UDC 005.521:330.341.1(438) DOI 10.21272/mmi.2018.2-26

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JEL Classification: H54, H68

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STRATEGIC FORESIGHT AS THE METHODOLOGY OF PREPARING INNOVATION ACTIVITIES

The prepared paper explains the essence of foresight research and shows the potential of building a common future on the basis of vision created by numerous, grass-roots stakeholders. It seems that preparing a vision on the specific area of activity is supported and should not give rise to any special problems, as long as the effects of scientific work and the so-called "good practices" are used. However, the social area, and, specifically, the lack of involvement, the imperfect system of informing about the potential possibilities of providing support, influence games or the lack of interest, combined with selective view of the conditions of execution of common vision, make it difficult, or even impossible to execute the developed future scenarios. The grass-root approach faces the guidelines specified in international documents, local strategies and legal regulations. The state and regional authorities make attempts to support initiatives by founding business environment institutions. However, their activity is poorly recognizable and the provided information is assessed as poor. These findings lead to a conclusion that the integration of activities related to the creation of common future is real with the application of the foresight approach and with the support of local authorities, provided that it faces no significant communication barriers. The results of the analysis revealed that the reasons for shunning knowledge are not necessarily related to poor judgment. Actually, stakeholders protect the current relations from attempts to make other things important, from giving voice to others and from other methods of activity. To reach for new knowledge, additional impulses (e.g. emotional) are required. Such desires cannot be stimulated only individually and provoked by the way of communicating with new knowledge.

Keywords: foresight, common vision, communication with stakeholders, integration.

Introduction. Expectations towards the future are the main element of the game between the sphere of politics, society and economics. Thomas J. Sargent's (2011 Nobel Prize winner in Economics) theory of rational expectations assumes that decisions are made on the basis of all available information about the existing and future conditions and the knowledge of the potential effects. The announced decisions are accepted, or not, by executors who should be competent, i.e. qualified, experienced and involved. The last attribute is decisive to effective and efficient execution of intentions because it reveals the understanding of the importance of the task, the ability to manage the resources and the willingness to cooperate in teams that have taken up the realization of the goals.

The essence of integration is to combine the teams performing the taken decisions into the most efficient ones. The objective-driven synthesis of activities requires them to be coordinated (arranged in a way where they do not obstruct each other) and focused (directed at a common goal). Consequently, the axis of integration must be determined – an activity characteristic in that when it is being performed, other constituent activities are being performed indirectly. The synchronization of activities (concurrent execution by multiple performers) should also be considered. Preparation is necessary for that, whereby

the performers are explained the essence of the posed tasks, the requirements are determined, the conditions are identified, the sequence of execution is shown, the resources are allocated, and which always takes place when the activities coordinated earlier determine the one coordinated later (Kotarbiński).

Preparations for relatively distant future are the cornerstones of foresight research (Kawalec, PARP), which may be performed in relation to a company (Badzińska, Siewczyńska 2013) or another institution, economic networks (Wyrwicka 2010) of the region or the country. Foresight is a process of arriving at the understanding of forces that shape the future (Coates, 1985) by systematically arriving at information (through analysis, communication or consultation) in order to create a medium and long-term vision of development. It applies to shaping the future together, gathering opinions on the possible versions of the future and choosing one of them (Slaughter, 1995). In most cases, the effect consists in determining the directions and priorities of development that serve as a tool for taking current decisions and mobilizing common activities preparing various social groups for the future.

Associating the thinking about future with the debate and preparing scenarios or the so-called road maps (showing both directions and developmental consequences or paths of achieving goals) is the core of foresight research and, at the same time, it becomes a premise for integrating stakeholders around common goals (Figure 1).

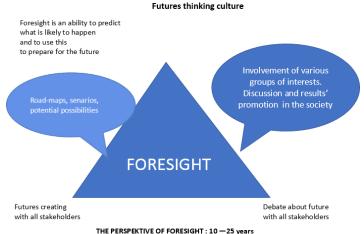


Figure 1 – Foresight research framework (own work)

In order to activate the development potential, the debate over the commonly prepared vision of the future must be maintained (Senge, 1998), but also a system of communication with the environment must be created, so that individual stakeholders have a chance to spot and take advantage of the opportunities. This is how relation networks are created – relatively durable, dynamic groups of independent entities, created in connection with the flow of information, cooperation, common pursuit of a goal or the use of the Internet, which are typical solutions applied in contemporary economy. They resemble flocks, hives or ecosystems, about which we learned in biology classes, where individuals benefit tangibly from being together. Contemporary networks have a global reach, but they often focus on local activity. This fact may foster the concentration of certain skills within one place, which, subject to favourable systemic solutions, may become a key factor behind accelerated growth or creating an economic advantage of a certain society.

Such issues are addressed by this paper. It briefly describes the genesis and application of foresight research, shows mechanisms of diluting common visions, identifies basic communication barriers and

presents examples of using international funds in the Wielkopolska region.

Strategic foresight. In the strategic perspective, foresight is a systematic participation process (Becker, 2002) aimed at creating medium and long-term visions (Daheim, Uerz, 2008), identifying chances and risks (Cuhls, 2003) in the social-cultural, political, environmental, economic, technological and competitive areas (Rohrbeck et al, 2007), that aims to support decision-makers in initiating innovative processes (Burmeister et al, 2004), identifying new business models, creating and communicating future scenarios (Daheim, Uerz, 2008). Therefore, strategic foresight's key role is to stimulate and support the creation of strategies and policy. The fundamental effects are insight into the future, a better understanding of forces and dependences shaping distant future, influencing groups interested in the execution of the generated visions which start to shape the politics on their own.

This happens, because strategic foresight is founded on assumptions that decision makers make crucial calls, the future should be approached in an alternative manner, but believing that it can be influenced, if determinants and conditions are known. The influence of other interested social groups who consider their future in various perspectives must be considered and it should be understood that unforeseen circumstances or events (wild cards) force the plans to change.

As a new planning tool, foresight pinpoints the most socially accepted economy sectors and activities on which the state's financial support should focus.

Five generations of foresight research are now considered (Georghiou, 2007).

Gen 1 – focused on technology forecasts by experts, identified priorities for science and technology.

Gen 2 – added industry and market, accounted for the service and industry sectors in the economy.

Gen 3 – added research directed at the social sphere and issues related to solving social and economic problems to the previous research.

Gen 4 – highlights the forecasted sector development tendencies and the consideration of systemic solutions that facilitate innovations.

Gen 5 – prioritizes the creation of transdisciplinary, innovation systems (in the scientific, technological, economic and social perspective).

Europe uses foresight research. The international World Future Studies Federation was founded in 1967. At first, the research focused on forecasting technological developments, but the oil crisis of 1970's and the successful application of foresight to create a scenario of lifting Shell out of it showed the need to create variant-dependent strategies and to set priorities (PARP). In 2009 the European Foresight Monitoring Network acknowledged the completion of over 1,900 foresight projects for enterprises, state economies and international projects.

Documents setting out directions of future activities of governments, Europa 2020 (European Commission) or recommended business activities, Vision 2050, is being created and adapted to conditions of specific countries.

Foresight requires that various methods of obtaining data – analytical, paradigmatic, sequential and exploratory (PARP) – are used. The methods selected for specific foresight research should combine the following elements: analysis and fact-based conclusions, creativity, professional expertise, impact identification and causative capabilities. Fig. 2 presents the so-called foresight diamond, a metaphor of synergy resulting from the combination of various methods of collecting and analyzing data and expert methods with the analysis of system dynamics that examines impacts and with methods of generating ideas. This is the only arrangement providing conviction that such a difficult research field as the future will be considered in multiple aspects and reliably. Triangulation, or authentication of research, is applied often. We distinguish data triangulation consisting of the use of various sources of information, the triangulation of researchers, which consists in introducing analyses and conclusions made by multiple experts (opinion-formers) representing various circles (scientific, political, business, media, various age or profession groups) and theoretical triangulation, where experts representing various research areas and

Methods largely dependent on the ingenuity and creativity of highly qualified individuals who have access to important information or the already Methods commonly utilizing the knowledge of people Methods utilizing the participation and sharing creativity of views of experts and non-specialists collected knowledge mutual impact expertise data Methods commonly utilizing standardized information, data, indicators, etc. qualitative semi-quantitative quantitative Methods providing Methods measuring Methods utilizing the variables mathematical principl of events nd utilizing statistical to determine subjectivity, and perception analyses, utilizing rational judgements or generating and the views of experts

using different methods or scientific concepts are involved.

Figure 2 – Foresight diamond – research methods (Badzińska, Siewczyńska, 2013)

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Foresight research are always goal-oriented, targeted and take place in steps, as shown in Fig. 3. It should be emphasized that these activities not only gave rise to alternative action scenarios when shaping the future, but also new knowledge resources that, according to N. Luhmann (1997) is neither a state (that can be archived), nor a process (that can be learned), but rather a structure that makes it possible and easier to use information. The social system relays expectations in connection to the past disappointments via this structure. The structure's objective is to prevent similar disappointments in the future (Baecker, 1998). This means that information is accepted as new or discarded as unimportant and of little significance. Some data can be used for comparisons and analyses and some data can be used to combine, which is the essence of synthesis. Therefore, knowledge is a structure that overcomes differences between relays of information – the same information, but coming from different sources. This makes it easier to integrate views and to direct activities of various stakeholders, which is another important objective for taking up foresight research.

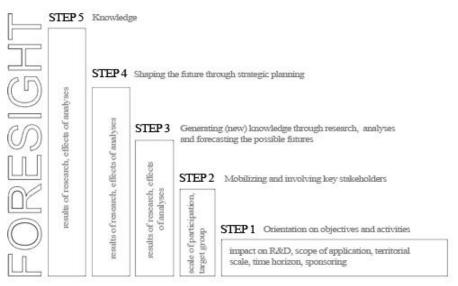


Figure 3 – Foresight research stages (Badzińska, Siewczyńska, 2013)

Foresight results not only allow to formulate scenarios, but also to create executive potential or to shape legal regulations in a way that serves to improve the conditions for the functioning of economy, while maintaining or growing economic benefits and raising competitiveness. Also, alternative strategies and execution tactics (road maps) can be developed.

Communication and creating a vision of the future. The problem of foresight research and the short-term need in the turbulent economic environment is the motivation related to cooperation and searching for new knowledge. This is why it is worth switching the accent from communicating about knowledge (new discoveries and works) to communicating via knowledge (mobilizing to experiment and collaborate for the purpose of solving problems). Foresight research make it possible to work out a common position on the future (vision) that should inspire enthusiasm among stakeholders (project participants), be discussed by them on an ongoing basis and explained, especially to those joining the group of executioners. A common vision has an anchoring point where every interested party (stakeholder) can access areas of knowledge that guarantee that their certainty in future-related activities will rise. However, as shown in Fig. 4, launching a debate, providing explanations and raising enthusiasm is not, still, a sufficient condition to take up collaboration. This "self-powering mechanism" is hindered by numerous obligations burdening the participants, possible polarization of views among interest groups, time pressure or the lack of will to act. The phenomena listed nullify the involvement in creating a common future according to the accepted guidelines.

From an individual perspective, explaining a common vision translates into the possibility of using it (knowledge at disposal). The tradition of communication with this regard is relaying knowledge as difficult at first, followed by its trivialization. The accompanying assumption is that problems can be avoided and difficult situations may be solved via knowledge. Still, people are not always eager and ready to acknowledge it. One can distance themselves from knowledge in the following dimensions:

- 1. Factual knowledge about things (content-related);
- 2. Social the knowledge of what others know and do not know;
- 3. Temporal knowledge must be corrected with other, more up-to-date knowledge.

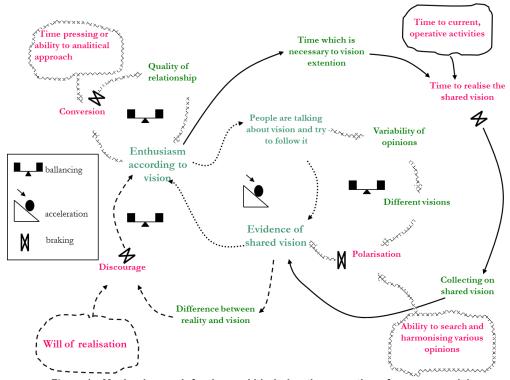


Figure 4 – Mechanisms reinforcing and hindering the execution of a common visions (Wyrwicka, 2003)

The reasons for shunning knowledge are not necessarily related to poor judgment. Actually, stakeholders protect the current relations from attempts to make other things important, from giving voice to others and from other methods of activity. To reach for new knowledge, additional impulses (e.g. emotional) are required. Such desires cannot be stimulated only individually and provoked by the way of communicating with new knowledge.

When asking about the possibilities of managing knowledge, the answer points to a social circle in which handling the knowledge (more precisely: the new knowledge) is obvious. Maintaining a dialogue at a synergic level may be identified as a precondition (Wyrwicka, 2003). These patterns are also complemented by typical communication barriers pertaining to social debate and the acceptance of decisions of authorities.

This is a weak spot in foresight research conducted within a strategic horizon, because the creation of development combines an economic aspect, the so-called hard initiatives, and a social-cultural aspect, the so-called soft initiatives.

These barriers exist both in internal and external communication. A well-organized communication strategy, being one of the elements of the "4k+z" model (communication, focus on future, coordination, consensus and involvement) during the execution of the second stage of the cycle (see Fig. 4.) of performing the foresight process will improve the partners' conformance to each other, the complementarity of activities, common activities when executing the isolated stages of the project. The following barriers may hinder communication at this stage:

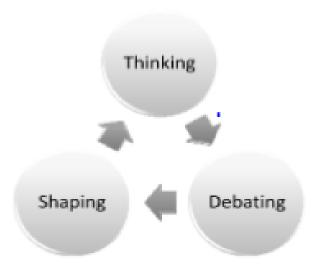


Figure 5 – The cycle of performing the foresight process (H. Pachciarek, A. Rudawska, 2012)

1. Logical barriers which can be overcome by building the communication process from the partner's direction. In practical terms that means caring for socially understandable wording of political messages, a task handled in a great way by the foresight tool that informs, in an easy to understand manner, about the decisions made or the implemented changes, or connecting decision makers with representatives of the society. The foresight tool allows to elaborate a way of communication aiming to create thesauruses common for managing entities and for representatives of various layers of society participating in projects. For example, the foresight program in place in Japan since the end of WWII showed that the result of the program is important.

The creation of a specific "language" of communication which became commonly understandable thanks to the involvement of experts, also from fields other than exact sciences, and various groups of stakeholders, was considered the key effect of the program [2, 21].

- 2. Phonetic and stylistic barriers also appear when creating program scenarios. When collaborating with stakeholders from various social strata it is worth paying attention to the transparency of messages, creating them as per chain principle, use short sentences with few professional expressions, thus making it possible to create a feeling of existence of common interests.
- 3. It is important to understand the concept of common good that not only combines shared ideas, but also responsibilities. The process of managing a region requires that not only representatives of the upper self-government management are integrated, but also the inclusion of representatives of all stakeholders, who will be creating a common ground for understanding and who will participate in making decisions within the region.

The experience of Wielkopolska region on the use of external financial support. Innovation of entire states and regions, not just businesses, is the condition for competitiveness. Institutions that introduce new products and services shape and answer the needs of buyers, at the same time ensuring their own profitability and survival. Innovations are not always the fruit of research conducted by certain companies – on the contrary, they are often based on concepts created by others. Moreover, given the high risk and cost of R&D, more and more businesses decide to collaborate in this area. How innovative an organization is depends on the quality of network connections with other institutions that generate knowledge. The economy is characterized not just by entities operating within it, but also by the synergy effect stemming

from their cooperation. Therefore, apart from institutions that generate knowledge and innovations, such as businesses, schools, research institutes and institutions liaising in the transfer of innovations, the efficient functioning of various interactions between them is equally important. The system of innovations consists of institutions and their interrelations, thanks to which a given region acts as an efficient knowledge distribution mechanism whose objective is to further process the knowledge. The vision of sustained development for the Polish business for 2050 identifies key challenges and priority areas in which entrepreneurs should adopt an active approach for the sake of supporting social and economic transformation. The following can be named among the key challenges identified at the state level, as stated in a report published in 2013: the need to improve social capital, the need to improve human capital, development of infrastructure, efficient management of natural resources, ensuring energy safety, raising the quality of the state and its institutions.

The objectives and priorities specified at the state level are then translated into regional objectives. The general strategic objective for the Wielkopolska region is:

"To efficiently use the developmental potential in order to increase the region's competitiveness, thus improving the quality of life of the region's citizens in sustainable growth conditions"

The objective will be realized through 9 strategic goals made up from the following operational objectives:

Operational objective no. 1. Improving the region's communication availability and coherence;

Strategic objective no. 2. Improving the natural environment's condition and manage rationally the natural resources;

Strategic objective no. 3. Improved energy management;

Strategic objective no. 4. Increasing the competitiveness of Poznan metropolitan area and other centers of growth in the region;

Strategic objective no. 5. Increasing the region's coherence;

Strategic objective no. 6. Strengthening the region's economic potential;

Strategic objective no. 7. Enhancing the competitiveness of inhabitants and promoting employment;

Strategic objective no. 8. Increasing resources and equalizing the region's social potentials;

Strategic goal no. 9. Increasing the region's safety and management efficiency.

Initiatives on various activity areas within and outside the Wielkopolska region are examples of the integration of stakeholders and overcoming of barriers in social communication with regard to the development of the region.

The key topics within the European Committee of the Regions were the works on the shape of the future coherence policy and maintaining its funding after 2020. ... The position achieved by four partner regions on the shape of this most important EU investment policy after 2020 was presented during the event. (UMWW, 2018).

The efforts of the Marshal's Office lead to the creation of the "Analytical Document on the Future of EU Finances".

The experience of other regions on stimulating grass-root activity of stakeholders was used when working on creating the region's future, namely a small grant competition was created for the execution of public projects in the area of "activity for European integration and developing contacts and collaboration among societies" (UMWW, 2018).

The Wielkopolska Region Marshal's Office actively participates in transferring information about the region's possibilities in joining EU projects or consulting with regard to developing intelligent specializations (activities of the Information Bureau of the Wielkopolska Region in Brussels).

Wielkopolska actively participates in projects co-financed with EU funds. Some of them are covered within European Territorial Cooperation: with regard to economy: COMPETE IN (2016-2021), RELOS3 (2017-2021). Apart from the subject, the common theme for both projects is the participation of a large

group of stakeholders representing various social areas and the creation of public and private partnerships; with regard to rural development: EcoWaste4Food; additionally, three other projects on the efficiency of using resources were presented, namely: OCOON, BIOREGIO, INTHERWASTE, with regard to social policy: Social(I)Makers; with regard to transportation: SubNodes. The project's goal is to connect peripheral areas with the main TEN-T railway lines.

Wielkopolska's innovation potential is not fully utilized for the purpose of increasing economic competitiveness. Surely, there are numerous reasons for this. On one hand, there is the consolidating unwillingness of business to take up cooperation with scientific units, the still obscure offer of the scientific sector aimed for businesses, rigid organizational structures of scientific units that are unwilling to take up new challenges (such as collaboration with businesses), intellectual property management and weak promotion of entrepreneurship and innovation. On the other hand, it must be also remembered that entrepreneurs are partly to blame for using only a part of Wielkopolska's potential for raising the region's economy competitiveness. Large companies, most often affiliates of international corporations, use their corporate know-how, import innovations and have no R&D units in Wielkopolska. The SME sector has very limited financial resources for this purpose and there is no tradition of collaboration with research units with regard to solving the region's current problems. The participation of business circle institutions in the relations between science and business also leaves a lot to be desired. There is nearly not enough focus on supporting the relations between the science and economy, not only at the research level, but also with regard to education and staff exchange programs. In order to improve the use of Wielkopolska's potential for the purpose of increasing the region's economy innovation there must be more involvement and the relations pertaining to all participants of the regional innovation system, namely the businesses, the R&D and education sector, the public administration and the business circles, must be intensified.

Research on business circles institutions. Business circles institutions include technological parks, technological incubators, academic enterprise incubators, enterprise incubators, technology transfer centers, science and research institutes and industry organizations. They focus their activity on supporting entrepreneurship and innovation processes in the following forms (Matusiak, 2010): spreading knowledge and skills through consulting, training and information provided in training and consulting centers, assistance in transferring and commercializing new technologies within technology transfer centers, financial support in the form of parabank loan and seed funds, credit sureties, business angel networks for individual starting their business activity and young people with no credit history, assistance in creating new businesses within the environment of scientific institutions and higher schools, founded by students, graduates, postgraduates and scientific workers in pre-incubators and academic enterprise incubators, extensive consulting, technical and premises-related assistance for enterprises newly created in enterprise incubators and technological centers, creating clusters of enterprises and animating innovative environments by combining, within a specific, develop area, business services and various forms of assistance for businesses within technological parks, business zones and industrial parks.

The assistance provided by the discussed centers is used by individuals and entities beginning their business activity, which are incapable, for financial or objective reasons, to use services provided by market institutions, such as consulting companies, banks, etc. Additionally, the described activities of innovations and entrepreneurship support centers generate strong developmental impulses identified in local and regional perspective in the following scopes [3]: integration of the network of science, business and administration contacts, which are mentally and organizationally distant circles; spreading knowledge, good practices and inspiring self-help activity, diffusion of industrialization by incubating new enterprises (often craft businesses) that use local skills, that have been present in the local culture for a long time in peripheral regions that have fallen behind in terms of economic development, strengthening market structures with new, highly competitive, technological enterprises, which facilitate the constant adaptation of new products and technologies thanks to their innovation skills, developing hi-tech industrial complexes

and innovation incubation systems in municipal agglomerations, which have strong scientific background.

Each of the business environment institutions has its own characteristics and pursues specific functions within the support system. Unfortunately, the conducted research has shown that the potential and know-how of innovation and enterprise support centers, so institutions that support the knowledge transfer process, is not utilized to a large degree.

The following have been identified during the research preparation stage: the research problem in the form of two questions, the examined population – residents of Wielkopolska, the sample size – 1,000 people, the sample selection method – random, the survey instrument – a questionnaire, the data analysis methods – graphical, analysis of correspondence, the duration – April 2016.

The objective of the examination of business environment institution in Wielkopolska was to answer the following questions:

- What is the recognizability of business environment institutions among the surveyed?
- How do the surveyed assess the quality of information provided by business environment institutions?

A questionnaire was prepared with closed questions about the following business environment institutions.

The examination showed that poor recognizability of business environment institutions in Wielkopolska poses a significant problem, as shown in Fig. 6.

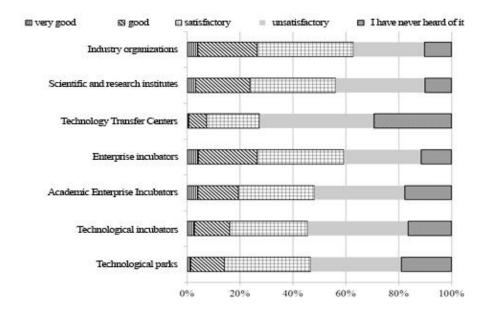


Figure 6 – The knowledge of the activity of business environment institutions (N = 994) (K. Ragin – Skorecka and A. Grzelczak)

With regard to the second research question, correspondence was analyzed – by providing the distribution of multiplicity (how many times an answer was given within a specific fraction). This allowed the analysis of correlation between the examined cases (groups of respondents – department heads, students, employees) and the variables (answers given – "very good", "good", "satisfactory", "unsatisfactory"). This formed the basis to prepare a diagram with correlation values placed on its axes.

The distribution of scoring applied by the respondents (the variables) and groups of respondents (the

cases) results from the values of correlation coefficients. The graphical analysis of the distance between a case (respondent type) to the closest variable (score) allows to determine the score most often given by certain respondents. The evaluation of the quality of information provided by business environment institutions is, generally speaking, negative. The employees evaluate the quality of information provided by business environment institutions as satisfactory, the students as unsatisfactory, and the scoring of department heads falls between "unsatisfactory" and "satisfactory".

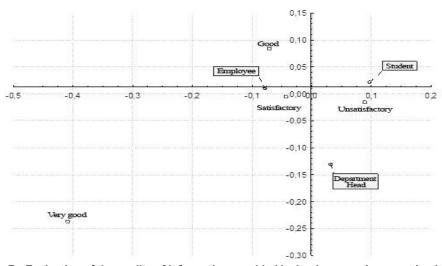


Figure 7 – Evaluation of the quality of information provided by business environment institutions for fractions distinguished for their employment (N = 994) (K. Ragin – Skorecka and A. Grzelczak)

Two major conclusions can be drawn from the conducted examination. Firstly, there is a serious need to run information actions on business environment institutions, informing Wielkopolska residents about the activities of these organizations and encouraging them to use the services provided by these outfits. Secondly, the results of the research show that the knowledge about business environment institutions is poor, especially among students.

Summary. The prepared paper explains the essence of foresight research and shows the potential of building a common future on the basis of vision created by numerous, grass-roots stakeholders. It seems that preparing a vision on the specific area of activity is supported and should not give rise to any special problems, as long as the effects of scientific work and the so-called "good practices" are used. However, the social area, and, specifically, the lack of involvement, the imperfect system of informing about the potential possibilities of providing support, influence games or the lack of interest, combined with selective view of the conditions of execution of common vision, make it difficult, or even impossible to execute the developed future scenarios. The grass-root approach faces the guidelines specified in international documents, local strategies and legal regulations. The state and regional authorities make attempts to support initiatives by founding business environment institutions. However, their activity is poorly recognizable and the provided information is assessed as poor. These findings lead to a conclusion that the integration of activities related to the creation of common future is real with the application of the foresight approach and with the support of local authorities, provided that it faces no significant communication barriers.

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Стратегічне прогнозування як методологія формування інноваційного розвитку

У даній статті проаналізовано перспективи використання форсайт-прогнозування при формуванні візії інноваційного розвитку країни її стейкхолдерами. Автор зазначає, що використання «досвіду кращих практик» є найбільш ефективним способом формування візії з урахуванням інноваційної складової. Однак, асиметрія інформації, низький рівень зацікавленості щодо участі у прийнятті рішень, наявність різних точок зору щодо формування місії та стратегії інноваційної переоріснтації призводить до ускладнення процесу формування сценаріїв розвитку країни. Окрім цього у статті згруповані фактори, що стимулюють та стримують процес формування загальної візії інноваційного розвитку. Автори зазначають, що grassroot nidxid дає можливості залучити широке коло стейкхолдерів до прийняття рішень. Даний підхід відповідає вимогам, визначеним у міжнародних документах, стратегіях та нормативних актах. У статті визначено роль державних і місцевих органів влади щодо підтримки ініціативності зацікавлених сторін у формуванні стратегії переорієнтації на інноваційний розвиток. При цьому автори наголошують, що зниження комунікаційних бар'єрів між органами влади та стейкхолдерами можливе лише за умови інтеграції дій у поєднанні з форсайт-прогнозуванням. Автори виокремлюють основні принципи та механізми використання форсайтпрогнозування. На основі аналізу наукової літератури автори систематизували п'ять невід'ємних складових форсайтпрогнозування: орієнтація на технології та промисловість, залучення громадськості, висвітлення тенденцій інноваційного розвитку, пріоритетність міждисциплінарних досліджень інноваційного розвитку з деталізацією наукових, технологічних, економічних та соціальних перспектив. У рамках дослідження встановлено, що опортуністична поведінка стейкхолдерів стримує розвиток комунікацій та поширення нових знань, що в свою чергу гальмує процес інноваційного

Ключові слова: форсайт, спільне бачення, комунікація з групами інтересів, інтеграція.