of external factors, 87 – the development of development scenarios, and 77 – other methods.

In response to the question of how often, over the last two terms of office, the views of various stakeholders were taken into account during planning and decisions on development in their municipality, the largest number of respondents indicated a high frequency (answers 'usually' and 'always') of consultation on development decisions with residents (109) and officials or representatives of other local government institutions (101) (Table 6). The lowest number of respondents indicated a high frequency of

Table 4. Techniques for collecting and analysing information in the process of building the strategy of development based on the results of the survey (N = 150).

Type of information gathering and analysis technique	Number of responses (n = 150)
Open workshop (involving representatives of other entities and residents)	140
Statistical data analysis	136
Online or on-site survey	135
Internal workshop (only for office employees)	126
Design thinking	48
Horizon scanning	48
Delphi survey (multi-stage survey with experts)	43
Other	38

Table 5. Methods in the process of building the strategy of development based on the results of the survey (N = 150).

Method name	Number of responses (n = 150)
Strengths and weaknesses analysis – e.g. SWOT	139
Trend analysis	96
Analysis of external factors – e.g. PEST/PESTEL	85
Building development scenarios	87
Other	77

Table 6. Frequency of consulting with stakeholders based on the results of the survey (N = 150).

How often has your municipality referred to the opinions of ... during the planning and decision-making process for development over the last two terms of office (since 2014)? (n = 150)	residents	experts	other public entities	officials or representatives of other local government institutions	business representatives	non-governmental organisations
Never	1	8	5	7	10	4
Rarely (in isolated cases)	40	60	65	42	85	63
Usually (in most cases)	89	70	68	83	44	68
Always	20	12	12	18	11	15

consultation with business representatives (55). The other stakeholder groups were indicated a similar number of times.

Verification of research hypotheses

The results of the analyses conducted to test the first hypothesis indicate that respondents in the HELIX TOP24 group indicated that their municipality used more than five different techniques (5.25), with almost one (0.833) indication for each municipality for a technique used as part of a method not mentioned in the question (answer 'Other') (Table 7). On the other hand, respondents from the second group indicated significantly fewer techniques used. There were less than four for each municipality (3.72). The results of the Mann–Whitney *U* test support Hypothesis 1 (Table 8). Municipalities with a higher level of involvement of the quadruple helix in development planning processes used statistically significantly more different techniques when developing their strategies.

Contrary to the second hypotheses, which stated that extensive involvement of the quadruple helix in development planning processes favours the use of scenarios in development planning, their higher use (but not statistically significant) took place in municipalities with a low level of quadruple helix involvement in development planning processes (Table 9). The hypothesis should therefore be rejected, but it is important to note that development scenarios are a very rare tool in general. The reasons for this

Table 8. Mann-Whitney U-test results for the number of techniques used in the two groups of municipalities based on the results of the survey (N = 150) – data was compiled using the PS IMAGO PRO solution, whose analytical engine is IBM SPSS Statistics.

Group of municipalities	Average rank*	Value Z	Significance
top24	28.71	−2.121	0.034
worst 25	20.29		

* a higher average rank means a higher number of techniques used.
H_0: the groups do not differ (the samples are drawn from the same population).

Table 7. Information gathering and analysis techniques in two municipal groups based on the results of the survey (N = 150).

Type of information gathering and analysis technique	HELIX TOP24	Number of 'Other' indications	HELIX WORST25	Number of 'Other' indications
Internal workshop (only for office staff)	21	0	18	0
Open workshop (involving representatives of other entities and residents)	24	1	19	1
Online or on-site survey	22	6	17	0
Delphi survey (multi-stage survey with experts)	8	4	4	0
Statistical data analysis	21	1	20	1
Design thinking	10	1	7	2
Horizon scanning	11	2	5	1
Other	9	5	3	1
Total	126	20	93	6
Average	5.25	0.83	3.72	0.24

H_0: the groups do not differ (the samples are drawn from the same population).

Table 9. Mann-Whitney U-test results for the use of development scenarios in the context of the quadruple helix (yes = 1, no = 0) based on the results of the survey (N = 150) – data was compiled using the PS IMAGO PRO solution, whose analytical engine is IBM SPSS Statistics.

Group of municipalities	Average rank* (yes = 1, no = 0)	Value Z	Significance
top24	24.17	−0.479	0.632
worst 25	25.80		

* a higher average rank means more frequent use of development scenarios.
H_0: the groups do not differ (the samples are drawn from the same population).

Table 10. Selected methods in municipalities by size group based on the results of the survey (N = 150).

Groups by population (based on percentiles)	Group size	Use of Delphi survey, design thinking or horizon scanning	Share (%) of municipalities indicating use of method within group
Group 1 (<4866)	26	9	35%
Group 2 (4866–7693)	31	12	39%
Group 3 (7694–13,030)	31	13	42%
Group 4 (13,031–25,088)	30	14	47%
Group 5 (>25,088)	32	15	47%
Total	150	63	42%

H_0: the groups do not differ (the samples are drawn from the same population).

Table 11. The Kruskal Wallis test results – using a Delphi survey, design thinking, or horizon scanning (yes = 1, no = 0) for 5 groups of municipalities based on the results of the survey (N = 150) – data was compiled using the PS IMAGO PRO solution, whose analytical engine is IBM SPSS Statistics.

Group of municipalities	Average rank* (yes = 1, no = 0)	Value H Kruskal Wallis	Significance
1	69.96	1.292	0.863
2	73.03		
3	75.45		
4	79.00		
5	79.16		

* a higher average rank means more frequent use of Delphi survey, design thinking or horizon scanning.
H_0: the groups do not differ (the samples are drawn from the same population).

should not be sought in the level of development of cooperation between different sectors, but in the general level of awareness.

The survey results indicated that the use of methods such as Delphi, design thinking, and horizon scanning increases with the municipality size, which is in line with the assumptions of the third hypothesis (Table 10). However, following the application of a the Kruskal–Wallis test, this result proved to be statistically insignificant (Table 11). It should therefore be concluded that the size of the municipality is not a significant differentiating factor in the approach to the use of techniques such as the Delphi survey, design thinking, or horizon scanning. The results of the complementary Mann–Whitney *U* test showed no significant difference between the two groups under comparison, indicating that the differences between the two groups of municipalities were not statistically significant (Table 12).

Table 12. Mann Whitney U test results – using a Delphi survey, design thinking or horizon scanning (yes = 1, no = 0) in the smallest and largest municipalities based on the results of the survey (N = 150) – data was compiled using the PS IMAGO PRO solution, whose analytical engine is IBM SPSS Statistics.

Group of municipalities	Average rank*	Value Z	Significance
1	27.54	−0.935	0.350
5	31.09		

* a higher average rank means more frequent use of Delphi survey, design thinking or horizon scanning.
H_0: the groups do not differ (the samples are drawn from the same population).

Discussion of the results and final conclusions

The obtained results allowed us to verify the initially formulated hypotheses. In the case of the first hypothesis, statistical confirmation was obtained. Therefore, two conclusions can be drawn regarding both practice and future research. The broad involvement of various stakeholders in the strategy-building process can obviously contribute to the diversity of methods used. At the same time, it can put pressure on the process leaders to draw on a variety of experiences. On the one hand, this can be a factor that improves the quality of work and results, but it can also

disrupt previously prepared plans for strategy development processes (Dziemianowicz 2016). In Poland, Guzal-Dec et al. (2020) conducted an interesting study on this topic. The study revealed a clear correlation between the use of participatory methods and the subsequent positive perception of the quality (usefulness) of the strategic document. The scope of this study extends beyond Hypothesis 1 in this article but highlights the impact of stakeholder engagement on management approaches. It also shows a possible feedback interaction – a good perception of the document quality may influence the subsequent willingness to engage in the process. The sustained engagement of stakeholders can lead to improved relations between them and the local authority, and can enhance the quality of the process (Ruano 2019).

The literature on the subject suggests that joint deliberations on the future leading to the definition of a consensus-based vision, or at least consideration of possible future scenarios, can form the basis for work on a strategy (Government Office for Science, 2016) and its subsequent legitimisation (Fenton et al. 2016). It is also directly related to the range of techniques used (Fenton et al. 2016). Nevertheless, we were unable to positively verify the second hypothesis in this study. This raises the key question of why scenario-based approaches are so rare in municipal strategies. Cybulska and Dziemianowicz (2024), using the term 'strategic-foresight maturity of municipalities', point to numerous problems and factors that discourage or limit local authorities in the use of scenarios. They concern the attitude and experience of leaders, but also of the teams that are preparing strategies. A certain limitation may also be the fact that scenarios are not a statutorily required element of strategy[2], although scenarios are clearly preferred in business thinking about the future (Tighe 2019). It is obvious, however – and this is confirmed by research (e.g. Carlsen et al. 2013, McBride et al. 2017) – that higher stakeholder participation affects the quality of the implemented scenario method, which by definition is based on participatory methods (e.g. van der Heijden 1996). It seems that the leader's involvement and influence on shaping the strategic process may be crucial.

The results obtained also do not confirm the third hypothesis. The lack of a relationship between population size and the variety of methods used in the strategic process may come as a surprise. The size of territorial units may determine the scope of the strategic process, the competences of teams and leaders (Carmeli 2006), and technical capabilities through economies of scale (Newton 1982), and sometimes directly influences whether given units create strategic documents at all (Řehoř 2015). Studies from other countries also provide such examples. For instance, in Hungary there is a clear positive correlation between the size of the local government and citizens' involvement in strategic processes (Barati-Stec 2019). The example of France also shows that in small municipalities it can be difficult to undertake strategic actions at all – it is the larger local governments that have greater powers and opportunities to engage citizens (Carmouze et al. 2019).

However, the process of strategy development, even if it involves cooperation with various stakeholders, can intensively engage a specific and fairly limited number of stakeholders (Dąbrowska et al. 2022). This means that it is not the number of potential stakeholders involved in the process that is important, but the actual number. Assuming that the activity may also concern those who are aware of and interested in the strategic process, the element of team competence is crucial, not the general public. In any case, this is actually what the results suggest – the use of more advanced methods is more common in larger municipalities, although the differences are not significant enough to be statistically significant.

However, when interpreting the results of our study presented in this article, it should be taken into account that we rely on the results of a survey that is subject to certain flaws. The main objection to this method in the context of the study is the low flexibility and superficiality of the topics covered (lack of opportunity to explore the topic in depth during the process) (Pandey, Pandey 2015). Another limitation is that a comparative regional analysis could not be conducted due to substantial disparities in the number of responses across

[2] Although they are a legally mandatory element of the national development concept (Journal of Laws 2006, No. 227, item 1658.), which could potentially influence their dissemination among local governments.

regions; therefore, this aspect was not analysed in detail. Moreover, since the existence of a local strategy is a prerequisite for accessing other territorial instruments in the 2021–2027 programming period, the lack of attention to the year of strategy adoption constitutes an additional limitation of the research. It should also be noted that the study did not rely on a strictly random sample. The number of responses obtained does not meet the sample size requirements, and the responding municipalities were more likely to be those that are relatively more active and open to sharing information. Consequently, the sample may be affected by response bias (Babbie 2011), which should be taken into account when interpreting the results. Nevertheless, it allows for a contribution to the research area, shedding some light on the specificity of strategy of development methods and verifying some of the hypotheses.

Nevertheless, in summary the findings demonstrate that broad and systematic stakeholder engagement supports greater methodological diversity, but at the same time reveals the marginal use of advanced methods. This indicates a clear need to strengthen institutional capacities and strategic competences within municipal administrations, regardless of the municipality size.

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Authors' contributions

WD: conceptualisation, including the development of hypotheses and research structure, literature review, and writing, including the description of results; MC: conceptualisation, literature review, statistical analysis, and writing, including the description of results; MS: conceptualisation, conducting the questionnaire survey, literature review, and writing, including the description of results.

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References

Act of March 8, 1990 on municipal self-government. Journal of Laws 1990, No. 16, item 95.

Act of March 27, 2003 on planning and spatial development. Journal of Laws 2003, No. 80, item 717.

Act of December 6, 2006 on the principles of conducting development policy. Journal of Laws 2006, No. 227, item 1658.

Ansoff H.I., 1985. *Zarządzanie strategiczne* (Strategic management). Państwowe Wydawnictwo Ekonomiczne, Warsaw.

Babbie E., 2011. *The basics of social research*, Fifth Edn. Cengage Learning EMEA, Hampshire.

Ball H.L., 2019. Conducting online surveys. *Journal of Human Lactation* 35(3): 413–417. DOI 10.1177/0890334419848734.

Barati-Stec I., 2019. Strategic planning in post-communist settings: The example of Hungary. In: Hințea C.l.E., Profiroiu M.C., Țiclău T.C. (eds), *Strategic planning in local communities. A cross-national study of 7 countries*. Palgrave Macmillan, Cham: 45–70. DOI 10.1007/978-3-030-03436-8.

Basset M.A., Mohamed M., Sangaiah A.K., Jain V., 2018. An integrated neutrosophic AHP and SWOT method for strategic planning methodology selection. *Benchmarking: An International Journal* 25(7): 2546–2564. DOI 10.1108/BIJ-08-2017-0232.

Bibri S.E., 2020. A methodological framework for futures studies: Integrating normative backcasting approaches and descriptive case study design for strategic data-driven smart sustainable city planning. *Energy Informatics* 3: 31. DOI 10.1186/s42162-020-00133-5.

Bończak-Kucharczyk E., Cousins L., Herbst K., Steward M., 1996. *Lokalne strategie rozwoju gospodarczego. Poradnik dla gmin i liderów lokalnych* (Local economic development strategies. A guide for municipalities and local leaders). Britain's Know-How Fund, Warsaw.

Carayannis E.G., Campbell D.F.J., 2009. "Mode 3" and "Quadruple Helix": Toward a 21st century fractal innovation ecosystem. *International Journal of Technology Management* 46(3/4): 201–234. DOI 10.1504/IJTM.2009.023374.

Carlsen H., Dreborg K.H., Wikman-Svahn P., 2013. Tailor-made scenario planning for local adaptation to climate change. *Mitigation and Adaptation Strategies for Global Change, Springer* 18(8): 1239–1255. DOI 10.1007/s11027-012-9419-x.

Carmeli A., 2006. The managerial skills of the top management team and the performance of municipal organisations. *Local Government Studies* 32(2): 153–176. DOI 10.1080/03003930600586159.

Carmouze L., Hernandez S., Serval S., 2019. Through the looking-glass: What does strategic planning reveal in French local governments? In: Hințea C.l.E, Profiroiu M.C., Țiclău T.C. (eds), *Strategic planning in local communities. A cross-national study of 7 countries*. Palgrave Macmillan, Cham: 9–44. DOI 10.1007/978-3-030-03436-8.

Churski P., Ciesiółka P., Kołsut B., Mikuła Ł., 2022. *Strategia rozwoju ponadlokalnego. Poradnik praktyczny* (Supra-local

strategy development. A practical guide). Ministry of Development Funds and Regional Policy, Warsaw.

Commission of the European Communities, 2001. *European Governance. A White Paper*. Commission of the European Communities, Brussels.

Cybulska M., Dziemianowicz W., 2024. *Po prostu foresight! W kierunku dojrzałości strategiczno-foresightowej samorządów* (Simply foresight! Towards strategic foresight maturity for local authorities). Institute of Urban and Regional Development, Warsaw–Krakow.

Dąbrowska A., Dziemianowicz W., Cybulska M., 2022. Towards the strategic cooperation of „Two Worlds": University-local government relationships in Warsaw. In: Iakovleva T., Thomas E., Nordstrand Berg L., Pinheiro R., Benneworth P. (eds), *Universities and regional engagement. From the exceptional to the everyday*. Routledge, London and New York: 156–172. DOI 10.4324/9781003150299.

de Wit B., Meyer R., 2010. *Strategy: Process, content, context: An international perspective*. Cengage Learning EMEA, Hampshire.

Durance P., Godet M., 2010. Scenario building: Uses and abuses. *Technological Forecasting & Social Change* 77(9): 1488–1492. DOI 10.1016/j.techfore.2010.06.007.

Dziemianowicz W., 2016. Łańcuch wartości w świetle wyników ankiet (The value chain of a commune in the light of research results). In: Dziemianowicz W., Szlachta J. (eds), *Łańcuch wartości gminy* (The value chain of a commune). KPZK PAN, Warsaw: 56–78.

Dziemianowicz W., Cybulska M., 2019. Partycypacja społeczności lokalnej w procesie tworzenia strategii rozwoju – na przykładzie miast wojewódzkich w Polsce (Participation of local communities in the process of building development strategies – an example of voivodeship's capitals in Poland [in Polish]). *Prace i Studia Geograficzne* 64(3): 161–180.

Dziemianowicz W., Szmigiel-Rawska K., Nowicka P., Dąbrowska A., 2012. *Planowanie strategiczne. Poradnik dla pracowników administracji publicznej* (Strategic planning. A guide for public administration employees). Ministry of Regional Development, Warsaw.

Dzwigoł H., 2015. Założenia do budowy metodyki badawczej (Assumptions for the construction of the research methodology). Zeszyty Naukowe Politechniki Śląskiej. *Seria: Organizacja i zarządzanie* 78: 99–116.

Etzkowitz H., Leydesdorff L., 2000. The dynamics of innovation: From national systems and 'Mode 2' to a triple helix of university – industry − government relations. *Research Policy* 29(2): 109–123. DOI 10.1016/S0048-7333(99)00055-4.

Fenton P., Gustafsson S., Ivner J., Palm J., 2016. Stakeholder participation in municipal energy and climate planning – experiences from Sweden. *Local Environment* 21(3): 272–289. DOI 10.1080/13549839.2014.946400.

Funck E.K., Karlsson T.S., 2019. Twenty-five years of studying new public management in public administration: Accomplishments and limitations. *Financial Accountability & Management* 36(4): 347–375. DOI 10.1111/faam.12214.

Gordon L.G., 2005. *Strategic planning for local government*, 2 edn. International City/County Management Association, Washington.

Government Office for Science, 2016. *Future of cities: Foresight for cities*. Government Office for Science, London.

Górniak J., Mazur S., 2012. *Zarządzanie strategiczne rozwojem* (Strategic development management). Ministry of Regional Development, Warsaw.

Guyadeen D., Henstra D., Kaup S., Wright G., 2023. Evaluating the quality of municipal strategic plans. *Evaluation and Program Planning* 96: 102186. DOI 10.1016/j.evalprogplan.2022.102186.

Guzal-Dec D., Zbucki Ł., Kuś A., 2020. Good governance in strategic planning of local development in rural and urban-rural gminas of the eastern peripheral voivodeships of Poland. *Bulletin of Geography. Socio-economic Series* 50(50): 101–112. DOI 10.2478/bog-2020-0035.

Hinţea C.l.E., Profiroiu M.C., Ţiclău T.C., 2019. *Strategic planning in local communities. A cross-national study of 7 countries*. Palgrave Macmillan, Cham. DOI 10.1007/978-3-030-03436-8.

Hoinkis D., Cieplak J., Machowski T., Odzimek W., 2021. *Strategia rozwoju gminy. Poradnik praktyczny* (Strategy of development for the municipality. Practical guide). Ministry of Development Funds and Regional Policy, Warsaw.

Hood C., 1991. A public management for all seasons? *Public Administration* 69: 3–19. DOI 10.1111/j.1467-9299.1991.tb00779.x.

Ignacy J., Kopyściański T., 2011. Selection criteria of strategic goals for local governments. *Argumenta Oeconomica* 27(2): 15–36.

John B., Keeler L.W., Wiek A., Lang D.J., 2015. How much sustainability substance is in urban visions? – An analysis of visioning projects in urban planning. *Cities* 48: 86–98. DOI 10.1016/j.cities.2015.06.001.

Jorm A., 2025. *Using the Delphi method to establish expert consensus: A practical guide*. Palgrave Macmillan, Singapore. DOI 10.1007/978-981-96-8357-4.

Kałkowska J., Pawłowski E., Trzcielińska J., Trzcieliński S., Włodarkiewicz-Klimek H., 2010. *Zarządzanie strategiczne. Metody analizy strategicznej z przykładami* (Strategic management. Strategic analysis methods with examples). Wydawnictwo Politechniki Poznańskiej, Poznań.

Kaplan R.S., Norton D.P., 1996. *The balanced scorecard: Translating strategy into action*. Harvard Business School Press, Boston.

Kaplan R.S., Norton D.P., 2008. *The execution premium: Linking strategy to operations for competitive advantage*. Harvard Business Press, Boston.

Kilonzo S.M., Ojebode A., 2023. Research methods for public policy. In: Aiyede E.R., Muganda B. (eds), *Public policy and research in Africa*. Palgrave Macmillan, Cham: 63–85. DOI 10.1007/978-3-030-99724-3_4.

Kjaer A.M., 2004. *Governance*. Polity Press, Cambridge.

Klasik A., Frenkel W., 1993. Istota planowania strategicznego (The essence of strategic planning). In: Klasik A. (ed.), *Planowanie strategiczne* (Strategic planning). Polish Economic Publishers, Warsaw: 9–23.

Kłosowski W., Warda J., 2001. *Wyspy szans. Jak budować strategie rozwoju lokalnego?* (Islands of opportunity. How to build local strategy of development?). Wydawnictwo Warda & Kłosowski, Bielsko-Biała.

Leigh D., 2010. SWOT analysis. In: Silber K.H., Foshay W.R., Watkins R., Leigh D., Moseley J.L., Dessinger J.C. (eds), *Handbook of improving performance in the workplace*. Vol. 2. International Society for Performance Improvement, Silver Spring: 115–140.

Leydesdorff L., Deakin M., 2011. The triple helix of smart cities a neo-evolutionary perspective. *Journal of Urban Technology* 18(2): 5363. DOI 10.1080/10630732.2011.601111.

Magruk A., 2012. Hybrydy metod badawczych w studiach przyszłości (Hybrids of research methods in future studies). *Economics and Management* 4: 37–46.

Martela B., Janik L., Bubak G., 2023. *Analiza strategii rozwoju lokalnego w miastach. Charakterystyka dokumentów i sposób ich wykorzystania* (An analysis of local development strategies in cities. Characteristics of the documents and how they are used). Badania Obserwatorium Polityki Miejskiej, Institute of Urban and Regional Development, Warsaw–Krakow. DOI 10.51733/opm.2023.14.

Maxwell J.C., 2012. *21 cech skutecznego lidera. Jak stać się osobą, za którą pójdą inni* (21 attributes of an effective leader. How to become a person others will follow). Wydawnictwo Studio EMKA, Warsaw (translated by W. Turopolski).

Mazur S., 2015. Współzarządzanie a administracja publiczna (Governance and public administration). In: Mazur S. (ed.), *Współzarządzanie publiczne*. Wydawnictwo Naukowe SCHOLAR, Warsaw: 38-64.

Mazzara L., Sangiorgi D., Siboni B., 2010. Public strategic plans in Italian local governments. A sustainability development focus? *Public Management Review* 12(4): 493–509. DOI 10.1080/14719037.2010.496264.

McBride M.F., Lambert K.F., Huff E.S., Theoharides K.A., Field P., Thompson J.R., 2017. Increasing the effectiveness of participatory scenario development through codesign. *Ecology and Society* 22(3): 16. DOI 10.5751/ES-09386-220316.

Meschede C., Mainka A., 2020. Including citizen participation formats for drafting and implementing local sustainable development strategies. *Urban Science* 4(1): 13. DOI 10.3390/urbansci4010013.

Newton K., 1982. Is small really so beautiful? Is big really so ugly? Size, effectiveness, and democracy in local Government. *Political Studies* 30(2): 190–206. DOI 10.1111/j.1467-9248.1982.tb00532.x.

Norcliffe G.B., 1986. *Statystyka dla geografów* (Statistics for geographers). PWN, Warsaw.

Obłój K., 2007. *Strategia organizacji* (The organisation's strategy). PWN, Warsaw.

Ørngreen R., Levinsen K.T., 2017. Workshops as a research methodology. *Electronic Journal of ELearning* 15(1): 70–81.

Pandey P., Pandey M.M., 2015. *Research methodology: Tools and techniques*. Bridge Center, Romania.

Pertoldi M., Fioretti C., Guzzo F., Testori G., De Bruijn M., Ferry M., Kah S., Servillo L.A., Windisch S., 2022. *Handbook of territorial and local development strategies*. Publications Office of the European Union, Luxembourg.

Phdungsilp A., 2011. Futures studies' backcasting method used for strategic sustainable city planning. *Futures* 43(7): 707–714. DOI 10.1016/j.futures.2011.05.012.

Quick K.S., Bryson J.M., 2016. Public participation. In: Ansell C., Torfing J. (eds), *Handbook on theories of governance*. Edward Elgar Publishing Ltd, Cheltenham: 158–169.

Regulation (EU) 2021/1060 of the European Parliament and of the Council. *Official Journal of the European Union* L 231/159, June 30, 2021.

Řehoř P., 2015. How to improve strategic planning of municipal organizations in Czech Republic? *Procedia Economics and Finance* 34: 521–527. DOI 10.1016/S2212-5671(15)01663-9.

Ruano J.M., 2019. Actors, aims and challenges of local strategic planning in Spain. In: Hinţea C.l.E, Profiroiu M.C., Ţiclău T.C. (eds), *Strategic planning in local communities. A cross-national study of 7 countries*. Palgrave Macmillan, Cham: 157–178. DOI 10.1007/978-3-030-03436-8.

Sanoff H., 2000. *Community participation methods in design and planning*. John Wiley & Sons, Hoboken.

Schütz F., Heidingsfelder M.L., Schraudner M., 2019. Co-shaping the future in quadruple helix innovation systems: Uncovering public preferences toward participatory research and innovation. *She Ji: The Journal of Design, Economics, and Innovation* 5(2): 128–146. DOI 10.1016/j.sheji.2019.04.002.

Shrestha R.K., Alavalapati J.R.R., Kalmbacher R.S., 2004. Exploring the potential for silvopasture adoption in south-central Florida: An application of SWOT-AHP method. *Agricultural Systems* 81(3): 185–199. DOI 10.1016/j.agsy.2003.09.004.

Sztando A., 2013. Model procedury budowy strategii rozwoju jednostki samorządu terytorialnego (Model procedure for strategy of development of a local government unit). *Biblioteka Regionalisty* 13: 247–266. DOI 10.15611/br.2013.1.18.

Sztando A., 2017. Does the strategic planning of local development result from the motives indicated in literature? Contemporary motivation of Polish small towns' authorities for strategic planning of local development. *Transylvanian Review of Administrative Sciences* 51E: 106–122. DOI 10.24193/tras.51E.7.

Taherdoost H., Madanchian M., 2023. Multi-criteria decision making (MCDM) methods and concepts. *Encyclopedia* 3: 77–87. DOI 10.3390/encyclopedia3010006.

Taratori R., Rodriguez-Fiscal P., Pacho M.A., Koutra S., Pareja-Eastaway M., Thomas D., 2021. Unveiling the evolution of innovation ecosystems: An analysis of triple, quadruple, and quintuple helix model innovation systems in European case studies. *Sustainability* 13(14): 7582. DOI 10.3390/su13147582.

Tighe S., 2019. *Rethinking strategy. How to anticipate the future, slow down change and improve decision making*. John Wiley & Sons, Milton Old.

Van der Heijden K., 1996. *Scenarios: The art of strategic conversation*. John Wiley & Sons, Chichester.

Vasileva E., 2019. Application of the PEST analysis for strategic planning of regional development. In: Đukić T., Radenković Jocić D. (eds), *Quantitative and qualitative analysis in economics*. University of Niš, Faculty of Economics, Niš: 223–229.

Warner M., 1996. Strategic development planning at the community level: A modification to participatory planning. *Community Development Journal* 31(4): 330–342. DOI 10.1093/cdj/31.4.330.

Weihrich H., 1982. The TOWS matrix – A tool for situational analysis. *Long Range Planning* 15(2): 54–66. DOI 10.1016/0024-6301(82)90120-0.

Wells J.R., 2014. *Inteligencja strategiczna. Jak stworzyć mądrą firmę* (Strategic intelligence. How to create a smart company). Dom Wydawniczy Rebis, Poznań.

Wilkinson A., Kupers R., 2014. *The essence of scenarios: Learning from the shell experience*. Amsterdam University Press, Amsterdam.

Williamson A., Fung A., 2004. Public deliberation: Where we are and where can we go? *National Civic Review* 93(4): 3–15. DOI 10.1002/ncr.66.