

A coupling multi-layer strategic Governance challenge and visioning model

Nima Norouzi

Energy Department, Amirkabir
university of technology, Tehran, Iran
Nima1376@aut.ac.ir

Abstract

Common vision consists of four components and dimensions, such as strategic intents, aim, and target (the philosophy of developing a system), logic, and core values. Common vision could be deployed in different organizations and various communities, macro or micro scales, individual or organizational levels, and the state or regional utilizations. The methodology applied for model designing in this paper is based on the researches of three integrated interactive coupling layers, including the ideals, core values, and environmental strategic challenges and factors, along with existing and /or emerging dominant intellectual views that cause a paradigm change, insights, and approaches. The innovative aspect of the model is that the layers have modular interactions and coupling with each other and the output of each layer is related to and effect on the next which eventually indicates the strategic challenges as a combination of the layer vectors of the three sectors of the model which leads to the recognition of strategic challenges of the system. Afterward, the resolution of the vision is prepared based on strategic challenges resulting from the model. It is noteworthy to mention that this very model of challenges has become the basis of designing.

Keywords: “coupling layer model,” “sun model,” “strategic challenges,” “visionary,” “perspective.”

Introduction

The complex nature and high uncertainty of the future challenges the ability of countries to plan and develop sustainable, as time goes by and happens changes in the environment, this becomes more complex and challenging. (Cameron and Potvin, 2016; Wilkinson, 2012) future is also facing an increase in uncertainty and unpredictable changes and challenges. (Banister and Hickman, 2013) state that integration and merge of the trends, plus technological, cultural, economic, social, and political notions on different levels, would cause the appearance of new phenomena, develop complicated and uncertain conditions, and provide highly sensitive, multi-dimensional situations. As the patterns of global and national development change, the approaches to administer the communities become more complicated as well. Now the question is; how the future is made and through which methodology, the paradigms governing the future shall be studied. The evident issue is that:” You could manage what you could imagine.” (Neuvenen and Ache, 2017) Understanding how these trends and processes spread globally can be utilized to formulate patterns over national developments. (Waldron, 2013) This knowledge and planning for future crystallize in the concept of future studies. Future studies embody a set of efforts through which it tends to search sources, patterns, and factors of change or stability and to conjure up the potential futures and their planning. Future Studies is the reflection of the method of the generation of “tomorrow” of the changes or stability of “today.” (Tatebe, 2010; Vanwynsberghe, 2007)

1982, Robinson introduced the backcasting approach as a new approach to energy forecasting and was then widely used on other issues. (Wiek 2013; Sydneysmith,

2007). Backcasting is composed of three stages (Figures 1 and 2), the first of which is the formulation of a "perspective," in which a long-term picture of a desirable future is formulated (see figure 2). And two stages of regulations and evaluation (Sorio-lara and Banister, 2017; Neuvonen, 2017).

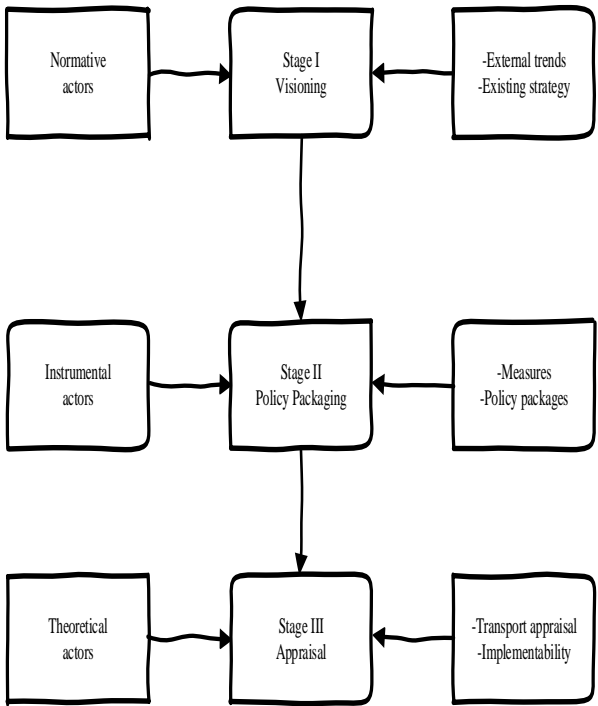


Figure (1): Steps of Backcasting method (Sorio-lara and Banister, 2017)

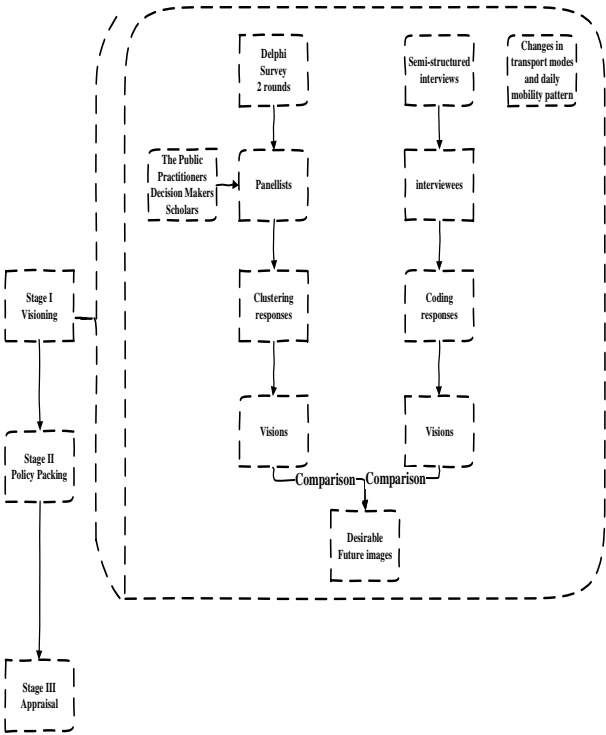


Figure (2): dimensions of perspective (Sorio-lara and Banister, 2017)

Perspective is a desirable, achievable, and long-term image of the future that is based on the values, aims, and needs of each society. (Axsen, 2014; Bizikova et al., 2010) perspectives are idealistic views of the future, which is designed to help planning to reach that ideal future. This is an image that is not only based on designing the future but also wishes and hopes, emphasizes the individual and social views. Planning to reach the ideal future is also dependent on the management of resources in quantity and quality and handling collaborations of experts, researchers, and the others. (Bodor, 2009; Doyce, 2006; Schneider, 2018) Outlook-based planning tries to analyze and determine the requirements and infrastructures required to achieve this perspective, taking into account an optimal prospect in the future. Therefore, unlike the traditional methods of strategic planning based on existing situation analysis and then drawing the future's direction, this method is based on providing an optimal image based on the interests of the stakeholders and a comprehensive effort to realize it. (Boyed, 2011; Brundtland, 1987) In other words, traditional methods are used to improve the current status, but this method in the term of desirable, ambitious, and possible future, considers creative methods and intermediate solutions. (Colantonio et al., 2011; Connelly et al., 2009; Ingeborgrud, 2017) A perspective that meets human values and an optimistic view of a desirable future motivates collaboration and group works. (Cameron and Potvin, 2016; Dempsey et al., 2011; Shrubsole, 2007; Matschoss et al., 2019) Perspectives are understandable in the field of future studies, some experts in this field of visioning have defined that in this field image of the far end of the horizon is at hand. (Beaulieu et al., 2015; Sheppard, 2012; Dijk and Weitkamp, 2017; Dillard et al., 2008) others see it as an objective, imaginative, and quantifiable picture. (Neuwanen and Ache, 2017; Cameron and Potvin, 2016; EC, 2010) Strong perspectives can build on the ambitions and will force the people and authorities to take

responsibility and take steps forward and to continuously revise and re-establish existing policies and practices. (Neuvenen and Ache, 2017; EC, 2012) though, according to Neumann et al., 2017, having an optimal and ideal perspective with strict goals and factors weakens it and even creates a sense of inertia and disagreement. Also, some studies have warned about the likelihood of designing a utopia rather than prospects and practical strategies. (Peel and Lloyd, 2005; Evans et al., 2006) The "realistic perspective" in the visionary literature is conceived: the vision must be idealistic, open, free, innovative, and somewhat utopian. (Wiek 2013; Friedman et al., 2015), on the other hand, is realism in the formulation of an appropriate perspective because the conditions are considered and analyzes and evaluations that cannot be permanently and irreplaceable on various dimensions, and usually, it must be evaluated every 5 years. (GCEC, 2014; Hartig et al., 2014; Heal, 2012) In this paper, the vision considers both idealistic goals as "ideals" and realistic goals that examine theories and trends as well as the recognition of the environment it will be obtained. (IISD, 2001; Norouzi et al., 2020)

New approaches to the visioning were introduced during the 1980s and 1990s, based on a combination of system thinking and participatory engagement. Visioning is a useful collaborative approach to dealing with the complexity of the environment, which is used to create the desired future and move towards it. It is also necessary to study the current status while making a vision to ensure its availability is at hand. 3D modeling and simulation are visual tools that help contributors to see the outcome of defined behaviors, policies, and goals. (Cameron and Potvin, 2016). The development of a vision, like participatory planning, refers to processes through which vision makers examine different aspects of the subject and can constructively discover issues, and present Solutions for the subject, beyond what was understood in isolation. (Sheppard, 2011) This suggests that a strong vision, about the definition, is a picture of the future that is made with the support of all experts involved. (Dijk and Weitkamp, 2017; Shellenberger, 2004)

Characteristics of a strong and successful perspective

A successful perspective is one that takes all hopes, wishes, aims and targets of all people involved in the society, in the account, analyzes the current status correctly and also evaluates trends and processes that affect the society. Also, the output of this process that is an outlook must be internally consistent, as well as being supported by the government and social leaders that make it more accessible. (IPCC, 2014; IPOS, 2009; Shaw, 2009)

The key to success for a vision is not necessarily related to its content. Dijk and Weitkamp have introduced nine key factors for the success of a vision:

1. Setting up excellent, attractive and consistent goals
2. Create a roadmap with the steps and tasks assigned to achieve those goals and dividing them into real projects.
3. Participation of experts from the very beginning of the process
4. Using sufficient expertise in the planning team
5. Creating and maintaining a sense of the necessity of having a vision
6. Linking several integrating benefits
7. Strong leadership to create the vision
8. Support of political parties
9. Financial support (Dijk and Weitkamp, 2017)

The success of each outlook in each system is highly dependent on the involvement of people at different levels and their impact on the process of developing a vision. The adoption of participatory approaches and the sharing of different segments of the people based on each stage, and their expertise and information in the vision and outlook, is one of the well-known methods of developing a vision at the national and institutional levels. (Kaplan, 2011; Larsen et al., 2011) According to Wangel, the participation of different people is needed to create this strategic statement. Public members, researchers, and experts are the groups that are needed to formulate a vision, identify the category, and introduce it. (Wangel, 2011; Robinson, 2007; Salter, 2010) Since the selection of contributors is of particular importance in the success of the vision, one of the ways of recognizing

participation Potential candidates in each group is the Stakeholder map, which determines influential candidates for this role. (Iwaniec, 2014; Robinson, 2011; Robinson, 2014) According to studies, the outlook should be "distinct and challenging" such this outlook will lead to better performance than the "superstitious goals" approach. At the same time, the vision must have a clear target with specific tasks. The importance of this is because the prospect needs to be addressed by the lack of accountability that is inevitable at the outset of developing an outlook. (Dijk and Weitkamp, 2017) These tasks answer the question "How" in visioning. (Page et al., 2010; Petersen et al., 2003) A successful vision must have a period and be attainable at the desired period, be quantifiable to track the progress of development of the strength of the system and the environmental opportunities, and must have strategies to improve the system's weaknesses and external threats. It is also necessary to stimulate public participation and encourage community movement. Supporting the outlook depends on not only the predicted outcomes but also ways to achieve these outcomes. (Dijk and Weitkamp, 2017; Richards et al., 2015)

During the term of Weitkamp 2014 an appropriate vision consists of following features such as: Inspirational, Sustainable, Systematic, Coherent, Likely, Tolerable, Related, Unique, Being Motivated, and Shared features and characteristics (See figure 3). (Weitkamp, 2014; Robinson, 2014)

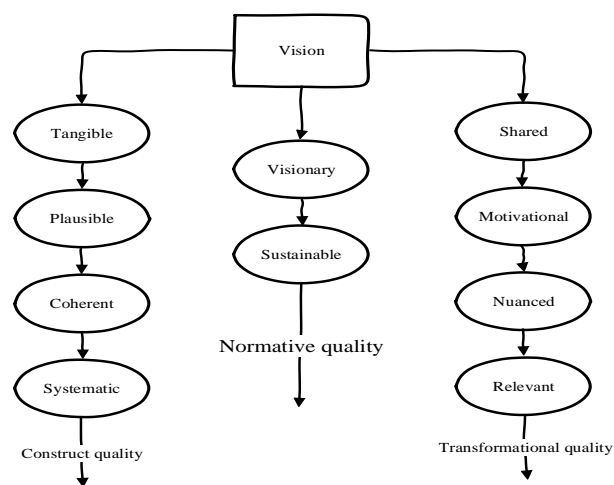


Figure (3): characteristics of a successful vision (Sorrio-lara and Banister, 2017)

Methods and materials

The bottom-up approach means that selected individuals create different scenarios for participation in relevant topics. (Andreani, 2018) Some scholars believe that with the organization, clustering, and networking of society a public outlook can be designed with a bottom-up approach, a public outlook that relied solely on receiving the intellectual and unwritten demands of the community; And the processes of long-term analysis, thinking and the recognition of the dynamics of the environment is not important. (McGrath, 2002) These methods are innovative and have no specific formulas, so they can take up a lot of time and expenses. On the other hand, the top-down approaches start with visioning models and then decides which subjects and topics involved in the process. (Shin, 2010) These methods are largely formulated. According to Wick and Iwaniec, 2014, neither innovative method, nor formulated methods alone can lead to the development of an appropriate perspective, since visioning involves cognitive, rational, and emotional tasks, so a combination of formulating and creative methods can create a Sustainable Perspective. Lara and Benster 2017 also argue that hybrid methods are generally more suitable for visioning since they do not use a complete visionary approach in the optimal future. (Sorrio-lara and Banister, 2017)

In the following, some commonly used methods in visioning are introduced. (Table 1) It is necessary to mention that some of the visioning methods formulated as "free format" ones. Which is used to expand existing political and operational horizons. Looking from the outside of the process of developing a vision, as a learning process at higher levels, is a participatory learning method among regional role-players that delivers new definitions of existing issues and solutions (see table 1). (Neuwanen and Ache, 2017)

Table (1): introducing visioning models
(Neuwanen and Ache, 2017)

<i>Table 1 introducing visioning models</i>		
Author	Main features	steps
Latam 1995	Culture (values, norms and shared experiences), dreams, expectations, and aspirations of individuals	Input collecting, Mindfulness, Removing additions, drafting the original document, correcting a statement, testing criteria, gaining approval or organizational reform, communicating, celebrating and promoting
Quigley-1999	Common Values (Nation's Beliefs), Dreams, Mission, and Long-Term Objectives	Choosing a Focal Point, Familiarity Committee Members or Group-Based, Preparing and Submitting a Questionnaire for each member of the group, conducting an interview, collecting and categorizing the response Summarizing the results, analyzing the current status, sharing findings with participating groups.

Lindgren and Bundwood -2003	Creativity and Public Participation	1-visioning Seminar (A group representing the entire organization or community is invited to a visioning training workshop) 2- Creating a Perspective (After completing the seminar with Creative Formations of People's Vision it is possible)
Lizli 2004	Values and Objectives, Environmental Data	An examination of the critical points of organizational life, the explanation of values, the image of the environment, the shaping of behaviors and capacities, the visualization of the system's image, the setting of objectives, and the visualization of the vision.

Examples in recent years in the development of perspective are discussed below:

The Delphi and semi-structured interviews were used in a 2017 study in Andalusia's vision development in the transport sector. The reason for choosing these two methods is that structured interviews allow the research process to be more open, and the Delphi method serves as a means of

identifying agreements and disagreements in group judgments based on specific questionnaires and several debate sessions. The questions used in this interview were:

1. Overall perspective
2. Changes in the behavior and quality of travel (changes in the context of community culture).
3. Technological changes
4. Access and planning

The results of the research indicate that the environmental forces in this region are divided into three categories of changes in travel behavior, technological change, and planning. To face these evolving challenges, the isolated outlook designed for each of these driving forces was first developed, such as changes in travel behavior, low carbon emissions, technological change, innovation in various sectors and issues. Accessibility and planning, increasing urban density were considered as the axes of the vision, and according to them, the 2050 vision statement of the region was formed. In a study that was designed to formulate a vision for Sweden's forests and the environment in 2016, backcasting approaches were chosen as the basis of this study, and its vision was formulated with collaborative approaches and with methods such as holding workshops successively given the following figure (see figure 4).

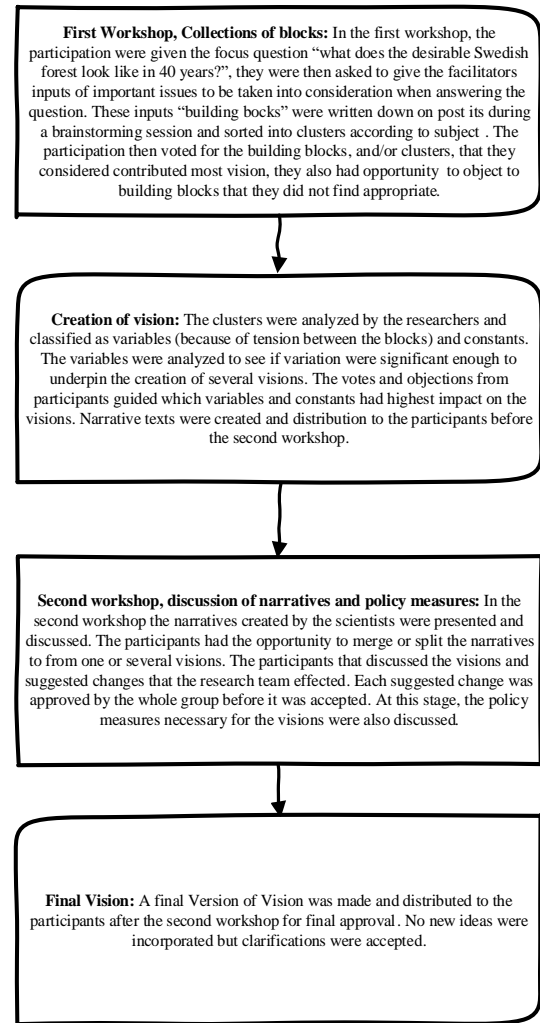


Figure (4): steps of vision, designing (Sweden's forests and the environment in 2016) (source: Rama et al., 2018)

In the next model designed to shape the European Union's natural and environmental vision, data are collected and analyzed step by step, the data are collected by the committee, and the participants are composed of academics and non-academic individuals. The vision compilation in this model is divided into 4 stages, the highest level of design we get, the more participation is needed. In each stage, a specific protocol has been developed and distributed among the members of the research committee. The first stage consists of two steps:

- Identify potential participants
- To communicate with the participants by the research team to introduce the project, the requirements for

participation in the project, as well as its scheduling

In the second stage, each group of participants focuses on the focal group technique. All these focus groups are led by a trained facilitator. The output of this step is several possible future scenarios developed by each group. In the third stage, the research team begins the process of developing strategy, to do a comparative study of the collected perspectives, identify common and appropriate perspectives and summarize in two or three perspectives, the results are presented to the participants. Presentation and validation will be made, and possible changes will be made to the outcomes of the visioning method. In the fourth stage, ways to achieve a vision are developed together with participants in different groups. (Quist et al., 2011)

The next study of the SPARC method, proposed by Wiek et al. in 2014, incorporates and corrects several of the various visioning techniques which are currently used in planning. In this way, the process of visioning consists of five steps:

1. Create a visioning process
2. Extract Outlook Statement and Priorities
 - The extraction approaches: responsive and unpredictable procedures (background)
 - Prioritize
 - Conclusion and extraction of results
3. Analysis of draft perspectives
4. Review and modify vision analysis plans
5. Finalize and publish the outlook

The sequence of these activities is planned to involve both creative processes and analysis processes. Phase 2 creates and encourages innovative processes, while Phases 3 and 4 contain analytical processes. All processes are facilitated by the participation of the relevant stakeholder group.

The research methodology of the model is collaborative research that includes field studies, upper documents, reception of leaders' opinions, knowledge of values, point of view, myths, cultural and civilizational metaphors, and their combination. This model is created with data derived from An analysis of the environment and its strategic factors. As well as dominant and influential trends and

drivers, with methods such as trend analysis, scenario planning, panel formation, and Delphi networks, collaborative think tanks, workshops, academic conferences and national conferences And Contextual mind storms, Focal Group, Team Networking, Survey Surveying, Systemic Review of Texts and Text Mining, Conceptual Modeling, Structured and Semi-structured Questionnaires, and Interviews, Multi Subjective Case Studies and Interaction Techniques.

The research method of the sun model is based on three phases of analytical-objective, creative-mental, and hybrid phases, and consists of 6 stages and several steps which are mentioned below:

- A pre-planning stage that includes the following 6 steps:

- 1.1. Identify and organize expert and experienced landscape designers
- 1.2. Evaluation and introduction of beneficiaries and a definition of the network of stakeholders at the community level and different social groups and groups were living in various geographic regions of Iran.
- 1.3. Organizing focal groups in each class of stakeholders and peer teams in organizations, enterprises, and NGOs, local and regional management organizations of universities and collaborative institutions as a network for participation
- 1.4. The definition of spatial and temporal-spatial and territories (in a country and the 20-year horizon)
- 1.5. Analysis of the environment and the identification of strategic environmental factors of a network of institutions, other non-governmental teams and scientific and expert organizations in the country by the State Organization for Management and Planning
- 1.6. National Seminar on Opportunities and Challenges of the Future of the 20-Year-Horizons

- 2. The second stage:

- 2.1. The formation of national think tanks at the level of major universities and planning agencies, management and economics institutes, and futures studies on the social, historical, political, economic, scientific and educational, cultural and legal geographies consistently and systematically to shape A

common understanding and the introduction of the project and the desirable dimensions

2.2. Create expert panels and select the questions which are needed to prepare a questionnaire for the Delphi panel. The panels consist of 7 to 9 scientific and executive experts in different departments, including three university professors in the field of specialization and two experienced experts and two top executives in charge of design.

2.3. Identifying the national network of experts and introducing a questionnaire and how to answer questions and assess their degree of interest and satisfaction in cooperation with the National Project Management Team

2.4. Sending questionnaires and receiving comments and analyzing them that Delphi polls are done in three steps

2.5. Classification of theoretical findings, panels and the formation of focal groups for the findings of each district

2.6. Documentation of the findings and documents submitted by members of the network of experts of the documentation network

- 3. Selection of a Historical Period of the Last 500 Years of Iran for the Study of Myths, Ideal Components, Beliefs, Persuasiveness, the Development in Iran, the Historical Evaluation of National Society in the term of Economic and Social Development and Cultural Transitions and Cultures affected Iran's people.

3.1. Invite experts, historians, and cultural, geopolitical scholars, scientific, educational, and geologic scholars who are experts in these fields.

3.2. Inviting research groups in the field of futures studies of strategic management in scientific institutions, universities, research centers, advisory groups, and scientific and technical service providers of futures studies. Continuous research to analyze future developments in environmental, cultural, scientific, technological, economic, and social aspects and Assessment of the next 20-year of Iran in the term of these driving forces.

3.3. The formation of a study group focused on the study of the world-class top-level internationally-visioning projects, such as the state of Louisiana, Malaysia, India,

Japan, China, Germany, and Turkey, due to their economic and cultural similarities with Iran.

3.4. The establishment of joint workshops between historians and futurists, as well as monitoring, to present their views and findings, to achieve the method of scientific classification and common conceptualization of findings.

3.5. Estimation and evaluation of national aspirations that will be stable in the future, the conditions of rival countries in the region and the world, and the dominant driving forces of the global future, as well as future strategic changes that affect Iran and its development and progress.

- 4. The creation of a workshop consisting of peer groups, the workshop with 30 to 45 people in working groups of 5 to 7 people who took away from the workplace and living for 48 hours and located in a beautiful and mountainous atmosphere. Conducted discussions in that place and shared the conclusions.

4.1. Inviting media that affect national public opinions, such as television networks, newspapers, magazines and newspapers, national and regional news, and information networks to inform the society from the topic and stages of work and gather the opinion about the topic and stages.

4.2. The formation of a specialist team that determines the model departments and how to build a model. The model consists of seven project team managers and 2 specialized panels following the regulations of the activities. Including forming the brainstorm to get feedback on the components and the vision document (Storming), receiving common ideas and normalizing (Norming), presenting the characteristics of the model (preforming), and classifying the concepts and key categories of factors derived from the environment, aspirations, metaphors, and historical and civilization myths and comparative studies of the world's premier experiences.

4.3. Conduct systematic interviews with community executives that are performed by the organizations responsible for executive, legislative, and judiciary, and receiving ideas and Expectations of their

missions by mentoring and through Grounded theory.

- 5. In the final stage, how to link the findings and opinions of the four stages of the model as a hybrid method is discussed.

5.1. Understanding and assessing the environment from the standpoint of the present situation and future scenario and explaining the future challenges of the environment that the country faces.

5.2. Receiving ideas, national expectations, norms and priorities of economic, scientific and technological identity and national security

5.3. Future strategic developments for changing the paradigms thought in the country or at the regional and international levels and recognizing G4 “Geopolitics, Geo-economics, Geo- culture, Geo-science, and technology” flows globally and regionally, changing thoughts, insights and changing paradigms, or ultimately changing strategic orientations.

5.4. The choice of the layered method based on the ideas of Soheil enayatullah in each sector and, finally, the way of linking and feedback of the layers in each sector and the whole model was selected, each layer of each sector in the model is interconnected and compatible and the movement of layers from the periphery to the center of the model (inductive analogy), is a strategic challenge. These challenges include the fundamental shift from future strategic developments, changes in G4 paradigms, strategic priorities derived from the ideals, fundamental values, community expectations, and the identification of environmental factors. The environmental factors that are based on the internal and external environment analysis based on the facts and the needs of the present and the future of the society were evaluated in the term of future developments and scenarios.

- 6. The project team presented several challenges to the socio-economic, political, security, social, and cultural, scientific, and technological experts in a joint workshop, which was held in three days, and received opinions of the expertise and conclusions of the case was done. The Weighting was done and performed by using Paired Comparison and AHP, and

finally, six final Strategic Challenges were selected.

6.1. The selection and documentation team was asked to quantify these strategic challenges.

6.2. The expert vision designer team selected 20-year and presented to 6 focal groups in the six major fields of STEEPV, each of which should combine its findings and creative expertise with a 20-year target that fits one Six strategic challenges set

6.3. At a one-day workshop, eight teams worked together, including a visual design team, six goal-oriented teams focusing on STEEPV, a discursive assessment team, and strategic challenges to address strategic challenges and macro goals. And compiled the original content of the document that came from the model.

6.4. Documenting all studies and compiling a vision book based on the model and approving it in the national associations with the participation of all stakeholders and legal authorities of the country and interviewing the media to introduce the product, which is a national perspective document and outlook.

6.5. Approval and notification of the vision document by the country's top leaders, executives, service providers, legislators, and the public media

6.6. Participation of the vision Design Management Team in the media, universities, professional, and scientific and cultural communities to introduce it to the community.

The ideals are the aspirations of people at different levels, which are valuable and derived from the point of view and rooted in their culture, beliefs and their historical norms, and are not limited to a certain time and are passed over to the generations. In the second layer, the study of myths, philosophy of life, the culture and civilization of the nation is carried out through the analysis of texts. After this stage, in the third layer, values, norms, and collective identity are explained as follows: values are a futuristic figure, and most philosophers have been focusing on it since ancient Greek civilization. In the term sociological knowledge, values are beliefs that people have about what is desirable, appropriate, good, or bad. Values are understood only by

psychological phenomena and cannot be explained separately from the social context. Values are a set of unified, coherent, goal-oriented, consistent principles, beliefs, and principles that, in structural, behavioral, semantic, environmental, and cultural dimensions, strives to strengthen social efforts. A set of goals, attitudes, beliefs, and things that are more important than other affairs and considered to be the majority of the community is desirable, can be considered as values, and because values are desirable, all seek to fulfill them, and For that, they are respected. Values have characteristics that are constant over time and less affected by changes. Features such as:

- Values are shared by people.
- Values do not depend on people's judgment
- Values are associated with emotions
- Values are fairly constant and durable.

The norm in the term sociological knowledge is referred to as a behavioral pattern that regulates the relationships of social reactions. The majority of their society adheres to it, and if it does not respect, the trespasser will be punished. To formulate the vision of a community, it is necessary to correctly identify and consider the norms of that society.

Several people associate themselves with a common theme with a particular title, such a feeling that gives us the feel of solidarity and the formation of a collective that is separated from the other by the title "us." The collective identity refers to the sense of belonging to a group (collective). Collective identity has generally been known as a catalyst for change throughout history.

With the combination of values, norms of collective identity, strategic values are achieved. Strategic values are values that directly relate to the vital, primary and secondary interests of society and embrace the basic principles of the common people of the community and as guiding principles for all have an intrinsic and pivotal value, this conceptual points strategic choices and are the criterion of the correctness of the selection. During the term of changes in the external environment and the change in the internal environment and strategic intentions of the leaders and key capabilities

are created in the strategic areas and strategic positions of society. In this way, new strategic spaces will be created for activities that may change the position of each community or organization or firm. This change in strategic positions changes the priorities and strategic actions, and the capabilities, strategies, and resources to achieve that position. Figure 4 illustrates this part of the model schema (see figure 5).



Figure (5): aspirations and its 4 layers
(Latam, 1995)

Major changes that take place in global management approaches and on the dimensions of theories and intellectual changes are the causes of many strategic factors of the international, regional, and national environment. It is imperative to pay attention to the paradigmatic theories that are of interest to the communities as well as the intellectual changes affecting the field of view and thinking that are effective in shaping the future. As the speed of innovation in the field of technology and developments in the world shows the inalienable ability of societies to create massive changes. In the other layers of this part, the future propagators of the future, including proponents associated with economic, geopolitical, political geography, cultural geography, and the geography of knowledge and technology, are studied. In this context, it is necessary to note that the culture is a feature set structure of a human

group, including the different dimensions of point of view, attitude towards the world, beliefs, customs, behaviors, practices, methods, tools, self-protection mechanisms, thought and thinking Literature and art, etc. Today's culture plays a role in national politics and international politics. The cultural geography examines the relationship between the two domains of culture and geography and their interactions. Therefore, the interrelationships between the environment and the culture of human groups are the subject of cultural geography. It should also be taken into account that economic geography forms when the sector or all of the economic capabilities of the nation-state depend on geographic issues. At present, moving the world's geopolitics towards a structure that is based on economic groupings. It can be said that in the contemporary world, the importance of geo-economics issues towards geopolitical issues is gradually expanding.

The next step is to study insight, according to some social and managerial scientists, people, or nationalities that have a positive image of the future and are the consequence of the positive outlook for their success in shaping the future. In the historical course of this trend, Greek architects have come up with a positive image of the future and dreams that have been able to impress the architecture of the West. In this regard, strong dreams become insight, and the actions of humans and societies based on their vision, and important insights are effective in the success of nations. Therefore, the success factor of the future is "perceived public perception." Dreaming and having a positive attitude towards the future, especially during the crisis, is the strongest factor in the success of nations. Strong dreams become insights, and the actions of humans and societies are shaped by their insight, and important insights are the success factor of nations. This formation of insight in societies requires the presence of conscious, informed, and guided leaders. In the following, after reviewing the preceding cases, it is necessary to describe the paradigmatic transformations. The paradigm consists of the frameworks, concepts, assumptions, and approaches that

members of a scientific community rely on their research. So when the paradigm shift occurs, a revolution has occurred in the realm of science. Given that paradigms are changing globally, these paradigmatic changes can overturn past orientations and approaches and replace new approaches and patterns. Therefore, after recognizing the paradigmatic changes, strategic direction changes will need to be addressed in the formulation of a vision (see figure 6).

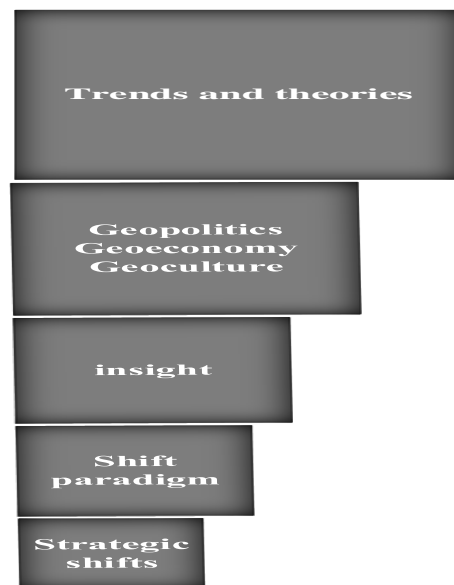


Figure (6): changing strategic orientations (Quigley,1999)

In this section, the strategic elements of the environment are scanned, monitored, and evaluated by factors, the environments in a system can be divided into two parts, internal and external. The environment is a set of conditions, trends, variables, factors, events, imaginations, and actions that are influenced by the controlling factors. Environments can be considered systems that have an impact on each other. The analysis of the internal environment leads to the assessment of the strategic factors of the environment, which forms the strengths and weaknesses of the environment. The quantitative and qualitative status of each of the internal factors of the system, in the event of a positive impact on the realization of the mission and its objectives and performance, leads to strengths and, if the situation of these factors hurts the realization and performance, determines the weaknesses. The external environment is

usually divided into two near and far environments. Factors, variables, and trends in the external environment includes a system that affects the conditions, factors, and strategic options of the internal environment and are typically out of control of the system. In analyzing the external environment, first, the factors are determined and their indicators and their effects on the internal system. The importance of each factor in the external environment is called opportunity when it has a positive impact on the mission, goals, and function of the internal system. Other external environmental factors are external threats and should be identified in time if they hurt the performance of the internal system or impede the achievement of its objectives. By looking at the strategic environmental factors (internal and external) and integrated assessment and interaction of strengths and weaknesses and the opportunities and threats that derive from the recognition of the national and international environment, some key factors are leading to the management of the country's top levels. They can be used to design and stabilize the future position of the system (organization, country, etc.).

By recognizing these critical factors in the system-level challenges, some views call the challenge a kind of conflict, and they consider it to be inherently negative and seek to cope with it or eliminate it. In other words, in this view, the challenge is a kind of deterrent, but in the other, there is also a positive attitude in which the challenge is considered as the interaction of the points (strength, weakness, the opportunity, and the threat) which is understood from the recognition of the environment. In this definition of the challenges, they have positive and negative aspects, depending on how they are managed, there is the possibility of overcoming the opportunity aspect over the threat or vice versa. In this perspective, the positive management of the challenge eliminates the aspects of threat and negativity by strengthening the strengths and optimal use of opportunities.



Figure (7): the environment's analyzing

The Results and the Sun model Design

To combine the three previously introduced concepts, including ideas, theories and drivers, and strategic elements of the environment that took place in a layered manner, environmental challenges, strategic priorities, and strategic change took place [18].

Of the strategic priorities, the direction of theories and drivers, and the environment of the strategic elements of the environment, environmental challenges are achieved. On the integration stage, the combination of the results from the three sections is achieved by strategic challenges. The basis of the outlook document is based on this model. A vision statement is arranged in a few tips, but transparent, clear and explicit terms, including environmental data, changes in attitudes, values and social aspirations, intellectual creativity of strategists and social leaders, and the public. This statement is arranged in the way that the strategic challenges and the qualitative objectives set in the document, have direct and meaningful connections, and homogenize the needs of the society in the future and present time, using ideal, achievable, valuable and sacred phrases and words for documentation of this outlook. In every modeling method, systematic thinking and the importance of feedback must be taken into account. In this model, there is a feedback, review, and correction

process. This means that when the environment is analyzed, and the future is evaluated, estimated, and designed. These events have not existed in the internal and external society and their effects and consequences. It has not been perceived and evaluated by people in the past and the future, and it creates incidental events that may affect all parts and layers of the model. Finally, an integrated model consists of three sectors in the fig. 8 below (see figure 8).

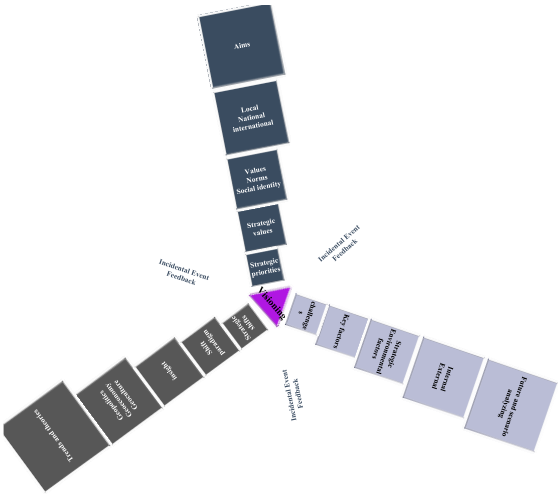


Figure (8): Sun Model “a national visioning model” (by the author)

Discussion and conclusion

The Sun model consists of three parts and coalesced and coherent layers that are examined in a layered structure and is concluded from a deductive approach to inductive. The design approach is based on

forward-looking, forward-thinking, and planning, and each layer in each section of the model has a two-dimensional interaction with the next layer, and each part of the model interacts with the other parts in a dependent and direct form. Also, the interaction of the aspirations with the realities (the two views of idealism and realism) (objectivity and mentality) in the design is one of the features of the Sun model. On the other hand, prospecting and monitoring of the environment and strategic factors which are interacting with each other (Interaction for Present and Future) and eventually the impact of random events in the feedback and moderation process has been considered in this model, which has led to the unique existence of this model.

In the sun model, the environmental data and evaluation of them is performed with formal, analytical, systematic processes, and intuitive and unstructured creativity, and looks at the creation of the future as a designing method. In this paper, the perspective consists of three categories: data derived from the fundamental aspirations and values of the nation, data from the analysis of the environment, and the data from analysis of trends and the recognition of futuristic proponents. Each of these categories includes the layers described in detail in the previous section, and finally, the relationships between them and how they are linked together, and how the general model is described (see table 2) [27].

Table (2): characteristics of the Sun Model (by the author)

	<i>real isti c</i>	<i>idealistic</i>	<i>Structured analysis</i>	<i>Semi- structured innovation</i>	<i>Interacting</i>	<i>layer</i>
Aims		*		*	*	*
Driving forces	*	*	*	*	*	*
Strategic indicators of the environment	*		*	*	*	*

References

- [1]. David Banister; Robin Hickman, "Transport futures: Thinking the unthinkable," *Transport Policy journal*, 29 (2013) <https://doi.org/10.1016/j.tranpol.2012.07.005>
- [2]. Brundiars, K., & Wiek, A. (2013). Do we teach what we preach? An international comparison of problem-and project-based learning courses in sustainability. *Sustainability*, 5, 1725-1746.
- [3]. Aleksi Neuvonen; Peter Ache, "Metropolitan vision making – using backcasting as a strategic learning process to shape metropolitan futures," *Future journal*, 86 (2017) <https://doi.org/10.1016/j.futures.2016.10.003>
- [4]. Julio A. Soria-Lara; David Banister, "Participatory visioning in transport backcasting studies: Methodological lessons from Andalusia (Spain)" *Journal of Transport Geography*, 58(2017), <https://doi.org/10.1016/j.jtrangeo.2016.1.012>
- [5]. Beaulieu, T., Sarker, S., & Sarker, S. (2015). A Conceptual Framework for Understanding Crowdfunding. *Communications of the Association for Information Systems*, 37, pp-pp. <https://doi.org/10.17705/1CAIS.03701>
- [6]. Terry van Dijk & Gerd Weitkamp, 2017. "What defines success when visions compete: lessons from post-Katrina New Orleans," *International Planning Studies*, Taylor & Francis Journals, vol. 22(4), pages 350-365, October.
- [7]. Josefin Wangel, 2011. "Change by whom? Four ways of adding actors and governance in backcasting studies," *Technological Forecasting and Social Change*, vol. 78, <https://doi.org/10.1016/j.techfore.2011.03.007>
- [8]. Laura Cameron; Catherine Potvin, 2016. "Characterizing desired futures of Canadian communities" *Futures*, vol. 82, <https://doi.org/10.1016/j.futures.2016.05.003>
- [9]. Axsen, J. (2014). Citizen acceptance of new fossil fuel infrastructure: value theory and Canada's northern gateway pipeline. *Energy Policy*, 75, 255-265. <http://>
- [10]. Bizikova, L., & Hatcher, I. B. G. (2010). Scenario-based planning for a changing climate in the Bras d'Or ecosystem. Paper presented at the Workshop report.
- [11]. Bodor, R. (2009). The future for social work and mental health in rural and northern Canada. *Rural Society*, 19(4), 289-292.
- [12]. Boyce, F. M. (2006). *Lake the Canadian encyclopedia*. Toronto: *Historica Canada*.
- [13]. Boyd, D. R. (2011). *Unnatural law: rethinking Canadian environmental law and policy*. UBC Press.
- [14]. Brundtland Commission (1987). *Our common future*. Oxford: Oxford University Press.
- [15]. Colantonio, A., & Dixon, T. (2011). *Urban regeneration and social sustainability: best practice from European cities*. John Wiley & Sons.
- [16]. Connelly, S., Markey, S., & Roseland, M. (2009). *Strategic sustainability: addressing the community infrastructure deficit*. *Canadian Journal of Urban Research*, 18(1), 1-23.
- [17]. Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: defining urban social sustainability. *Sustainable Development*, 19(5), 289-300. <http://dx.doi.org/10.1002/sd.417>.
- [18]. Norouzi, N., Fani, M., & Ziarani, Z. K. (2020). The fall of oil Age: A scenario planning approach over the last peak oil of human history by 2040. *Journal of Petroleum Science and Engineering*, 188. <https://doi.org/10.1016/j.petrol.2019.106827>
- [19]. Dillard, J., Dujon, V., & King, M. C. (2008). *Understanding the social dimension of sustainability*. Routledge.
- [20]. Environment Canada (2010). *Planning for a sustainable future: a federal sustainable development strategy for Canada...* from <https://www.ec.gc.ca/dd-sd/default.asp?lang=En&n=16AF9508-1#s3>.

- [21]. Environment Canada (2012). Greenhouse gas emissions by economic sector. <https://ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=F60DB708-1> Retrieved 09.04.15.
- [22]. Evans, K., Velarde, S. J., Prieto, R., Rao, S. N., Sertzen, S., Davila, K de Jong, W. (2006). Field guide to the future: four ways for communities to think ahead. Center for International Forestry Research (CIFOR) From <http://www.cifor.org/library/2137/field-guide-to-the-future-four-ways-for-communities-to-think-ahead/>.
- [23]. Friedman, K. B., Laurent, K. L., Krantzberg, G., Scavia, D., & Creed, I. F. (2015). The Great Lakes Futures Project: principles and policy recommendations for making the lakes great. *Journal of Great Lakes Research*, 41,171-179. <http://dx.doi.org/10.1016/j.jglr.2014.11.026>.
- [24]. The Global Commission on the Economy and Climate (GCEC) (2014). The new climate economy report.
- [25]. Hartig, T., Mitchell, R., De Vries, S., & Frumkin, H. (2014). Nature and health. *Annual Review of Public Health*, 35, 207-228.
- [26]. Heal, G. (2012). Reflections—defining and measuring sustainability. *Review of Environmental Economics and Policy*, 6(1), 147-163.
- [27]. Norouzi, N. (2020). The Sun multi-layers model A coupling multi-layer strategic challenge and visioning model. 6th International conference of Modern Research in Management,Economics and Development