

THE SCENARIO METHOD IN URBAN PLANNING

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Abstract. *Scenario planning techniques are increasingly gaining attention in the process of spatial and urban planning because of their usefulness in times of uncertainty and complexity. Scenario planning encourages strategic thinking and helps to overcome thinking limitations by creating multiple futures. In this way, it can help to shape the future according to the values and desires of society.*

Although scenario planning has been used a lot in the business world, there are scarce examples of its application in the field of urban planning. One of the reasons for this is the huge variety of methods and tools with no general guidelines for the implementation of the appropriate procedure and techniques for constructing scenarios in urban planning. Although each exercise of scenario planning must be unique in its context and actors, the methodological approach may be similar. For this reason, the main goal of this paper is to systematize the known methods for scenario construction, emphasize the featured techniques and tools, and consider the possibility of applying scenario methods in the contemporary city planning.

Key words: *scenario, urban planning, future, uncertainty*

1. INTRODUCTION

Contemporary cities and urban regions have been undergoing rapid and intense transformation due to technological and cultural change, expanding globalization and new economic trends. The dynamics of change and the impacts that shape urban environment are difficult for mapping, monitoring and coordination. The scale and intensity of prevailing urban problems around the world indicates that the existing planning process fails to effectively serve its primary purpose. Cities require new, more creative ways of dealing with existing problems. It is increasingly recognized that urban planners and decision-makers lack an effective future-oriented approach allowing them to anticipate future transformations, effectively prepare for their consequences and deal with complexity. In order to respond to these problems an increasing emphasis is being placed on the use of scenarios techniques. These techniques have been used successfully in the business world, but are also increasingly used in the field of urban

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planning. The advantages of scenario planning are reflected in the reduction of uncertainty by creating and identifying possible alternative paths of future urban development.

There is an evident need for a change in thinking and acting about the future of cities, and for the shift from the traditional planning to a more imaginative and innovative approach. The aim is to point out that the scenario method is an effective tool for forming conceptions of an uncertain and complex future, understanding the factors that shape the environment and overcoming the limitations of thinking in the process of urban planning. As the discipline of scenario planning is mainly practitioner driven approach, there is a great diversity of methods and processes for scenario construction. For this reason, this paper reviews the scenario planning literature in order to summarize the current knowledge on the method. The main scenario development approaches, various tools and techniques for identification of the most critical scenario drivers and validation criteria are discussed. The intention is to highlight the need of using the scenario planning method in urban planning and decision making.

2. CONTEMPORARY PLANNING ISSUES

Most planning thought and practice of the last decades in Europe has moved beyond a simplified physical view of cities, whose quality was understood only through their physical form and structure [1]. At the end of the 20th century in many parts of Europe have appeared new efforts to develop strategies for cities and regions in order to achieve a coherent spatial logic for land use, resource protection, investments in regeneration and infrastructure [2]. It is widely recognized that the development of urban areas, considered in the socio-economic and environmental terms, cannot be planned by government actions in a linear way, from intentions to plan, to action and to planned outcome [1]. This means that traditional methods of planning and management of cities are not adequate in the times of accelerating change, greater complexity in the environment and associated uncertainties of spatial development [3-5]. As some of the main reasons for the ineffectiveness of the existing planning processes and practices Ratcliffe and Krawczyk [3] listed:

- complexity and change in society which increases the level of uncertainty of future events flowing from current decisions,
- lack of an integrated approach to planning,
- short-term approaches and fast-paced solutions,
- lack of the 'predict and provide' model,
- limited collaboration of stakeholders.

In order to sustain the vitality and viability of cities, a major shift in the way we think, plan and act is needed. Future urban development, economic changes and urbanization challenges require a long-term horizon of research taking into account new technologies, innovations, demography, climate, culture and socio-economic development. Urban planners and decision-makers lack an effective future-oriented approach enabling them to comprehend current complexity, anticipate impending changes and shape a desired future condition [3-5]. However, despite the increased awareness of the need for more imaginative thinking about the future in urban planning [6], there is still not enough, "future" in contemporary planning [7].

2.1. Future studies in urban planning

A key function of urban planning is to make decisions in the present that will direct future activities in order to create cities that are economically advanced, culturally vibrant, socially

cohesive, clean, green and safe, and in which all citizens would be able to live happily and productively [3, 8, 9]. In an era of accelerating change, increasing complexity and increasing uncertainty, adopting the method of future planning offers a rigorous, comprehensive and integrated approach to urban management, which relies more on intuition, participation and flexibility. The main reasons for adopting a future approach in urban planning are [3]:

- overcoming the conventional thinking and strengthening more forward thinking;
- fostering thinking and stimulating conversation about the future;
- helping identify assumptions about the future that might require examination, testing and modification;
- encouraging people to consider the positive possibilities and opportunities that tomorrow might bring, as well as the potential threats and risks;
- inspiring people to think 'outside the box';
- better preparing for and managing change by improving the capacity to learn;
- shortening the time required for making relevant responses and reactions to future events;
- fostering active participation in strategic thinking.

However, the role of planners in shaping the future is ridden by certain difficulties. The context is usually complex, with many interconnected elements, and planned actions, such as those related to land use or major public works often have consequences that are manifested much later. In addition, decisions about the future require the agreement of a number of actors, many of whom differently value key factors.

The future cannot be predicted, but we can make assumptions about the future and use them to get ideas about what the future might look like [10]. Planning for the future can play an important role in the development of the preferred future, by creating a platform for cooperation between the different stakeholders and by formulating specific actions and broader policy proposals. This approach enables dealing with the complexity of systems and the uncertainty of impending changes. The future field raises a number of questions that help in developing mindsets ready to deal with upcoming issues and events in a constructive and creative way.

In the context of researching future development paths, the scenario method has evolved into a tool for effective forming of conceptions of an uncertain and complex future [4, 11-13]. Scenarios can be useful for identifying possible patterns of urban development because they describe how the city might look like in a few decades and stimulate thinking about the preferred conditions and actions for achieving it. The process of scenario building is also an important technique for identifying and better understanding the factors that shape the urban environment, and the ways in which they can act and react with each other. It is also considered that scenarios are essential component of integrated approaches to the transition towards sustainable development [14, 15].

2.2.1. What are scenarios?

We cannot explore every possible future, but we need to reduce complexity to be able to handle it, and that is where scenario helps. Skillfully created scenario can reduce the large amount of uncertainty to several plausible alternative paths, which together contain the most relevant uncertainty dimensions. Scenario planning encourages strategic thinking and helps to overcome thinking limitations by creating multiple futures. There are many different definitions of scenarios, each of which defines the scenario in a specific way.

Herman Kahn, who is considered one of the founders of futures studies and father of scenario planning, defines scenario as „a set of hypothetical events set in the future constructed

to clarify a possible chain of causal events as well as their decision points” [11]. Durance and Godet [16] state that „a scenario is not a future reality, but rather a mean to represent it with the aim of clarifying present action in the light of the possible and desirable future”. Schoemaker [17] understands scenarios as „focused descriptions of fundamentally different futures presented in coherent script-like or narrative fashion for better understanding future uncertainties”. According to Pillkahn [10] „scenarios are hypothetical illustrations of the future that describe a cross section in an established context, describe development paths and serve as a form of guidance”.

The advantage of scenarios is that they do not describe just one future, but that several possible or even desirable futures [18]. Scenario writing is not just a planning tool, but also an effective learning tool, as it helps to understand the development logic, clarify driving forces, key factors and actors [19]. Using scenario planning for long-term planning and strategic foresight facilitates faster adapting to major changes [11].

3. THE SCENARIO METHOD

The concept of scenario planning was developed after the World War II and US Department of Defense used this method for military purposes in the 1950s at RAND Corporation [10, 20, 21]. During the 1960s, scenario methodology was extensively used for social forecasting, public policy analysis and decision making. In the early 1970s scenarios were improved and had reached a new dimension with the work of Pierre Wack. Use of scenario planning has significantly increased during the last decade and it is now more or less a standard tool in many companies and consulting firms.

Scenario planning differs from most other future-oriented approaches because it usually provides more qualitative description of how the present will evolve into the future, rather than requiring numerical accuracy. Scenarios are different from forecasts, because in scenarios the range of possible outcomes resulting from uncertainty is explored, while the purpose of forecasts is to identify the most likely paths and estimate uncertainty. Creating a vision is another future method that is different from scenarios, because it builds a picture of desired future together with strategies for achieving goals. There are also simulations, which are systematic quantitative models of the future without the assessment of the probability, possibility or desire. However, they can be used in scenario process to increase its value. Table 1 shows the main differences between the forecasting methods.

Table 1 Differences between scenarios, forecasts and visions [19]

Scenario	Forecasts	Visions
Possible, plausible futures	Probable futures	Desired future
Uncertainty based	Based on certain relations	Value based
Illustrate risks	Hide risk	Hide risk
Qualitative or quantitative	Quantitative	Usually qualitative
Needed to know what we decide	Needed to dare to decide	Energizing
Rarely used	Daily used	Relatively often used
Strong in medium to long-term perspective and medium to high uncertainties	Strong in short-term perspective and low for degree of uncertainty	Functions as triggers voluntary change

3.1. Classification of scenario planning methods

There are numerous approaches to scenario planning, which are mainly developed in practice. This has led to a great diversity of methods and processes, and a clearly defined general approach that would result in a successful scenario planning still does not exist. Many different scenarios techniques suggest that the ways of scenario constructing are very flexible and can be adapted to the specific task-situation.

Models of scenario building presented by Schwartz and Shoemaker are considered very popular and often cited in the literature [11, 12]. Generally these scenario building techniques emphasize defining the problem, identifying key factors, stakeholders, trends, limitations and other important issues in a systematic manner and ranking of these elements by importance and uncertainty. According to Inayatullah [22] there are:

- six concepts of futures thinking – the used future, the discarded future, alternative futures, alignment, models of social change, and uses of the future;
- six futures questions – will, fear, hidden assumptions, alternative futures, preferred futures and next steps, and
- six pillars - mapping, anticipation, timing, deepening, creating alternatives and transformation.

The Institute for Alternative Futures (IAF) has developed the "aspirational futures" - an approach that combines learning about the future and its uncertainty with the vision and creating the preferred future [23]. Exploring plausible scenarios should include the path to visionary goals. Van Notten et al. [24] identify 14 scenario characteristics contained within the three broad themes: the project goal, process design and scenario content. Tevis [25] proposes a methodology of "goal-oriented scenario planning," which is supposed to help an organization to create its future, depending on external influences rather than considering only the possible future in order to respond to it. The method that Schwab, Cerutti and Von Reibnitz [18] describe consists of eight steps and involves a participatory approach with a team from as many disciplines as possible (Fig. 1).

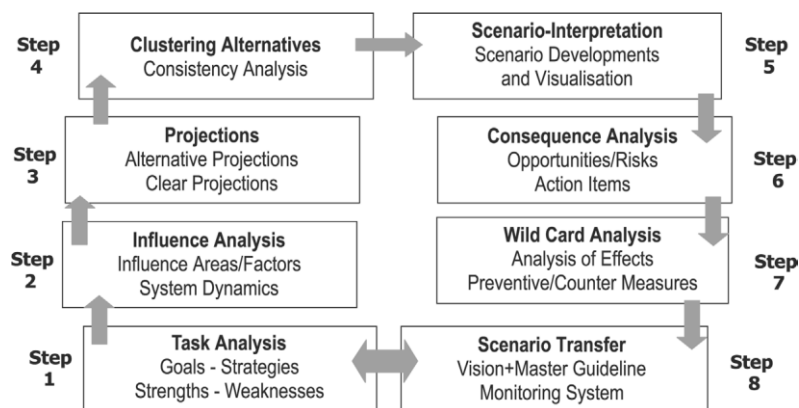


Fig. 1 The eight steps of scenario technique [18]

According to Kosow and Gaßner in [26] the scenario process is typically carried out through the five phases shown in Fig. 2.

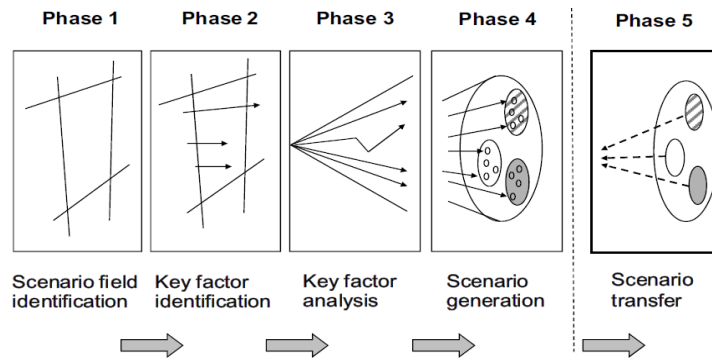


Fig. 2 The scenario process in five phases [26]

3.1.1. The main categories of scenarios

Various typologies of scenarios have been suggested, without consensus on them [27]. Two major categories of scenarios can be identified: exploratory, which start from past and present trends and lead to likely futures (what can happen); and anticipatory or normative, which describe the desired future or the feared future [13, 24]. They can be created retrospectively ("backcasting" scenarios). Börjeson, Hoyer and Dreborg [27] add a third category – predictive scenarios, which describe the most probable future (what will happen). Scenarios are also classified on the basis of the scenario topic.

Scenarios are also classified on the basis of spatial coverage (global versus national, regional, local and problem specific), breadth of the scenario scope (single-sector versus multi-sector), focus of action (i.e. environmental or political), and level (micro versus macro). The data used for scenario development can be qualitative or quantitative, and on the basis on that scenarios can be qualitative and quantitative.

3.1.2. Schools of scenario planning

There are three major schools of scenario techniques [11, 16, 21, 28]: (1) intuitive logics, (2) probabilistic modified trends (PMT) methodology and (3) the French approach of La prospective.

Intuitive logics school does not use any mathematical algorithms. There are numerous variations of the intuitive logic model, but the methodology proposed by Stanford Research Institute International (SRI) is the most popular and frequently used [28]. The advantage of SRI approach is the development of flexible, internally consistent scenarios from an intuition and logical perspective.

Probabilistic modified trends school incorporates two different matrix based methodologies: trend impact analysis – TIA and cross impact analysis - CIA.

Trend impact analysis combines traditional forecasting techniques with qualitative factors [11] and involves four steps [21]:

- collecting historical data related to the problem,
- use of an algorithm for selection of specific curve-fitting historical data and their extrapolation for the generation of 'surprise-free' future trends,

- creating lists of unprecedented future events which could cause deviations from the extrapolated trend,
- using expert judgment to identify the probability of occurrence of these unprecedented events as a function of time and their expected impact, in order to produce adjusted extrapolation.

Cross impact analysis includes a set of different causal variants developed in a cross impact matrix [11].

French School - La prospective assumes that the future is not part of the predetermined temporal continuity, but it can be created and consciously modeled [21]. Godet [29] has developed this approach as a mixture of systems analysis tools and procedures. His approach consists of the following phases:

1. identification of key variables by structural analysis (Micmac method),
2. trend analysis and identification of actors (retrospective study and 'MACTOR' method) and
3. reducing uncertainty on key issues (Delphi method and cross impact analysis), and the selection of the most probable scenarios using professional methods (Morphol, SMIC PROB-EXPERT).

3.2. Selection of raw scenarios and appropriate number of scenarios

There is no precise answer to the question of how many future scenarios should be developed and various researchers recommend different number of alternative scenarios. Based on the literature analysis [16, 18, 20] it can be concluded that 3-5 scenarios are optimal. If there is less than three scenarios all of the possible alternatives cannot be stressed. Also, a large number of scenarios is not desirable, because it would be counter-productive and impractical. Some of the researchers also believe that the number of scenarios should be even in order to prevent the desire to select the scenario that is in the middle [30, 31].

Depending on the situation, motivation, effort and available time for scenario development one can choose minimal, standard and maximum approach [10].

3.3.1. Four quadrants matrix – minimal approach

The minimal approach is appropriate if there are only two criteria or factors that are sufficient, and can be used to determine the future development. It is also called the double uncertainty or 2×2 matrix approach [32]. Scenarios are developed in each of the four quadrants of the grid representing the most important and the most uncertain factors.

3.3.2. Standard approach

Standard approach is recommended when it is not possible to reduce the number of uncertain factors to two. First, all elements are evaluated separately according to their estimated level of uncertainty in the context of continued development and their possible impact on the direction of development using the Wilson matrix (Fig. 3).

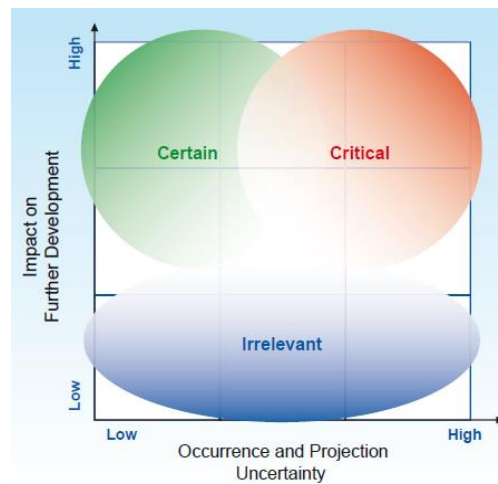


Fig. 3 Use of Wilson matrix to prioritize scenario drivers [10]

Alternative development variations for each element can be explored using morphological analysis [10]. It ensures the relevance, coherence and plausibility of scenarios [13]. Critical elements are entered at the top of the column. A number of conceivable development variations is determined (at least two). Variations are combined into plausible strands and each of them forms the basis of scenario (Figure 4).

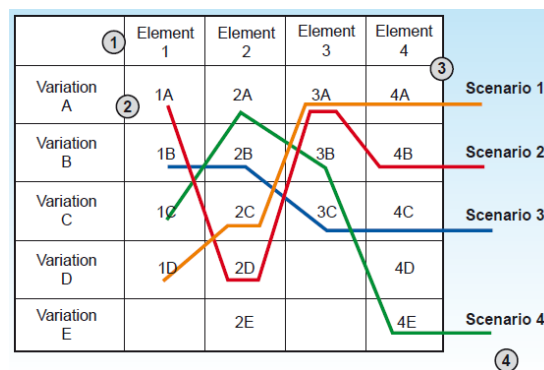


Fig. 4 Morphological analysis – the scenarios are dependent on the variation of the individual elements of the future [10]

3.3.3. Maximum approach

The maximum approach is used for situations when there are even more uncertain elements, and the number of elements can be reduced using cross impact analysis. This is used to evaluate changes in the likelihood of occurrence within the entire range of possible future events and trends. In this approach, a cross-impact matrix is created which identifies the impact and effect of each factor or trend on other factors/trends. A simple example of cross-impact matrix is shown in Fig. 5 and involves 10 trends (T1 to T10)

[10]. A score is assigned on a scale of 0-3. The trend with the strongest impact on the other trends is identified by summing the score.

↑	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Active Score
T1		3	3	3	2	3	3	2	1	2	22
T2	0		3	0	3	0	2	0	1	2	11
T3	1	1		0	0	0	2	1	0	0	4
T4	2	2	3		3	2	3	1	1	2	16
T5	0	2	3	0		0	2	1	1	3	13
T6	2	1	3	1	1		1	0	1	2	13
T7	1	2	2	2	2	1		3	2	3	18
T8	2	3	3	1	1	0	3		1	2	16
T9	2	1	0	2	1	2	2	2		1	13
T10	3	3	3	3	3	0	2	2	1		20
Score	15	18	23	12	16	8	20	12	9	17	

Active: T1 T7 T10
 Passive: T2 T3 T7

0 Independent	2 Dependent
1 Slight impact	3 Strong driver

Fig. 5 Hypothetical example of cross impact analysis [10]

After cross impact analysis, the selected elements are analyzed in the same way as in the case of the standard approach using the Wilson matrix and morphological analysis. Then, in the case of maximum approach a consistency analysis is carried out with the help of another matrix.

3.4. Scenario validation

Many researchers have identified scenario validation criteria [10, 16, 19, 20, 33]. The internal consistency is highlighted as the most important criterion. The paths to the future and images must be consistent with each other, i.e. their aspects may not be mutually contradictory or exclude each other. In order to insure the internal consistency of raw scenarios, consistency analysis is carried out. Plausibility is another very important criterion – scenarios should represent a logical path from the present and past, they should be based on future events that are realistically possible. Plausibility can be ensured by using the morphological analysis.

A good scenario should also be relevant to the issues of interest, colorful and surprising, and it should bring a new perspective to the problems. It should also describe the generic different futures rather than variations of the same theme. The less highlighted criterion is transparency [15, 33]. If the scenario is not transparent, it is difficult to believe in it.

Consistency analysis is usually conducted after performing morphological analysis and creating raw scenarios. It is used to check the compatibility of combined variations of different scenario drivers (concepts, trends, etc.) in these raw scenarios. Pilkahn [10] proposes assigning a score on a scale of 1-5 to evaluate the consistency of scenarios. A score of 1 is assigned if there is total inconsistency (an impossible combination) and a score of 5 is assigned if both factors are highly related and positively influence each other or have mutual dependency (Fig. 6).

	1A	1B	1C	2A	2B	3A	3B	4A	4B	4C	
1A											
1B											
1C											
2A	1	3	5								
2B	2	4	3								
3A	3	3	2	4	5						
3B	1	4	5	2	1						
4A	2	2	3	5	2	4	2				
4B	3	4	4	4	4	3	5				
4C	2	2	3	3	3	2	1				

1 Totally inconsistent	3 Neutral	5 Supporting
2 Partially inconsistent	4 Encouraging	

Fig. 6 Consistency matrix for raw scenarios [10]

4. THE USE OF SCENARIOS IN URBAN PLANNING

Scenario planning has been used extensively at corporate level and in many cases has been successfully applied at national level. The best known user of scenarios in a business environment is the company Royal Dutch Shell, which had even created scenarios annually [30]. The use of scenario techniques in urban and regional context refers to modeling, planning, and learning about alternative spatial development with consideration of uncertainties. They also provide insight into the preferences and decision-making of urban and regional planning actors [4].

Volkery and Ribeiro [34] indicate that the methodological approaches to scenario planning have been largely discussed in the literature, but less attention has been paid to their use and impact in the field of policy-making, although the wide range of their functions to support decision-making has been emphasized. Some governments have taken some measures to strengthen capacity for planning scenarios (the UK, Sweden, and Finland). Rotmans et al. [15] show that one of the ways to consider the concept of sustainable Europe is the use of scenarios, because the concept of sustainable development introduces new sources of uncertainty and conflicts. They present the VISIONS project, which aims to develop different futures of Europe, in order to better understand the possible links between socio-economic, ecological and institutional processes. Mahmoud et al. [35] propose a framework for the development of formal scenarios for use in environment studies, and it consists of five progressive phases: defining scenario, scenario design, scenario analysis, scenario evaluation and risk management. Alcamo [36] indicates that scenarios can be a useful tool for estimating future implications of current environmental problems or the emergence of new problems in the future, and suggests numerous tasks that the process of scenario can fulfill. Although most of these tasks can be established using

the existing estimates and policy analyses, scenarios can provide added value to these estimates because they provide an efficient way of data integration and easier intelligibility of results. Zegras and Rayle [37] examined the role of scenario planning in science-practice collaboration, and possible support in a regional planning context of Portuguese cities. Although the conducted exercise had a modest impact on the propensity of participants for further cooperation, it should be considered as a basis for further research.

In numerous studies, various organizations involved in urban and regional planning pointed to the lack of specific skills in terms of the use of futures methods and approaches and the lack of capacity to adopt new approaches and ways of thinking, acting and collaborating [38]. Scenario planning offers a solution to this problem. However, despite the availability a lot of different scenario approaches, the technique to construct scenarios of urban future in uncertain conditions has not yet been developed. Such technique should be based at least on the following methodology requirements [6]:

- scenarios should provide perspectives for policies or proposals in an urban plan; the goal of linking scenarios to urban planning is not only providing results that would serve as inputs in planning but also encouraging planners to a new way of thinking in the process of creating scenarios;
- images of the future should be present so that the analysis of the development can be phased out in time intervals corresponding to the middle-term planning; the knowledge generated could then be used as input in the planning process;
- a city represents a system for which the changes in the external environment (national and international conditions) are essential; for this reason, it is useful to make explicit assumptions about the future development of the environment.

The Futures Academy, at DIT, has developed a methodology for scenario planning in spatial and urban planning "Prospective Through Scenarios Process", based on the French school "La prospective" [39]. The methodology includes a process of 10 steps, which are presented in Fig. 7, along with the techniques that can be applied.

Using this methodology numerous scenario studies have been conducted. Mainly, the futures of Dublin and Ireland have been explored, but some global studies have also been developed, such as "Competitive global city 2030", conducted for considering alternative future scenarios of global cities [40].

In the literature there are more examples of scenarios that are successfully conducted.

The urban government in Vasteras, Sweden has implemented the method for constructing alternative urban scenarios under economic and political uncertainty in 1985 [6]. The scenarios are mostly qualitative and based on intuition with the use of few quantitative data. Because of the use of intuitive imagination, there is a certain amount of incompatibility within each scenario. Scenario construction was seen as a complementary activity to planning. Writing the scenarios helped to identify key areas which required more detailed and specific strategic studies.

Scenario of the Limmattal region (a suburban agglomeration close to Zurich) for 2030 was made with the goal of integrating knowledge from science and practice for a better understanding of the complex interaction between impact factors in the urban fabric [4]. This approach demonstrates how a regional scenario can be built in a collaborative research process involving various actors from science and practice. The formative scenario analysis has been applied. It combines qualitative and quantitative information to analyze the direct variables impact and explore possible and plausible futures.

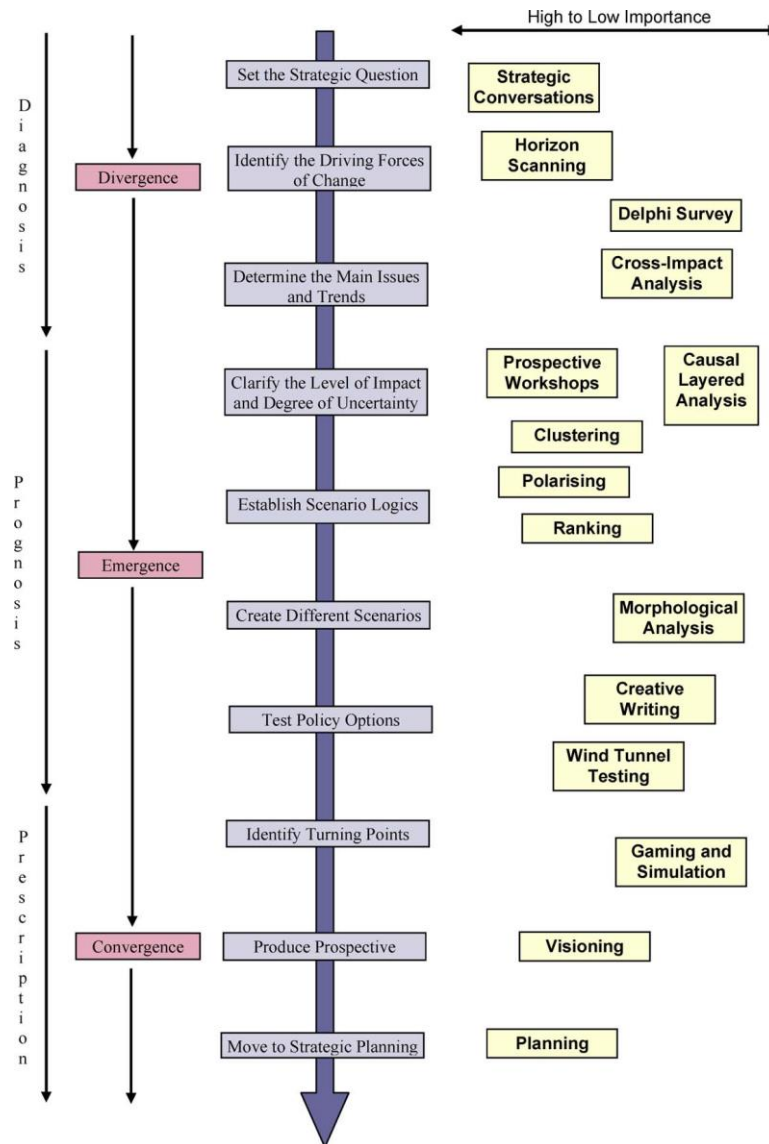


Fig. 7 The ‘prospective through scenarios’ model [39]

A backcasting study for Stockholm 2050 was conducted to obtain a vision of the city that successfully addresses the climate change challenge [41]. The approach of target-oriented backcasting was applied in order to develop images of the future showing how certain targets could be achieved in different ways. The images of the future are based on the three spatial structures - Urban Cores, Suburban Centres and Low-rise Settlements, and two tempo of life structures—Fast and Slow.

Examples of scenario planning exercises in urban planning are different because they have a specific context, are initiated by different motives and objectives and use different methodological approaches. However, they showed that the scenario method can be successfully used for understanding the forces that are drivers of change in the urban environment and to stimulate thinking and discussion about the future. Scenario planning deals with how planners and managers can set out and negotiate a successful course into the future in the face of significant uncertainty. Despite the differences, many of these projects are faced with similar problems arising from the lack of systematic knowledge about the process.

5. CONCLUSION

As a consequence of the transformation of cities today and its uncertainty and complexity, a growing need for alternative and imaginative planning approach appears. An increased interest of planners and decision makers for different approaches for facing the future is noted, leading to the need for systematical examining the issues associated with the implementation of future planning method in the process of urban and spatial planning. The development of scenarios is rapidly advancing as an alternative planning approach that accepts long-term perspective, includes critical uncertainties and long-term vision. Its application comes from the need for recognizing various alternative futures and a desire to eventually construct a single preferred future. This process encourages innovation, promotes thinking "outside the box" and helps planners and decision makers in exploring future possibilities, understanding the complexities of the urban environment and predicting the changes and their consequences. It can be used to resolve impending conflicts, stimulate strategic conversations and facilitate cooperation between actors. Besides all this, the scenario method could be integrated into a wider strategic framework, creating the necessary competitive advantage of cities. Given the impossibility of precise knowing the way the future will develop a good decision or strategy would be the one that is appropriate in several possible future.

Although the scenario approaches represent a common and popular practice in the business world, there are fewer examples of their use in urban planning. Also, there are no general guidelines for the implementation of the appropriate procedures and techniques for scenarios development. For this reason, every scenario project in the process of urban planning is unique because it is placed in its context, driven by different actors and uses a different methodology. This is in fact the consequence of the insufficient research of the approach.

The systematization of existing scenario approaches that was made in this paper showed that highlighting the advantages of this method as a complementary activity to the planning process would allow for selecting the scenario approach that would be most appropriate in a particular case and which would allow to establish the quality solutions for urban environment future.

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METOD SCENARIJA U URBANOM PLANIRANJU

Tehnike planiranja scenarija sve više dobijaju na značaju u procesu prostornog i urbanističkog planiranja zbog njihove korisnosti u vremenu neizvesnosti i kompleksnosti. Planiranje scenarija stimuliše strateško razmišljanje i pomaže da se prevaziđu misaona ograničenja stvaranjem višestrukih budućnosti. Na taj način može da pomogne oblikovanju budućnosti prema zajedničkim vrednostima i željama društva.

Iako je planiranje scenarija dosta korišćeno u poslovnom svetu, u oblasti urbanog planiranja postoje malobrojni primeri njegove primene. Jedan od razloga za to je i postojanje mnoštva različitih metoda i alata bez opštih smernica za primenu odgovarajeg postupka i tehnika za izradu scenarija u planiranju. Iako svaki projekat izrade scenarija mora biti jedinstven po svom kontekstu i akterima, metodološke postavke mogu biti slične. Iz tog razloga je u radu glavni cilj istraživanja bio da se izvršeni sistematizacija poznatih metoda za izradu scenarija, naglase istaknute tehnike i alati, i razmotri mogućnost primene metode scenarija u trenutnom procesu planiranja gradova.

Ključne reči: *scenario, urbano planiranje, budućnost, neizvesnost*