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Kristina Henriksson, Päivi Mantere, Alenka Fikfak & Aleš Švigelj (eds.)

Cities for Everyone: Co-Creating Scenarios for Accessible, Safe and Inclusive Futures. Lessons from the SAFE Project in Five European Cities

SAFE
Sustainable Accessible Future Environments

Co-funded by the European Union

Cover image: SAFE project

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Preface – Framing the Book

PURPOSE OF THIS PUBLICATION

THIS BOOK WAS born out of the **SAFE project, Erasmus+ Cooperation Partnership project funded by the European Union during 2022-2025**, – a collaborative initiative aimed at exploring how accessibility and safety in European urban spaces can be improved by involving vulnerable groups directly in future-oriented planning. Its purpose is threefold:

1. **To demonstrate** how scenario work can be applied to urban development challenges, especially those relating to accessibility and inclusion.
2. **To document** five case studies where scenario work was carried out in collaboration with local stakeholders, universities, and representatives of target groups.
3. **To inspire** decision-makers, urban planners, community organizations, educators, and practitioners to use participatory futures methods in their own contexts.

This publication is, therefore, not only written for academics. It is intended for a broad readership: municipal leaders, architects, designers, NGOs, community activists, and anyone interested in creating more inclusive urban futures. The book aims to provide both theoretical grounding and practical insights, showing how scenario work can become a tool for meaningful change.

WHY FIVE CASES?

The book presents scenarios from five European cities: **Vantaa (Finland), Kiel (Germany), Bydgoszcz (Poland), Granada (Spain), and Kranj (Slovenia)**. These cities were not chosen at random. They represent the partner institutions and communities of the SAFE project consortium. Each case offers a unique lens into accessibility and safety, reflecting local challenges and cultural contexts:

- **Vantaa (Finland):** focused on senior mobility and accessible tourism.
- **Kiel (Germany):** explored inclusion in a multicultural and socio-economically challenged district.
- **Bydgoszcz (Poland):** examined scenarios of demographic change and digital transformation.
- **Granada (Spain):** addressed accessible tourism and perceptions of safety.
- **Kranj (Slovenia):** developed housing scenarios for diverse vulnerable groups.

Taken together, these five cases illustrate both the commonalities and the differences in how European cities approach accessibility. For instance, while Kiel prioritized **inclusion** in a disadvantaged neighborhood, Vantaa focused on **senior mobility** and Kranj on **housing solutions**, Granada looked at **tourism accessibility**, and Bydgoszcz at questions of **demographic change**. At first glance these may seem disparate, but they share a unifying theme: how to make urban environments safer, more accessible, and more inclusive for all, from open space to changes in housing interior. Their diversity demonstrates the flexibility of scenario work as a method, capable of adapting to very different contexts and needs.

By bringing these cases together in one volume, we emphasize the European dimension of accessibility challenges. Accessibility is not an isolated concern but a shared responsibility that calls for international exchange, mutual learning, and creative approaches. Ensuring accessibility also enhances safety, as inclusive environments reduce risks for vulnerable groups and foster a sense of safety and belonging for everyone.

WHAT IS SCENARIO WORK AND WHY DO WE DO IT?

The future is uncertain. Cities across Europe continuously face demographic shifts, technological changes, migration, and climate pressures reshaping the way people live, move, and connect. One of the most effective tools to prepare for these uncertainties is **scenario work**. Scenario work is a structured process of co-creating alternative images of the future. It does not attempt to predict what *will* happen but instead helps us explore what could happen under different conditions. By building scenarios together, communities, professionals, and policymakers can stretch their imagination, test their assumptions, and prepare for multiple possibilities.

It is important here to distinguish between **scenario work** and **futures work**. Futures work is a broader umbrella, encompassing a wide range of foresight methods such as trend analysis, Delphi studies, forecasting, and back-casting. Scenario work is one of its key applications: a practical, participatory method that engages stakeholders in envisioning alternative futures. In this book, we deliberately use both terms. Futures work refers to the wider theoretical and methodological field, while scenario work refers to the hands-on approach used in the SAFE project. We believe that clarifying this distinction helps the reader understand the book's purpose: it is not a general handbook of futures studies, but a practical demonstration of scenario building in the context of accessibility, safety and inclusion.

METHODS USED IN SCENARIO WORK

The scenario book applies **futures-oriented and participatory scenario work** as its primary method. The process combined structured foresight tools with co-creation workshops in five European cities.

The method followed these main steps:

- **Initial Scenario Building:** During Intensive Study Programs (ISPs), multidisciplinary student teams developed preliminary scenarios for 5, 10, and 20 years into the future.
- **Context Analysis:** A **PESTE analysis** (Political, Economic, Social, Technological, Environmental factors) was conducted in each city to identify key change drivers shaping accessibility and safety.
- **Scenario Workshops:** Local workshops engaged stakeholders and vulnerable groups (seniors, immigrant women, families with children, people with disabilities, and neurodivergent individuals). Tools such as the Lotus Blossom technique (see Chapter 2) and 2x2 scenario matrices (examples in each scenario chapter) were used to structure discussions and generate alternative futures.
- **Validation and Refinement:** Draft scenarios were compared with existing research and feedback from participants to ensure plausibility and relevance. Storytelling techniques were added to illustrate everyday implications.
- **Local Guidelines:** Each set of scenarios concluded with practical recommendations for urban development, grounded in the experiences and visions of target groups.

This iterative and participatory approach ensured that the scenarios were not only analytically robust but also rooted in lived experiences. By blending academic foresight methods with stakeholder engagement, the SAFE project created scenarios that serve as both **strategic tools for decision-makers** and **inspirational visions for inclusive urban futures.**

INVITATION TO THE READER

This book is both a guide and an invitation: to imagine, to question, and to co-create. The five scenarios presented here are not predictions, but possibilities – each offering a glimpse of how our cities could become safer, more inclusive, and more accessible for everyone. We invite you to read these stories of futures not yet written, reflect on them considering your own community, and join us in shaping urban spaces where all people can belong.

Chapter 1: Introduction to SAFE's scenario work

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ABSTRACT

THIS SCENARIO BOOK discusses how the project SAFE has created scenarios for five urban areas in Europe: Kranj in Slovenia, Gaarden Kiel in Germany, Bydgoszcz in Poland, Granada in Spain, and Vantaa in Finland. The chosen target groups include seniors, immigrant women, families with children, physically disabled individuals, and neuroatypical people, especially those with Asperger's.

Futures work enables organizations, decision-makers, associations, and individuals to better prepare for possible futures. By preparing for the future, decisions can be made that guide us towards the desired outcomes. Accessibility ensures that all kinds of people are considered in various urban areas and related services. Physical accessibility is a basic requirement, but it also includes challenges related to senses and perception, as well as a sense of safety.

Scenario work has progressed in the target areas, responding to the needs of the region and the selected target groups. In all areas, scenario work was based on scenarios created during the Intensive Study Programs (ISP) for 5, 10, and 20 years ahead. These scenarios have been further developed through co-creation with project actors and partners. This book presents the scenario work and its results carried out in the project SAFE.

Keywords: accessibility, futures thinking, multidisciplinary approach, scenario work, urban area

This scenario book outlines the future scenarios for five urban areas in the European Union. It is structured as follows: The introduction highlights the importance of futures thinking and the role of various educational fields in understanding accessibility. It also explains how the regional scenarios were developed and how they address the needs of special groups.

The subsequent chapters present the scenario work and its results for each region. This book compiles the future work carried out in the SAFE project, which was based on the Intensive Study Programs (ISP) in five cities and local workshops. During these development weeks, multidisciplinary student teams and local community representatives, along with selected target groups, created future scenarios for the areas. The scenarios aimed to illustrate how open urban areas and their services could become more accessible and safer in the future, particularly from the perspective of certain target groups. These groups included seniors, immigrant women, families with children, physically disabled individuals, and neuroatypical people, especially those with Asperger's.

The following subsection details the scenario work process conducted in the project SAFE.

PRESENTING THE SCENARIO WORK

Students, university staff, and stakeholder representatives have participated in creating the local scenarios. All project partners followed the collaboration process with stakeholders. However, there were differences due to the unique characteristics of the regions, the priorities and approaches of the higher education institutions, and the nature of the stakeholders, particularly the needs of the target group representatives. Figure 1 illustrates the actors and process involved in the local scenario work.

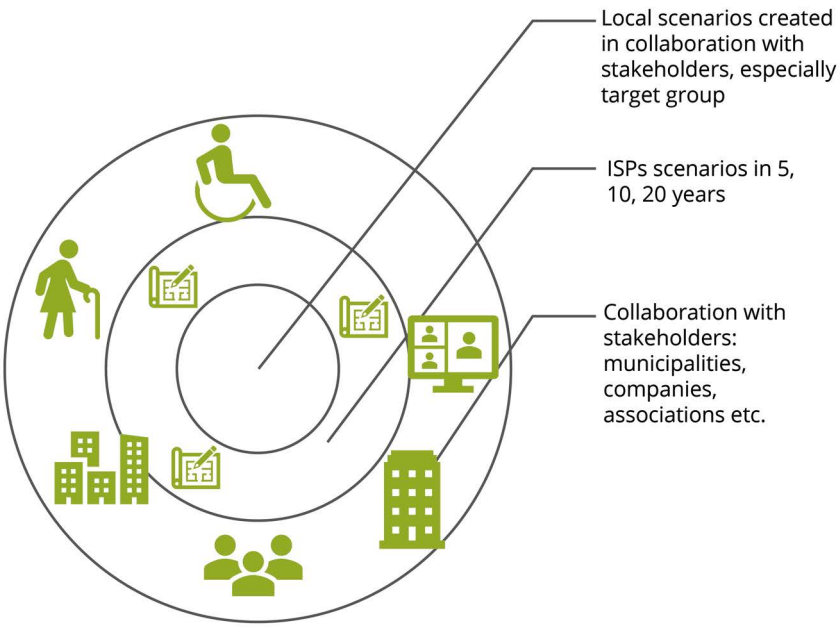

Figure 1: *Local scenario work (SAFE project, 2024).*

Local scenarios were created as part of an iterative process. The construction of the scenarios started with stakeholder cooperation. Individuals and organizations that represent the following stakeholder groups have cooperated: seniors, immigrant women, families with children, physically disabled and neuroatypical people, especially people with autism spectrum disorder.

Figure 1 illustrates how local scenarios are at the centre because they were structured in multiple stages involving different actors. The five intensive study programs (ISP) provided scenarios describing the areas. They related needs in 5, 10, and 20 years and served as the central material and basis. The first step of the forecasting process is to decide the time frame to be considered (Meristö & Laitinen, 2021, p. 8). During the ISPs it was decided that the relevant periods were to have visions both for the near future and a little further. For many actors, the five-year time frame is the most convenient time to understand and implement related decisions. Brier (2005, p. 842) has identified why extending the time frame is often challenging. For example, one does not necessarily have the ability to think further, and on the other hand, one needs to get information up to this moment. The reason may also be the difficulty of those involved in thinking about the future or the perception that long-term futures thinking is complicated and too theoretical. However, it is important that futures thinking also takes into account long-term opportunities. For example, municipal decision-making often requires a longer time frame to plan and implement changes that affect accessibility and safety.

The scenario work in the different target areas in Finland, Germany, Poland, Slovenia, and Spain aimed to create alternative descriptions of futures. Although the scenario work had a common goal, the methods used varied somewhat. This variation was due to the different target groups in each area, which required different methods. Additionally, the specific characteristics of each area influenced the selection of the most effective methods for futures work. It was also beneficial to consider the unique approach of the host university when creating the scenarios. The chapters of this Scenario book on each of these areas present these processes in more detail.

The basic structure for the scenario work was as follows: During the ISP, predictions were created for the most accessible future of open urban areas and their services in 5, 10, and 20 years. After this, the scenarios were further developed in cooperation with local organizations in local workshops. Representatives of the local authority and the target association or other organization participated in this collaboration.

THE IMPORTANCE OF FUTURES THINKING

This subsection discusses the importance of futures thinking. It justifies the significance of futures thinking as part of co-creation. The scenarios are based on reality but are future-oriented. They enable foresight into different future options and are useful for organizations because they can be used to imagine what the future might look like. They can be applied in education planning, investments, recruitment, and the creation or improvement of service concepts (Henriksson & Mantere, 2023, p. 58).

Forecasting the future aims to reduce uncertainty. Futures research can create possible or desired alternative images of the future, making it easier to prepare for what lies ahead (Alonso-Concheiro. 2016, pp. 335–337). Furthermore, futures material produced through co-creation is essential for politics and other decision-makers. It helps determine the development of areas and services to meet future challenges (Voorberg, Bekkers, & Tummers. 2015, p. 14).

In the project SAFE, various visualizations and illustrative methods were used to describe the futures of different regions. These alternative approaches provide a versatile overview of the futures, considering

accessibility and safety for special groups. For example, the prioritization technique was utilized in building the scenarios, resulting in a 2 x 2 scenario matrix. This matrix is structured by selecting the two most critical change drivers, whose manifestations are placed on the axes. Often, a desirable and undesirable alternative is used (Favato & Vecchiato, 2017, p. 136). A fourfold table, also known as a 2 x 2 matrix, is one option for describing future scenarios. It visualizes different future options and offers the opportunity to view four different future images simultaneously.

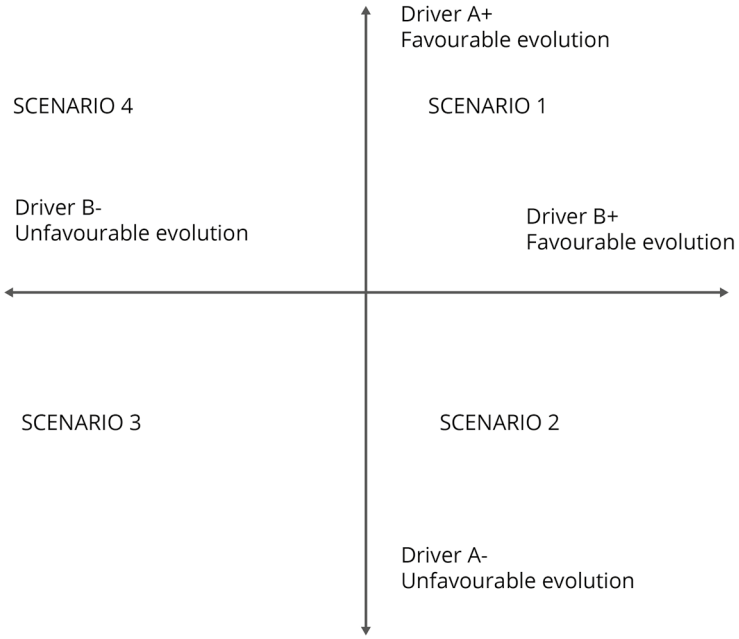

***Figure 2**: A fourfold table (SAFE project, 2024).*

Scenario work benefits organizations and decision-makers in making long-term plans and implementations. It broadens their thinking and helps detect inevitable future trends (Avis 2017, pp. 3, 6). On the other hand, weak signals highlight surprising, non-obvious but possible future paths (Dufva, 2019). For example, a weak signal can indicate a potentially emerging theme that may become significant in the future. Along with trends and megatrends, these signals lead to new ways of thinking (Dufva, 2018).

Futures thinking is central to the development of policy and administration, as it helps decision-makers predict and prepare for future challenges. Futures thinking helps create long-term strategies that consider and prepare for possible future scenarios. Politics and governance can help develop a society's ability to cope with and adapt to unexpected changes and crises, thereby strengthening resilience (ADP Research Institute, 2020, p. 2). Additionally, futures thinking promotes participatory decision-making, in which different stakeholders, such as citizens, businesses, and organizations, can participate in planning and developing the future (Johansson, 2021). Politics and governance can help promote innovative solutions that respond to future challenges.

The next subsection will present how diverse disciplines and study fields have contributed to the scenario work in project SAFE.

MULTIDISCIPLINARY APPROACH: COMBINING DIVERSE FIELDS

The project SAFE enhances the accessibility and safety of open urban areas and their services. At the centre of everything is the individual's experience – the subjective feeling of how the customer, tourist, or resident perceives and senses the urban areas and services.

Figure 3 illustrates the individual's experience of accessibility and safety being at the heart of the SAFE project. The project has sought to find solutions by combining different disciplines and perspectives.

Figure 3: *Combining diverse fields (SAFE project, 2024).*

A truly versatile and profound understanding of the experience of accessibility is not created only from a single point of view. However, accessibility is often viewed narrowly from the perspective of the built environment. Observations related to movement are indeed a significant part of the experience of accessibility and the creation of equal opportunities. Nevertheless, a more versatile examination allows for the development of accessibility of areas and services to meet a broader range of needs. According to accessibility, it is good to consider issues that also affect seeing, hearing, understanding, and communication (Esteettömyys, 2024). To enable an equal experience, social accessibility should also be taken into account, i.e. examine the object's usability both functionally and in social situations (Shinohara et al., 2018, p. 6:1).

In urban planning, sense of safety must be considered (Henriksson, Mantere, & Ruoslahti, 2023, p. 4). Sense of safety extends beyond systemic perspectives. However, the safety aspect is often overlooked, with a focus primarily on technical models (Reiman & Pietikäinen, 2012, p. 1993). An individual's experience of safety encompasses more than just organized security. For instance, weak lighting is not perceived as unsafe when social security is assured (Boomsma & Steg, 2014, p. 193).

The European Network for Accessible Tourism has defined the goal as a situation where tourists, regardless of their abilities and opportunities, can travel freely and enjoy tourism. They should be confident that they can receive the services they need (European Network for Accessible Tourism, n.d.). Accessibility is closely related to wellness tourism, as it enables tourism for groups for whom promoting well-being and health is particularly important (Huovinen & Jutila, 2015, p. 69).

From a social work perspective, inclusion and community as well as accessibility of services are important in the development of accessible urban areas. Inclusive planning focuses on the diversity of people and how they alter spatial planning (Coleman, 2016). Inclusion does not mean that the product needs to be designed in such a way that it will meet the needs of the entire population, but in a way that encompasses as many different users of the space as is sustainable and viable in practice (Lavtižar et al., 2022). The planning of accessible urban areas must ensure that all residents, including people with disabilities and the elderly, can participate in community activities and decision-making. This promotes community and reduces exclusion (Kaupunkitutkimuksen päivät, n.d.). Urban areas must offer easily accessible services, such as healthcare, social services and cultural services. Accessibility of services improves the quality of life of residents and supports their wellbeing (Henriksson et al., 2024.)

The SAFE project has combined these different scientific and academic disciplines in all its activities, including scenario work, to enable a broad, multidisciplinary and comprehensive examination of accessibility. The following subsection will discuss how the needs of diverse target groups can be taken into consideration while pursuing more accessible areas and services.

THE NEEDS OF THE TARGET GROUP – DESIGN FOR ALL/UNIVERSAL DESIGN

The SAFE project's approach is in line with Design for All (DfA) and Universal Design. DfA refers to a design principle that focuses on people's diversity, social inclusion and equality. It aims to promote design that makes environments and services accessible to as many people as possible. The goal is that an individual's limitations should not limit their opportunities to act as equal users of the area (Interaction Design Foundation, n.d.). On the other hand, universal design strives to ensure that all operators have an equal opportunity to utilize and enjoy environments and related services. It aims for an equal experience for people regardless of age, physical or mental characteristics, or disabilities. An accessible area and its services benefit everyone (The Centre for Excellence in Universal Design, 2024).

Universal design is based on inclusive planning theory which focuses on the diversity of people and how this affects spatial planning. The British Standards Institute (BS 7000-6, 2005) defines inclusion as the design of products and services that are accessible and usable for as many different users as possible, without the need for such a product or service to require any adaptation, a special intervention or retrofit in their use thereafter. The principles of inclusive design in relation to the Commission for Architecture and the Built Environment (CABE, 2012) instrumented in making the public space safe, accessible with ease and dignity with the flexibility to adapt considering the changing needs of people. This makes the space accessible for all, regardless of their age, gender, mobility, nationality or any other circumstances, removing barriers that could exclude a particular group of people (Lavtižar et al., 2022).

Table1 illustrates the application of universal design principles in the scenario work. It shows some examples of each principle regarding the needs of the project SAFE target groups.

Table 1: *Application of universal design principles in scenario work (Source: Burgstahler, 2009; The Centre for Excellence in Universal Design, 2024).*

UNIVERSAL DESIGN PRINCIPLES	APPLICATION IN SCENARIO WORK
Equitable use.	Urban planning ensures that all services and facilities are accessible to everyone, regardless of their physical or cognitive limitations. For example, barrier-free entrances and routes that are accessible to both wheelchair users and strollers.
For example, Seniors	*Scenarios can describe future urban areas with barrier-free entrances and routes with handrails and resting places for the elderly.*
Flexibility in use.	Designing facilities and services that adapt to the needs of different users. For example, adjustable workstations and seating that can be adapted to different heights and abilities.
For example, families with children	*Scenarios can depict playgrounds with different activities for children of different ages, as well as spaces with space for strollers.*
Simple and intuitive use.	Signs are designed to be clear and easy to understand for all users. For example, clear and simple signs that direct users to different services and facilities
For example, physically disabled people	*Scenarios can depict clear signage and accessible routes that are easy to understand and navigate.*
Perceptible information.	Multisensory communication methods, such as visual, auditory and tactile cues, are used to make information accessible to all users. For example, raised lettering and audio cues help visually impaired people navigate in urban areas.
For example, immigrant women	*Scenarios can describe multilingual signage and communication that takes into account different linguistic and cultural backgrounds.*
Tolerance for error.	Design facilities and services that reduce the possibility of errors and minimize the consequences of errors. For example, safe pathways with adequate lighting and barrier-free surfaces reduce the risk of falls.
For example, neuroatypical people	*Scenarios can depict clear and calm environments with few distractions, reducing the possibility of errors.*
Low physical effort.	Ensuring that the use of facilities and services does not require excessive physical effort. For example, automatic doors and elevators that make it easier to move around the city.
For example, with Seniors	*Automated doors and elevators, which reduce physical strain and make movement easier, can be included in scenarios.*
Size and space for approach and use.	Design facilities and services so that they are easily accessible and usable by all users. For example, wide doorways and sufficient space for wheelchairs and other assistive devices.
For example, physically disabled people	*Wide doorways and sufficient space for wheelchairs and other assistive devices can be included in scenarios.*

These principles share the goal of creating urban areas that are accessible and accessible to all users, regardless of their physical or cognitive limitations. Furthermore, these principles can help ensure that urban areas are accessible and accessible to all users, promoting equality and inclusion.

CONCLUSION

This introductory chapter has described how the project SAFE has built future scenarios in different areas, taking into account the needs of different target groups. It presented the scenario work process at a general level. The scenario work carried out in the five areas will be described in more detail in other chapters of the publication. This chapter also briefly discussed why and how future-oriented thinking is relevant to ensuring a more accessible and safer urban environment. The SAFE project combines a multidisciplinary understanding of accessibility and the development of open urban areas and their services. Finally, it was presented how universal design principles relate to creating scenarios from the perspective of special groups.

The following chapters will introduce five urban areas in the countries of the consortium, illustrating scenario work carried out with intercultural teams, students, staff, as well as local stakeholders and representatives of target groups. The chapters present ideas with different futures that SAFE envisions to improve the areas in the near future and beyond. So, enjoy reading into the futures!

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Chapter 2: Finland: Scenarios in the city of Vantaa

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ABSTRACT

THE CHAPTER DISCUSSES the city of Vantaa which was the municipal partner in Finland for the SAFE project and the Helsinki Airport situated in Vantaa. The chapter presents the scenario work carried out with the target group of senior citizens, focusing on the accessibility of safe travel and airports.

Keywords: Vantaa, Helsinki Airport, PESTE analysis, future scenario workshop, safe travel

INTRODUCTION TO SCENARIO WORK IN FINLAND

The project SAFE aims to improve the accessibility and safety of various urban areas and their services. This chapter describes the scenario work carried out in the SAFE project in Finland. It is based on SAFE's Intensive Study Programme, ISP, that took place in Vantaa, Finland in spring 2024. The development work in the area during the ISP served as a basis for creating future scenarios. Together with target group representatives of the Kanta-Helsinki Seniors Association, SAFE created specified future scenarios that are presented in this chapter.

The close cooperation with the city of Vantaa has enabled co-creation and future work together with city representatives and other stakeholders, such as entrepreneurs, associations, consumers and citizens.

The ISP in Vantaa aimed to develop accessibility and safety in five different areas of Vantaa. All target groups of the SAFE project were examined, i.e. elderly people, families with children, immigrant women,

physically disabled and neuroatypical people, especially people with autism spectrum syndrome. However, the perspective of the senior traveller was specifically chosen for this scenario book. The approach was selected because it enabled a detailed focus on future needs from the perspective of one target group. Senior citizens is an increasingly growing tourist segment: they have experience in traveling, many have good language skills in foreign languages, and they have the means and time to travel. However, one should bear in mind that their physical and cognitive skills are changing when growing older. Therefore, it is especially important to examine the services in tourism from the perspective of seniors and consider their special needs.

SAFE would like to express its special thanks to the Kanta-Helsinki Seniors for their active and invaluable contribution to the project and especially in the scenario work.

A Brief Introduction to the City of Vantaa

Vantaa, situated in the southern region of Uusimaa immediately north of Helsinki, ranks as the fourth most populous city in Finland, with a resident population exceeding 251,000. As an integral part of the Helsinki Metropolitan Area, the city is distinguished by its multicultural character, where over 120 native languages are represented. Vantaa serves as a key transportation and commercial hub, hosting Helsinki Airport—the nation's largest—and prominent business districts such as Aviapolis. Among its notable cultural and historical sites are the Church of St. Lawrence and the Finnish Aviation Museum.

It is worthwhile to note that Vantaa also promotes co-creation and accessibility: The City of Vantaa's Walkability Promotion Programme establishes a shared strategic direction for enhancing pedestrian infrastructure and experiences across all municipal sectors and geographic areas. This initiative supports the implementation of key priorities outlined in Vantaa's Urban Strategy 2022–2025 and aligns with the objectives of the city's Resource Wisdom Roadmap 2021–2025. Furthermore, it refines the city's transport policy by specifying measures related to pedestrian mobility. The program considers the needs of pedestrians to implement walkability improvements in the future. (City of Vantaa, n.d.)

Helsinki Airport entrance

The scenario work in Finland concentrated on the entrance of Helsinki Airport. This was decided after negotiating with Vantaa city. The airport as the development object was considered important based on the experiences of senior travellers and of Vantaa tourism. Therefore, it was important to be able to develop alternative possibilities for senior travellers to depart on their journey safely and accessibly in the future.

The arrival to the airport has undergone major changes due to changes in the terminals as well as in public transit and private car traffic. The Helsinki Airport entrance has recently undergone significant renovations to enhance the overall passenger experience. The entrance transformation project has streamlined access and improved services for travellers, including an expanded pedestrian bridge, upgraded taxi and bus services, and enhanced parking facilities. The recent renewal of Departure Terminal has also brought improved amenities and services for passengers, from expanded shopping and dining options to upgraded security measures. (Finavia, 2021; Finavia, 2022.)

The primary attractions, or rather, the key experiences, are found in the hotels and services available within the airport entrance area, as well as the accessibility to public transportation.

The following section examines the PESTE analysis as part of the scenario work, which looks at Helsinki Airport from the perspective of a senior traveller.

PESTE ANALYSIS FOR HELSINKI AIRPORT

This section introduces the PESTE analysis as a method for exploring the operating environment and the changes occurring in it, through the political, economic, social, technological, or environmental perspectives. It examines the factors of change from the perspective of senior tourism in Vantaa.

PESTE was carried out by analyzing relevant and topical research data and documentation with the target group. Table 1 presents the PESTE analysis from the viewpoint of the seniors and Vantaa. It functioned as a central lead in scenario work, giving a wide perspective for the seniors to examine the challenges and opportunities related to travel.

Table 1: *Breakdown of PESTE components, Finland, Vantaa and seniors*

1. Political factors	Pension index increases Pension policy of EU countries Actions are guided by Finland's age policy program and other instructions that guide the activities Welfare areas Disruptive politics due to the change of administration Expansion of the Eurozone Possible EU requirements for promoting accessibility and sustainability
2. Economic factors	Inflation and purchasing power The cost of living Pension changes Variation in the value of investments Deterioration of services Using apps instead of cash
3. Social factors	The desire to influence A sense of responsibility and a sense of duty for the next generations The role of grandparents Internationality Language skills Habits and experiences of travel Attitude towards tourism Deterioration of military services Accessibility of apartments The ethics of travelling
4. Technological factors	Electronic reservations Social media Digital tickets Artificial intelligence Virtual reality The rapid development of digitization Rapid ageing of digital devices Increased use of robots in service tasks
5. Environmental factors	Climate change, extreme conditions, especially the heat and drought in southern Europe Preference for local production Destinations burdened by overtourism Movement and accessibility in winter Durability of accommodations

The factors in Table 1 are linked by broad changes and their impact on different areas of seniors' lives. These impacts indirectly affect seniors' travel experiences, especially from the perspective of accessibility.

Political and economic perspectives:

From an economic and social perspective, for example, the increase in the pension index, pension policies in EU countries and other pension changes affect the purchasing power of seniors. Various economic changes affect seniors' lives and wellbeing in many ways. Different regulations and guidelines governing activities are related to the type of wellbeing services seniors receive. These affect the ageing population in particular. Political changes and EU enlargement affect the policies and regulations of member states, including accessibility and sustainability.

Economic factors, such as inflation and changes in VAT, affect the opportunities of tourists and the responsibility of tourism operators. Higher costs can limit tourism, but at the same time they can encourage the development of more sustainable and cost-effective solutions.

Technology perspective:

The rapid development of technology and digitalization are changing the ways in which people use services and communicate. Therefore, technological and digital innovations are significant for all travellers. For old adults, it is essential to consider their capabilities, cognitive functions, and the challenges of keeping pace with constantly evolving technological requirements.

Virtual tourism, new payment methods, social media, and other technological innovations can, at their best, improve accessibility and responsibility. Virtual tourism offers an environmentally friendly alternative to traditional tourism, new payment methods make it easier to use services, and social media acts as a source of information and trendsetter.

Environmental perspective:

Climate change and sustainable development affect tourism and housing and vice versa. It is useful and necessary for people to consider their choices of travelling, even far away. This means that slow travel could be environmentally friendlier than air travel, which, on the other hand, might be too strenuous for seniors, for example, to plan their winter hibernation in the south of Europe.

Social perspective:

Social responsibility and community are emphasized in different areas of life, including tourism and family relationships. Seniors' tourism often involves traveling together with their families. Many of these factors reflect broader social and economic changes that affect different areas of life and require adaptation and innovative solutions.

The Accessibility Directive and the Green Key certification are related to responsibility and equality. Responsibility as a trend, population ageing, awareness of neuroatypical syndromes even among ageing people and equal opportunities are related to social responsibility and equality. Responsibility as a trend emphasizes sustainable development, while awareness of different needs, such as neuroatypical syndromes and the needs of the ageing population, promotes equal opportunities for all.

The following section discusses the scenario process of senior travellers, Vantaa, and Finland.

LOCAL FUTURE SCENARIO WORKSHOPS

In Finland the scenario process was carried out in a way where the focus was on senior citizens. The process was implemented in different steps, which suited the workshop participants well. The scenario process that took place in different steps and phases served the aim of the work and improving accessibility in a useful way. Below, Figure 1 exemplifies the scenario work process carried out in Finland.

Figure 1: *Scenario work (SAFE project, 2024).*

Figure 1 introduces the process of creating scenarios. The scenarios are based on the scenario work done by students at Vantaa ISP. Seniors also participated as active co-creators. The students created three alternative scenarios for the selected target area at ISP in 5, 10 and 20 years. Inspired by the scenarios produced at the ISP, a PESTE analysis was carried out. PESTE, which was outlined in the previous section, formed the basis for the scenario work.

Workshop 1: Preliminary workshop May 2024 Vantaa

Scenario work with seniors was divided into several workshops. The first part of the workshop dealt with change factors, and the Lotus flower, often called the 8x8 method, was used to map them. It resembles a mind map type activity but is more systematic as an ideation method. The problem under consideration is written in the middle of the paper. After this, themes are devised for the problem or challenge, which produce solutions to the problem. The method produces 64 smaller ideas around the selected themes. The method is illustrative and visually indicates solution possibilities. (Ojasalo, Moilanen & Ritalahti, 2013, p. 163.)

A workshop with seniors was organized to survey their views on what the main challenges for their future travels are. In addition, preliminary solutions were jointly devised to address these challenges. The central challenges were comfortability, accessibility, safety, and how to have a good experience for a senior traveller at Helsinki-Vantaa Airport. The main themes were Transport services, Digital solutions, Area improvements, Assistance, Additional services, Mobility, Signposts, Language issues. Table 2 presents the key challenges with initial solutions.

Table 2: *Challenges and solutions for senior travellers*

Trans-parency of the tax prices	Location of the buses	Bus time-tables	Electrically assisted carts	Remote controlled equipment	Voice controlled devices	More personal services	Consid-ering the stress of travelling	
Reliability of the taxis	**Transpor-tation**		Instruc-tional video in plain language	**Digital solutions**		More support due the physical disabilities	Assistance	
Carrying services for luggage	Cheer board in the lobby to ease the tension	Services for the visually impaired	**Transpor-tation**	**Digital solutions**	**Assistance**	How to reach different transpor-tation options	Picking up arriving tourists	Signs for groups to gathering
Tables for places for the groups	**Additional services**	Wider food and beverage services for the quiet times	**Additional services**	**Accessi-bility at Helsinki-Vantaa Airport**	**Signs**	Lighting	**Signs**	Instruc-tions for services on the floor
Ease the luggage tag system	Physical helpdesk for acces-sibility issues	Separate services for bigger luggage	**Mobility**	**Area improve-ments**	**Language issues**	Signs in the bigger lobby areas		
Physical disabilities in security check: fast tracks	Lighter carts	Shorter distances	More room for groups to gathering	Covered area for the buses	Heated passage-ways for winter times	Plain language		
Accessibli-ty of stairs	**Mobility**		Clearer areas for groups	**Area improve-ments**		Language skills of the staff	**Language issues**	
			Increasing the safetyness of the taxi area	Improving the availability of taxi services				

Table 2 illustrates the initial solution ideas that emerged as results. From the seniors' point of view, sense of safety was emphasized, especially regarding taxis. In addition, the sense of safety related to transport services was affected by the weather conditions in Finland. Especially important for seniors is that they can trust the way to the bus stops are safe and that the passageways are not slippery or too poorly lit. Decreasing physical strength and agility made them appreciate services that made it easier for them to move around. For example, luggage transport services or reception services would be helpful. In the ideation, it was also brought up that an ageing person might be nervous about traveling. They may experience tension and fear for their ability, i.e., whether they will survive in travel situations.

Workshop 2: Main workshop September 2024

The main workshop was organized in cooperation with the Seniors' Association in the Helsinki library in September 2024. The workshop culminated the cooperation with the senior association in the SAFE project. Many of the senior association's members had previously participated in various activities of the project. In this workshop, they had the opportunity to apply what they had experienced and learned earlier in the project. In addition, the workshop was an opportunity to involve seniors more broadly than, for example, through individual ISP participants. Figure 5 presents the program of the scenario workshop.

Figure 2: *Program of the scenario workshop*

As presented in Figure 2, the work proceeded as follows: First, the participants were briefed on the project's goals and purpose. Then, they were introduced to the importance of accessibility and sense of safety, especially for seniors traveling. The results of the PESTE analysis were presented to the workshop participants as a basis for discussion. Based on the analysis, the participants pondered which factors they think will be relevant in the future to increase the comfort and safety of traveling for seniors. A four-fold analysis of the change factors was prepared to describe different scenarios.

The seniors discussed in pairs what the change factors could be in the future. Observations of the seniors were collected on a flipchart. After this, the participants were asked to mark the most relevant and likely change factors in their opinion. The change factors produced by the participants are listed below in the Table 3.

Table 3: *Voted change factors (Source: SAFE project, 2024).*

CHANGE FACTOR	VOTES
The risks of traveling are increasing	7
Transitions and schedule pressures	6
Technological development and dependence on it	5
Physical and mental fitness	4
Take into account the realities of your own condition	3
Help cannot be found when needed	3
Language skills in customer service	3
The logic and supply of information (e.g. languages)	2
Long queues without seats	2
Hearing	1
Activities of the tour operator in special situations	0

The number of votes received by each change factor is indicated in Table 3. The change factors were related to the individuals, especially their physical or psychological ability to function or tourist experience. In addition, external factors were mentioned, such as those related to service quality. Figure 3 presents the voting process showing how seniors discussed the presented change factors and evaluated them. Furthermore, Figure 4 shows the final outcome of the evaluation and voting.

The participants voted for the most relevant and likely change factors that will affect the experience of accessibility and safety related to travel for seniors in the future. The most influential change factors were the increasing travel risks, transitions, and time pressure. These change factors were described by defining two extremes. In defining the extremes, we wanted to avoid just using more or fewer expressions. This made it possible to create more versatile scenarios. About risks, the terms individual and external risks were defined at the end of the axis. Transitions and schedule pressures took the shape of a smooth and challenging

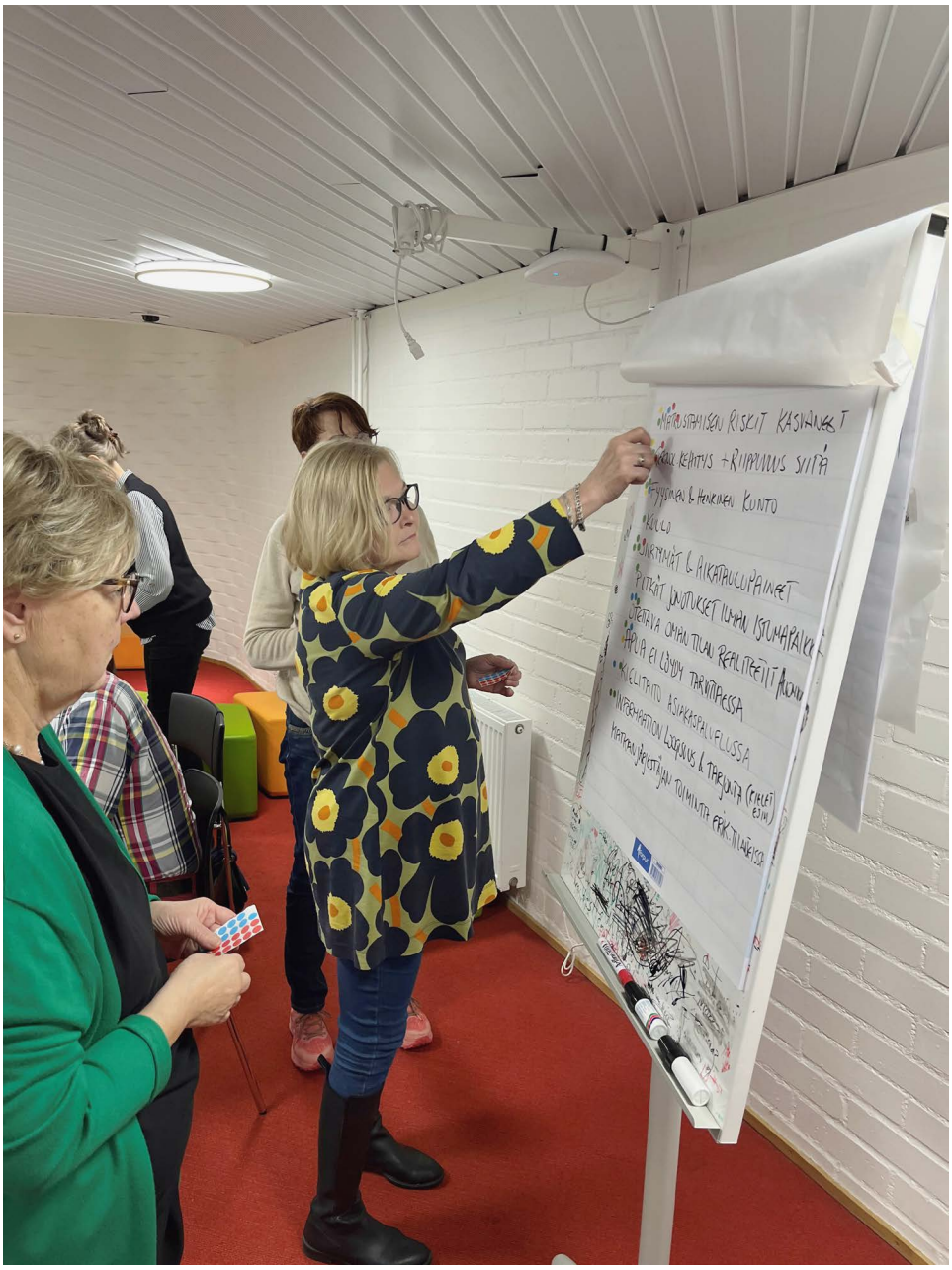

Figure 3: *Photo of the workshop process (SAFE project, 2024).*

service at the other end. These expressions were written on flipchart paper. The participants were tasked with thinking about what happens when the axes meet. For example, what is the situation like when risks are associated with the individual's activities and ability to function, but the service is smooth? In the same way, the participants were asked to think about answers to all parts of the square.

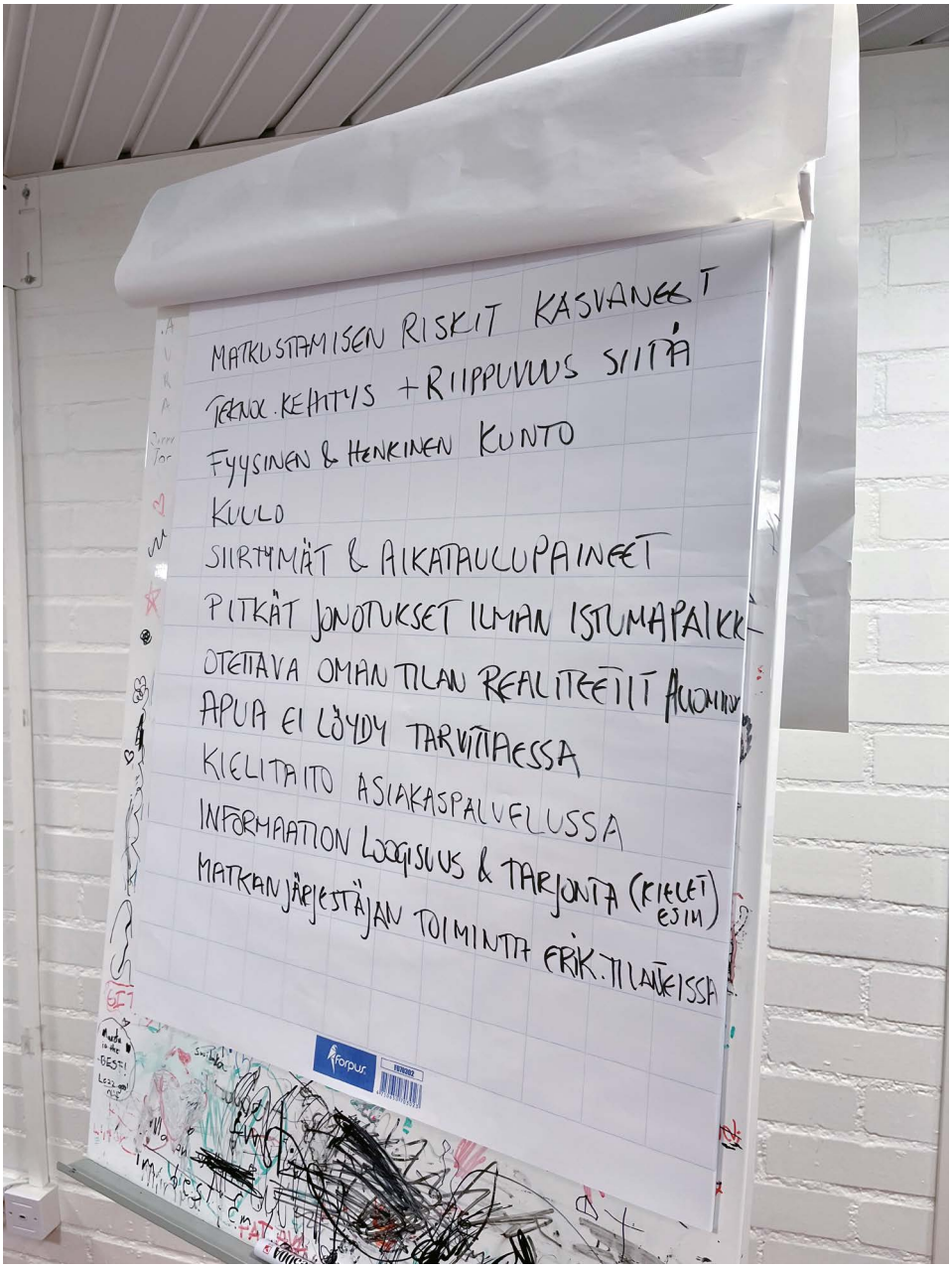

Figure 4: *Photo of outcomes of the voting (SAFE project, 2024).*

Validation of the scenarios January 2025

Validation of the scenarios was an important step to ensure their reliability and usability. The scenarios were compared with available research data, for example, Visit Finland's Traveller 2030 scenarios (Business Finland, 2021). In addition, the scenarios were presented to seniors to receive feedback and be able to modify them. The modification of the scenarios was quite small. However, the iterative process helped to develop more

accurate and usable scenarios. In addition, storytelling was added to them to illustrate the findings.

The scenarios were validated by 40 seniors in Vantaa. By introducing the scenarios, one could make sure that the scenarios were possible images of the future. The event produced even more content to the scenarios based on the experiences and expectations of the seniors.

Figure 5. *Photo of Scenario Workshop in Vantaa, Finland. (SAFE Project, 2025.)*

Final scenarios

The scenarios were finalized, and content was added. The final scenarios can be used to support strategic planning and decision-making for organisations in Vantaa. The scenarios help the organisations to visualize future developments, identify risks and uncertainties, and develop risk management plans. Scenarios provide decision-makers with information and insights that support informed decisions and help them understand the long-term impacts of different options. They also serve as a tool for discussion and collaboration between stakeholders, creating a shared understanding of future challenges and opportunities. In addition, scenarios can inspire new ideas and innovations, identify business opportunities, and develop creative solutions to future challenges. (Kallio, 2024.)

The next section introduces the fourfold table that was created from the scenario work described in this chapter. The fourfold table illustrates four alternative scenarios from the perspective of senior travellers.

SCENARIOS FOR VANTAA SENIORS

This section introduces the four scenarios as an entity and then each one separately. The final scenarios are presented in Figure 6. They form four alternative visions of the future senior traveller. They were created based on the workshops and co-creation process. Scenarios provide versatile tools for development and help organizations, such as cities, companies and associations prepare for future changes. Furthermore, customers, in this case senior travellers, can reflect on their own behaviour and actions in relation to different possible future visions. Final scenarios have been presented to the seniors in senior events.

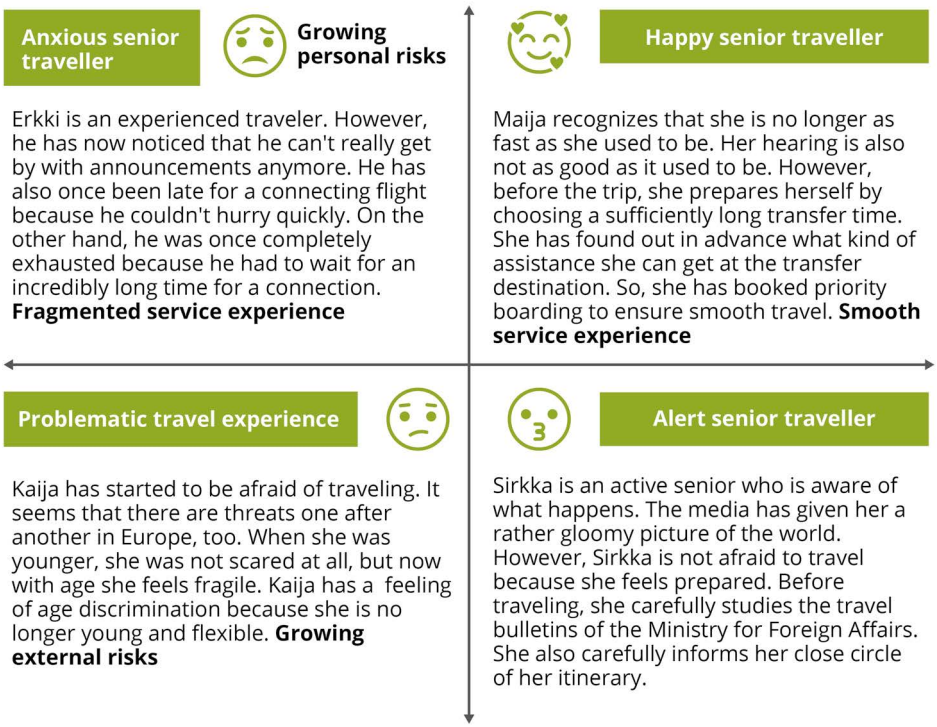

Figure 6: *Fourfold table scenario (Source: SAFE project, 2024).*

Vision number 1 was called Happy Senior Traveller. It was typical that, even though the ageing persons' functionality and ability to act as tourists included an increase in the risks associated with them, as a whole the service experience was smooth and satisfying to the customers. Senior travellers had the opportunity to get assistance and information. In addition, they had the skills to utilize them.

Vision number 2 was called Alert Senior Traveller. External risks were encountered when they occurred. However, the service was smooth. The vision emphasized the importance of providing services and considering them broadly. The responsibility of the public sector, for example, keeping the ministry's instructions up-to-date or the quality of commercial services, on the other hand, guaranteed a smooth customer experience for senior travellers in a challenging situation.

Vision number 3 described a Problematic travel experience where external risks met with a fragmented service experience. From a senior traveller's point of view, this vision is not desirable because the customer experience could be smoother. The trip may even be interrupted due to related challenges.

Vision number 4 describes the Anxious Senior Traveller's vision. When a person's physical and psychological capabilities and ability to function deteriorate with age, the discontinuous service experience may feel very uncomfortable. This vision of the future is associated with negative operating models and experiences.

The following subsections narrate the stories based on the generated scenarios.

Happy Senior Traveller – A Smooth Service Experience

Maija realizes that she is not as fast as before and that her hearing has become weak. But she is careful with planning her trip and organising everything before departure: she selects a long transfer time, and she finds out what additional services are available in the transfer destination. Priority boarding is booked in advance. Maija finds travelling still as an enjoyable and controllable pleasure. Being proactive and using additional services makes the travel itself smooth.

Figure 7: *Happy senior traveller*

A Happy senior traveller is well prepared and experienced. Nevertheless, it is important for her to be able to note that her specialities, experiences and expectations can be met and considered. To ensure a smooth travel experience, she expects to receive clear information flow. She trusts that by organising different things in advance she can ensure to have a smooth trip. It is, thus, important to receive verifications of bookings and other organised services. Since she wants to make sure that her trip is successful and smooth, she arrives at the airport well in time. It is essential that the airport provides enough services that meet her needs. Before the trip she has booked priority boarding to ensure a smooth way to enter the plane. To make sure that the experience is positive, it is significant that a trustful relation is created with her, the customer, that then continues to her other experiences as well. This traveller segment is a pioneer, whose actions are monitored as a model. Thus, it is vital to ensure positive experiences for the senior travellers. Also, when going on board the airplane, it is important that the process is friendly and attention has been paid to the traveller.

Alert Senior Traveller -Increase in Personal Risks

Sirkka is an active traveller who follows the world events carefully. Although the media mediates a dim view on the risks of travel, Sirkka is not afraid. She prepares herself well for the travel: she examines the pages of the Foreign Ministry, informs her travel plans to her family and ensures that everything is in order before departure. Her preparedness generates safety even though individual, personal risks have increased.

Figure 8: *Alert senior traveller*

A senior traveller being alert is still ready to travel. She wants to prepare herself well in advance and is knowledgeable on the potential threats and other challenges in the world. Her positive travel experiences require topical and sufficient information to be available. She knows where to find information by officials and other information, but she also values the travel organiser to be aware of potential security challenges, thus informing their customers when necessary. Her travel comfort includes the availability of various documents, and many times even on paper according to her wishes. She does not want to travel in a carefree manner; instead, her smooth travel experience is based on information that she has found and studies as well as information shared by the service provider automatically and in a trustworthy way.

Problematic Travel Experience – Increase in External Risks

Kaija has started to be afraid of traveling. There seem to be continuous new threats in Europe, and the world seems unpredictable. When young, she was never afraid but now with age she feels fragile. She also experiences age discrimination – she is not young nor nimble anymore. Travel does not feel safe and fear limits her moving.

Figure 9: *Problematic travelling experience*

A senior who feels travel being a problematic experience needs special support to be brave enough to travel and to gain positive experiences. Since she is concerned with the world situation and different threats, careful and trustworthy information is especially vital. One needs to pay attention to the skills of customer service to be calming and trustworthy. This concerns both planning and organising the trip as well as the travel itself. Peers can also be supportive by sharing honest information on the safety and opportunities of travelling. Since she is already retired from the world of work and from many busy activities in life, the rush and crowds of people at airports can make her feel insecure and afraid. When necessary, one should be able to find services that increase the sense of safety in travel as well as comfortable travel experience. This way one can encourage people to implement their travel dreams.

Anxious Senior Traveller – A Fragmented Service Experience

Erkki is an experienced senior traveller, but lately he has noticed that he cannot rely on loudspeaker announcements only. Once he was late from transferring to his next flight because he was not fast enough to reach the next gate. Another time, he was completely exhausted when he was forced to wait for this next flight too long. Travel feels uncertain and fragmented, he thinks, and the service chain does not seem to meet his needs sufficiently.

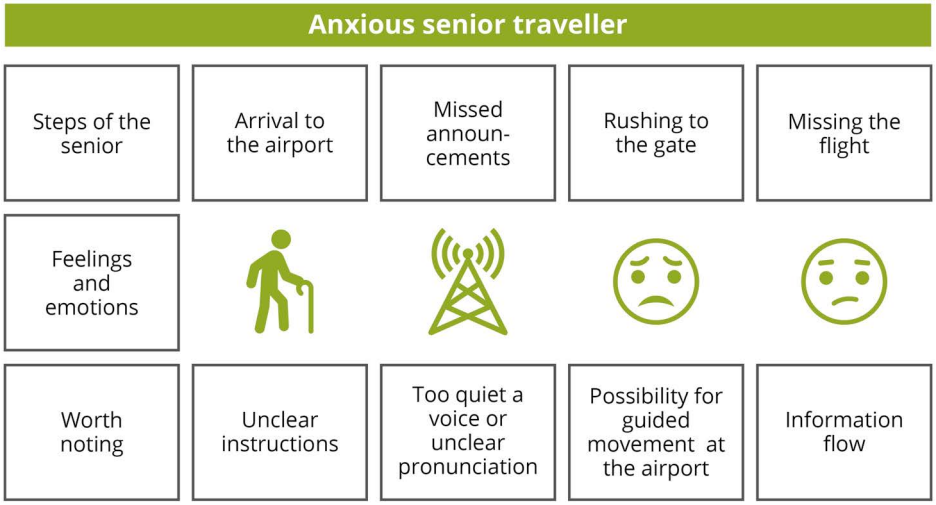

Figure 10. *Anxious Senior Traveller*

An anxious senior traveller meets many challenges when arriving at the airport. He might be too excited to observe announcements carefully. As an elderly person, his hearing has become weak. This means that he cannot hear the announcements properly. His travel experiences would be better if the signage and guidance at airports were clear and with sufficient information content. Furthermore, announcements in clear, plain language would be useful for him. Changes taking place in the airport can cause him to rush and feel agitated, which means that to support senior travellers like him would be to provide additional services to ensure a safe and smooth way from security control to the gate. One should especially pay attention to information flow and how to recognise individuals with potentially weak cognitive and physical skills.

This section presented four different future scenarios. The next section illustrates different recommendations by the SAFE project to help senior travellers to travel safely and accessibly, especially at the Helsinki Airport.

LOCAL GUIDELINES FROM THE SCENARIOS FOR VANTAA

It is important to consider how services could benefit from these future scenarios when the target group is senior travellers and taking into account both individual and general risks and the need for a unified tourism experience.

Helsinki-Vantaa Airport entrance

- Improving the accessibility of the airport, for example increasing the number of ramps, elevators, and accessible toilets, could ensure that seniors can move around easily.
- Providing integrated tourism services, for example, guided tours and personal service, could ensure that seniors have a unified and smooth tourism experience.
- Cooperation with health services, for example providing first aid points and medical services, could increase safety and reduce health risks.

Finally, the ratio of senior citizens is continuously increasing in society among the population. There are many reasons why it is important to improve and develop services and accessibility; this chapter explored future scenarios in travel at airports. It is an introduction to developing accessible services for the elderly by the SAFE project. We can do more.

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Chapter 3: Germany: Scenarios for the Full Inclusion of disadvantaged groups in the district of Gaarden in Kiel

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ABSTRACT

THE CHAPTER DESCRIBES some characteristics of the Gaarden district in Kiel, which is characterised by cultural diversity, among other things and identifies external factors affecting Gaarden. It outlines four future scenarios for full inclusion for migrant women, older people, people with disabilities and families with children, developed in a local participatory workshop.

Keywords: Kiel, the district of Gaarden, PESTE analysis, future scenario workshop, support factors for inclusive environments

INTRODUCTION

Gaarden is a former traditional working-class district on the east bank of Kiel with a population of over 18,000 inhabitants, more than 60 per cent of whom have a migration background (Landeshauptstadt Kiel, 2024, p. 3). The district is one of the largest in Kiel and offers advantages such as proximity to the city centre and the fjord, green spaces, a lively local shopping area around the pedestrianised Vinetaplatz, a lively square with market stalls and street cafés, and a pedestrianised area off this in Elisabethstrasse street. Gaarden also has a growing cultural and creative scene. Many of the buildings in the area date from the early 20th century, alongside post-war public and social housing and newly built residential complexes (Kreislere & Davies, no year, p. 12).

Figure 1: *Map of Kiel (Source: Kreislere & Davies, no year, pp. 7-8).*

Figure 2: *Houses at Vinetaplatz (left);* ***Figure 3:*** *Typical house facade in Gaarden (right)* (SAFE project).

Gaarden is widely regarded as a socio-economically disadvantaged district, which has led to its poor public reputation. Key social problems highlighted include alcoholism, drug addiction, domestic violence, widespread poverty, poor health outcomes and a particularly high unemployment rate (ibid., p. 21). The unemployment rate is over 13 per cent, with a significant 37 per cent of residents relying on basic income support for jobseekers (Landeshauptstadt Kiel, 2024, p. 3). Poverty levels are high, and child and elderly poverty is widespread.

Figure 4: *Social housing in Gaarden (left);* ***Figure 5:*** *Rubbish in the backyard (right) (SAFE project).*

Since 2000 the Gaarden area has been the focus of special support as part of the 'Socially Integrative City' urban development programme, with the implementation of a local neighbourhood management system. Since 2018 this support has been further strengthened by the urban development strategy Gaarden hoch10, which aims to gradually eliminate urban development deficits and comprehensively improve living conditions and future prospects in the area. The objectives for improving the area around Vinetaplatz and Karlstal focus in particular on increasing the sense of safety for local residents and businesses, reducing urban disorder and drug-related crime, and preventing both the trade in and public consumption of alcohol and/or drugs (ibid., p. 4).

However, Gaarden has historically been and continues to be a focal point for the alcohol and drug scene. Public spaces, particularly the streets and areas around the supermarket next to the Vinetaplatz square and the large Karlstal intersection, are common sites for drug dealing and consumption. The area has experienced an increase in crime, especially drug-related crime, which has led to a decrease in the feeling of safety among citizens (ibid., p. 3). In response, the police have made a concerted effort to tackle the problem, focusing on tackling drug-related crime and maintaining a visible police presence in the area. At the same time, there has been a steady increase in the number of poorly managed properties, often referred to as junk properties. Some of these buildings not only serve as drug dealing points but also suffer from overcrowding and visible structural problems (ibid., p.6).

In order to address the challenges, several measures have been proposed, with different strategies to address the root causes of the problems in Gaarden. These measures include the provision of social and health services through outreach programmes aimed at people suffering from addiction, the intensification of regulatory and legal efforts to mitigate urban disorder, and urban development initiatives aimed at eliminating spaces that contribute to a sense of fear in the community. A key component of these efforts is the strengthening of cooperation between police forces and municipal agencies to ensure synchronised action to increase the overall effectiveness of interventions. In addition, the Kiel Police Directorate has committed to regular monitoring activities at known trouble spots, allowing for a more dynamic response to emerging

issues. There is also an increased focus on intensifying law enforcement against organised drug-related crime (ibid, p. 4).

Despite these challenges and concerted efforts to improve them, Gaarden's reputation is often more negative than it deserves. The perception of the area often overshadows the positive aspects. For example, Gaarden is characterised by its wide range of international supermarkets and snack bars, which contribute to a rich and varied culinary landscape. The presence of international traditions and specialities contributes to a distinctive atmosphere and positions Gaarden as the most diverse and colourful district in Kiel.

"The multicultural nature of the area is its core identity, also giving the neighbourhood a distinct role in Kiel. There is a varied and lively atmosphere and many signs of cultural diversity." (Kreislere & Davies, no year, p. 20) ... "In Gaarden, cultural resources include a few independent galleries, maker spaces, workshops, bars and live music clubs. There is a particularly cosmopolitan feeling when it comes to food, music, fashion, graphics, and urban graffiti, which reflects the mixed neighbourhood. There is a sense of cultural openness" (ibid., p. 26).

PESTE ANALYSIS FOR GAARDEN

PESTE analysis is a framework that is utilised for the identification of macro-environmental (external) factors that exert an influence on a specific phenomenon. Such factors may be political, economic, social, technological, or environmental in nature. The following factors have been identified for Gaarden:

Table 1: *PESTE analysis for Gaarden.*

POLITICAL FACTORS	ECONOMIC FACTORS	SOCIAL FACTORS	TECHNOLOGICAL FACTORS	ENVIRONMENTAL FACTORS
Measures for social protection and integration of migrants and refugees Poverty alleviation Availability and effectiveness of police and order services Legal frameworks that affect crime rates and social order Measures for affordable housing Expansion of public transport	Rents and rent price development Access to employment opportunities Level of unemployment rate Economic integration of migrants Income levels Availability and access to basic services and amenities Investment in the neighbourhood Development of infrastructure and local economic initiatives	Composition of the population (age structure, cultural diversity) Degree of social cohesion and inclusion Presence of community centres or initiatives that promote interaction between different population groups Access to and quality of educational institutions Educational level of the population Access to/ availability of drugs and alcohol in the neighbourhood Crime rate Poverty	Access to digital technologies, the internet, and their use (also as a means for education, information, and integration into the job market) Availability and accessibility of modern medical technologies to improve healthcare	Condition of residential buildings, public spaces, green areas Levels of air pollution, noise, and other environmental factors that can negatively impact health Waste disposal in the neighbourhood

Political factors: The topics of social protection and the integration of migrants and refugees, poverty alleviation, policing, the legal framework affecting crime and social order, affordable housing, and public transport are all intertwined in shaping the quality of life in Gaarden. The potential for positive change is evident in the area of policy decisions that prioritise economic development within the area, particularly in terms of supporting small businesses and investing in education and health services. Such measures can make a significant contribution to improving the social fabric and quality of life. The availability and effectiveness of police and community order services are pivotal in ensuring the safety and security of residents. Policies that promote community policing, where officers are familiar with the residents and issues specific to Gaarden, can enhance trust between the community and the police. Cultural competence and conflict de-escalation strategies can also improve police-community relations and contribute to a sense of safety and social order. In addition, the provision of innovative housing solutions, such as co-operative housing projects and mixed-use developments, can further contribute to the vitality and diversity of Gaarden. Investment in sustainable transport solutions, such as cycle lanes and pedestrian zones, could improve public wellbeing.

Economic factors: The unemployment rate is a critical economic indicator, and the availability of employment opportunities would significantly improve the quality of life and economic stability for residents. In this context, the maintenance of affordable housing is essential to ensure that Gaarden remains accessible to a diverse population, including migrants, students, artists and low-income families. Gaarden's economic vitality is also influenced by the accessibility and quality of basic services and amenities such as healthcare, education, retail and leisure. Investment in these areas would improve living standards, thereby supporting local economic activity and stability. It is also important to recognise the significant contribution of migrants to the local economy as entrepreneurs and through their role in enhancing cultural diversity. Furthermore, the development of infrastructure, including transport, utilities and digital connectivity, is fundamental to sustaining economic growth and ensuring that Gaarden becomes an attractive place to live and work. Supporting small businesses, marketplaces and cultural events could stimulate economic activity, foster a sense of community and improve the local quality of life.

Social factors: The demographic profile plays a key role in future developments. Promoting mutual understanding and respect between different (cultural and/or age) groups is crucial to fostering a sense of community and preventing social unrest. High levels of social cohesion are reflected in mutual trust between neighbours, participation in community activities and a sense of belonging regardless of background. Community centres and initiatives that facilitate interaction between different population groups are fundamental to a good social environment. They provide venues for cultural exchange, learning and mutual support, which are essential for integrating new residents and building social networks. Furthermore, the availability and quality of educational facilities in Gaarden has a direct impact on the social and economic mobility of its residents. The problem of drug abuse, which is widespread in the area, has been shown to have a negative impact on health, economic and social factors, including increased crime rates. It is therefore recommended that effective prevention and treatment programmes for drug abuse should be expanded. A high crime rate has been shown to have a serious impact on the social fabric of Gaarden, undermining residents' sense of security. It is vital that efforts to reduce crime are maintained. However, poverty is at the root of many social challenges in the district and is closely linked to education levels, employment opportunities, health and social background. Tackling poverty requires a comprehensive approach that combines social welfare programmes, economic development opportunities and community support.

Technological factors: Technological advancements pertain to the enhancement of access to digital technologies and internet connectivity. The provision of computer skills education to the local population is

intended to promote social inclusion. Digital literacy is the foundation upon which residents can develop the skills to use digital technologies; therefore, the implementation of digital literacy initiatives is imperative. These programmes, ideally free of charge, are designed to ensure that all members of the community, regardless of age, background or socio-economic status, can participate in the digital revolution. In today's digital age, access to technology is about more than just connectivity; it is about empowering individuals to broaden their educational horizons through online learning platforms, access information, engage in community activities and participate in the digital economy. In addition, the use of mobile health (mHealth) applications has the potential to improve individuals' health management and health literacy, for example through the use of applications that deliver health-related services and information directly to users' smartphones.

Environmental factors: The environmental quality of Gaarden is shaped by a complex interplay of factors, including the condition of its residential buildings, the availability and maintenance of public spaces and green areas, levels of air and noise pollution, and the effectiveness of its waste disposal systems. Investment in building renovation, green infrastructure, clean transport and waste reduction is essential to improve the health and well-being of residents. Many buildings are old and suffer from neglect. Renovation and maintenance of these buildings is essential to improve living conditions and energy efficiency. Efficient waste management and recycling systems are essential to maintain public health and environmental quality. Improving waste management infrastructure, promoting recycling and composting, and educating residents about sustainable waste practices can significantly alleviate these problems and lead to a cleaner, healthier environment.

LOCAL FUTURE SCENARIO WORKSHOP

The Workshop

On 25 November 2024, a futures scenario workshop was convened in Gaarden. The workshop was organised by the Kiel University of Applied Sciences and the associated partner Büro Soziale Stadt Gaarden. The three-hour event attracted over 20 participants, including local residents from diverse backgrounds, students and staff from the Kiel University of Applied Sciences, and representatives from the City of Kiel. The primary objective of the workshop was to facilitate a collaborative exploration and forecasting of potential future scenarios, with a particular focus on improving the quality of life for diverse and often underserved target groups of the SAFE project, i.e. disabled people, families with children, migrant women and the elderly. The workshop was based on the principle that public spaces should be designed to be inclusive, safe and accessible for all.

Four working groups, each focusing on a specific target group, were tasked with developing future scenarios in response to two overarching megatrends: diversity/participation and social/economic divide. These trends were identified and agreed upon before the task of creating future scenarios began. The workshop facilitated small group discussions focusing on practical solutions.

Four Future Scenarios

A 2x2 matrix was used to explore four potential scenarios, derived from the two megatrend factors that could influence the future:

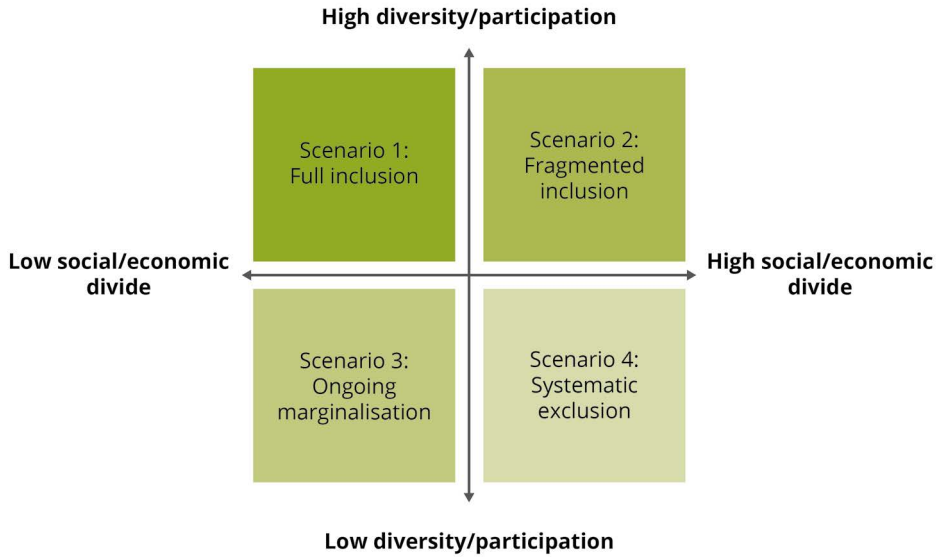

Figure 6: *SCENARIO MATRIX.*

The four scenarios that were developed based on the two megatrend factors are:

- **Scenario 1 Full Inclusion:** High diversity/participation and low social/economic divide
- **Scenario 2 Fragmented Inclusion:** High diversity/participation and high social/economic divide
- **Scenario 3 Ongoing Marginalisation:** low diversity/participation and low social/ economic divide
- **Scenario 4 Systemic Exclusion:** low diversity/participation and high social/economic divide

The following paragraphs describe only the so-called **full inclusion** ideal scenario. It is based on the notion of a society in which barriers/constraints/discrimination faced by individuals or groups of individuals are systematically removed, ensuring equal participation and recognition in all aspects of community life, from employment to decision-making. In such a more or less utopian scenario, policies and practices ensure accessible education, employment and social engagement, fostering an environment of equity. Social attitudes are inclusive, and social and economic divides are minimised through effective support systems, equitable access to health care, housing and social services.

Future Scenario Full Inclusion for migrant women

In this future scenario for migrant women, high levels of diversity and participation mean that their voices and needs are reflected in community planning, leading to an inclusive society where cultural diversity is seen as an asset rather than a challenge. The reduction in disparities in income and social opportunities has resulted in enhanced integration and access to resources for these women. Initiatives such as the provision of affordable housing, the assurance of equitable access to high-quality education and culturally sensitive healthcare services, and the implementation of targeted support measures for migrant families with low income serve to equalise opportunities across socioeconomic strata and ethnic background. Schools and adult education institutions facilitate language acquisition; however, the education system in Gaarden emphasises bilingual or multilingual education, ensuring that children from migrant backgrounds feel valued and supported in their

cultural identity. Adult education institutions align language/communication skills with job market demands. The implementation of cultural education programmes engenders a mutual understanding and respect between the migrant and autochthonous population. When moving around in public spaces, migrant women do not have to fear crime or xenophobic attacks. Furthermore, the establishment of groups that are led by women and/or exclusively comprised of women have been realised, with the objective being the articulation of rights and responsibilities from a women-centred perspective.

Supporting factors in such a context are access to: language training; skills development and job training; affordable childcare; culturally sensitive health care (including stress and trauma support); social services in multiple languages; legal services to assist migrant women in challenging life circumstances; cultural exchange and understanding through community events, workshops and forums that bring together migrants and local people; support and networking groups for migrant women to share experiences; safe spaces where migrant women can feel safe to express themselves; services, where migrant women can participate in activities without fear of discrimination or harassment; microfinance to start small businesses/entrepreneurship; affordable adequate housing; strengthening of social connections and local networks.

Future Scenario Full Inclusion for the elderly

In an inclusive future scenario for elderly people, every aspect of society from healthcare to transportation, housing, and technology is designed with accessibility, affordability, and community engagement at its core. Diversity in cultural backgrounds, interests, and experiences is praised, with seniors actively participating in community life. Enhanced intergenerational and intercultural exchange is enriching the social fabric of Gaarden. Elderly people have access to a wide range of healthcare services, including preventive care, specialist treatments, and emergency services, and telehealth options are also available. Public transportation systems are fully accessible, with features designed to assist the elderly, such as low-floor buses, priority seating, and accessible stations. Special transportation services cater to those with specific healthcare needs, ensuring all appointments and social engagements are within reach, fostering independence and social participation. A variety of free or affordable recreational activities designed for the elderly are offered, considering their interests and physical capabilities. A local community centre, Räucherei, acts as a hub for socialising, learning, and engagement. Programmes that facilitate interaction between young and old promote mutual respect, learning and understanding. Digital literacy programmes are tailored to older people to ensure they can navigate the digital world with confidence. Affordable access to smart devices, coupled with ongoing technical support, ensures that older adults can stay connected to their families and access online services, improving their quality of life. Urban planning prioritises accessible toilets and safe, well-lit pedestrian routes that allow older people to move freely and safely. Parks and public places encourage outdoor activities and social interaction. Housing for older people is designed to be safe and accessible. High quality home care services are widely available to enable older people to live safely and comfortably in their own homes.

Supporting factors in such a context are: accessible and affordable healthcare; accessible and affordable transportation options, including for those with special health care needs; free or affordable recreational programmes tailored to the interests and abilities of older people; a community centre where older people can engage in a variety of activities, access services and find company; promotion of intergenerational encounters; digital inclusion programmes/ courses, affordable access to technology (tablets/smartphones) coupled with technical support; accessible public spaces and safe pedestrian routes; senior housing projects that are safe and accessible; supportive living environment; good home care services enabling them to live independently as long as possible.

Future Scenario Full Inclusion for disabled people

At the heart of a fully inclusive environment for people with disabilities is the creation of a new inclusive community centre. This centre is equipped with facilities and services that are fully accessible to people with disabilities, including wheelchair access, sign language interpreters, and tactile signage, ensuring that physical barriers do not hinder participation. In partnership with the community centre, local businesses launch inclusive employment programmes, specially designed to accommodate the diverse abilities of all residents. The community centre organises a wide range of activities, all of which are co-designed by people with disabilities, ensuring that activities resonate with their interests and capabilities, thereby promoting high participation. New housing developments are constructed in accordance with universal design principles, thereby ensuring accessibility for all individuals. Community living arrangements provide supportive environments that encourage social interaction and mutual support among residents, both with and without disabilities. Residents with disabilities have a direct say in the local decision-making process, and regular community forums and accessible online platforms enable everyone to contribute to discussions on local issues. In terms of local issues, Gaarden is distinguished by a healthcare system that is both universally accessible and attuned to the specialised needs of the disabled community. The municipality has implemented preventative health programmes, mental health services and rehabilitation services, which are readily accessible and contribute to reducing long-term health disparities. Furthermore, support services, including personal assistants and accessible transportation, are adequately funded, ensuring that disabled individuals can lead independent lives.

Supporting factors in such a context are: schools are equipped with technologies and methodologies to support a wide range of disabilities; workplaces are adapted to meet a variety of needs, with flexible working conditions becoming the norm; preventative health program and rehabilitation are accessible, reducing long-term health disparities; support services, including personal assistants and accessible transportation, are funded, ensuring that disabled individuals can lead independent lives; affordable, accessible housing is sufficiently available; a supportive environment encourages social interaction and mutual support between residents with and without disabilities; Gaarden's public spaces, cultural institutions, and recreational activities are fully accessible; the voices of people with disabilities are heard and their needs are considered in all community planning and development.

Future Scenario Full Inclusion for families with children

In a future scenario that meets the needs of families with children, Gaarden has evolved into an inclusive community where families play an active role in local schools and community projects. The social and economic divide has been mitigated through the implementation of socially responsible policies, equitable education systems and community-led development projects. In this scenario, sufficient safe, affordable and decent housing is available, allowing families to live comfortably without the burden of financial stress. Quality education is accessible to all, with schools equipped with excellent infrastructure and resources. Free or low-cost school meals ensure that every child receives nutritious food. After-school programmes provide homework help and various work groups for children to explore new interests in a safe environment. Parents, including those in single-parent households, find relief in the availability of subsidised childcare services, allowing them to pursue work or education without compromising the wellbeing of their families. Access to quality health care, with a focus on maternal and child health services, ensures that families receive the medical support they need. The surrounding environment is safe and clean, with well-maintained parks

and playgrounds, safe walking and cycling routes, and community gardens where residents can grow fresh products, fostering a connection with nature and encouraging healthy eating.

Supporting factors in such a context are: availability of safe, affordable and appropriate housing for low-income families; good quality school education and school infrastructure; free or low-cost school meals and after-school programmes; subsidised childcare services to support working parents and single-parent households; good community and family support services; access to healthy food; access to quality health services (including maternal and child health services); safe and clean environments; forums that give residents a voice in local governance; programmes and activities that positively engage children and young people; safe walking and cycling paths; access to community gardens; parks, playgrounds and clean streets.

CONCLUSIONS TO GAARDEN'S SCENARIOS

The future scenarios for full inclusion in Gaarden outline a vision and identify support factors to building a society that embraces diversity, equity and community participation. For migrant women, the shift towards an inclusive society is characterised by the recognition of cultural diversity as a fundamental asset, which promotes integration through access to essential resources such as affordable housing, equitable education and culturally sensitive healthcare. Senior citizens experience inclusion through accessible health care, transportation and recreational opportunities that enable them to actively participate in community life and intergenerational exchange. An inclusive environment for people with disabilities focuses on universal accessibility, from community facilities to housing, ensuring that physical barriers do not limit participation and that their voices are an integral part of local decision-making. Families with children benefit from comprehensive support systems, including equitable education, health care and housing, designed to bridge social and economic divides. By prioritising a safe accessible environment, family-friendly policies and resources to promote wellbeing and development, Gaarden can become an inclusive community for all.

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CHAPTER 4: POLAND. Scenarios in Bydgoszcz

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ABSTRACT

THIS CHAPTER DESCRIBES Bydgoszcz from the point of view of social development, particularly accessibility and inclusion. It explores the political, economic, socio-cultural, technological and environmental factors that influence the development of a fully accessible and safe environment in the city. Four scenarios are proposed regarding demographic and technological changes in the city, describing their strengths, weaknesses, opportunities and threats, and concluding with the proposal of strategies to transform or consolidate these scenarios.

Keywords: Accessibility, Safety, Bydgoszcz, Scenarios, PESTE analysis, SWOT analysis, demography, technology

DESCRIPTION OF THE REGION

Bydgoszcz is one of the largest cities in northern Poland, located in the Kujawsko-Pomorskie Province, where it serves as a co-capital alongside the historic city of Toruń. With a population of around 330,000, Bydgoszcz is a vibrant urban centre situated at the confluence of the Brda and Vistula rivers and crossed by the historic Bydgoszcz Canal. Its geographical location, halfway between Warsaw and the Baltic Sea, gives it strategic significance in terms of transport, trade, and logistics.

Historically an important hub for commerce and industry, Bydgoszcz today continues to be a key economic engine in the region. Its economy is diversified, with well-developed sectors such as logistics and transport, IT and telecommunications, food processing, chemical and machine industries, and increasingly, business services. The city is home to Poland's largest inland port and hosts several logistics and distribution centres serving both domestic and international markets. In recent years, Bydgoszcz has also become known for its growing BPO/SSC sector, with global companies investing in modern office infrastructure and recruiting staff from a well-educated local workforce (Bydgoszcz 2030 Development Strategy, 2020, p. 7).

Figure 1: *City landscape by the river Brda in Bydgoszcz (SAFE project).*

The presence of nine higher education institutions – both public and private universities – contributes to a dynamic academic atmosphere, with approximately 30,000 students enrolled in a broad range of BA, MA and PhD courses. These institutions also foster innovation, research, and international exchange programmes. Culturally, Bydgoszcz boasts a rich offering: from the iconic Opera Nova and the Pomeranian Philharmonic Hall to numerous museums, theatres, and cultural festivals. Its riverside boulevards, revitalized granaries, and stylish Art Nouveau architecture form a unique and picturesque urban fabric. In 2023 Bydgoszcz was awarded the UNESCO City of Music title, becoming part of the UNESCO Creative Cities Network (*www.bydgoszczmusic.com*).

Green areas and water are key features of Bydgoszcz's identity. The recently revitalized Mill Island, located in the heart of the city, is a prime recreational and cultural space popular among both locals and tourists. The city has over 970 hectares of green areas, including forests, parks, and botanical gardens, making it one of Poland's greener urban centres. The proximity to the Bydgoszcz Forest, Brda River, and the nearby Bory Tucholskie National Park further supports outdoor activities and ecological awareness.

However, despite these strengths, Bydgoszcz faces certain challenges in terms of accessibility and safety. One of the main concerns is the city's urban sprawl, suburbanization and therefore its dependency on car traffic. While recent years have seen the development of cycling infrastructure and improvements in public transportation, including a modern fleet of low-floor trams and buses, certain suburban areas still lack reliable connections to the city centre. The integration of railway infrastructure into the urban transport system remains a work in progress, particularly regarding the potential offered by the modernised main railway station (Bydgoszcz Główna).

Figure 2: *Modern low-floor tramway feet manufactured in Bydgoszcz (SAFE project).*

For people with reduced mobility, accessibility has improved, however, it is still not yet universal. Many sidewalks and public buildings are equipped with ramps and lifts, but older areas, especially those with preserved pre-war or early 20th century architecture, remain only partially adapted to modern accessibility standards. Narrow pavements, occasional lack of tactile paving, and inconsistent signage may pose obstacles to visually impaired or mobility-challenged individuals (Jakość życia..., 2023, p. 16-20).

The main challenges, as expressed both by the participants of SAFE's Intensive Study Programme (ISP) in Bydgoszcz and Local Scenario Workshop organized as parts of the SAFE project in 2024, were:

- No handrails at entrances that have steps (e.g. shops, churches)
- Insufficient number of disabled parking slots
- Traffic congestion and absence of pedestrian crossings
- Overstimulating or unpredictable environments (e.g., scooters, noise)
- Not enough quiet areas or sensory-friendly zones
- Info signs are absent, incomplete or only in Polish (inaccessible and confusing for foreigners)

- Poor pedestrian infrastructure (bike parking narrowing sidewalks)
- Inaccessible or underdeveloped buildings (particularly lack of lifts)
- Absence of public amenities like toilets, intercultural gathering areas
- Uneven sidewalks, streets blocked by cars, bikes, scooters
- Inadequate lighting
- Lack of inclusive playgrounds
- Poor or not enough explanation how to use electronic services for less digitally educated citizens, such as seniors
- Lack of lifts in both old tenement houses and blocks of flats

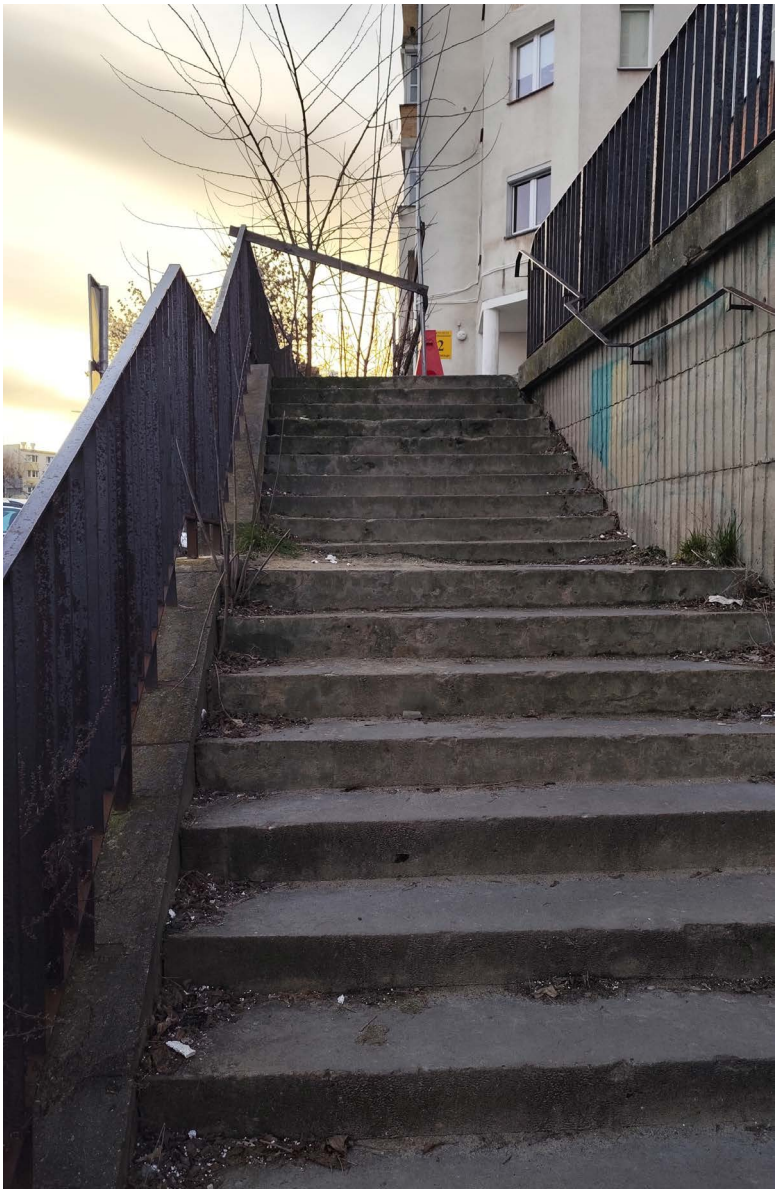

Figure 3: *Neglected street steps in the city centre (SAFE project).*

In terms of safety, Bydgoszcz is generally considered a safe city. Crime rates have declined over the past decade, and public spaces, especially around the Old Town, Mill Island, and shopping areas are regularly monitored and well-lit. Nevertheless, certain residential districts on the periphery may experience higher levels of vandalism and social exclusion, often related to historical underinvestment or socioeconomic disparities. The city authorities have launched various revitalisation programmes targeting these neighbourhoods, aiming to improve quality of life and social cohesion. Also, numerous educational and cultural programmes have been launched for the elderly residents to prevent social isolation and improve the wellbeing of seniors (Diagnoza potrzeb..., 2021, p. 17).

Figure 4: *Social cafe and community centre for elderly residents (SAFE project).*

In recent years, Bydgoszcz has also begun to emerge as an attractive tourism destination, gaining recognition for its blend of post-industrial heritage, nature, and culture. Its revitalized waterfront areas, especially Mill Island, and river boulevards have become points of interest for visitors seeking a peaceful, yet culturally rich urban experience. The city's dynamic music scene along with its festivals, museums, and architectural landmarks, contribute to its growing popularity among both domestic and international tourists (Strategia rozwoju markowych..., 2024, p.5-7).

Following Russia's invasion of Ukraine in February 2022, Poland became a primary destination for Ukrainian refugees, hosting nearly one million by early 2025. Bydgoszcz, as one of Poland's significant urban centres, has actively participated in this humanitarian response. The city hosts 10,000 war refugees from Ukraine, mostly women, children and seniors. It is also estimated that a bigger number of Ukrainians had lived in the city before 2022, mainly due to work and studies which sums up to a total of 35,000 Ukrainian diaspora. The settlement of noticeable groups of Ukrainian citizens, both before and during the full-scale war, has been one of the most significant changes to the city's demographic structure, generally characterized by ethnic homogeneity, decline and aging (Wodjat & Cywiński, 2022, p. 21).

The main thematic focus of this chapter is safety, accessibility and inclusion in the central part of Bydgoszcz, with a special emphasis on the needs of families with children and senior residents.

PESTE ANALYSIS FOR BYDGOSZCZ

The following PESTE analysis examines the Political, Economic, Social, Technological, and Environmental factors influencing a city. It focuses on residents' quality of life, urban accessibility and safety, and the needs of specific groups such as people with disabilities, senior citizens, families with children, and foreigners.

Political Factors

Bydgoszcz places a strong emphasis on strategic development and citizen participation, as outlined in its local development strategy, which envisions the city as a fully formed metropolis fostering innovation and ensuring a high quality of life for its inhabitants. The city's ambitions include creating a competitive economy, developing modern infrastructure, and promoting comprehensive resident development. Citizen engagement is facilitated through mechanisms like the Bydgoszcz Participatory Budget, allowing residents to propose and vote on local projects. Additionally, the long-term support of residents for pro-European parties is reflected in a relatively stable personal line-up of local authorities, including the mayor and city council. Bydgoszcz also positions itself as an important defence hub due to the presence of major military units, the NATO Joint Force Training Centre, and other NATO-affiliated institutions. However, despite these strengths, bureaucratic challenges can impede the efficient implementation of policies and projects, with complex administrative procedures potentially delaying initiatives aimed at improving urban accessibility and services for vulnerable groups. Furthermore, shifts in political leadership or priorities can lead to inconsistencies in urban planning and development strategies, potentially affecting long-term projects designed to enhance residents' quality of life, including infrastructure improvements and social programs.

Economic Factors

Bydgoszcz has strategically positioned itself as a hub for innovation and competitiveness by supporting the growth of scientific and higher education institutions, successfully attracting both domestic and foreign investments, and launching initiatives like the Industry and Technology Park to provide attractive business locations for investors. The city's development of infrastructure, including the expansion of the road network and public transportation, coupled with a growing business community characterized by entrepreneurs' organizations, business conferences, and networking meetings, further enhances its economic landscape. However, Bydgoszcz, like many Polish cities, has experienced deindustrialization, leading to the decline of traditional industries, job losses, and economic uncertainty, which have contributed to social challenges such as depopulation. Moreover, economic growth may not be evenly distributed across all segments of the population, resulting in pockets of poverty that affect access to quality housing, education, and healthcare, particularly for vulnerable groups like families with children and the elderly. The city managed to transform its economy from an industrial profile, typical for (post)communist Central and Eastern Europe to a service and technology-based one and currently enjoys a very low unemployment rate (2.5% as of February 2025). However, salaries remain low and therefore are less competitive compared to larger metropolitan labour markets such as Warsaw, Cracow, Wrocław, Gdańsk or Poznań, which might be a disadvantage for high-skilled workers or talented graduates who are likely to seek career opportunities in other cities.

Figure 5: *Traffic disruption at a housing construction site (SAFE project).*

Social Factors

Bydgoszcz is dedicated to fostering an inclusive and active community through various cultural and recreational programmes designed to engage citizens and promote social cohesion across generations. The city has established the Centre for NGO and Volunteering Support, a resource centre financed and managed by the municipality to develop the potential of local organizations. Emphasizing social integration, Bydgoszcz provides support for vulnerable groups, including people with disabilities, senior citizens, and families with children, and encourages community involvement through its own volunteering support program, thereby building robust social networks. However, the city faces challenges such as depopulation, with a consistent annual decline in population observed over recent years, leading to a reduced workforce, lower economic productivity, and decreased demand for local services, potentially resulting in underutilized infrastructure and housing. Additionally, an increasing proportion of elderly residents poses challenges for healthcare services, social support systems, and the adaptation of urban spaces to ensure accessibility and safety for senior citizens. Furthermore, as the city becomes more diverse, integrating foreigners into the community remains a challenge; language barriers, cultural differences, and access to services can hinder social cohesion and the inclusion of all residents.

Technological Factors

Bydgoszcz leverages technological advancements to enhance urban living by investing in digital infrastructure that improves communication between residents and municipal services. Initiatives like Digital Poland implemented in Bydgoszcz and other cities aim to increase digital literacy among citizens and integrate modern technologies into various aspects of city life, including education, healthcare, and public services. However, while these technological advancements offer numerous opportunities, there is a risk of a digital divide where certain segments of the population, such as the elderly or low-income individuals, may lack access to digital tools and the internet, hindering their ability to benefit from e-services and participate fully in the digital economy or public services. Additionally, as Bydgoszcz invests in digital infrastructure, the city becomes more vulnerable to cyber threats; ensuring the security of data and digital systems is crucial to protect residents' information and maintain trust in digital services.

Environmental Factors

Bydgoszcz prioritizes sustainable development and environmental protection through programmes aimed at improving air quality, effective waste management, urban beekeeping, increasing green spaces, including reforestation projects and park revitalizations that contribute to a healthier urban environment. The city also promotes eco-friendly transportation options, such as cycling and public transit, to reduce its carbon footprint. However, the legacy of industrial activities, notably from the former Zachem chemical plant, has left areas with significant environmental contamination, with pollutants seeping into the ground and groundwater, posing health risks to residents and necessitating substantial remediation efforts. Additionally, Bydgoszcz is susceptible to climate change effects, including extreme weather events like heavy rainfall leading to flooding, which can damage infrastructure, disrupt services, and pose safety risks to urban areas. Despite ongoing efforts, air pollution remains a concern, particularly affecting vulnerable groups such as children, the elderly, and individuals with respiratory conditions. To minimize the negative impact of solid fuel heating systems, a grant scheme was introduced for residents living in multi-apartment building with obsolete heating equipment. The residents can apply for partial funding to purchase low-emission heating devices and therefore contribute to air quality improvement. Another key initiative regarding the city's environmental protection is to build a network of retention tanks enabling to store rainwater. This provides both protection from unpredictable weather anomalies, particularly heavy rains, as well as access to necessary water reserves in the wake of global climate change.

Despite the existing challenges or possible threats, the combined impact of these factors generally enhances the quality of life in Bydgoszcz. Political commitment to strategic development ensures that urban planning is aligned with residents' needs. Economic initiatives provide employment opportunities and support local businesses. Social programs foster community engagement and support vulnerable populations. Technological advancements improve access to information and services. Environmental efforts create a cleaner and more sustainable city. Bydgoszcz places a strong emphasis on safety and accessibility within urban areas. The development of modern infrastructure includes considerations for people with disabilities, ensuring that public spaces and transportation are accessible to all.

Figure 6: *Accessible bathroom at a shopping centre (SAFE project).*

FOUR SCENARIOS FOR BYDGOSZCZ

The participants in the Local Scenario Workshop, which was organized by the WSG University in Bydgoszcz as a part of the SAFE project on December 16, 2024, brought up most of the factors mentioned in the previous subchapters. The event gathered a group of around 30 representatives from the neighbourhoods of the city centre, NGOs working with families and elderly residents, teachers and lecturers from schools and universities. The starting point of the workshop was a general reflection of how the city has changed over 10, 20 or 30 years, depending on the interlocutors' memory and biography. Participants generally shared the view that most of the changes that have taken place in the city over the decades are necessary and positive. They emphasised the role of new health centres, renewed public transport, educational facilities, and investments funded by European Union funds. It was noted that the economy in the city has changed from the typical post-communist industrial production towards a more diversified model, which is well represented by IT, business services and logistics. Participants felt that the aesthetics of the city have improved - Bydgoszcz has a nice, positive image, based on water and green spaces.

However, there were also doubts about the future of the city. The discussion increasingly highlighted themes related to the city's demographic crisis. Bydgoszcz, like most Polish cities, is and will be affected by ageing and depopulation. As the average human life expectancy increases, there are growing questions about whether the city will be infrastructurally and technologically friendly for future generations, especially the elder one. Therefore, the following analysis of four scenarios focuses on two main factors:

FACTOR 1: DEMOGRAPHICS

Favourable value (F1+): Progress

Unfavourable value (F1-): Crisis

FACTOR 2: TECHNOLOGY

Favourable value (F2+): Inclusion

Unfavourable value (F2-): Exclusion

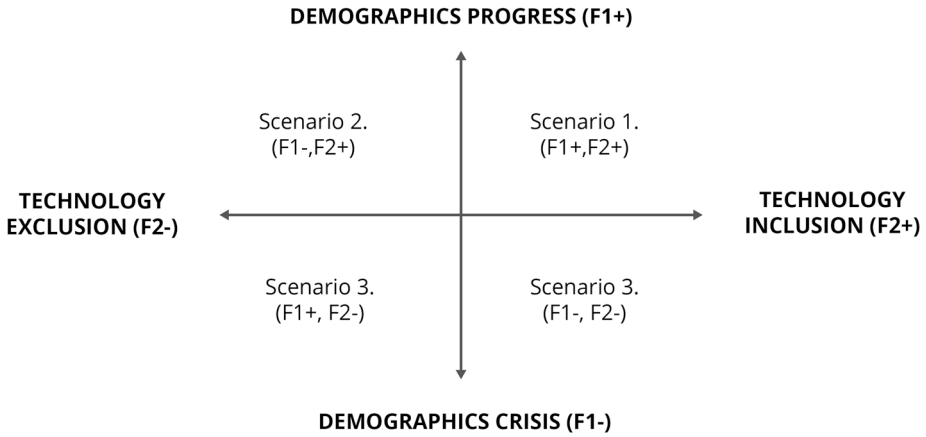

Figure 7: *Quadrant visualisation of four possible development scenarios for Bydgoszcz originating from different combinations of the values of two key factors - technology and demographics.*

Figure 8: *Introduction to the local scenario workshop in Bydgoszcz (SAFE project).*

Scenario 1: Smart Vibrant City (F1+ and F2+)

In this scenario, Bydgoszcz experiences a demographic upswing driven by both internal growth and sustained immigration, especially from Ukraine. It predicts that a well-managed migration supported by integration services and welcoming approach of the native community might stimulate the demographic structure of the city. A young, more diverse population injects new energy into the city. This shift aligns perfectly with rapid technological development that prioritizes inclusivity. Smart city initiatives expand across districts: public spaces and transport become universally accessible, equipped with real-time data systems and light or voice-assisted navigation for people with disabilities.

Enhanced urban mobility plans integrate tram-bus-rail connections, all equipped with modern low-floor and barrier-free vehicles. Public safety is managed via AI-supported surveillance in high-risk zones, reducing crime or vandalism in sensitive districts. Tech-savvy young people and inclusive digital literacy programs help older citizens navigate services confidently, as well as protect themselves from online disinformation or scam threats. The city also sees a boom in social innovation: real-time community alert systems become part of everyday life. Such alert systems can be future enhancements of the already existing app for reporting various types of issues.

The Mill Island and riverside boulevards evolve into vibrant spare time and recreation hubs with more barrier-free design, serving as models of integrated green infrastructure. As Bydgoszcz continues to attract talents and investment, the synergy of favourable demographics and inclusive technology propels it toward becoming a European benchmark for a safe, smart, and accessible city. The arrival of a young population also has a positive impact on local hospitality and entertainment businesses, as this group of clients is more likely to eagerly spend on restaurant, tourist attraction, sport events, etc.

This scenario was rated by the participants as a difficult one to achieve, yet the most optimistic.

Scenario 2: Digital Divide Among Generations (F1+ and F2-)

Although Bydgoszcz enjoys demographic revitalization, this scenario sees the risk of technological progress being distributed unevenly. A young, more diverse population invigorates the cultural and economic life of the city, but systemic digital exclusion grows, particularly among elder residents, low-income groups, and new immigrants unfamiliar with Polish digital systems, like mObywatel or ePodatki.

While the city invests in digital infrastructure, many services, from healthcare appointments to public transport navigation, shift online without adequate analogue alternatives or support. This creates barriers to access and exacerbates social inequality. Families and younger populations thrive, especially in tech-friendly neighbourhoods, but marginalized groups become increasingly alienated, especially in peripheral districts where infrastructure and broadband coverage lag. Insufficient or lack of alternative to digital services causes parts of the local community, most likely elders and people with low digital skills, at risk of isolation and alienation, as they have less and less opportunities to interact with other people to ask for an advice, do shopping, or have occasional small talks with the staff while buying a train ticket or making an appointment at the health centre. As expressed by the workshop participants, this potential situation may trigger the feeling of being an unnecessary burden to society in many elderly residents and either force them to rely on others or be left without help.

Public transport networks expand but rely heavily on app-based ticketing and real-time updates, leaving many seniors or cash payment supporters behind. Safety programs use smart tools, but community trust declines due to limited digital participation. Suburbanization intensifies disparities—well-connected areas flourish, while old, under-resourced zones suffer neglect. Despite demographic growth, Bydgoszcz's failure to bridge the digital divide poses long-term risks to cohesion and inclusive safety. On the other hand, there is one advantage in this scenario, even if elderly citizens remain less skilled in new technologies. Health monitoring wearable devices and applications may play a crucial role in providing the seniors' comfort and safety. Medical help can be faster and better targeted, provided that the devices are used properly and regularly. This is particularly important for elders or people with disability living in one-person households.

Scenario 3: Inclusivity amid Decline (F1- and F2+)

In this scenario Bydgoszcz faces demographic stagnation: population aging and youth outmigration driven by better career opportunities lead to shrinking neighbourhoods and underutilized infrastructure. However, the city doubles down on inclusive technologies as a strategic response. Public transport, reoriented to match the needs of an older population, introduces innovations such as voice-controlled timetables, tactile navigation systems, and AI-supported assistance for people with limited mobility. More low-floor and barrier-free vehicles are in use, and the timetables are modified to provide more arrivals per hour. Public awareness campaigns encourage elderly residents, families with young children and persons with disabilities to use modernised public transport as a friendly, affordable and reliable mobility option.

Remote health services and virtual care hubs support seniors, particularly in remote districts like Fordon, or neighbourhoods most affected by population aging like Błonie or Osiedle Leśne. Despite the demographic crisis, the digital inclusion initiatives ensure that no resident is left behind. Vacant properties are repurposed into smart community centres offering more tech training, co-working spaces, and intergenerational programs than earlier. Senior citizens are aware of the opportunities created by the constant digitalization and able to use tools provided daily. This is possible to a great extent thanks to the growing network of senior clubs, third age universities and other educational initiatives.

The emphasis on accessibility leads to universal design in various public areas, from benches with health sensors to adaptive street lighting. Safety is managed through neighbourhood monitoring apps and social engagement platforms that encourage civic participation, especially among the elderly ones. Bydgoszcz gains recognition as a model of compassionate, tech-augmented aging, and a city that proves small can still mean smarter and safer. As commented by the participants, in a long-term perspective this might be the most likely and realistic scenario of social and technological development for Bydgoszcz.

Scenario 4: Social and Digital Disconnection (F1- and F2-)

This scenario sees Bydgoszcz struggling with both demographic and technological downturn. With continued depopulation and suburbanization, the urban core loses its vibrancy, and peripheral neighbourhoods (Fordon, Wyżyny, etc.) become ghostly remnants of their former selves. The aging population dominates, but without access to supportive technology or digital literacy programs, many fall into isolation. The feeling of solitude is deepened by the fact that elderly residents usually live alone.

Public infrastructure deteriorates as economic strain forces cutbacks. Without adaptive technologies or inclusive planning, public transport becomes sparse and unintuitive for seniors and those with disabilities. Urban safety erodes, as vandalism and petty crime grow in neglected areas. Revitalization efforts stall due to a shrinking tax base and bureaucratic inertia. Disconnected from digital services, older residents struggle to access healthcare, social assistance, or even basic city updates. Technological tools exist but are implemented without support structures, deepening exclusion. The city's once-celebrated public spaces lose appeal and become underused. Accessibility regresses as the old infrastructure remains unmodernized. Without bold intervention, Bydgoszcz risks becoming a fragmented city, defined by disconnection and digital silence.

The participants commented that a scenario of this kind is the least likely to happen, yet it cannot be fully excluded from the consideration. The proximity of war due to a Russian invasion in Ukraine proved that if an extreme crisis strikes, vulnerable social groups like seniors or people with disabilities might particularly suffer from the lack of connectivity, and therefore also access to basic social services. Natural disasters (floods, fires, etc.) can also put broad spectrum of social groups under the risk of disconnection – both in terms of technology and human interaction.

CONCLUSIONS FROM THE SCENARIOS

- Technology is a powerful tool for social change and progress, but only if inclusivity is prioritized. The difference between a thriving or failing city in all scenarios depends on whether digital transformation is accessible to all residents (or not).
- Aging demographics are not necessarily a burden. If accompanied by smart investments in health technologies, transport, and community life, Bydgoszcz can evolve into a leading city for comfortable senior living.
- Reducing the digital divide should become a policy priority. Analogue alternatives, digital education, and human-centred service design are essential to avoid the marginalization of seniors and digitally less-literate residents.
- Crisis preparedness matters. Scenarios 2 and 4 show how digital or social disconnection during difficult situations can endanger the most vulnerable groups. Robust, inclusive infrastructure can increase resilience.

- Scenario 3 provides a realistic policy foundation. While growth may not be guaranteed, inclusive technological investments can maintain and even improve urban quality of life, making Bydgoszcz a sustainable city, friendly for all generations.

Figure 9: *Modern technology disrupted by inaccessibility: parcel machine located on an elevated concrete platform that creates a physical barrier (SAFE project).*

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CHAPTER 5: Spain, Scenarios for the accessible tourism and perceived safety in the city of Granada

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ABSTRACT

THIS CHAPTER DESCRIBES Granada from the point of view of tourism, one of its main economic activities. It explores the political, economic, socio-cultural, technological and environmental factors that influence the development of fully accessible and safe tourism in the city, as well as the megatrends in the field of tourism accessibility and safety. As a consequence, four scenarios are proposed with respect to accessibility and perceived safety in the city (low perceived safety – low accessibility; low perceived safety – high accessibility; high perceived safety – low accessibility; high perceived safety – high accessibility), describing their strengths, weaknesses, opportunities and threats, and concluding with the proposal of strategies to transform or consolidate these scenarios.

Keywords: Accessibility, Safety, Granada, Scenarios, Tourism, PESTE analysis, SWOT analysis

DESCRIPTION OF GRANADA

Granada is located in southern Spain, specifically in the Autonomous Community of Andalusia, and has a population of around 230,000. Tourism is one of its main economic drivers. In 2024, the city received 6.7 million tourists (4.4% more than the previous year) (Granada Hoy, 2025). This is partly due to the fact that it is home to one of the most visited monuments in Spain: the Alhambra and Generalife Monumental Complex, a World

Heritage Site. In 2024, the Alhambra broke its record with 2.72 million visits (Ideal, 2025), placing it in the top 10 most visited monuments in the world (Granada Hoy, 2024).

However, Granada is not only known for the Alhambra. The history of Granada, the last city to be conquered by the Catholic Monarchs in 1492, gives it an unmistakable Arab flavour, which influenced its craftsmanship and urban planning. In fact, the Albaicin district, which is of Arab origin, is a World Heritage Site. The city's gastronomy with its unmistakable tapas is also noteworthy, as well as its full cultural and leisure agenda, with film, music and theatre seasons and festivals, exhibitions, seminars, conferences and colloquiums in old Renaissance palaces and innovative infrastructure prepared for major events. Granada is also the birthplace of Federico García Lorca, was declared a UNESCO City of Literature in 2014, and is strongly linked to flamenco, declared Intangible Cultural Heritage of Humanity in 2010 (Spain's Official Tourism Portal, 2025).

The province of Granada also has great tourist attractions. Among all its attractions, the Sierra Nevada ski resort stands out, consisting of 124 slopes with a total length of 107 kilometres. In addition, Sierra Nevada is a UNESCO Biosphere Reserve. Also noteworthy are the Granada Geopark, with its semi-desert landscape of thousands of gullies and 'bandlans' in the northern part of the province, the beaches of the Costa Tropical, 73 kilometres of coastline with an average annual temperature of 20 degrees and Las Alpujarras, a mountain range made up of dozens of small white villages with narrow winding streets (Turgranada, 2023).

Granada is also a city renowned for its university. The University of Granada is considered by various rankings to be among the top 3% of universities in the world. It has 22 faculties, 4 higher technical schools, 124 departments, 19 research institutes, 5 research centres, 89 undergraduate and double degree courses, 116 master's degree courses and 28 doctoral programmes. This translates into 46,000 undergraduate students (11,406 of which come from outside the Autonomous Community of Andalusia), 5,328 master's students (1,137 of which are foreigners) and 3,878 doctoral students (1,337 of which are foreigners). In addition, the University of Granada is a leader in undergraduate student mobility, receiving 1,914 ERASMUS+ students (University of Granada, 2025).

However, the city faces several challenges related to accessibility and safety. These include:

- **Steep topography:** Granada is built on mountainous terrain, with many sloping streets, especially in historic neighbourhoods such as the Albaicin. This creates challenges for people with reduced mobility and increases the risk of falls and accidents for everyone.
- **Narrow, cobbled streets:** Many of the oldest streets in the city are narrow, which can make it difficult for wheelchairs or prams to pass. In addition, uneven pavement and cobblestones do not facilitate comfortable and safe movement. The narrow streets can also create a sense of insecurity during busy periods when it becomes severely congested and sometimes vehicles drive too perilously close to pedestrians, which is also a risk.
- **Historical infrastructure:** As a city with an important historical and cultural heritage, many of the buildings and streets are protected and have not been fully adapted to modern accessibility regulations. This means that many buildings, squares, and monuments do not have ramps, lifts, or other modifications necessary to facilitate access for all.
- **Mass tourism:** the high flow of tourists in the city can make the most touristy streets and access points crowded, creating additional obstacles for those with reduced mobility. In addition, large crowds can facilitate theft or antisocial behaviour, which impacts personal safety.

Therefore, there is much to be done to achieve a fully accessible and inclusive city, and work is needed to remove the barriers faced by people with accessibility needs when sightseeing in the city and in their daily lives. However, these barriers are not only physical, but also, in many cases, cultural, social, communication and attitudinal.

Figure 5.1: *Granada Cathedral. Facade of Granada Cathedral with people walking in the plaza below (Alex Quezada. Creative Commons Attribution-Share Alike 4.0)*

PESTE OF GRANADA

Political factors

In 2020, the Regional Government of Andalusia approved the Large Cities Tourism Plan to boost the competitiveness of tourism in Andalusia in the segment of municipalities with more than 100,000 inhabitants. The main objective of the plan is to diversify the offer of Andalusian cities by expanding their tourist space and creating and developing new and attractive products. In the case of the plan for the city of Granada, one of the objectives is the continuous improvement of universal accessibility and the accessibility of tourist information, with accessible tourism as one of its strategic axes. Specifically, the following actions are contemplated within this strategic axis:

- Design, signposting, promotion, and improvement of the accessibility of new tourist routes.
- Adaptation of cultural and heritage environments with tourist potential.
- Strengthening of the synergies between the city and the Alhambra through accessibility.

The first phase of the Plan, which is almost completed, had a budget of 1,107,868.56 Euros. At the end of 2024, the second phase of the plan was approved, with a total of 15 initiatives and an investment of almost 9 million Euros.

For its part, achieving accessible tourism is one of the main challenges of the Granada City Council. This organisation is working to facilitate and promote the elimination of physical barriers to access all monuments and tourist services for people with accessibility needs. In this sense, it is also worth highlighting the work of the Municipal Council for Accessibility and People with Disabilities, the highest body for democratic participation of organisations and associations dedicated to the care of people with disabilities in the Municipality of Granada.

Economic factors

Granada is a city that is highly dependent on the tourism sector. It is estimated that it directly accounts for 15% of its GDP (and up to 30% indirectly) and generates some 25,000 direct jobs and 8,000 jobs linked to related activities (Eldiario.es, 2024). On the other hand, it should be noted that the average expenditure of tourists visiting the province of Granada is 92 euros, an increase on the previous year. However, the average length of stay is getting shorter, standing at 3.7 days in 2024.

The unemployment rate in Granada city is approximately 20%, while the Consumer Price Index (CPI) is stabilising at the beginning of 2025 after the huge increases suffered in previous years. However, prices continue to rise year on year (in the last 12 months there has been an increase close to 3%) (INE, 2025).

The above data demonstrates the great relevance of tourism for Granada which, in a situation of high unemployment, rising prices and a reduction in tourist stays, requires a type of tourism that contributes to generating quality tourism, which in turn generates high expenditure and long-term stays. This can be achieved through accessible tourism, which opens up significant business opportunities in the tourism services sector.

Social and Cultural Factors

Granada is one of the most populated cities in Andalusia, which makes up 17% of the surface area of Spain, making it the second largest autonomous community in Spain and the most populated of all. A relevant aspect to highlight is the ageing of its population. In 2009, 15.8% of the population of the province of Granada was at

least 65 years old, while in 2023 this percentage has increased to 18.9% and is expected to skyrocket to 27.1% by 2039. Ageing can also be seen in tourists. The percentage of tourists visiting Andalusia in 2024 over 65 years old was 19.5% (IECA, 2025).

For this reason, improving accessibility in the city of Granada is not only important for the development of tourism in the city, but also for the wellbeing of an increasingly ageing population. Granada's society is increasingly aware of the importance of universal accessibility. Proof of this is the large number of associations in Granada that are fighting to achieve total accessibility in the city, including La Ciudad Accesible, the Granada Asperger's Syndrome Association-TEA and the Association for people with intellectual disabilities in Granada (ASPROGRADES).

Technological Factors

Technology plays an important role in the development of accessible tourism. As such, The Practical Guide to Accessibility in Tourism, published by Andalusia's Regional Ministry of Tourism, outlines how technology can make tourist destinations in Andalusia more accessible through aspects such as open websites, graphic information panels, signage, lighting, and contrast (Regional Government of Andalusia, 2022).

On the other hand, the Guide to Good Practices in Accessibility in Tourism, published by the Confederation of Andalusian Employers (CEA), shows good practices in accessibility in various destinations in which technology plays a key role in tourism (Confederation of Andalusian Employers, 2023). Among these goods practices are the website of accessible tourist destinations in Andalusia, which provides information on the accessibility of Andalusian destinations, as well as the initiatives carried out by AENA, the company that manages Spanish airports (including Granada airport) to make them more accessible. Among the technology-related initiatives at Spanish airports, the TEAcompaño app is particularly noteworthy. It is designed to help children with ASD (Autism Spectrum Disorder) and/or SLI (Speech Language Impairment) become familiar with the stages of travelling through an airport in a fun way.

At a local level, *the accessible tourism section of the Granada tourism website*, which brings together the necessary information so that everyone can enjoy tourism, stands out.

Environmental Factors

Environmental sustainability is booming, with a growing interest in combining accessibility with sustainable practices. This involves adapting infrastructures without damaging the natural environment of the city and its surroundings. For this reason, Granada has a great opportunity to combine accessible and environmentally friendly tourism.

However, it is important to mention that there is a lot of work to be done in terms of the environmental sustainability of Granada, which is one of the three most polluted cities in Spain. In this respect, the aforementioned Large Cities Tourism Plan recognises that one of the main threats facing Granada is the loss of quality of the surrounding Natural Spaces, with problems of soil erosion, deterioration of the landscape, pollution of rivers, as well as the degradation and deterioration of the historical, cultural, and monumental heritage. Hence, one of the pillars of the plan is sustainability. Specifically, the plan seeks to design tourism actions that allow the city's environmental resources to be valued, taking care of the environmental quality of the territory, trying to mitigate and adapt to climate change and ensuring the maintenance and improvement of the cultural, natural and historical-artistic heritage. Consequently, sustainable tourism is another of the main axes of the plan, and must be compatible with accessible tourism, another of its axes (Junta de Andalucía, 2020).

Table 1 summarises the main aspects of the PESTE analysis of Granada.

Table 5.1: *Main aspects of the PESTE of Granada.*

POLITICAL FACTORS	ECONOMIC FACTORS	SOCIAL AND CULTURAL FACTORS	TECHNOLOGICAL FACTORS	ENVIRONMENTAL FACTORS
Strategic plan for large cities. Work done by Granada City Council to eliminate barriers. Municipal Council for Accessibility and People with Disabilities.	Dependence on tourism. Decrease in average length of stay. High unemployment rate. Increase in prices.	Ageing of the population of Granada. Ageing of tourists to Granada. Existence of associations that seek to achieve accessibility.	Initiatives to use technology to achieve accessibility: A) At the level of the Regional Government of Andalusia (accessible tourist destinations website). B) At the level of airports (TEAcompaño). C) At the local level (accessible tourism section of the Granada tourism website).	Pollution. Risk of loss of quality of natural spaces, deterioration of the landscape and of the historical, cultural, and monumental heritage. Need for compatibility between accessible tourism and sustainable tourism.

MEGATRENDS IN ACCESSIBLE TOURISM AND PERCEIVED SAFETY

Accessible tourism is an approach that seeks to ensure that all people, regardless of their abilities or circumstances, can enjoy tourist experiences on equal terms (e.g., Pillmayer et al., 2018). It is not only about eliminating physical barriers, but also about offering environments, services and information adapted to diverse needs. This includes people with motor, sensory or cognitive disabilities, but also the elderly, families with young children, people with autism spectrum disorder (ASD), migrant women and other groups that may face difficulties in conventional tourist environments. Beyond an ethical and legal imperative, accessibility is a key factor for the competitiveness and sustainability of tourist destinations.

In Granada, the wealth of heritage and the complex topography pose significant challenges in terms of accessibility, but also opportunities for an evolution towards a more inclusive tourism. In addition to architectural barriers such as cobbled streets and steep slopes, there are still limitations in inclusive signage, the training of tourist staff to attend to people with diverse needs and in the availability of information in accessible formats. For example, visually impaired people may find it difficult to enjoy the heritage sites without adapted resources, while people with ASD may face sensory overload without options for regulation. Similarly, migrant women may encounter language and cultural barriers in tourism services, and families with young children may not have adequate rest or eating areas.

The transition towards accessible tourism in Granada must be approached in a comprehensive manner, combining improvements in infrastructure with training, technological and social initiatives. Adapting tourist routes with accessible itineraries, offering easy-to-read information, incorporating multisensory signage, and promoting personalised attention are key steps in this process.

Perceived safety is an essential factor in the tourist experience, as it directly influences the comfort, confidence, and satisfaction of visitors. Beyond objective safety, which depends upon factors such as crime or urban infrastructure; perceived safety is linked to the feeling of well-being and protection that tourists experience in a destination. This perception varies according to the profile of the visitor and can be affected by physical barriers, lack of clear information or the absence of measures adapted to groups with specific needs, such as the elderly, families with children, people with disabilities or migrant women.

In Granada, the perception of safety can vary depending on the characteristics of the group of tourists. While some areas are well lit, signposted and have a police presence, others can generate uncertainty due to the lack of accessibility, the absence of adapted information or the lack of accompanying and assistance measures. The narrow-cobbled streets of the old town can be unsafe for people with reduced mobility or families with pushchairs, while the lack of resources for people with sensory disabilities can increase the feeling of vulnerability in areas with heavy traffic or little auditory and tactile signage.

For groups such as people with ASD, perceived safety depends not only on physical protection, but also on the predictability of the environment. The lack of sensory rest areas or the overload of stimuli in tourist areas can generate anxiety and affect their experience. Similarly, migrant women may experience insecurity due to language barriers that make it difficult to access crucial information or to ask for help when needed.

The evolution towards a tourist environment that guarantees adequate perceived safety requires strategic interventions at various levels. Improving urban accessibility with adapted routes, increasing lighting in key areas, and reinforcing inclusive signage are essential measures. Likewise, training tourism and security staff in diversity awareness would make it possible to respond more effectively to the needs of different groups.

Technology can also play a key role in this process. Mobile applications with easy-to-read information, accessible alert systems and interactive maps adapted for people with sensory or cognitive disabilities would improve orientation and reduce feelings of insecurity. Similarly, the installation of multilingual information points and the creation of safe spaces for women and families would reinforce the confidence of these groups in the destination.

Granada has the opportunity to position itself as a safe and inclusive destination if it integrates the perception of safety into its tourism planning, together with a focus on accessible tourism. By ensuring that all travellers, regardless of their abilities or circumstances, can enjoy the destination without fear or uncertainty, the sustainability and competitiveness of local tourism is strengthened. A commitment to perceived safety not only improves the tourist experience but also strengthens social cohesion and the image of the destination internationally.

FOUR SCENARIOS PROPOSED FOR GRANADA BASED ON PERCEIVED SAFETY AND ACCESSIBILITY TRENDS

Total exclusion (low perceived safety – low accessibility)

This scenario describes tourist environments where physical, sensory, and cognitive barriers are widespread, and where the perception of insecurity is high due to lack of lighting, inadequate signage, or the non-presence of support services. In these areas, the tourist experience is severely limited for many groups, effectively excluding them.

In the particular case of Granada, some areas of the Albaicin district present this scenario due to their challenging accessibility, with steep cobbled streets, an absence of adapted routes and little inclusive signage.

In addition, the lack of lighting and reduced traffic in certain areas can generate insecurity, especially for older tourists, females, those with reduced mobility or those travelling alone.

SWOT analysis:

- Strengths: strategic location of these spaces in areas of high heritage value and with great tourist attraction.
- Weaknesses: inadequate infrastructure and perception of high insecurity. Specifically, where there are narrow streets, uneven surfaces, uneven pavements, and a lack of adapted transport.
- Opportunities: possibility of funding through accessibility programmes (for example, from European public funds), modernisation of the old town and development of sustainability.
- Threats: resistance to change due to restrictions on heritage conservation and/or urban planning.

Figure 5.2: *Albaicin district. Cobblestone street with whitewashed houses and stone steps in the Albaicín neighbourhood of Granada (Source: © Plataforma de Material Audiovisual de Turismo y Deporte de Andalucía; © Junta de Andalucía).*

Insecure accessibility scenario (low perceived safety – high accessibility)

This scenario represents situations in which, although the tourist environment has been adapted in terms of physical, sensory, and cognitive accessibility, perceived safety remains low. Factors such as lack of surveillance or the perception of risk at certain times affect the tourist experience, discouraging certain groups from visiting.

By way of reference, this situation can be found in the area around the bus station in Granada. Although this environment is physically accessible, with lifts and adapted services, the perception of safety may be low due to the lack of lighting in nearby areas, the occasional presence of groups that generate a feeling of insecurity and the limited availability of support or security personnel at certain times of the day.

SWOT analysis:

- **Strengths:** good level of accessibility in infrastructure and transport.
- **Weaknesses:** perception of insecurity at certain times and lack of specialised attention (for example, due to the lack of personnel trained in security and accessibility).
- **Opportunities:** use of video surveillance, remote assistance, security, and improvement of the tourist experience.
- **Threats:** risk that excessive security measures will restrict the destination's sense of openness and its image as a tourist destination.

Figure 3: *Granada bus station. Entrance of Granada bus station with people and luggage outside (Andreuvv. Creative Commons Attribution-Share Alike 4.0).*

Restrictive safety scenario (high perceived safety – low accessibility)

Here, the destination offers a high sense of safety thanks to the presence of surveillance, environmental control and good order conditions and lighting among other elements, however, accessibility is still poor. This may be due to unadopted heritage infrastructure, non-inclusive transport, or lack of information on accessible alternatives, limiting the participation of certain groups of tourists.

In Granada, this situation could be represented around the monument of La Alhambra and its surroundings . Despite being a safe environment, with access control, surveillance, and good general conditions, it presents accessibility barriers due to unevenness, irregular pavements, and areas with access restrictions for people with reduced mobility. The lack of multisensory signage and specific resources for visitors with sensory or cognitive disabilities can also affect the visitor experience.

SWOT analysis:

- **Strengths:** safety and conservation at the main tourist attractions.
- **Weaknesses:** strict conservation regulations that limit accessibility in certain infrastructures and services.
- **Opportunities**: application of inclusive technologies that do not physically impact the heritage.
- **Threats:** loss of tourism competitiveness if improvements in accessibility are not implemented, possible loss of historical value when carrying out accessibility adaptations.

Figure 5.4: *The Alhambra. View of the Alhambra palace complex at sunset with the Sierra Nevada mountains in the background (Source: © Plataforma de Material Audiovisual de Turismo y Deporte de Andalucía; © Junta de Andalucía).*

Inclusive and safe tourism scenario (high perceived safety – high accessibility)

This is the optimal scenario, where perceived safety and accessibility combine to offer truly inclusive tourism. Here, visitors find adapted infrastructures, inclusive signage, trained staff and safety measures that together, guarantee a comfortable and barrier-free experience.

A place in Granada that can be considered to represent (or come very close to representing) this ideal situation is the Science Park , as it has physical accessibility, adapted signage, information in Braille and spaces designed for diverse types of visitors. In addition, its good lighting, the presence of support staff and organised spaces contribute to a perception of high safety, favouring an inclusive environment for families, the elderly, and tourists with disabilities.

SWOT analysis:

- **Strengths:** fully accessible and safe environment for all visitors, has the potential to become a benchmark in inclusive tourism.

- **Weaknesses:** need for continuous investment and constant adaptation, as well as a long-term commitment.
- **Opportunities:** increase in accessible tourism as a global trend and positioning as a benchmark in inclusive tourism.
- **Threats:** lack of adaptation to new emerging needs if a dynamic approach is not maintained, and lack of long-term political or economic commitment.

Figure 5.5: *Science Park. Exterior view of the Science Park in Granada, Spain, featuring a helicopter display and modern architecture (Source: © Plataforma de Material Audiovisual de Turismo y Deporte de Andalucía; © Junta de Andalucía).*

STRATEGIES FOR THE TRANSFORMATION AND/OR CONSOLIDATION OF SCENARIOS TOWARDS ACCESSIBLE AND SAFE TOURISM

Developing accessible and safe tourism in Granada requires a gradual strategy that transforms deficient areas into inclusive and secure environments. To achieve this, it is essential to intervene in each of the identified scenarios, addressing their shortcomings through structural, technological, and training measures. The strategies for each case are presented below, allowing the identification of the key factors in their evolution.

Guidelines for transforming the scenario of total exclusion (low perceived safety - low accessibility)

This is the most unfavourable scenario, as it combines physical, sensory, and cognitive barriers with a low perception of safety. In order to move towards a more inclusive model, it is useful and urgent to implement urban planning and technological interventions that eliminate obstacles and reinforce visitors' confidence.

Some key actions and recommendations for public decision-makers can focus on improving:

- **Infrastructure:** adapting the cobbled streets paving, installing accessible ramps, and improve lighting in tourist areas and key access routes, while maintaining the aesthetics of the area.
- **Mobility and transport:** creation of accessible routes with inclusive signage and improvements to public transport with adapted vehicles (such as to areas of Albaicin and Sacromonte).
- **Safety and assistance:** with an increase in the presence of support staff and emergency call devices at strategic points.
- **Information and technology:** through the development of applications with easy-to-read information, interactive maps and accessible audio guides that provide accessible tourist routes and safety warnings.
- **Lighting and safety:** installation of intelligent lighting and surveillance cameras in areas with low visibility.
- **Awareness and training:** programmes for local businesses and accommodation on inclusive attention and safety for different groups.

Guidelines for transforming the unsafe accessibility scenario (Low perceived safety - High accessibility)

This scenario has advances in accessibility, but the feeling of insecurity can demotivate certain groups of visitors. It is key to reinforce safety without affecting the openness and accessibility of the environment.

The following suggestions for improvement and actions that could be carried out are proposed:

- **Improvement of the environment:** installation of inclusive street furniture, rest areas, installation of intelligent lighting and signage with clear and accessible information.
- **Accessible information:** information panels with tactile maps and signage in braille and easy-to-read format.
- **Presence of staff:** increased police presence and assistance staff in areas with a high influx of tourists, reinforced surveillance in tourist areas and training in attention to groups with special needs.
- **Collaboration with the private sector:** incentives for shops and hotels to implement accessibility and security measures.
- **Awareness-raising:** campaigns to improve the perception of security and generate confidence in visitors.

Guidelines for transforming the restrictive safety scenario (high perceived safety - low accessibility)

This scenario is characterised by a high level of safety, but with barriers that limit access to various groups. The strategy should focus on removing obstacles without compromising the protection of the environment.

The following key actions and improvements are proposed:

- **Adaptation of heritage:** implementation of accessibility solutions without affecting the conservation of the environment. For example, accessible alternative routes could be created around the Alhambra site.

- **Inclusive technology:** incorporation of augmented reality, audio guides and Braille signage for visitors with sensory disabilities.
- **Staff training:** training of guides and sector workers in accessibility and inclusion and attention to vulnerable groups.
- **Flexibility in access regulations:** review of regulations to allow adapted access without compromising safety and adapted vehicles in restricted areas.

Guidelines for consolidating accessible and safe tourism (High perceived safety - High accessibility)

This scenario represents the final goal, considered to be an environment where accessibility and safety are integrated, allowing all visitors to enjoy the destination without barriers or worries.

The following strategies and actions are suggested to maintain and enhance this situation:

- **Standardisation and normalisation of accessibility and safety:** application of international and/or European accessibility and safety regulations throughout the destination.
- **Innovation and continuous improvement:** incorporation of new technologies to improve the experience of all types of visitors and tourist services.
- **Public-private collaboration:** promoting agreements between administrations, companies, and associations to maintain standards of inclusion.
- **Citizen participation:** involving residents and associations in decision-making on accessibility and safety.
- **Constant evaluation and improvement:** implementing regular audits to detect and correct deficiencies.
- **International promotion:** positioning Granada as a leading destination for accessible and safe tourism.

CONCLUSION TO GRANADA SCENARIOS

This chapter has tried to explain the current situation of Granada, the political, economic, socio-cultural, technological and environmental factors that condition it in order to achieve the goal of being a fully accessible and safe city and the current megatrends in terms of accessibility and safety. Based on the above, four scenarios have been proposed related to four outstanding tourist areas of Granada that have important accessibility and safety aspects to be taken into account. The strengths, weaknesses, opportunities and threats of these scenarios have been described, and solutions have been proposed to improve or consolidate them.

In conclusion, the city of Granada has heritage and historical characteristics that make it unique. However, these same characteristics pose a challenge to ensure that any person, regardless of their characteristics, can enjoy fully accessible and safe tourism. Granada is working on this, but there is still a long way to go. This chapter has tried to shed light on what can be done to achieve full accessibility and safety for a city for which tourism is an integral part of its identity and economy.

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Chapter 6: Slovenia. Residential Design Scenarios for Different Vulnerable Groups in the city Of Kranj

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ABSTRACT

THE CHAPTER FOCUSES on the design of four housing scenarios for different vulnerable groups in the municipality of Kranj. Each scenario has been designed based on a real location in the city of Kranj. The introductory part presents the economic, political, social, environmental and technological aspects of the city to provide a broader picture of the area in which each of the scenarios are designed. Four different scenarios presented are addressing the vulnerable groups of people with disabilities, visually impaired, elderly and people with autism. Each scenario includes a presentation of the location, design guidelines according to the type of vulnerable group taken from the literature and policies in this field and the specific design of each dwelling. Scenarios have also been tested and presented to the local community.

Keywords: Kranj, Slovenia, PESTE analysis, future scenario workshop, vulnerable groups, inclusive design

INTRODUCTION TO KRANJ

The town of Kranj developed in the central part of the Gorenjska region at the intersection of the Sava and Kokra rivers, on the edge of the Kranjsko polje below Šmarjetna Gora, where the old town centre of the settlement was formed. The town initially expanded northward, where central activities took shape, while an area of manufacturing activities dependent on the exploitation of the river took shape on the lower area along the river Sava. To the east and north of the town centre, there is a predominantly residential area dating back

to the second half of the 20th century, consisting of a mix of apartment blocks and single-family houses. The urban fabric is completed by residential and industrial areas and a partially developed educational centre. All of these areas are characterised by a fairly densely built fabric, which as a whole allows them to be defined as a compact city. Within the compact city there are two major sport and recreation areas, which complement the area of Šmarjetna Gora, a popular hiking point in the region. The suburban settlements along the roads to Škofja Loka, Preddvor and Golnik are also included in the urban area.

Figure 1: *Location of Kranj (Aleš Švigej (2023). Position of Kranj [Computer sketch]).*

The central, urban part of Kranj is intensively urbanised. The characteristic structure of the built-up area is defined by the two major rivers and their terraces. With the rise of intensive urbanisation and suburbanisation, the city has developed beyond its historical context with new residential neighbourhoods. Over time, Kranj has merged with the suburban built-up areas along major thoroughfares into a larger urban agglomeration. Given the concentration of population and the daily functional connectivity of other settlements, the actual sphere of influence of the core urban area is wider, extending also into the suburban settlements and business areas of neighbouring municipalities that were administratively connected in the past. Through the suburban settlements, the city organically flows into the rural hinterland. The proximity of Ljubljana Urban Region conurbation has a particular transport and economic impact on the development of Kranj. The city is developing into a centre of national importance, as the second most important of the wider Ljubljana urban area and an important regional transport hub. Within the Gorenjska region, Kranj plays the role of a regional centre, with a concentration of public services, administrative, educational and cultural institutions, as well as key business and service activities that serve the entire region. The city is particularly attractive also to the surrounding local communities due to intensive daily work, education and transport flows. Its geographical proximity to Ljubljana has a strong influence on the development and migration flows. In mid 2023, the municipality of Kranj had approximately 57,080 inhabitants, 28,680 of which were male and 28,400 female

(SORS, 2023). In terms of population, it ranks 3rd among all municipalities in Slovenia, after Ljubljana and Maribor (SORS, 2023). It has an average of 378 inhabitants per square kilometre, making it the most densely populated municipality in Slovenia (SORS, 2023). The number of live births was higher than the number of deaths in 2023, resulting in a positive natural population increase, while the rest of Slovenia experienced a negative increase (SORS, 2023). Statistically, the population growth was negative and the average age within the municipality was 43.3 years, which is lower than the national average (SORS, 2023). Nevertheless, as in most Slovenian municipalities, the number of old people is higher than the number of young people.

Figure 2: *Main Square in the Old Town of Kranj (Source: Visit Kranj)*

Figure 3: *Panoramic view of Kranj (Source: Finestays Slovenia*

DEVELOPMENT VISION OF KRANJ

The development vision of Kranj, set for realization by 2030 outlines the long-term goals that the city wants to establish both in the urban core area and in the municipality as a whole (TUS, 2016). By 2030, Kranj will be a city of opportunity, which means that it will be a sustainable, progressive and vibrant urban centre of Gorenjska (TUS, 2016). It will be known as an open space where it will be easy to implement entrepreneurial ideas. It will be favourable to new technologies and the promotion of young talent, making it a reference for the creation of new solutions based on modern information and communication technologies. The city will offer all generations the chance to lead an active, healthy and creative lifestyle within a green alpine environment. The city will be better connected to the surrounding area, including nearby Ljubljana, the airport and the countryside. Personal transport will gradually be replaced with public transport, cycling and walking. Smart solutions will make the city's public services more efficient and user-friendly. The Old Town will be attractive for living, shopping, entertainment and tourism, functioning as the centre of the urban cultural pulse. Through careful management, Kranj will preserve its environment, culture and heritage for future generations. Agricultural land will be used for local food production, and the countryside will remain populated and vibrant.

PESTE ANALYSES FOR KRANJ

Political factors

- Administrative, business, commercial and educational centre of Gorenjska,
- Inter-municipal and regional cooperation,

- Active local communities,
- Open municipal administration for citizens,
- Safe city,
- Experiences in implementing investment projects.

Economic factors

- Accessible location: Proximity to Ljubljana, airport, highway and railway,
- High quality of living,
- Growth of small and medium-sized businesses,
- Concentration of ICT companies,
- Development centre for ICT technologies,
- Headquarters of support and financial Institutions,
- Social enterprises in operation,
- Initiative programmes for agriculture and tourism events

Social factors

- Positive demographic trends compared to Slovenia,
- Diverse network, range of programmes, events and facilities in the field of social protection and youth,
- Diverse range of social and health services (primary and secondary level),
- Intergenerational centre,
- Adequate network and surfaces of sports facilities,
- Established physical education and coaching system,
- Aging population.

Technological factors

- The city's commitment to new technologies and fostering young talents,
- Expanding and increasing the capacity of the high-speed broadband network, its security and reliability,
- Investing in the development of services to ensure a high-quality smart city environment,
- Unified intelligent information support for transport subsystems,
- Key city investments in regional, national and cross-border advanced technology solutions,
- Healthcare information solutions,
- Deployment of smart systems for distribution and management of natural energy resources.

Environmental factors

- Good transport links for green mobility,
- Refurbished public spaces and infrastructure in the city centre,
- Improved management of natural resources,
- Reduction of water losses and light pollution,
- Increased recycling of waste,
- Reduction of energy consumption in public facilities,
- Attractive landscape - rivers with the canyons,

- Numerous natural values,
- Natura 2000 protected area.

Political factors

The Spatial Development Strategy of Slovenia places Kranj in an urban agglomeration with Ljubljana, whose proximity is one of the major reasons for the loss of the city's former strength. At the same time, Kranj has the status of a regional centre in the Gorenjska region, where it is crucial to seek new advantages and links with the capital in the fields of public transport, higher education, research and culture. Within the Slovenian area, it strives for cooperation and trusts at all levels of politics, administration, business and civil society in specific areas. In line with its cooperation with the capital, Kranj also forms links with other municipalities and institutions in the region. It is particularly active in ensuring that the dynamics of preserving and establishing new central activities, which are essential for maintaining the role of a regional centre. It also promotes a high-quality offering of jobs, housing, services and supply functions. In this way, it provides the potential of an urban centre that contributes to the development of the wider area. A key challenge in the urban development process is managing coherent growth, ensuring functional complementarity and fostering greater coexistence between the core urban area, the suburban surroundings and the countryside. The city's development pulse also extends to the international stage, where it connects with other European cities and adopts best practices in urban management. As part of its networking efforts, the city is a member of a network of 20 Friendly Cities across 10 European union countries.

Economical factors

Kranj is the economic and commercial centre of Slovenia, famous for its trade fairs, which have been held in the town for more than 500 years. It is striving to become a more attractive location for new business opportunities, as evidenced by the city's Sustainable Urban Strategy, which states that Kranj wants to become a place of new business opportunities to relaunch the economy. In terms of economic development, Kranj is lagging behind the leading cities in Slovenia (Ljubljana, Novo mesto, Koper) and is therefore striving for an economic transformation from an industrial to an entrepreneurial city based on modern technologies, services and tourism. As part of this, the city strongly encourages and facilitates creativity, innovation and entrepreneurship. The decline in local jobs is not only because of the decline in economic activity of large industrial systems, but also in fact that many residents from Kranj work outside the city, mostly in the capital city Ljubljana. To address this, the city is committed to making significant investments in degraded areas promoting the sustainable use of urban space. Because these areas are privately owned, the city actively participates in public-private partnerships, with desire to develop, upgrade and maintain the existing infrastructure. In line with its development, the city supports the creation and growth of domestic small and medium-sized businesses and strengthens the economy by attracting investments. One of Kranj's key objectives is to develop business zones that provide realistic opportunities for starting or continuing economic activities to create the conditions for Kranj to further develop its attractive business location.

Social factors

In the terms of population, Kranj ranks 3rd in Slovenia. In mid 2023, the population of the municipality as a whole was approximately 57,080 (SORS, 2023). On average, 378 inhabitants per square kilometre of land were living in Kranj, making it one of the most densely populated municipalities in Slovenia. The population is growing in both urban and rural areas, where growth is more intense. The municipality has recorded a positive

natural increase, which is not the case for Slovenia as a whole, where it is negative. However, like the rest of Slovenia, Kranj continues to experience the general process of population aging. Demographic trends are particularly reflected in the increased demand for public services, kindergartens, housing and elderly care. The City offers co-financing of market rents for the most vulnerable groups, but at the same time it lacks sufficient financial resources for the construction of non-profit housing. Young people and families facing financial hardship are particularly vulnerable in such situations. The market situation is further worsened by the lack of regular employment, limited access to credits and the high cost of real estates. The city has developed a wide range of social protection programmes, both through public providers and NGOs. These programmes include support and care for the elderly, intergenerational meetings and gatherings, vocational rehabilitation, violence prevention, homelessness assistance, addiction prevention programmes, support for individuals and families facing social difficulties, mental health assistance programs, and supported living options for people with disabilities and other vulnerable groups. Kranj, as the educational centre of the Gorenjska region, is also home to several secondary, higher and tertiary educational institutions that serve people of all ages.

Technological factors

Kranj stands out in Slovenia for its concentration of companies and competences in the field of information technologies, which has made it a traditional technological hub for many decades. Despite the abandonment of some industries and the restructuring of existing ones, the electronics, telecommunications and IT sectors remain the main ones. Over the past decade, a number of small and medium-sized industries have established themselves in Kranj and its surroundings. These industries are further supported by secondary and higher education institutions specializing in information technologies. To attract young people, who are essential for a successful economy, the city has implemented a systematic approach to engage with Kranj's primary school students to promote creativity, innovation and entrepreneurship. The main aim is to guide young people to explore their talents, career aspirations, and future opportunities, with a focus on innovative entrepreneurship, ICT innovations, technical culture, new technologies and services, technological innovation, collaboration, and values orientation. The ultimate goal is to identify talent and, in the long term, provide the city with a foundation of creators and entrepreneurs for the future. It is about guiding young people to think systematically about their talents, career aspirations and future careers, using the key elements of innovative entrepreneurship such as ICT innovations, technical culture, new technologies and services, technological innovation, collaboration and values orientation. Because of this, the ICT Development Centre, a technology park, has been established in recent years to provide a foundation for the further growth of industries, test and transfer technological solutions to the local environment. With the new development, the city has created the missing innovation ecosystem which provides the creation of start-ups and supports the growth of existing businesses. Through continuous improvement, integration, and the incorporation of new technology programs into the research environment, Kranj aims to develop into a smart city, offering smart communities that support efficient and sustainable city management.

Environmental factors

Almost 20% of Kranj lies within Natura 2000 area, which is protected for preserving biodiversity across Europe (TUS, 2016). One of the city's key advantages is its centre, surrounded by a green belt that includes several protected nature and forest areas. Two main elements within the city are Sava and Kokra rivers, which flow directly through the centre. The extensive green areas surrounding the city represent an important quality of living and recreational opportunities for the citizens. The city is continuously creating new recreational and

thematic routes to upgrade the existing programme. Agricultural activities, incomplete drainage and water treatment systems and individual industrial plants significantly affect the quality of the rivers. To address these problems, the city is actively working to modernise and renovate existing infrastructure through environmental investments and programmes to create a quality and environmentally friendly wastewater and rainwater drainage network. Another environmental issue is the excessive traffic in the city centre and along main entry points, which contributes to greenhouse gas emissions and occasionally results in the concentration of dust particles exceeding daily limits during the winter. As a result, the municipality of Kranj has been identified as an area with excessive air pollution and has been included in the Republic of Slovenia's strategy for reducing CO_2 emissions. The primary contributors to environmental pollution are the economy, agriculture, traffic in the city centre, and incomplete municipal infrastructure. The city consistently meets legislative targets in several key areas, including wastewater discharge and treatment, the energy-efficient adaptation of public lighting, and the reduction of light pollution, as well as the energy renovation of public buildings. Kranj is also active in adopting proactive approaches to address the challenges in waste management, the protection of agricultural land and promotion of local food production. This is demonstrated by the successful implementation of various projects and programs to retain the city's environment clean and protected.

SCENARIO WORKSHOP

Introduction to scenario workshop

The local scenario workshop was organised in cooperation with the Municipality of Kranj, and the associated partners of the University of Ljubljana in the SAFE project: Urban planning institute of the Republic of Slovenia and Geodetic institute of the Republic of Slovenia. The workshop is a continuation and deepening of the knowledge gained through the work on the intensive week in Kranj, which took place at the beginning of November 2023. The workshop, related to the field of expertise of the participating university, addressed the design of the apartments for different vulnerable groups. A total of 28 students from various years of study in the fields of architecture and urban planning participated. This ensured interdisciplinarity and, above all, cooperation and exchange of knowledge between the different fields of study. The workshop also involved all SAFE project participants: associated partners from the Municipality of Kranj, teaching staff from the University of Ljubljana and representatives from vulnerable groups who had already participated in the ISP in Kranj. The participants were divided into four groups, each tasked with designing the apartment for one of the four specific vulnerable groups: people with disabilities, people with visual impairments, elderly people and people with autism. Each group's design was based on a real location within the municipality of Kranj that is why the first step of each group was to consider and analyse the existing location in relation to the vulnerable group.

Four Future scenarios

Based on the available data on vulnerable groups and the locations in the city of Kranj, four residential scenarios were designed:

- An apartment for people with disabilities,
- An apartment for the visually impaired,
- An apartment for the elderly people, and
- An apartment for people with autism.

For each of the scenarios participants made an analysis of the proposed location, guidelines for the design of such spaces based on relevant literature and regulations in this field, and the design of the individual apartment.

Scenario 1 – An apartment for a paraplegic

Location

An apartment is located in the immediate vicinity of the main bus station in Kranj. Positioned to the north of the city centre and close to the bus station, the location represents a major advantage in terms of mobility, especially for individuals who find such activities more challenging. The newly designed building is positioned along Bleiweis Street, continuing the linear morphological pattern from the separation with Koroška Street and the older part of the city. The surrounding area also offers many services, activities and green spaces, which provides quick and unobstructed access for the paraplegic person.

Design guidelines

The guidelines were selected based on the world-famous book Architect's data (Ernst Neufert et al., 2019) which includes a chapter on architectural design for people with disabilities, and a set of Slovenian standards for adapting the living environment.

The key principles for designing spaces for people with disabilities are:

- Accessible door widths - minimum 80 cm to allow easy passage,
- Clear space for wheelchair rotation - minimum diameter 1.5 metres,
- Ramps with a maximum slope of 5 degrees,
- Provision of handrails on both sides of steps and ramps,
- Toilet accessibility - at least 1.5 m of space in front of the toilet bowl,
- Accessibility of washbasins - no higher than 80 cm,
- Avoidance of changes in height,
- Hard, flat and non-slip surfaces,
- 120 cm corridor width to allow 90° turning through doorways,
- Sliding doors in narrow spaces,
- Avoidance of door designs that open into the room,
- Door handle at a height of 80 cm from the floor.

The design

The apartment is located on the ground floor of a multi-apartment building and includes the following rooms: entrance hall, kitchen with dining area, living room, bathroom, bedroom and study, with a total usable floor area of 112.7 m2. The apartment also has a garden with a terrace measuring 40 m2. The apartment is oriented in a north-south direction, with the living room and dining area facing south, while the bathroom is oriented to the north. The floor plan is designed to provide sufficient space for wheelchair (red circles on the floor plan). The furniture in the apartment is custom-designed and specially adapted to the needs of a paraplegic, to ensure the most independent use of the space. All doors are equipped with sliding systems, eliminating the issue of wheelchair access obstructed by door swings. Additionally, all switches, sockets, and handles

are installed at appropriate heights for easy use from a wheelchair. The kitchen and bathroom are designed for optimum wheelchair access, with non-slip flooring and strategically positioned grab rails to ensure easy use of the space. All the flooring in the apartment is made of smooth materials to allow unhindered use, and all thresholds are lower than 25 mm. The garden includes high beams with soil, specifically designed for wheelchair users, enabling them to garden comfortably from a seated position.

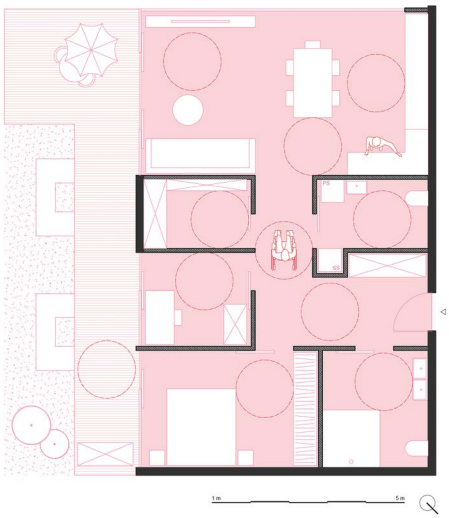

Figure 4: *Floor plan of an apartment for a paraplegic (Zala Koščak, Maja Vučko, Ana Kovačevič, Izza Verbovšek, Lucija Petrinić, Maruša Legat, Žan Ložar (2023). Floor plan [Computer sketch]).*

Figure 5: *Model of an apartment (Zala Koščak, Maja Vučko, Ana Kovačevič, Izza Verbovšek, Lucija Petrinić, Maruša Legat, Žan Ložar (2023). Model [Model]).*

Scenario 2 – An apartment for the blind and partially sighted

Location

The site is located in close proximity to the building of the municipality of Kranj, inside dense residential area. It offers easy access to various services and activities which allows person living in the area to use mainly green forms of mobility. As accessibility is a crucial factor for individuals who are blind and partially sighted an accessibility analysis was also carried out. To reach the grocery store, the individuals must cross the road four times, and to access the town centre and other activities, they must cross the road twice. None of the crossings are illuminated or traffic lighted, which makes crossing dangerous. Improvements needed within the area would be adequate acoustic signals, tactile paving for guidance, and the implementation of comprehensive guidance systems to assist individuals with navigation.

Design guidelines

The selection of the guidelines was based on a wide range of national and international literature and Slovenian standards and guidelines for the design of spaces for people with visual impairments.

The key principles for the design of spaces for people with visual impairments are divided into three areas:

Spatial orientation

- Simple floor plan and organised space,
- 90 degrees angles with minimum turns
- Minimum 90 cm wide areas,
- Identification of zones in different parts of the apartment,
- Ensuring free passage between zones.

Lighting

- More lighting than normal (natural and artificial),
- Even illumination with fewer shadows,
- Lighting of the work surface, not just the room,
- Automatic lighting of the cabinet interior,
- Use of non-reflective materials,
- Ambient directional light.

Details and textures

- Tactile and acoustic elements,
- Contrast on surfaces and elements,
- Colour coding and tactile markings,
- Rounded edges,
- Use of plants with a specific scent for guidance purposes.

The design

The apartment is divided into nine different zones along the main walkway, ensuring safe and easy movement for visually impaired individual. A central corridor separates the living area from the sleeping area. Each function in the space is well defined and marked by tactile signs on the floor, which serve as navigational guides for visually impaired individual. In addition, contrasting colours and textures are used, to different key areas from the rest of the flooring. The position of the windows is defined according to the individual space, providing an enhancement of the individual areas, sense of depth and orientation. The apartment is designed to be both flexible and compact, with only the external walls being load-bearing and all internal walls being prefabricated for ease of customization. Upon entry, the central corridor is the first area encountered. To the right is the children's room, followed by a storage room, and then the main bedroom. At the end of the corridor is the bathroom. To the left of the corridor is the living area, which includes a work area and a living room with access to the balcony. Opposite the living room, the kitchen is located on the left, while the dining room is on the right. The living area is open and only partially enclosed by a partition between the kitchen and the working area. Some of the walls have been extended to guide the user and to avoid bumping into the furniture. Furniture is designed with rounded edges to minimize the risk of injury or damage during contact.

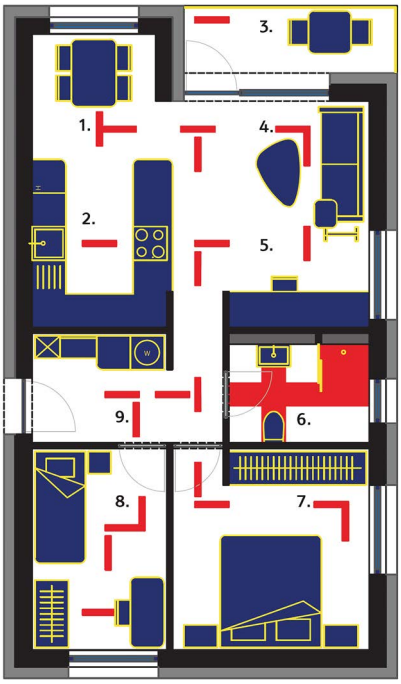

Figure 6: *Floor plan of an apartment for blind and partially sighted (Živa Valjavec, Delfina Rustemi, Lana Bavcon, Ana Marinko, Pia Mišič, Korina Kuzmic (2023). Floor plan [Computer sketch]).*

Figure 7: *Model of an apartment (Živa Valjavec, Delfina Rustemi, Lana Bavcon, Ana Marinko, Pia Mišič, Korina Kuzmic (2023). Model [Model]).*

Scenario 3 – An apartment for the elderly people

Location

The designed apartment is located in the northern part of Kranj, close to the old military area. It is located along the road that connects Kranj to the surrounding towns in the north. The site is surrounded by an area of single-family houses to the north and east, and by typical modernist tower blocks to the south. Accessibility was a key factor in the selection of the site, as it is close to the city centre, allowing older individuals to be included rather than isolated from the city life. Additionally, the proximity to nature provides residents with a peaceful retreat from the urban environment, allowing them to enjoy recreational activities and social interactions in a more peaceful setting.

Design guidelines

The guidelines for the design were selected based on both national and international literature. Key references include Architect's data (Ernst Neufert et al., 2019) and the Slovenian Rules on Minimum Technical Requirements for the Construction of Assisted Living Facilities for the Elderly (Government of the Republic of Slovenia, 2004).

The key guidelines for the design of spaces for elderly people are:

- Minimum entrance door width 90 cm,
- Clear width of passageways for communication between rooms: at least 100 cm,

- Corridors longer than 200 cm should be at least 120 cm wide,
- The minimum depth of a balcony or loggia in a sheltered housing: 140 cm,
- Rooms for living and sleeping purposes must not be narrower than half their length and not narrower than 220 cm,
- No more than two beds may be provided in a room or part of a room intended for living or sleeping purposes,
- Doorknobs shall be placed 90 to 110 cm above the floor,
- Doors must accommodate auxiliary handles for ease of use.

The design

Having a well-structured daily agenda for older people can contribute to their better overall wellbeing, support physical and mental health, foster social engagement and provide a sense of purpose. It is important to bear in mind that individual preferences and health conditions may vary, so it is vital to adapt the agenda to the individual's needs. An ideal routine for an older individual might include a balance of morning activities, errands and gardening, followed by the time for hobbies and rest in the afternoon. By maintaining an active lifestyle, they can experience greater satisfaction and a higher quality of life in their later years. The apartment is designed to complement this daily rhythm, ensuring that everything the elderly person needs is easily accessible. It is spacious enough to allow comfort and mobility but at the same time remains practical. The layout is intended for two elderly individuals who do not own a car but have a passion for gardening. The apartment offers a smooth transition from the living space to the terrace and garden, which includes three high beams with soil for gardening. These high beams enable comfortable and enjoyable gardening without requiring physical strain, supporting a healthy, active lifestyle.

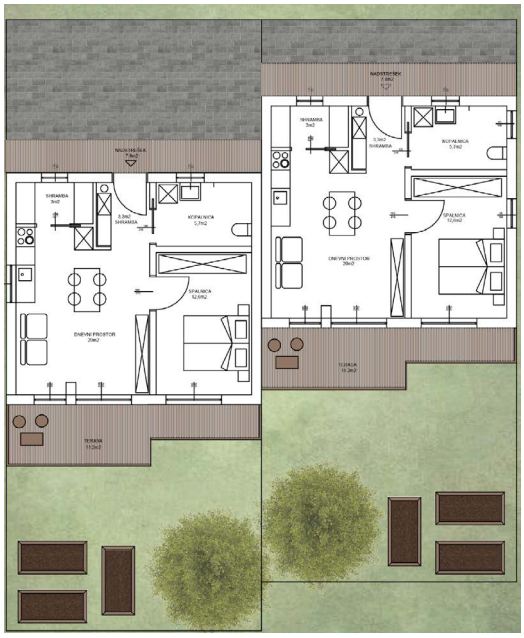

Figure 8: *Floor plan of an apartment for elderly (Nea Bekonjič, Lucija Lohkar, Tilen Mavrič, Lara Mrak, Filip Slakan Jakovljević, Barbara Veronica Vasić (2023). Floor plan [Computer sketch]).*

Figure 9: *Model of an apartment (Nea Bekonjič, Lucija Lohkar, Tilen Mavrič, Lara Mrak, Filip Slakan Jakovljević, Barbara Veronica Vasić (2023). Model [Model]).*

Scenario 4 – An apartment for people with autism

Location

The location is situated in the northern part of Kranj, on the edge of a built-up area. Zlato polje is an area characterised by social and educational institutions with proximity to the agricultural activities. The site is adjacent to both educational and residential areas and is surrounded by roads and a large parking lot on one side. It is accessible by public transport and offers a large number of activities within the surrounding area with sports and green infrastructure. From the point of view of a user with autism, a lively and intense area involving the user in a variety of activities can be quite stressful, so it is important that the typology of the space and its placement responds to the duality of the elements of the surroundings, providing the user an opportunity to selectively engage with the environment.

Design guidelines

Based on the literature, the main guidelines for designing homes for individuals with autism are divided into three categories: sensory considerations, architectural solutions, and the specific needs of the home's users. Sensory considerations are addressed separately, as people with autism spectrum disorder are often highly sensitive to certain environmental stimulations. Architectural solutions are directly related to the organization of the apartment, which is arranged according to the function of the rooms, their temporal aspects, and the types of stimulations they generate. The individual's personal preferences help determine which spaces are needed and how they navigate in the space throughout the day.

Senses

- Keep odours from the kitchen out of other rooms,
- Additional sound insulation in some rooms,
- Colour palette chosen and coordinated,
- Views out of the window,
- Emphasis on the choice of natural materials.

Architectural solutions

- Acoustic panels,
- Organisation of spaces – grouping of spaces according to daytime use,
- Escape space – smaller space with less stimulations from the surroundings,
- Spatial boundaries – spaces separated according to the function,
- Transitional spaces – spaces for emotional regulation,
- Stimulation zones – grouping spaces into areas of similar stimulation.

Selected person

- Age - male, 30 years,
- Location - Zlato polje, Kranj, Slovenia,
- Support - family members, friends,
- Medical help – therapies,
- Employment – musician,
- Interests – music, cello playing.

The design

The floor area is 66.1 m², providing sufficient space that can be easily adapted to meet the needs of the individual with autism. The layout and dimensions of the spaces are designed to respond to the individual's needs, with particular focus on creating functional and sensory zones. The apartment consists of 12 rooms, each tailored to meet the needs of an individual with autism. The rooms are grouped into five areas based on their function, sensory aspects, and time component. The eating area, which includes the kitchen and dining area, is separated from the rest of the apartment by a wall. This separation helps prevent the spread of noise from household appliances and unpleasant smells to the other areas of the apartment. The passageway includes a vestibule, corridor, living room, laundry room, and toilet. The vestibule plays a key role in emotional regulation, providing a transition space between the outside space and the living room. The living room serves as a space for watching television or socializing with friends and family, with access to the toilet for visitors. The morning/evening area includes the bedroom, dressing room, and bathroom, allowing all essential routines to be carried out in one area, both after waking up and before going to bed. The balcony serves as the point of contact with the outside environment and is an important source of natural light which contributes to overall wellbeing. It also offers a view of the surroundings and provides positive visual stimulations. The last area is the "quiet" area, which offers the greatest possible isolation from the external distractions. This space allows the concentration in the music room and provides a calming effect and the "escape room". Special attention is given to the sound insulation in this area to enhance its intended function.

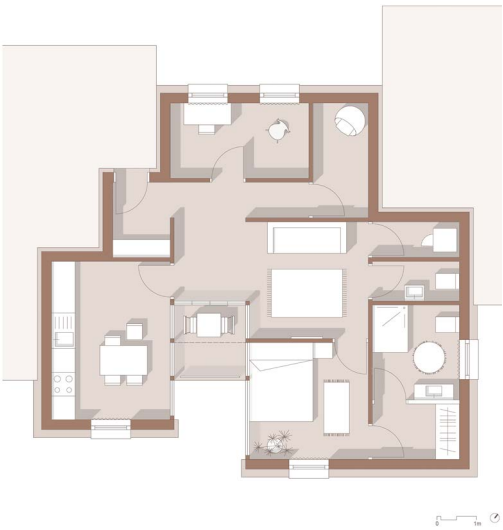

Figure 10: *Floor plan of an apartment for people with autism (Nina Beganović, Tjaša Lahne, Leon Rus, Filip Živkovič, Lea Bizjak, Tinkara Zajec, Marko Rapuc, Eleonora Lazarova, Anastasija Ristova (2023). Floor plan [Computer sketch]).*

Figure 11: *Model of an apartment (Nina Beganović, Tjaša Lahne, Leon Rus, Filip Živkovič, Lea Bizjak, Tinkara Zajec, Marko Rapuc, Eleonora Lazarova, Anastasija Ristova (2023). Model [Model]).*

CONCLUSION TO KRANJ'S SCENARIOS

The scenarios of designing the apartments for various vulnerable groups address the often-overlooked topic of including vulnerable groups in the apartment design process. The designed scenarios make a significant

contribution to the way interior space is treated, especially in the case of municipality of Kranj, which is already actively involved in the inclusion of vulnerable groups inside the open public spaces. The purpose of designing local scenarios for the future living of different vulnerable groups is to emphasize the need for actively including these groups in the design process of all types of buildings, rather than merely designing specific buildings for particular groups, as this can lead to new processes of gentrification in space. It is essential for each vulnerable group to have the ability to move freely and enjoy equal opportunities, both within public and private spaces. Planning plays a crucial role in this regard, as it is the only way to create an inclusive, fair, and cohesive society. A key aspect of this is the contribution of vulnerable groups themselves, as despite different needs and use of the space, they also strive for the same goal as we: the unrestricted use of space. This is especially important because it concerns the case of private living spaces, everyone perceives them as a safe place for retreat and intimacy. From the perspective of people with disabilities, it is vital that the space is free from physical barriers and adapted to accommodate the space in which they are able to navigate and use effectively. For the blind and partially sighted people it is essential that the design of interior spaces addresses and incorporates the aspects of lighting, orientation and materiality of space in a holistic way. People with autism spectrum disorder are extremely sensitive to specific stimulations from their surroundings, which creates a significant spatial design challenge affecting to ensure a space of retreat. The key to this type of design is, in particular, the choice of the right materials and colours, the correct orientation of the spaces and the right relationship between the function and time of the space. From the point of view of the elderly people the design of space should contribute to the establishment of an individual's daily routine and general well-being because this is one of the ways to contribute to the positive physical and mental health of an individual who wishes to continue to be socially involved and purposeful. The scenarios discussed, which cover a wide and diverse range of specific users, highlight a common truth for all space users: despite the diversity of users, a space, whether public or private, does not only meet technical requirements, but also builds an intimate space within which each individual has the possibility of happiness and success.

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Chapter 7: Concluding– Reflections and Lessons Learned

WHAT WE LEARNED FROM THE SCENARIOS

Looking at the five cases, several lessons stand out:

- **Accessibility is multidimensional.** It is not only about physical access, ramps, or elevators. It also involves social inclusion, digital access, cultural sensitivity, and emotional safety. A space can be physically barrier-free but still inaccessible if people do not feel safe, welcome, or represented.
- **Inclusive design requires co-creation**. The most valuable insights came not from professionals alone, but from the active involvement of seniors, immigrant women, families, people with disabilities, and neurodivergent individuals. Their lived experiences shaped the scenarios in ways that no external expert could have imagined.
- **Scenario work broadens horizons.** By looking 5, 10, or 20 years ahead, participants could move beyond immediate complaints and think in terms of long-term transformations. Scenarios created space for imagining futures that are not yet visible, but possible.

WHAT WE WOULD TELL OUR READERS

To a reader wondering **how to make urban spaces more accessible**, our message is: start with the people who face the greatest barriers. Accessibility is not a technical problem to be solved by planners alone – it is a social challenge that requires empathy, dialogue, and collaboration. Work with communities, not just for them.

To a reader curious about **how to apply scenario work**, our advice is: begin small but begin. A participatory workshop with local stakeholders can already spark new ideas and reveal blind spots. Scenarios are not blueprints; they are conversation starters, tools for building shared visions. What matters most is not the final scenario matrix, but the dialogue and learning created in the process.

WHY THIS BOOK MATTERS

This book is more than a collection of local reports. By presenting five different cases together, we show that accessibility and inclusion are universal challenges with local variations. The SAFE project demonstrates that scenario work is a flexible method capable of addressing diverse issues – tourism, housing, social inclusion, or mobility – while always centering the lived experience of vulnerable groups.

The work also underscores a deeper message: accessibility is not a marginal concern. It is a cornerstone of sustainable urban futures. A city that is accessible to its most vulnerable members is a city that works better for everyone.

FINAL REFLECTIONS

We conclude with three insights that may guide future readers and practitioners:

1. **Co-creation builds legitimacy**. When communities shape scenarios, they also shape the future.
2. **Differences are strengths.** The contrasting emphases of the five cities enrich the overall under standing of accessibility in Europe.
3. **Futures thinking builds resilience.** By exploring multiple possible futures, cities and communities become better prepared for uncertainty.

This book is an invitation. An invitation to policymakers, urban designers, educators, and citizens to embrace scenario work as a tool for shaping inclusive futures. An invitation to see accessibility not as an obligation, but as an opportunity to create cities where everyone belongs.

The SAFE project has shown that this is possible. The challenge now lies with the next readers, the next cities, and the next communities to take these lessons further.

LAUREA

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In 2025, cities are more accessible than ever in the European Union. However, more work and effort are needed to improve accessibility in our towns, regions, countries to make our societies more inclusive and safer for everyone. The SAFE project (2022-2025) aimed to help five communities in the EU to find improvement ideas and solutions to becoming more accessible. The project would like to thank the EU and Erasmus+ Slovenia for the support received in the three-year process of developing together with stakeholders and students our five communities.

This publication introduces the scenario work carried out to develop accessibility in the cities of the project. We hope it sparks new ideas in the readers to carry out their endeavours to develop accessibility in their communities. Everyone can play a part in these processes. SAFE shows how we can collaborate with stakeholders and generate solutions that can make our lives better and places safer and more inclusive for us all.

SAFE
Sustainable Accessible Future Environments

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