PROSPERITAS

18 57 BUDAPEST BUSINESS UNIVERSITY
BBU

Research Paper

A strategic approach to stakeholder engagement and scenario planning

Annamaria Ács

Doctoral School of Entrepreneurship and Business, Budapest Business University. Budapest, Hungary

Correspondence: annamaria.acs.17@unibge.hu

Abstract: Strategic thinking is crucial for urban planning in a world characterized by uncertainties. To address these uncertainties, long-term visionary planning is essential, enabling the creation of resilient and adaptable strategies. Involvement of stakeholders, such as businesses, NGOs, and local governments, in participatory governance has become a widely used method in Western democracies. This approach fosters collaboration between various actors, enabling diverse viewpoints in decision-making processes. Strategic foresight has emerged as a valuable tool for managing uncertainty by developing plausible future scenarios. These scenarios help decision-makers understand potential paths and create strategies that can succeed in different future contexts. This paper illustrates the process of developing methodological tools that integrate strategic foresight and stakeholder engagement to shape the future of sustainable urban mobility. It showcases the creation of an online questionnaire and structured workshops involving business leaders, decision-makers, and NGOs to generate multiple alternative scenarios for Budaörs' sustainable urban mobility by 2030. The case study highlights the importance of structured methodologies in guiding participants through effective scenario-building, ensuring outcomes that are both actionable and aligned with broader strategic goals. This approach not only encourages future-oriented thinking but also provides a comprehensive framework for urban planning at the municipal level.

Keywords: strategic foresight, urban development, sustainable urban mobility, scenario planning.

1. Introduction

In today's volatile world, marked by uncertainties (Westphal et al., 2023), futures thinking has become essential in strategic planning. Across the globe, governments, businesses, and organizations are increasingly adopting long-term strategies to address emerging challenges, manage uncertainties, and capitalize on new opportunities. Current trends call for proactive, forward-looking planning beyond short-term responses or mere survival.

Shaping better futures for democratic societies requires moving beyond the traditional, linear approach of "speaking truth to power" in the science-policy interface. Instead, a more inclusive, multi-stakeholder model that combines foresight with co-creation is essential (Wilkinson et al., 2014). This shift acknowledges that no single actor can address the complexity of today's challenges alone. A key component is learning with futures, which focuses on fostering open dialogue and exploring conflicts rather than rushing to consensus (Mermet, 2011). Futures thinking, or strategic foresight, provides tools to manage uncertainty, detect early signs of change, and develop flexible strategies that assume turbulence instead of stability. Such an approach shifts the focus from predicting a single future to preparing for multiple possibilities, enhancing resilience and adaptability (Park, 2017). By integrating foresight with collaboration, diverse stakeholders can co-create solutions rather than react passively. This approach is increasingly crucial, especially as local actors like municipalities play a growing role in sustainable development (Gustafsson et al., 2015). The urgency of the matter is underscored by global crises such as the COVID-19 pandemic, supply chain disruptions, extreme weather, energy shortages, and economic instability. In Hungary, rising

Citation:
Ács, A. (2024). A strategic approach to stakeholder engagement and scenario planning. *Prosperitas*, *11*(4), Article 5. Budapest Business University.
https://doi.org/10.31570/prosp_2024_0130

History:
Received: 12 Nov 2024
Revised: 1 Dec 2024
Accepted: 3 Dec 2024
Published: 13 Dec 2024

poverty and a shrinking middle class further highlight the need for adaptive and collaborative solutions. We have reached a point where old solutions are no longer effective. Innovative approaches are needed. The worsening circumstances are pushing local decision-makers to collaborate more widely than ever before. In times of crisis, local actors instinctively turn to one another, realizing that solutions are more likely to be found when collective knowledge and experiences are shared. Bringing expertise from different sectors together increases the chances of success.

Local governments understand that they must not only respond to immediate challenges but also prepare for long-term developments that will shape the future of their communities. A key aspect of this preparation is the active involvement of businesses and other stakeholders in future-oriented planning. Businesses, which often already apply long-term strategies to ensure their growth and sustainability, bring valuable insights and experience. By engaging these experienced actors, local authorities can create more comprehensive and practical strategies. This collaboration enhances the fluidity of futures thinking within local governance and helps ensure that strategies are visionary and grounded in practical realities.

The primary research question this paper addresses is: How can strategic foresight, combined with stakeholder participation, support future-oriented decision-making in the context of sustainable urban mobility? To explore this question, this paper examines the development of methodological tools that integrate strategic foresight with stakeholder participation, focusing on territorial foresight to support future-oriented decision-making. Territorial foresight enables policymakers to evaluate how future scenarios, trends, and policies may affect specific regions, considering their unique socio-economic, demographic, geographic, and environmental characteristics. By identifying and analysing critical factors—down to sub-factors—this approach helps determine the policy adjustments needed to maintain or restore territorial balance in the face of potential disruptions (Holstein, 2023).

This research emphasizes the synergy between strategic foresight and stakeholder engagement to foster forward-looking thinking in setting strategic goals. Using sustainable urban mobility as a case study, the article illustrates how strategic foresight gathers diverse insights from stakeholders to envision plausible alternative futures. These insights support decision-makers in formulating strategies tailored to the unique conditions of different urban areas. The paper aims to develop a practical, future-oriented framework to benefit policymakers, business leaders, and NGOs to enhance preparedness, resilience, and sustainable regional development by addressing these aspects.

2. Theoretical framework

The involvement of different stakeholders in strategic planning processes led by central or local governments has become a well-established practice in Western democracies (Edelenbos & Klijn, 2006). This is often described as “interactive governance” (Edelenbos & Klijn, 2006) or “participatory governance” (Kostaki et al., 2024), both of which challenge traditional, top-down decision-making models. These terms refer to a governance approach that invites collaboration between governments, citizens, businesses, NGOs, and other community stakeholders rather than relying solely on authority-driven planning. Such an inclusive model is especially important in urban planning, where the complexity of modern city life requires diverse perspectives to address social, environmental, and economic challenges.

Participatory governance is essential for balancing diverse interests and promoting sustainable urban growth. It provides a platform to integrate the views of marginalized groups, ensuring more equitable decision-making processes. For example, Innes and Booher (2010) argue that collaborative planning fosters ‘collaborative rationality,’ where diverse stakeholders co-create solutions, reducing the risk of exclusionary or ineffective policies. Additionally, this approach enables cities to address power imbalances and improve the legitimacy of urban governance through deliberative forums (Healey, 1997).

Participatory urban governance has been further elaborated by Geekiyanage et al. (2021), who conducted a systematic review identifying 34 participatory methods tailored for various engagement levels in urban development projects. Their study emphasized the value of inclusive planning processes, particularly in addressing urban inequalities and enhancing stakeholder ownership. Additionally, the work of Geddes et al. (2019) highlighted the

transformative potential of co-creation in participatory planning, stressing the importance of integrating community-driven approaches in urban governance frameworks.

Participatory urban governance has emerged as a vital tool for creating more sustainable cities. Its role in promoting sustainability is increasingly acknowledged as key to achieving long-term urban transformation (Simon, 2023). This is closely tied to Sustainable Development Goal (SDG) 11 of the 2030 Agenda for Sustainable Development, endorsed by 193 countries in 2015. SDG 11 emphasizes making cities and human settlements inclusive, safe, resilient, and sustainable (United Nations, 2015). However, achieving these goals requires more than immediate actions—it requires forward-thinking and an ability to adapt to future challenges. As the pace of change accelerates, the future becomes more unpredictable. Climate change, technological advancements, global economic shifts, and rapid urbanization all contribute to this uncertainty.

To manage these uncertainties, models have been developed that help governments and stakeholders prepare for a range of future possibilities, particularly through the creation of plausible future scenarios (Rutting et al., 2021). These scenarios allow decision-makers to better understand potential future paths and develop strategies that can succeed in multiple contexts. The set of tools that have gained importance in navigating these uncertain futures is strategic foresight. This approach provides a structured way to examine trends, emerging issues, and potential disruptions thereby helping stakeholders explore a broad range of socio-economic forces that may shape the future (Kok et al., 2007).

Scenario planning, a key method within strategic foresight, is especially useful for exploring alternative futures. Rather than predicting what will happen, scenario planning offers evidence-based narratives of what could happen under different conditions. By creating and discussing these scenarios, stakeholders can think critically about the future and examine how today's decisions might play out across various potential outcomes. Participatory scenario planning takes this process further by integrating the perspectives of different stakeholders, ensuring that the scenarios are comprehensive and reflect a wide range of community concerns and aspirations.

In strategic planning, especially in complex systems such as urban mobility, the interdependence of sectors must also be considered. The input-output analysis, widely used in economic research, offers valuable insights into the cross-sectoral dependencies and ripple effects of development strategies (Gáspár, 2020). While input-output analysis is primarily a quantitative method, its underlying approach is equally applicable to scenario planning, which emphasizes the need to account for the interconnections between transportation and other sectors such as energy, industry, and land use. This perspective enriches strategic foresight by enabling sensitivity analyses and fostering a deeper understanding of how sectoral changes influence one another. Incorporating such a systemic lens ensures that scenarios remain realistic and grounded in the broader socio-economic context.

Several studies have demonstrated the application of scenario planning and participatory scenario planning across different sectors. For instance, Westphal et al. (2023) used scenario planning to explore potential future changes in ecosystems highlighting how environmental conditions might evolve based on social, economic, and policy decisions. In the energy sector, Creed et al. (2018) applied scenario planning to explore Canada's future energy security, showing how planning for multiple futures can help create more resilient energy policies. Similarly, Kok et al. (2007) incorporated strategic foresight into environmental assessments, offering a structured approach to evaluating future environmental conditions and their interaction with human systems. More recently, scenario planning has been applied to urban sustainability. Neuhoff et al. (2023) explored how cities can adapt to future challenges by considering various trajectories of urban development, environmental sustainability, and technological advancement. This approach allows cities to anticipate potential issues and create flexible policies that are better suited to future uncertainties.

Incorporating strategic foresight into participatory urban governance offers a powerful strategy for cities aiming to achieve sustainability goals, especially in the face of growing uncertainty. By combining the diverse expertise of stakeholders with the structured, future-oriented insights of strategic foresight, cities can develop more resilient and adaptable strategies.

This paper applies the strategic foresight model to create a methodology for involving decision-makers, local business leaders, and NGOs in planning the future of urban mobility in Budaörs by 2030. In 2023, the municipality of Budaörs was working on its Sustainable Urban

Mobility Plan (SUMP), a key strategic document. To support the successful development of this plan, the current project was offered as a resource to the municipality.

3. Research Methodology

This research is based on a case study of Budaörs' strategic planning for sustainable urban mobility by 2030. This paper presents methods and tools for gathering data from key stakeholders including business leaders and NGO representatives. The primary methodological goal was to develop futures thinking methods that yield comparable and complementary insights, fostering innovative solutions for sustainable urban mobility.

This section describes the methodological background. It details the tools and approaches used to create methods that encourage stakeholders to look beyond the present. Moreover, the developed methods have been created for a municipality strategy, thus aiming to inspire innovative solutions for sustainable urban mobility in Budaörs by 2030.

The methodological framework integrates strategic foresight to encourage stakeholders to move beyond immediate challenges and envision possible, alternative, and preferred future scenarios for urban mobility in Budaörs. It emphasizes a forward-thinking approach, focusing beyond current issues. The process began with identifying key driving forces through a SWOT analysis, which provided the foundation for exploring future scenarios. Using these drivers, the "Futures Table" methodology (Kuosa, 2022) was applied to generate multiple plausible future scenarios. This approach became the core tool for data collection, offering a structured way for stakeholders to engage with and contribute to strategic foresight. The methods were specifically tailored to inspire innovative and actionable solutions in a municipal context. Insights from urban planning and architecture literature were integrated into the framework, with a focus on the four dimensions of urban planning: physical infrastructure, social, environmental, and economic.

To gather comprehensive and meaningful data, the research employed a dual-method approach. First, an online questionnaire was designed to reach a broad range of stakeholders, the questionnaire focused on the same key drivers identified during the SWOT analysis. Second, in-person workshops were held to facilitate deeper discussions, enabling stakeholders to collaboratively explore and refine the plausible future states and images generated by the "Futures Table." Using the same drivers across both methods ensured consistency and allowed the insights to be comparable and complementary. By combining these tools, the research aimed to develop a valuable understanding of stakeholders' perspectives.

3.1 Strategic foresight

The research aims to develop methods that enable decision-makers, business leaders, and NGO representatives to strategically envision the future. Utilizing the model of strategic foresight, methodological tools were developed to promote future-oriented thinking. These tools provide a structured framework for guiding participants in anticipating potential developments and making informed deductions.

Strategic foresight is a systematic process used to anticipate and prepare for possible future changes and also for uncertainties. It extends to identifying emerging trends, exploring plausible future scenarios, and understanding possible future contexts. This approach helps organizations and leaders develop long-term strategies by considering not only plausible futures but also unexpected changes that could impact their goals. According to Hines and Bishop (2015), strategic foresight activities can be categorized into six sequential stages: Framing, Scanning, Forecasting, Visioning, Planning, and Acting. Framing defines the research domain, establishing the context and boundaries for the foresight activity. Scanning identifies trends and signals of change within the domain's environment. Forecasting involves creating baseline and alternative scenarios to illustrate various future outcomes based on current trends and uncertainties. Visioning defines a preferred future and explores how it can be achieved. Planning focuses on strategic steps and decisions required to reach the envisioned future. Acting includes implementing necessary actions to bring about changes and achieve the desired future state.

These stages, when applied systematically, enable organizations to navigate complex and uncertain environments with a proactive and informed approach. The present research utilized different futures tools to create methods that engage decision-makers and business representatives in the Forecasting process. In other words, the goal was to create a set of methods that help participants generate alternative future scenarios related to the specific domain. This approach enabled the exploration of various potential outcomes, fostering a deeper understanding of possible future developments and uncertainties for the municipality's strategic planning.

3.2 SWOT analysis

SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is a vital technique that facilitates comprehensive discussions on the strengths, weaknesses, opportunities, and threats associated with a particular issue. This method enables a critical perspective for assessment, as highlighted by Gibis et al. (2001), and is used to evaluate both the external and internal environments of a domain. The analysis is based on the interaction between internal elements (strengths and weaknesses) and external elements (opportunities and threats), as noted by Pickton and Wright (1998). This structured approach helps organizations identify strategic factors and assess the alignment between internal capabilities and external conditions.

As part of the preparation for the Sustainable Urban Mobility Plan (SUMP), a thorough and comprehensive environmental scan was conducted during a previous research study. This study was carried out by a specialized firm, which was contracted by the municipality of Budaörs in 2022-2023 to develop the entire SUMP strategic document for the municipality. That research process also benefited from contributions in data collection and workshop organization, in which the author was directly involved. This environmental scanning provided a thorough understanding of the external and internal factors impacting urban mobility in the city. In the present research, this data was utilized to conduct a SWOT analysis, which evaluated the strengths, weaknesses, opportunities, and threats related to sustainable urban mobility in Budaörs. The results of this SWOT analysis serve as the foundation for identifying key driving forces and shaping strategic recommendations for sustainable urban mobility in the research.

3.3 Futures table

To analyse the future states of the driving forces identified through the SWOT analysis, the Futures Table scenario planning tool was applied. This tool is particularly effective in assessing various potential future states of drivers and in examining how they might evolve. As outlined by Kuosa (2022) the Futures Table is rooted in morphological analysis, a method originally developed to systematically explore complex, multidimensional problem spaces that were not quantifiable and for which traditional simulation models and causal analysis were not suitable. Later, the Futures Table was adapted for futures research, making it a valuable tool in scenario building and strategic foresight. The Futures Table offers a structured and comprehensive approach to analysing how various variables related to a trend, issue, or change signal might develop over time. In this context, the Futures Table helps to identify and explore different potential future states of drives by breaking down each driver into multiple possible future conditions. These individual future states are then combined and analysed to generate a set of plausible scenarios for the futures research. This structured approach enables a systematic exploration of a wide range of potential futures, enhancing the understanding of how different variables may interact and what implications they may hold. Through this methodology, the research facilitates a deeper exploration of the forces shaping the future, enabling strategic insights and forward-thinking planning (Kusoa, 2022).

3.4 Four dimensions approach

The methods and tools were designed for a workshop with stakeholders to support the development of Budaörs' sustainable urban mobility plan, analysing the future of sustainable urban mobility through four key dimensions: sustainability, economy, society, and infrastructure. Each dimension encouraged participants to consider the domain from different

perspectives, highlighting various aspects that could shape the development of urban mobility in the future. This multidimensional approach enabled a comprehensive examination of the factors influencing sustainable mobility thus ensuring that all relevant aspects—environmental, economic, social, and infrastructural—were thoroughly addressed throughout the analysis. By incorporating these diverse viewpoints, the research provided a holistic understanding of the dynamics driving the future of urban mobility.

3.5 Online Questionnaire

An online questionnaire was developed as a preparatory task for key stakeholders to complete before attending the workshop. This questionnaire was designed based on two key elements: the SWOT analysis of Budaörs' mobility landscape and the future scenarios of the key drivers identified in the Futures Table. The primary objective of the questionnaire was to capture key stakeholders' opinions and preferences regarding the various potential future states of each driver. Specifically, participants were asked to: 1) indicate their preferred future states for each driver; and 2) compare these preferences with their perceptions of how likely each future state is to occur.

In addition to the key stakeholders, Budaörs residents and other mobility users were also invited to complete the same questionnaire. This broader participation aimed to gather insights into the preferences and opinions of everyday mobility users, offering a valuable comparison with key stakeholder perspectives. This approach provided a comprehensive understanding of both key stakeholder and public viewpoints on the potential evolution of sustainable urban mobility in Budaörs. Furthermore, it allowed for a comparative analysis between the preferences of key stakeholders and those of mobility users, highlighting any similarities or differences in expectations and priorities.

In addition to gathering opinions, the questionnaire served another critical purpose: it familiarized participants with the key drivers and their possible future states prior to the workshop. By engaging with the material in advance, participants entered the workshop with a solid understanding of the key factors to be discussed and this way already reflected on the different scenarios previously. This prior exposure enabled more focused and in-depth discussions during the workshop, allowing participants to concentrate on deeper analysis and collaborative exploration of strategic solutions for sustainable urban mobility in Budaörs.

3.6 Workshops with Stakeholder Groups

Workshops were conducted with three distinct groups: city representatives, companies operating in Budaörs, and non-governmental organizations (NGOs) based in the city. The purpose of these workshops was consistent with that of the online questionnaire: to delve into the diverse perspectives of key stakeholders and gain insights into their visions for the future of mobility in Budaörs. These sessions offered an interactive yet structured platform for stakeholders to discuss, refine, and expand upon their ideas, thereby deepening the understanding of how each group envisions sustainable urban mobility in the city.

4. Findings and Discussion

The study aims to develop methods and tools that support and simplify future thinking for key stakeholder groups. The workshop was tailored to key stakeholder groups including political representatives from the municipality, business managers from local companies – both SMEs (such as Terrapark Ltd. and BTG Nonprofit Ltd.) and multinationals (e.g., Decathlon Hungary and Nhood Ltd.) – as well as representatives from local NGOs across various sectors from architecture to the civil organization for individuals with disabilities. The aim was to create a workshop method that was clear and suitable for each group. The three groups participated in three separate workshops: first, the municipality representatives; second, the business leaders; and finally, the local NGO representatives. The rationale for not mixing the different stakeholder groups was to allow for distinct perspectives and ways of thinking to be explored independently. The following section describes the phases of the

development of the workshop methods. The ultimate result of this study is the development of methods for the workshop.

4.1 From SWOT analysis to Futures Table

First, the SWOT table was created by the author. This analysis is the basis of the Futures Table. The Futures Table, in turn, provides input for the online questionnaire and workshop. The SWOT analysis table was based on findings from a prior research study conducted separately from this paper. That study assessed the environment and current state of urban mobility in Budaörs. That study was conducted by a specialized firm hired by the Budaörs Municipality to develop the SUMP. The author also contributed to data collection and the organization of workshops for the environmental scanning process. These data were used in the present research to develop the SWOT analysis. The elements within the SWOT table were reviewed and discussed with the specialized firm mentioned above.

The SWOT analysis in this paper forms the foundation for understanding the current urban mobility landscape and identifying key drivers of change. The table systematically examines six critical categories: pedestrian mobility, cycling and soft mobility, mobility management, public transportation, parking, and mobility logistics. Each category includes elements divided into strengths, weaknesses, opportunities, and threats. For example, strengths like the popularity of walking and high-quality bus services are contrasted to weaknesses such as inadequate intermodal connections and missing or poorly maintained sidewalks. Opportunities such as the expansion of soft mobility modes and the development of railway stations are weighed against threats like increasing motorization and intensifying conflicts between transportation modes. This detailed and structured approach not only supports the development of the Futures Table but also ensures a comprehensive understanding of the multifaceted challenges and opportunities in urban mobility thereby facilitating the identification of drivers that will shape the future dynamics of urban mobility.

Next, based on the 6 categories and results of the SWOT analysis table, four key drivers of change and several sub-drivers were identified. Drivers are those elements which are likely to shape the future of our domain. These drivers were designed to serve as foundational elements for constructing different future states, ultimately leading to the creation of future images and scenarios. Identifying drivers provided a basis for understanding how various factors might influence the development of urban mobility, facilitating the exploration of potential future dynamics and strategic directions.

The four key driver groups represented different aspects of urban mobility: the Citizen Perspective, the Material or Asset-Based Perspective, the Technical and Economic perspective, and the Political Perspective. When applied to the context of urban mobility, these perspectives translated into four primary mobility drivers: transportation habits, modes of transportation, infrastructure and financing, and management and land use. According to the SWOT analysis, these drivers are the core factors shaping the future of sustainable urban mobility. Each of these key drivers was further divided into several sub-drivers.

Using these drivers, the Futures Table was developed by the author. The logic behind its creation was that each driver was transformed into four distinct future states reflecting different levels of sustainable development in urban mobility. These future states range across a spectrum with each driver having four possible outcomes: highly sustainable, less sustainable, unlikely to be sustainable, and unsustainable. This method provided a structured way to explore how each aspect of urban mobility could evolve according to varying sustainability levels.

The workshop methods aim to prompt business leaders and other key stakeholders to consider the future of sustainable urban mobility. To achieve this, it is crucial to include the possibility of unsustainable development. Fully understanding future scenarios for sustainable urban mobility requires accounting for the potential evolution of unsustainable technologies, needs, and directions of change. Recognizing these factors enables a more thorough analysis and a nuanced understanding of the challenges and opportunities that may arise. This framework also encourages business leaders, politicians, and experts to think critically about the future by exploring a broad range of possibilities. By engaging with various scenarios, decision-makers can better prepare for and navigate the complexities of urban mobility in a rapidly changing world.

4.2 Designing and testing the online questionnaire

The online questionnaire aimed to collect data on possible future scenarios and to combine the different future states of various drivers. The original idea of creating an online questionnaire was to integrate mobility users in Budaörs and collect their experiences and expectations on the future of sustainable mobility in the city. Later the online questionnaire was made available to the participants who attended the workshops. This process was intended to lead to a diverse set of alternative future scenarios.

In the Futures Table, each column contains drivers that reflect similar future states categorized into four distinct levels: highly sustainable, less sustainable, unlikely to be sustainable, and unsustainable. By examining the table from top to bottom in each column, it can be outlined that each driver represents the same specific future state. However, this state is deemed unlikely to occur. Therefore, the objective of the questionnaire was to mix the different drivers and their corresponding future states to create a more comprehensive range of alternative scenarios.

The initial concept of creating the questionnaire stemmed from the understanding that each of the four key drivers – transportation habits, modes of transportation, infrastructure, financing, as well as management and land use – has four distinct future states that reflect varying levels of sustainability. Each future state listed in the Futures Table (Appendix B) includes several sub-drivers associated with the respective key driver. These blocks of future states can serve as potential future images of urban mobility.

The Futures Table itself was developed by the author, based on the key drivers identified during the SWOT analysis. This table served as the foundation for building the questionnaire. Before drafting the questionnaire, the author consulted her supervisor to refine the structure of the questionnaire and to ensure its alignment with research objectives.

Once the first draft of the online questionnaire was completed, it was reviewed by the firm contracted by the municipality of Budaörs. This review was a crucial step, as the contracted firm is responsible for the final publication of the SUMP and its content, including the integration of the questionnaire's findings. Ensuring the questionnaire met their standards was essential to maintaining consistency with the overall SUMP framework and fulfilling the contractual obligations of the municipality.

Consequently, in the first version of the online questionnaire, 16 distinct future images were created by the author based on the four future states of the four key drivers (See Appendix A). A debate between the author and the experts of the contracted firm arose regarding whether the different images should be completely mixed or follow a specific categorization, either vertically or horizontally, based on the Futures Table. Ultimately, the 16 images were organized horizontally, while the order of the future states was mixed within each grouping, as illustrated in Appendix A. To create future scenarios the questionnaire aimed to analyse the level of uncertainty and the level of preference for each future image. Each future image uses a scale ranging from -2 to +2. On this scale, -2 signified a belief that the specified occurrence would not occur in Budaörs by 2030/reflects that the respondents would not prefer the occurrence of that future state; while +2 indicated a firm conviction in its definite occurrence/indicates that the respondent would highly support the occurrence of the given future state. The intervening values (-1, +1) represent varying degrees of uncertainty or probability/preference, and the sign '0' means uncertain if it will happen/indifference whether it happens or not.

Before the questionnaire's launch, a testing phase was conducted. The Budaörs Festival, held annually, provided an excellent venue to engage with a diverse audience. Given the municipality's support for developing the Sustainable Urban Mobility Plan, it was clear that the questionnaire data would play a crucial role in shaping this strategic document. As a result, opportunities were seized to gather valuable insights. The municipality offered a place for the project at the festival. Thus, at the municipality's tent during the festival, participants were invited to complete a printed version of the questionnaire. This setting not only facilitated conversations with respondents but also allowed for valuable feedback on the questionnaire itself. Upon collecting feedback on the structure of the survey from respondents, it became evident that the statements were often perceived as lengthy and occasionally confusing. Respondents reported feeling confused during the questionnaire completion process, which prompted some to discontinue filling the survey. In some instances, participants admitted to either skimming through or entirely skipping certain statements due to their complexity.

Additionally, respondents pointed out a significant issue: they wanted to assign different scales to various statements regarding a future image. For instance, consider the following future image: "The so-called 'sharing' transport options, such as car-sharing, 'public bikes,' and 'public scooters,' are available in the city. Home office and internet-based services are common, which results in fewer people travelling within the city." Respondents expressed that they would assign different levels of uncertainty or preference to the availability of public bikes compared to public scooters or to the concept of home offices. This feedback is valid and indicates that the questionnaire, in its current form, may yield unreliable and invalid data. In response to this valuable feedback, it became apparent that a refinement of the questionnaire was necessary. The complexity of statements necessitated a re-evaluation, which prompted the adoption of a more straightforward and accessible approach. The overarching goal was to enhance respondent understanding by using simple, concise, and clear sentence structures. The lessons learned from the initial testing phase underscored the significance of brevity and clarity.

The questionnaire was altered through aligning with respondent preferences for simplicity and clarity, which ultimately enhanced the quality and reliability of the collected data. Each of the 16 statements underwent restructuring, adhering to the principle of one piece of information per sentence. The complex sentences were deconstructed into shorter, more comprehensible units, ensuring that each sentence conveyed a singular piece of information. For instance, the original sentence, "The so-called 'ride-sharing' means of transport such as car-sharing, 'public bikes,' 'public scooters' are available in the city. Home office and internet-based services are common, so fewer people are travelling in the city," was broken into independent statements for respondents' evaluation. This process broke down one future image into several distinct statements for assessment such as "Public bikes are available in Budaörs."; "Public scooters are available in the city."; "Car-sharing is popular in Budaörs," and "More and more people work from home." Respondents were tasked with scoring these statements individually, which thereby enhanced the clarity and simplicity of the questionnaire.

However, recognizing the potential challenge of presenting more than 100 sentences for respondents to evaluate as a result of altering each sentence and their 4 future states, each driver was streamlined to one future state in the online questionnaire. Additionally, certain drivers, such as public scooters and rail freight transport were excluded due to their marginal relevance or lack of involvement in the daily lives of respondents. For efficiency, services offered by bus providers Volán and BKK within Budaörs were consolidated into a single question, while the local free bus line remained a distinct item. Drivers under state jurisdiction rather than municipal control, such as the statement "the state supports the purchase of electric cars," were also excluded. The refined questionnaire ultimately comprised 25 statements, accompanied by five control questions representing a different future state of 5 selected statements from the 25. Before finalizing the questionnaire, colleagues from the municipality working in the fields of renovation and mobility, as well as municipal leaders, reviewed the document. Based on their feedback, one question and its corresponding control question were excluded from the questionnaire: The municipality supports the maintenance of electric vehicles. This question was removed because it could imply a specific direction and create potentially unrealistic expectations. Thus, a total of 24 plus 4 controlling statements were carefully formulated to capture diverse aspects of anticipated developments. This strategic formulation aims to shed light on various perspectives, offering insights into potential trajectories for Budaörs in 2030.

Thus, the questionnaire's structure (see Appendix C) was completed after initial demographic inquiries, through introducing two distinct blocks. Each block encompasses the same collection of the 30 transport-related statements. A further enhancement was introduced in the initial test questionnaire. In the original design, the scoring system ranged from -2 to +2. However, to capture more nuanced responses, this scale was extended to a range of -3 to +3. Within this expanded scale, -3 and +3 signify the two extremes, representing certainty and preference regarding the occurrence of future states. The intermediary values (-2, -1, 0, +1, +2) denote varying degrees of uncertainty, probability, or preference, while 0 indicates either complete uncertainty about the future of that driver or complete indifference to the occurrence of the issue according to the respondent's perspective. The statements, representing diverse viewpoints, collectively paint a comprehensive picture of the potential future of transportation in Budaörs, assuming that current trends persist. Respondents were tasked with rating each statement based on two fundamental criteria:

- Certainty of Implementation (Scale: -3 to +3): indicating how certain respondents believe the statement will or will not be implemented in Budaörs by 2030;
- Preference for the Outlined Process (Scale: -3 to +3): gauging the extent to which respondents prefer the process described in the statement to unfold.

This dual-scoring system enables an evaluation, capturing both the anticipated likelihood of each scenario and the respondents' preferences for the envisioned future states.

4.3 Forming the method for the workshop

The goal of the workshops was to capture diverse perspectives and leverage their insights to shape the future of mobility in Budaörs. Building upon the foundation set by the Futures Table and the initial questionnaire, at first the 16 future scenarios were used as the basis for workshop discussions. Later, after testing the questionnaire, the workshop's structure also continued to focus on the future states of the key drivers, mirroring the questionnaire's approach. A crucial aspect of planning the workshops was ensuring alignment with the questionnaire's format so that results from both tools could be compared effectively. Moreover, comparing the results enables a consistent evaluation of future scenarios and a robust analysis. The outcome of the workshop was the creation of alternative scenarios for the future of sustainable urban mobility in Budaörs by 2030.

A key consideration during the development of the workshop methods was ensuring that each session was carefully structured to fit within a maximum duration of 1.5 hours. During the workshop planning phase, two key activities were designed to engage participants in thinking about the future. The workshop was designed for approximately 10 participants. To ensure consistency with an online questionnaire, the same driving forces and their future states were used for both activities. Moreover, the initial concept for the workshop emphasised examining the future of sustainable urban mobility from diverse perspectives.

First, the views of each participant were collected. Comparably to the online questionnaire, the preference and certainty of each statement's future occurrence were asked from participants. Unlike the online questionnaire, which focused solely on individual preferences, the workshop aimed to task participants with considering the future of sustainable urban mobility from broader perspectives. Moreover, a colour-coded system was introduced to represent various dimensions of future states. This approach drew inspiration from (Alföldi, 2012), which identifies four key dimensions of urban planning: Economy, Environment (Sustainability), Society, and Physical Structure. For the workshop, each of the four dimensions was associated with a distinct colour: Yellow for Social aspects, Blue for Economic factors, Green for Sustainability considerations, and Pink for Infrastructure and Physical Structures. Thus, the task focused on analysing the future of urban mobility from multiple perspectives. Printed copies of the potential future states of drivers, as used in the online questionnaire, were displayed on a flip chart. Participants were asked to evaluate these scenarios not from their viewpoints but through considering the societal, economic, sustainability, and infrastructural implications of each future state. Each participant was given coloured papers corresponding to these four dimensions and was instructed to assign the colours to any or all of the future scenarios based on their perceived relevance and impact in each dimension.

This method enabled participants to categorize and prioritize the different future states, fostering a comprehensive and structured understanding of the future of mobility in Budaörs by 2030. This holistic evaluation process allowed the group to refine their concepts and discussions with greater depth and clarity. At the end of the activity, time was allocated for a group discussion, encouraging debate and the sharing of diverse perspectives on the results. This task was called Dimensional Analysis.

The other task was designed to further enrich the workshop with the vision-building process. This activity was planned to engage participants in a group-based activity. The four future states of each driver given in the Futures Table represent the core elements of scenarios, therefore it was necessary to be used in scenario building. In this activity, the four future states of the driving forces were printed on separate sheets of paper and were grouped into the four key drivers (Transport Habits, Transport Modes, Infrastructure, and Management) and put in four separate envelopes. Also, there were blank papers in each envelope, which allowed the participants to add new information they found important.

Participants were grouped, and the number of groups at each workshop depended on the number of participants, ideally 4-5 people formed one group. The task of the groups was to choose one out of the four dimensions – Society, Sustainability, Economy, and Physical Structures – and to collaboratively develop a shared vision for the future based on their chosen concept of the four dimensions.

Through consensus-building within each group, participants aimed to craft an ideal transportation future scenario for the people of Budaörs, aligning with the specific interests of their chosen dimension. For example, one group may create a scenario that results in a future scenario that is favourable to societal well-being, while another focuses on a scenario that promotes economic growth. This nuanced approach allowed for the creation of distinct perspectives: Social, Economic, Sustainability, Infrastructure, and a comprehensive synthesis of all aspects. The results of each group's work were visually presented on a flip chart, allowing everyone to see and understand the different perspectives and scenarios created. Finally, each group presented their findings verbally, which provided a platform for discussion and feedback. This interactive and structured approach ensures a comprehensive exploration of future scenarios, which reflects a diverse range of opinions and ideas. This task is named Group Scenario Building.

During the workshop planning phase, several ideas emerged: one was to introduce two additional colours specifically for Certainty and Preference, alongside the four primary colours. These extra colours would help capture key stakeholders' personal preferences and would assess how confident stakeholders felt about the likelihood of the occurrence of each future state, and how strongly they supported or opposed them. This would serve as the initial set of questions, allowing participants to clarify their positions on each future state before moving on to more detailed evaluations. The idea of gathering key stakeholders' personal preferences and insights on the future of urban mobility was initially supported. However, due to the strict 1.5-hour time limit for the entire workshop, a different approach was needed. The compromise was to have participants complete the online questionnaire – focused on preference-uncertainty analysis – before the workshop. Participants received this online questionnaire via e-mail beforehand.

At the development stage, another suggestion was to expand the online questionnaire to include an evaluation of the four key dimensions (society, technology, sustainability, and economy) in addition to the Certainty and Preference scores. This would have allowed the workshop to focus solely on the collaborative scenario-building activity, as the dimensional analysis was to be completed online already. However, this proposal was ultimately rejected, as conducting the dimensional analysis in the workshop setting was seen as an opportunity for valuable discussion.

The final decision was to have participants complete the online questionnaire on the preference-uncertainty analysis of future states before the workshop, so they would be familiar with the content. During the workshop, the same future states would be printed on flipcharts, and participants would conduct a dimensional analysis using coloured stickers to represent their evaluations across the four dimensions. Afterwards, the workshop would continue with the group scenario building. Each phase – dimensional analysis and scenario building – would end with discussion and debate, all fitting within the 1.5-hour timeframe.

Those unable to attend the workshop in person were asked to complete the online questionnaire. Also, businesses and NGOs could delegate more than one representative to participate. However, to ensure balanced representation and to mitigate any potential biases, separate workshops were organized for different stakeholder groups: one specifically for NGOs, one for business leaders and another for the political representatives of the municipality. This separation ensured that no single sector could dominate the discussions. The methodology further emphasized objectivity: participants assessed issues from assigned perspectives – such as sustainability, infrastructure, economy, or society – rather than their personal or organizational viewpoints. During group activities, they continued to represent these perspectives, fostering a structured dialogue. While individual backgrounds inevitably influenced responses, this diversity enriched the outcomes, which offered a comprehensive and nuanced understanding of the issues.

5. Conclusions and recommendations

Future thinking plays a crucial role in developing long-term strategies, as it allows decision-makers to anticipate potential developments and navigate uncertainties. When it comes to strategic planning, authorities, businesses, and other key decision-makers recognize the importance of evaluating various alternative future scenarios. This case study illustrates that futures thinking is relevant even at the local level. In this context, local governments demonstrate a proactive approach by incorporating future-oriented perspectives into their planning processes. Local governments are open to involving diverse stakeholders – such as businesses and non-governmental organizations (NGOs) – in collaborative discussions about the future. Moreover, businesses and NGOs are open to thinking about the future. The engagement of these local actors ensures that different viewpoints are considered and that strategies are more comprehensive and reflective of community needs. Moreover, involving businesses that already practice long-term strategies makes future thinking more seamless. The expertise and forward-looking approach of these businesses enhance the quality of discussions. However, while there is an openness to future-oriented discussions, the case study also highlights the necessity for a structured and well-designed methodology to facilitate effective scenario-building. This approach enables participants to explore various future possibilities systematically and evaluate their implications. The need for a robust framework is essential for guiding stakeholders through the complexities of scenario building, which ensures that outcomes are actionable and aligned with broader strategic views. Overall, this case study reinforces the value of incorporating future thinking into governance practices and emphasizes the importance of a collaborative and methodical approach to strategic planning at the local level.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Alföldi, Gy. (2015). *Budapest 2050 - A belvárosi tömbök fennmaradásának esélyei* [Budapest 2050 - The chances of survival of inner-city blocks]. Budapest, Hungary: Terc Kereskedelmi és Szolg. Kft.
- Creed, I. F., Duinker, P. N., Steenberg, J. W. N., & Serran, J. N. (2018). Managing risks to Canada's boreal zone: Transdisciplinary thinking in pursuit of energy security. *Environmental Reviews*, *27*(3), 407-418. https://doi.org/10.1139/er-2018-0070
- Edelenbos, J., & Klijn, E. H. (2006). Managing stakeholder involvement in decision-making: A comparative analysis of six interactive processes in the Netherlands. *Journal of Public Administration Research and Theory*, *16*(4), 417-446. https://doi.org/10.1093/jopart/mui049
- Gáspár, T. (2020). Az ágazati kapcsolatok mérlegének új perspektívái a nemzetközi gazdaság kutatói számára [New perspectives on the balance of sectoral relations for international economics researchers]. *Statisztikai Szemle*, *98*(5), 373-399.
- Geddes, I., Charalambous, N., & Papallas, A. (2019). Participatory methods in the development of public space: Case studies review. In *AESOP Annual Congress 2019*. https://doi.org/10.13140/RG.2.2.27211.54563
- Geekiyanage, D., Fernando, T., & Keraminiyage, K. (2021). Mapping participatory methods in the urban development process: A systematic review and case-based evidence analysis. *Sustainability*, *13*(16), 8992. https://doi.org/10.3390/su13168992
- Gibis, B., Artiles, J., Corabian, P., Meiesaar, K., Koppel, A., Jacobs, P., Serrano, P., & Menon, D. (2001). Applications of strengths, weaknesses, opportunities, and threats analysis in the development of a health technology assessment program. *Health Policy*, *58*(1), 27-35. https://doi.org/10.1016/S0168-8510(01)00111-X
- Gustafsson, S., Ivner, J., & Palm, J. (2015). Management and stakeholder participation in local strategic energy planning: Examples from Sweden. *Journal of Cleaner Production*, *98*, 205-212. https://doi.org/10.1016/j.jclepro.2014.08.014
- Healey, P. (1997). *Collaborative planning: Shaping places in fragmented societies*. London, England: Macmillan Press Ltd. https://doi.org/10.1007/978-1-349-25538-2
- Hines, A., & Bishop, P. (2015). *Thinking about the future: Guidelines for strategic foresight*. Hinesight. ISBN-13. 978-0996773409.
- Holstein, F. (2023, June 9). *Why territorial foresight matters for policymakers.* Futures Platform. https://www.futuresplatform.com/blog/why-territorial-foresight-matters-policy-makers?rq=territorial
- Innes, J., & Booher, D. (2010). *Planning with complexity: An introduction to collaborative rationality for public policy*. Routledge. https://doi.org/10.4324/9780203864302
- Kostaki, E., Frangopoulos, Y., Makridou, A., & Kapitsinis, N. (2024). Participatory governance for the temporary use of urban abandoned areas: A socio-spatial approach to the "Old Hospital" area in Alexandroupolis, Greece. *Cities*, *154*, 105378. https://doi.org/10.1016/j.cities.2024.105378

- Kok, K., Biggs, R., & Zurek, M. (2007). Methods for developing multiscale participatory scenarios: Insights from southern Africa and Europe. *Ecology and Society*, *13*(1), Article 8. Retrieved from http://www.ecologyandsociety.org/vol12/iss1/art8/
- Kuosa, T. (2022, December 14). *Futures table guide – A powerful scenario planning tool*. Futures Platform. https://www.futuresplatform.com/blog/futures-table-scenario-planning-tool
- Mermet, L. (2011). Strategic environmental management analysis: Addressing the blind spots of collaborative approaches. *Working Papers IDDRI no. 5/2011*. Paris, France: IDDRI. https://ethz.ch/content/dam/ethz/special-interest/usys/ites/ecosystem-management-dam/documents/EducationDOC/EM_DOC/Recommended%20readingDOC/Mermet_2011_SEMA_Collaboration_Blind_spots.pdf
- Neuhoff, R., Simeone, L., & Holst Laursen, L. (2023). Forms of participatory futuring for urban sustainability: A systematic review. *Futures*, *154*, 103268. https://doi.org/10.1016/j.futures.2023.103268
- Park, J. (2017, September 22). Introducing the sustainable futures lab. *Business for Social Responsibility Blog*. https://www.bsr.org/en/blog/introducing-the-sustainable-futures-lab
- Pickton, D. W., & Wright, S. (1998). What's SWOT in strategic analysis? *Strategic Change, 7*(2), 101-109. http://dx.doi.org/10.1002/(SICI)1099-1697(199803/04)7:2<101::AID-JSC332>3.0.CO;2-6
- Rutting, L., Vervoort, J., Mees, H., & Driessen, P. (2021). Participatory scenario planning and framing of social-ecological systems: An analysis of policy formulation processes in Rwanda and Tanzania. *Ecology and Society*, *26*(4), Article 20. https://doi.org/10.5751/ES-12665-260420
- Simon, S. (2023). The role of design thinking to promote a sustainability transition within participatory urban governance: Insights from urban agriculture initiatives in Lisbon. *Urban Governance*, *3*(3), 189-199. https://doi.org/10.1016/j.ugj.2023.05.003
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. Department of Economic and Social Affairs. Retrieved January 9, 2024, from https://sdgs.un.org/2030agenda
- Westphal, L. M., Sturtevant, B. R., Reese, G. C., Quigley, K. M., Crabtree, J., Bengston, D. N., Fleischman, F. D., & Plisinski, J. S. (2023). Preparing for an uncertain future: Merging the strategic foresight toolkit with landscape modeling in Northeast Minnesota's forests. *Landscape and Urban Planning*, *237*, 104798. https://doi.org/10.1016/j.landurbplan.2023.104798
- Wilkinson, A., Mayer, M., & Ringler, V. (2014). Collaborative futures: Integrating foresight with design in large-scale innovation processes—Seeing and seeding the futures of Europe. *Journal of Futures Studies*, *18*(4), 1-26. Retrieved from https://jfsdigital.org/wp-content/uploads/2014/06/Articles1-Wilkinson.pdf

Appendix A

Questionnaire describing 16 future images.

Theme	Description of the future images	How certain are you that the vision will occur? [1]					How happy would you be if the vision occurred? [2]				
		-2	-1	0	1	2	-2	-1	0	1	2
Transportation habits	1. Transportation modes based on sharing, such as car-sharing, "public bike," and "public scooter," will not be available in the city. Neither "home office" nor online transactions are common, increasing the number of people commuting in the city.										
	2. In Budaörs, a majority of the population opts for shared transportation modes (car-sharing, public bike, and public scooter) instead of buying their vehicles. Many people work from home, and most services become accessible online, leading to a decrease in the number of commuters in the city.										
	3. Shared transportation modes, such as car-sharing, public bikes, and public scooters, remain unpopular among the population, and only car-sharing companies are available in the city. "Home office" and online transactions are not prevalent.										
	4. Shared transportation modes, including car-sharing, public bikes, and public scooters, are spreading, but only car-sharing is available in the city. A slightly higher number of people work from home, and more services are accessible online.										
Transportation modes	5. A significantly higher number of people use cars, typically not electric ones. Due to increasing car traffic and declining safety perception, fewer people choose "gentle" transportation modes like biking, scootering, and walking, and the number of public transportation users decreases. Railway freight transport ceases entirely.										
	6. Although more people use cars than before, an increasing percentage of commuters switch to electric vehicles. The usage of "light" mobility modes (biking, scootering, walking) and public transportation remains stable.										
	7. The use of cars does not decrease, but an increasing percentage of drivers switch to electric cars. The usage of "light" mobility modes and public transportation slightly increases within the city. Railway freight transport opportunities remain unutilized.										

	8. The percentage of car users decreases, "light" mobility modes such as biking, scootering and walking become more popular within the city, and public transportation gains popularity. Both passenger and freight transport by railway are more effectively utilized.											
Infrastructure and Financing	9. Free park-and-ride (P+R) facilities are increasingly available on the outskirts of the city. Bike paths are established within the city and towards neighbouring towns. The sustainability of public transportation improves, and the railway station and its surroundings are renovated. The state and municipality support the purchase and maintenance of alternative fuel (e.g., electric) vehicles.											
	10. Some free park-and-ride (P+R) facilities are available at stops on the outskirts. Bike paths are developed within the city. The railway station is renovated, but its surroundings remain unattractive. The number of public transportation users slightly increases. The use of electric cars and other eco-friendly vehicles is financially supported by the state and municipality.											
	11. Payable park-and-ride (P+R) facilities are available at stops on the outskirts, but no additional bike paths are constructed. The number of public transportation users decreases, and less money is allocated to local bus services. The railway station and its surroundings remain unattractive. Alternative fuel vehicles, like electric cars, receive financial support from the state and municipality.											
	12. No park-and-ride (P+R) facilities are established at stops on the outskirts. No additional bike paths are built, and existing ones deteriorate due to lack of maintenance. The quality and sustainability of public transportation significantly decline. The decay of the railway station and its surroundings continues. Financial support for alternative fuel vehicles, such as electric cars, is unavailable.											
Management and land use	13. In public transportation, the number of routes decreases, schedules are not coordinated, and delays are common. The proportion of transportation surfaces slightly increases, while green areas and pedestrian spaces used as community areas decrease.											
	14. In public transportation, the number of routes increases, schedules are well-coordinated, and delays are not common. The proportion of green areas and pedestrian spaces used as community areas in the city rises, while the proportion of transportation surfaces decreases.											
	15. Public transportation shows improvement: schedules are coordinated, although minor delays still occur. The proportion of green areas and pedestrian spaces used as community areas in the city remains unchanged.											
	16. In public transportation, some routes cease to operate, schedules are											

	uncoordinated, and frequent delays and missing routes are common. The proportion of green areas and pedestrian spaces used as community areas in the city significantly decreases.										

[1]-2: Definitely will not happen; -1: Probably will not happen; 0: Uncertain if it will happen; 1: Probably will happen; 2: Definitely will happen

[2] -2: I would not be happy at all; -1: I would be less happy; 0: Indifferent whether it happens or not; 1: I would be somewhat happy; 2: I would be very happy

Appendix B

The Futures Table.

Transportation habits (social dimension)	● Shared transportation modes, such as car-sharing, electric scooters, and bicycles, become widely popular. Multiple providers compete in the market alongside electric cars. ● Remote work intensifies, and through the development of e-government and e-commerce, mobility needs decrease.	● Shared transportation modes spread, but only electric cars are available in the city. ● Remote work, e-government, and e-commerce slightly increase, leading to a somewhat reduced mobility demand.	● Among shared transportation modes, only electric cars are available in the city, with no increase in popularity. ● Mobility needs stagnate, and there is no growth in remote work, e-government, and e-commerce.	● Shared transportation modes regress, and providers withdraw from the city. ● Mobility needs to increase.
Transportation modes (technical dimension)	● The proportion of private car usage decreases significantly. ● The percentage of those choosing micro-mobility modes greatly increases. ● Public transportation is used by more people. ● Opportunities for railway freight transport are better utilized.	● Private car usage does not decrease, but the proportion of electric cars increases. ● A slight increase in the percentage of those choosing micro-mobility modes. ● The proportion of public transportation users slightly increases. ● The share of railway freight transport remains constant.	● Although private car usage increases, the proportion of electric cars also rises. ● The percentage of those choosing micro-mobility modes does not change. ● The number of public transportation users remains stable. ● The proportion of railway freight transport decreases.	● Private car usage has increased significantly, and the proportion of electric cars remains unchanged. ● Due to growing car traffic and intensified conflicts, the percentage of those choosing micro-mobility modes decreases. ● The number of public transportation users significantly decreases. ● Due to a lack of demand, railway freight transport ceases.
Infrastructure and Finance (technical and economic dimension)	● Free P+R parking facilities on the outskirts become widespread and used by non-residents. ● The railway station and its surroundings are renovated. ● The bicycle infrastructure is fully developed within the city and towards neighbouring towns, providing a sense of security for cyclists. ● The sustainability of public transportation improves due to the increase in users and strengthened state and municipal financing. The service of local bus routes is outstanding. ● The state and municipality support	● Some free P+R parking facilities appear at stops on the outskirts, mainly used by non-residents. ● The railway station is renovated, but its surroundings remain unattractive. ● The bicycle infrastructure is mostly developed within the city, but incomplete towards neighbouring towns. ● The number of users slightly increases, and the sustainability of public transportation remains stable	● Some P+R parking facilities appear at stops on the outskirts, but they are paid, causing non-residents to partially continue parking in the city centre. ● The railway station and its surroundings continue to remain in their current state. ● The bicycle infrastructure does not progress. ● The number of users stagnates, and the sustainability of public transportation gradually declines. The municipality allocates less funding for local bus services.	● No P+R parking facilities are established anywhere, and non-residents continue to park in the city centre. ● The decay of the railway station and its surroundings continues. ● The existing bicycle infrastructure depreciates. ● The number of users and the decrease in state and municipal financing led to a significant decline in the sustainability of public transportation. The municipality no longer funds the local bus service. ● Support for alternative fuel vehicles is unavailable.

	the purchase and maintenance of alternative fuel vehicles (with free parking, tax incentives, etc.).	due to the level of state and municipal financing. ● The state and municipality support the purchase of alternative fuel vehicles.	● The state and municipality support the maintenance of alternative fuel vehicles with parking, tax incentives, etc.	
Management and Land use (urban policy dimension)	● The number of services in public transportation increases. ● Schedules in public transportation are coordinated and adhered to. ● The proportion of transportation surfaces (for either traffic or parking purposes) decreases, simultaneously increasing the proportion of green spaces. ● The number of traffic-calmed streets and pedestrian areas usable as community spaces increases.	● The number of services in public transportation remains the same. ● Public transportation schedules are coordinated, with minor delays. ● The proportion of transportation surfaces remains unchanged, as does the proportion of green spaces. ● The number of traffic-calmed streets and pedestrian areas usable as community spaces remains constant.	● Due to deteriorating financing, the number of services in public transportation decreases. ● Coordinated schedules in public transportation are not common, with frequent delays. ● The proportion of transportation surfaces slightly increases at the expense of green spaces. ● The number of traffic-calmed streets and pedestrian areas usable as community spaces slightly decreases.	● Due to deteriorating financing, the number of services in public transportation decreases significantly, with some routes ceasing operation. ● Schedules in public transportation are not coordinated, with very frequent delays and missing services. ● The proportion of transportation surfaces significantly increases at the expense of green spaces. ● The number of traffic-calmed streets and pedestrian areas usable as community spaces strongly decreases.

Appendix C

Final online questionnaire.

Future states of drivers	Please indicate how certain you are that the following statements will be true for transport in Budaörs in 2030[1].							Please indicate to what extent you would like the following statements to characterise transport in Budaörs in 2030[2].						
	-3	-2	-1	0	1	2	3	-3	-2	-1	0	1	2	3
More people use cars in the city.														
Cycling will be more popular in the city.														
In public transport, services keep timetables.														
More people use BKK bus services than today.														
The city will have more pedestrian areas and pavements than today.														
Existing cycle paths are renovated and properly maintained.														
Electric car rental is very popular in Budaörs, many people use the service.														
More and more people are switching from conventional to electric cars.														

[1] -3: Definitely will not happen; 0: Uncertain if it will happen; 3: Definitely will happen

[2] -3: I would not be happy at all;0: Indifferent whether it happens or not; 3: I would be very happy.