Deliverable
D2.1 – Stakeholder Mapping and Engagement Roadmap

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List of abbreviations

Abbreviation	Explanation
AGE	AGE Platform Europe
AI	Artificial Intelligence
CC	Co-Creation
FG	Focus group
FVH	Forum Virium Helsinki – pilot site
GDP	Gross domestic product
IMEC	Interuniversity Microelectronics Centre
MICT	Media, Innovation and Communication Technologies
SANT	Santander - pilot site
TEC	Tecnalia Research & Innovation
UGent	University of Ghent
UN	United Nations
WHO	World Health Organisation
WP	Work Package

Glossary

Concept	Definition
Use case	URBANAGE pilot sites will set up the use cases. The use cases will identify the usage requirements validating and testing the URBANAGE Ecosystem with the potential users - older adults and civil servants – and evaluate its implementation to extract lessons for replication. Use cases are defining the general scenarios meant to serve the pilot site, and to engage the end-user to interact with URBANAGE Ecosystem.
Pilot site	Refers to the specific place where URBANAGE partners and researchers will deploy the use cases, namely, Helsinki in Finland, Santander in Spain and the Flanders region, in Belgium.

1. Executive Summary

According to the WHO, health and well-being are determined not only by our genes and personal characteristics but also by the physical and social environments in which we live our lives. Environments play an important role in determining our physical and mental capacities across a person's life course and into older age [1]. The WHO defined eight key domains on urban life that encompass determinants of health and wellbeing: outdoor spaces and buildings, transportation, housing, respect and social inclusion, civic participation and employment, social participation, community and health services, communication and information. Our environment also affects how well we adjust to the loss of function and other forms of adversity that we may experience at different stages of life, and in particular in later years. Both older people and the environments in which they live are diverse, dynamic and changing. In interaction with each other, they hold incredible potential for enabling or constraining Healthy Ageing.

As 68% of the world population is projected to live in urban areas by 2050 according to the UN [2], making cities age-friendly is one of the most effective policy approaches for responding to demographic ageing. The URBANAGE project assesses the potential benefits, risks, and impact of implementing a long-term sustainable framework for data-driven decision-making through disruptive technologies in the field of urban planning for ageing well in cities, which will be based on a thorough understanding of users' needs (older persons and civil servants) and the results of a collaboration between civil servants and older people in the three pilot sites, namely Helsinki, Santander, and Flanders.

The first part of the deliverable provides the pilot sites with the material needed to organize inclusive focus groups and co-creation activities that will enable the URBANAGE technical partners to develop the URBANAGE Ecosystem. It describes the profile of stakeholders that will need to be invited to participate to the activities (older adults, civil servants and experts), how they should be recruited, and how the pilot sites should organize the activities in an inclusive way (e.g. exempt of ageist attitudes, diverse profile of civil servants). The second part, the "Focus Group Roadmap for older adults' involvement", describes the research process design guidelines that are meant to understand and identify what are the motivations, challenges and barriers, impacting the participation and engagement of older people in the pilot areas finding the most adequate strategy, specific tools and methodologies to promote inclusion in data-driven policymaking. Another objective is to investigate the potential of gamification for user engagement.

The third part, "The Co-creation Roadmap for older adults, civil servants and experts' involvement", guides the pilot sites on how to organise the Co-creation activities, aimed to identify the challenges older citizens find for ageing well in cities and will give the information to refine the use case definition and define the user requirements (from civil servants) and solutions related to the implementation of each use-cases (E.g. data sources, visualizations, simulation models and AI) required to address those challenges.

The present deliverable may also be read as a manual by other cities willing to adopt and implement age-friendly cities through disruptive technologies. Finally, the readers will find two different roadmaps which guide them through the research process design guidelines to understand the challenges, opportunities, requirements and impact from the end-users' perspective, namely older adults and public servants, of using

data-driven decision-making support systems and technologies in urban planning for age-friendly environments.

2. Introduction

The deliverable is meant to support URBANAGE pilot sites to organise inclusive focus groups and co-creation activities dedicated to understand the challenges, opportunities, requirements and impact from the end-users' perspective, namely older adults and public servants, of using data-driven decision-making support systems and disruptive technologies in urban planning for age-friendly environments.

The deliverable provides the reader with an understanding of what an age-friendly city can provide to its inhabitants and the importance to improve it with the involvement of its younger and older citizens (see chapter 3). As people age, they encounter a number of personal and external challenges. Older people can suffer from physical and psychological constrains, such as loss of sensory abilities (hearing, eyesight, taste, etc.), physical impairments (speech, dexterity, mobility, strength, endurance, etc.), and cognitive and intellectual problems (memory loss, information processing, etc.). Most of the problems older people face today arise because the environment is too slow to adapt to the needs of an ageing society and can reinforce new or existing social challenges (e.g. isolation, loneliness). Therefore, the environment can quickly become an enemy of the ageing process and become a barrier to accomplish activities that contribute to one's well-being. Chapter 4, "Mapping of Stakeholders", lists the different actors that cities should involve to adopt an inclusive approach and ensure they are considering all relevant beneficiaries in the process. The document describes step by step how the URBANAGE pilot sites will proceed with the recruitment of their participants to the activities (see chapter 5). Because the scope of URBANAGE is to improve the urban space for the ageing population, it is of utmost importance to adopt an inclusive approach. The pilot sites can refer to the tips and trick described in chapter 6 to guide them when organising their activities and make sure they are aware of ageist attitudes to avoid when conducting the interviews.

As mentioned previously, two types of activities are planned to reach the necessary understanding of the challenges and barriers faced by the end-users and come up with solutions: focus group and co-creation activities are described respectively in chapter 7 (Focus Group Roadmap for older adults' involvement) and chapter 8 (Co-Creation Roadmap for older adults, civil servants, and experts' involvement).

These roadmaps are aimed at deploying the processes in the URBANAGE pilots, and once revised with lessons learnt in URBANAGE, they will feed D2.5 Pathways for replication for other cities to embark on the process.

3. Defining the context: An age-friendly city is a city that needs to improve in every domain

In recent years, many cities in Europe have implemented different strategies to make cities more walkable, bikeable and more suitable to the human scale. One example is the city of Barcelona and the superblocks. Each superblock consists of a set of adjacent blocks of typically 400 meters where motorized traffic is constrained into external roads. By making car-free interior roads, Barcelona is generating new public spaces, increasing the space for bicycles and pedestrians, making streets safer, reducing the air pollution and finally, promoting human scale dynamics. Accelerated by the COVID-19 pandemic, many cities around the world implemented ambitious plans to make the cities more walkable [3]. Paris, for example, in the new mobility plan, introduced and made popular the concept of the 15-minutes city where services and citizens' needs are easily reachable by walking distance. Many of these approaches rely on the average pedestrian speed and the distance to the main services in the city. This approach satisfies the needs of the average population but does not consider the specific needs of older people, especially the ones with reduced mobility, as the average walking speed of older adults is lower than the average speed. In 2019 the population over 65 years old represented 20.3 % of the European population and the population over 80 years old is projected to increase from 5.8 % to 14.6 % in 2100 [4]. There is a growing need of spaces that support the autonomy and independence of this growing population.

European demographic ageing trends and the rapid expansion of the very old population (aged 85 years or more) is likely to have profound implications for governments, business, and civil society. Very-old people tend to consume proportionally more social services impacting health and social care, pensions, and public finances. Policy makers are concerned about the increase of the cost of providing adequate health care and long-term care. Rather than focusing on short-term fixing actions, a holistic long-term approach is required to address these challenges [5] [6]. Such an approach should start from understanding the needs and wishes of the older population and from the identification of the key elements impacting their autonomy in their daily life. Despite the current European trends in extending the retirement age, the pension age in the pilot countries is 65, and the target group is typically not expected to participate in paid work activities. Nonetheless, older people's social and economic impact is significant:" The economic value of older people's non-market contributions is substantial. The average unpaid contributions of older people across the EU and Turkey could be worth as much as 1.4% of GDP [7]". Urban spaces, infrastructures and furniture are thus key in providing spaces for leisure activities that promote health and well-being, but more importantly to enable older people to do what they value the most and support them with their unpaid work and therefore our economy. For this reason, it is important to guarantee the availability, accessibility and enjoyability for everyone in the urban environment. Such an approach should start from understanding the needs of the older population and from the identification of the key elements impacting their autonomy in their daily life. Grandparenting is one of these unpaid contributions that can contribute to people's well-being. In some European countries, such as Italy and Spain grandparenting activities are crucial in supporting families [8].

Another aspect that contributes to the well-being of ageing people is the ability to remain autonomous and being able to independently access essential services such as healthcare, public transport, banks, and postal services among others. Older people are more likely to visit the doctor with respect to the rest of the population and consume proportionally more health-care services [9]. Therefore, accessibility and proximity to healthcare facilities and doctors are important as well as the choice to affordable homecare services. Moreover, older people should be able to independently reach other essential services such as banks, postal services, and supermarkets. Mobility plays a key role in expanding the distance an older person could reach independently. Multiple aspects need to be considered as, for example, safe and accessible sidewalks, bike paths and public transport.

Urban spaces, infrastructures, affordable housing and furniture are key in providing spaces for leisure activities and promote health and well-being, but more importantly to enable older people to do what they value the most autonomously. For this reason, it is important to guarantee the availability and accessibility for everyone to the urban environment. Such an approach should start from understanding the needs of the older population and from the identification of the key elements impacting their autonomy in their daily life.

4. Mapping of Stakeholders

4.1. Introduction

Organizing focus group and co-creation activities with end-users requires to have a good overview of the stakeholders who can influence and contribute to a project such as URBANAGE, but also determine whose interests should be taken into account when developing and/or implementing a policy or an urban plan. Having a detailed stakeholder mapping will support pilot sites in identifying the right actors essential to the URBANAGE activities. The following sections describe and list the different identified actors who can be approached and invited to take part in URBANAGE activities.

4.2. Older adults

4.2.1. The importance of including older adults

As people age, they encounter a number of personal and external challenges. Older people can suffer from physical and psychological constrains, such as loss of sensory abilities (hearing, eyesight, taste, etc.), physical impairments (speech, dexterity, mobility, strength, endurance, etc.), and cognitive and intellectual problems (memory loss, information processing, etc.). Most of the problems older people face today arise because the environment is too slow to adapt to the needs of an ageing society and can reinforce new or existing social challenges (e.g., isolation, loneliness). Therefore, the environment can quickly become an enemy of the ageing process and become a barrier to accomplish activities that contribute to one's well-being. Older people should be involved in decision making related to the urban planning of their city. The local government should

encounrage citizens' engagement and facilitate their daily life by including them in any kind of process which will have an impact in citizens' lives.

A growing body of work has highlighted the value of research carried out "with" or "by" older people and its contribution to understanding the variety of health and social issues experienced in later life [10]. We believe that user involvement can bring an added value both to research and practice [11]. The involvement of users needs to happen early in the process. When planned at a later stage, there is a higher risk that the feedback from the users will not be implemented, and users will experience their involvement as tokenistic. Unlike what we think, older adults are not a homogeneous category. Older adults have diverse needs, lifestyles and preferences and experience later life differently. Each of them has experiences, skills and abilities that complement the knowledge and expertise of researchers and policymakers. They also consider topics from a different perspective. Therefore, by involving them early in research work, they will contribute to defining specific social needs and identifying potential solutions that could work for them. As users of public services, older people have a right to be consulted about social innovations that affect their lives. Involving older adults in the process ensures relevance and adequacy of new approaches and will help them to be implemented and adapted to different contexts.

Based on AGE Platform Europe's experience, user involvement helps to [12] :
- bridge gaps between research and practice;
- highlight ethical concerns;
- pinpoint issues of acceptability (e.g.: privacy, safety);
- raise questions of affordability and costs;
- address issues of interoperability, technical reliability, and support;
- cross-evaluate from a user's point of view the social innovations and bring the experience of users in the social innovation process;
- qualify the outcomes of the social innovation process;
- identify issues that need to be further studied;
- draw attention from media and political stakeholders;
- strengthen the dissemination strategy;
- better adapt the social innovation to the needs of different communities by listening to users from different contexts. The market deployment of the products and services is facilitated and improved as real needs and problems are addressed.

4.2.2. Profile of older adults

URBANAGE proposes to improve the quality of life of *all* citizens using disruptive technologies in the public services for urban planning to age well in cities with the involvement of public servants and older adults. Ageing is unequal with respect to a number of intersecting axes of inequality which operate simultaneously and often in combination [13]. To ensure that the URBANAGE approach is inclusive, participants will be selected to reflect the diversity of ageing populations along the lines of age, gender, ability, and digital literacy, as well as older adults from difference social class, race and ethnicity when relevant [13]. According to Dressel

et al., bringing together intersectionality and ageing research can be used to better understand how structural factors shape ageing [14] and thus, implementing actions that should be resourced and delivered with a scale and intensity proportionate to the level of disadvantage [15].

To guarantee a representative sample of the target group, we suggest the following selection criteria pilot sites should consider when composing their groups of older adults. Based on the angle of the use case of each pilot site, some selection criteria might be prioritized compared to other ones. We understand that pilot sites will be highly dependent on the number of subscribed participants and might not be able to have a fully representative group of their older population. However, we recommend that when composing their focus groups and co-creation groups, pilot sites be as representative as possible to their population. For example, if a city is composed of slightly more older women than older men, the group of volunteers should be composed of slightly more older women than men.

The composition of the focus group and co-creation activities should consider the following selection criteria:
- **Age**: *URBANAGE is focusing on improving the urban space to make it more age-friendly. To cover the diversity of the older population, their needs and perspective, it is important to consider the different age groups.*
    o 55-65
    o 66-75
    o 75+
- **Gender**: *urban planning has historically designed cities that reflect traditional gender roles and gender division of labour. As a result, urban planning and public space design had facilitated the use of these spaces by some groups more than others. Women, men, gender minorities use urban spaces in different ways depending on their needs. By involving equal number of women and men (and gender minorities if possible), URBANAGE will be able to improve urban space in an inclusive way* [16].
    o Male
    o Female
    o [Include gender minorities if possible]

- **Digital literacy**: *Benefiting from the opportunities of our digitalised societies depends on our abilities to operate digital tools. Involving older adults with different levels of digital skills will enable us to see what are the shortcomings and improvements needed for better engagement from older adults.*
    o Low
    o Medium
    o High
- **Physical impairment**: *Urban planning is also connected with Universal Design or Design for All. Age-friendly environments needs to be inclusive, and thus accessible to all* [17].
    o Yes
    o No

The following two criteria were considered important to ensure an inclusive approach; however, pilot sites will decide whether or not to consider them in their selection criteria.

- **Socio-economic background:** *the socio-economic background is a key factor in determining the quality of life of older people. It might also carry information with regards to individual resources, access, and information processing capabilities* [18]*.*
  - o Low
  - o Medium
  - o High
- **Ethnic background***: older migrants are often faced with problems such as language and cultural barriers further hindering their capacity to find services and/or institutions that would help them for example meet their care needs as they reach older age. Moreover, professionals and planners who work with older immigrants, tend to attribute the under-use of services to the characteristics of the immigrants and not to the nature of the organization or the services provided* [19]*.*
  - o Yes
  - o No

4.3. Civil Servants

4.3.1. Why include civil servants

In the context explained above in Chapter 3 of this document, there is a need of rethinking the current approaches to enable older people to remain independent as long as possible by adapting the urban spaces to support their needs and daily life. Policy makers and civil servants have a key role in promoting policies and interventions to enable older people to conduct, as long as they can, an independent life. Older adults should be able to live, move, socialize, go to the supermarket, and conduct any daily task without requiring extra assistance. Because conducting a life requires the interaction with many different spaces and it is linked to many domains; therefore, collaboration between different city departments and expertise is also key. In this way, departments could effectively share more data and knowledge, create holistic programmes that effectively address the needs and requirements of the ageing population in cities. This approach should focus on improving the quality of life and well-being of older people in cities, but, consequently, it can also lead to a decrease in the cost of care and the creation of new services and businesses at city level.

Although it is known and recognized the importance of the involvement of public servants of different city departments in all these processes and the need of intersectoral collaboration, there are still some barriers that have been demonstrated as difficult to overcome. A recent research study has been done in Germany [20] around intersectoral collaboration for promoting active mobility for healthy ageing. After some interviews carried out with the heads of planning and public health departments in city and district administrations it has been concluded that some of the reasons for not tackling it from an intersectoral approach is the lack of human resources and expertise, mainly due to the low priority on the issue, but also due to changing political agendas which are set periodically.

This said it must be recognized that even in those cases where the issue of "ageing well" in cities is considered a priority there are some other barriers, that are typical in many processes that require this intersectoral approach. Historically in many places, different city departments have worked in silos, with a clear lack of communication among them. One of the solutions to overcome these situations could be to create new administrative structures that can influence different city departments. This approach has been taken in some cities inside the Age Friendly Cities Network (e.g. the city of Donostia-San Sebastian [21]) with the creation of a transversal city plan that covers the different city domains.

Another way to overcome this siloed approach is to use digital tools, that is what is proposed in this project, like the digital twin of the city, that allows the city departments to have a picture of all the different domains of the city at first sight, being able to take into account the other domains when they have to make a decision to deploy global rather than local policies and strategies.

Urban Digital Twins are particularly suited for officials to design, simulate and offer different solutions to a specific urban challenge, so that policy makers can make better decisions with a solid justification behind them. This is because Digital Twins are uniquely designed to be used by people with different digital competences and expertise. Most importantly, they also have a unique capability of providing a holistic view of the current state and of the impact of certain intervention.

Involving public servants in the process is therefore compulsory if that intersectoral approach is to be achieved and if the full potential of using digital tools for urban planning processes with a holistic approach is to be demonstrated.

It´s known that disruptive technologies bear great potential to transform the way public services are delivered. However, to take advantage of that potential and ensure successful uptake, organisations and individuals need to be transformed as well. Moreover, technology adoption should follow a careful analysis of the needs of the organisations or domains, to make sure it actually helps sort problems out, and it is not introduced for the sake of it. The advantages of disruptive technologies are quite clear in some sectors, but less clear or experimented in others, which generates uncertainty and lack of trust.

In the specific field of urban planning introducing advanced digital decision support systems bears the risk of generating distrust from urban planners working in public authorities, whose current practice is still very traditional and analogic in general. It is critical to engage them in the definition of the tools to foster understanding of the benefits that technology can offer, in order to ensure acceptance.

In a study exploring the barriers for e-government, a barrier group called innovativeness was analysed [22] and the overall problem of bringing innovations into public administration is described. This barrier group suggested that public administration is not yet ready to implement new technologies or processes due to two reasons:
1. Public administration lacks currently the necessary technical or managerial skills and know-how for the reform that these initiatives involve.

2. Characteristics of public administration workplaces, such as risk-aversion and low incentives for innovation, are a barrier for the implementation of smart government initiatives.

In this context to ensure the involvement of public servants, both from the technical and from the management spheres, in all the process and to engage them in it, is key to overcome the barriers and to guarantee the success and the sustainability of the implementation and future use of the technological tools.

4.3.2. Profile of public servants

The process to identify the city departments that should be involved in the process of making a city age-friendly, and the civil servants that should be committed with the process is quite straight forward if the basis to work on is the World Health Organization´s Age friendly Cities movement. The Global Age Friendly cities: A guide [23] identifies 8 different domains a city must take into account in order to be considered age friendly. These domains reflect the importance to understand the urban environment as a network of interactions between different domains that work together in defining common strategies to support the autonomy of the ageing population.

Achieving age friendly cities requires a transversal effort that must involve different departments and profiles of civil servants to ensure that all the agents responsible of a city are aware of the older people´s needs and requirements.

The domains identified by WHO are [24]:
- Social Participation;
- Communication and information;
- Housing;
- Transportation
- Outdoor spaces and buildings;
- Respect and social inclusion;
- Civic participation and employment;
- Community support and health services.

Crossing these domains with the different profiles of civil servants working in city administration has resulted in the identification of the following list of city responsibles.

OUTDOOR ENVIRONMENTS
- Urban Planning;
- Infrastructures (works and construction);
- Security and emergency: here it should be included all those public servants involved in what has to do with safety, from the criminal activities towards older people, to falls or accidents in the urban space, and also the sense of safety;

- Environment: the responsible at city level of controlling the pollution (air quality, noise, light) but also to avoid the urban heat islands;
- Public spaces and Nature and green areas;
- Innovation;
- Public buildings (full access to hospitals, city council, administrative office, health centre, public library, sports centres, cultural centres, etc.).

TRANSPORT AND MOBILITY
- Public transport;
- Parking: the proportion of parking lots reserved for people with special needs;
- Streets and traffic planning;
- Cycling and walking (infrastructure).

HOUSING
- Housing;
- Social Services, Equality and Personal Autonomy: usually the departments in charge of funding housing interventions to improve accessibility are those of social and potentially homecare services;
- Innovation;
- Security and emergency: the same as in OUTDOOR ENVIRONMENTS but in housing;
- Urban Planning.

SOCIAL PARTICIPATION
- Citizen participation;
- Culture (museums, theatres, leisure (pubs, coffee, restaurants…), sport and tourism;
- Innovation;
- Services (Banks, Post office, Commerce and markets, pharmacies, bakery, dentist, hairdresser, worship centre, …).

COMMUNICATION AND INFORMATION
- Innovation.

The Public servants who should be involved should cover at least all the domains that have been identified as under the competences of urban environment at city level. The ones directly related with urban planning competences are outdoor environments, housing, and transport and mobility.

On the other hand, those public servants involved in other departments historically in charge of the relation with the older citizens, as social services, should be involved even if they are not so directly involved in city planning but the actions in the other fields may have an influence in their own field, and they have the knowledge about the citizen profile. And of course, all the departments in charge of citizen participation, as well as communication and information, should be engaged.

4.4. Experts

Older people are considered experts of their own lives and are best placed to provide information on how to improve the urban space from their perspective. Nevertheless, in case some profiles of participants are not well represented in the focus group or co-creations activities, an alternative would be to bring in third sector organisations which represent these unrepresented groups (e.g. older women, older people with disabilities, organisation representing older minorities).

Moreover, should the outcomes of the previous activities be insufficient to define the user requirements and the solutions or functionalities to be developed through the URBANAGE Ecosystem, pilot sites are invited to consult experts. Experts in the case of URBANAGE would be experts in e.g., ageing, urban and smart city planning, accessibility, civil society, third-age universities, consumer organizations, etc. Nonetheless, this is also the opportunity for consortium experts to bring their perspective as ageing experts, representative of older citizens, urban planners or civic participation experts.

5. Recruitment

The project planned different activities, namely focus group and co-creation activities in three different European cities with the different stakeholders described in chapter 4. Involving older people, civil servants and experts will enable policy makers to enhance and adapt their tools based on engagement strategies, but it will also enable the identification of challenges, opportunities, requirements and solutions for the URBANAGE Ecosystem from the users' perspectives.

As each pilot site represents a different profile in terms of geographical specificities of the territory, demographic population and closeness with the target stakeholders, we describe below how each pilot site will proceed when it comes to the recruitment of participants to the activities.

5.1. Recruitment process and checklist

The recruitment process of URBANAGE for focus group and co-creations activities will follow a three-stage check list in accordance with the strategy developed in other research projects in planning and recruiting the sample for focus group and in-depth interviews [25]: (i) preparation stage (ii) contact stage (iii) follow-up stage.

This check list will provide the different steps to follow by the different pilot sites and will be the same for the different target groups involved in the activities: older persons, civil servants and experts (if needed). The checklist is valid for the focus group activities as well as the co-creation activities.

1/ *Preparation stage*:

- Step 1: Pilot sites need to check whether or not they have existing contact with the 3 target groups (e.g. from other research project, other departments within their own organization, organization of older people they have already worked with) corresponding to the profiles described in chapter 4.
- Step 2:
    o If pilot sites already have existing contacts with the target groups, they will directly be in touch with them.
    o If pilot sites do not have existing contacts with older adults, AGE will support pilot sites in screening potential recruitment partners. AGE will contact its local members before liaising with the pilot site.
    o If pilot sites do not have existing contact with civil servants, they need to establish the contact with the municipalities.
    o If pilot sites do not have contact with experts, AGE, TEC and IMEC can support pilot sites in finding experts relevant for the use cases.

2/ *The contact stage*:
- Step 3: After completing the preparation stage, pilot sites or recruitment partners will share the recruitment message by email directly to potential participants with a link to the subscription form (see Section 5.3 for Recruitment message and Annex 1 for the Subscription form). This form will link to a consent subscription form (see Annex 2 Consent Subscription form) explaining what data will be collected for the recruitment phase, who will have access to these data, recall the rights of the potential participants and asking for consent. Both documents were developed by IMEC and translated by the pilot sites.
- Step 4: The subscription of participants will be processed through the Qualtrics platform, managed by IMEC.
    o A Joint Controller Agreement addressing the exchange of personal information between the pilot site and IMEC needs to be signed prior to the recruitment and agree to comply with their obligation towards Data Protection Laws, comply with applicable ethical laws, guidelines or recommendations, ensuring the level of security, the processing and the anonymization of personal data.
    o IMEC will send anonymized dashboard updates with the profile breakdowns until the recruitment period is over.
    o Pilot sites will each receive an individual and localized list with profiling data and contact information of the respondents for their own pilot sites (and not for the others).
- Step 5: Pilot sites will select a maximum of 12 participants for each activity based on the criteria developed in chapter 4.
- Step 6:
    o If participants **are** selected: They will be contacted by pilot sites to give confirmation that they are selected. Additionally, they will receive the information sheet prepared by URBANAGE legal and ethics task leader UH (See Annex 3 Information sheet), with the details on how the activities will be conducted: date, venue, further information needed from participants (e.g.,

if reimbursement is needed for the transportation). If participants are **not** selected: Pilot sites need to inform non-selected participants by sending a "Thank you" email.

3/ *The follow-up stage*:

- Ensure a dedicated contact person is assigned to each pilot site to handle project related questions and that this person is easy to reach for participants or potential participants in case of questions (see Section 5.5 Contact point).
- Ensure the informed consent form (See Annex 4 Informed Consent) is signed before the performing of the activities. This consent is given for audio or video recording of the activities, anonymization or pseudonymization of data and consent on the information sheet that was received before (Step 6).
- Ensure the participants are informed about the results of the activities they took part in and what they contributed to.
- In case they are expected to take part in the next activities, ensure they receive the right information.

5.2. Recruitment channels

Potential recruitment channels have been identified for each pilot sites:

- Santander:

The pilot site is organized by SANT, the Municipality of Santander, and has an existing and solid relationship with the older population through their social services, providing quality assistance to those in need of social support. Santander decided to recruit older participants for URBANAGE's activities through this privileged channel. To ensure a back-up recruitment channel, AGE approached CEOMA [26], one of its Spanish members, for support in case the privileged channel is unsuccessful.
As for civil servants, they are already in touch with them through the municipality.

- Helsinki:

The pilot site is organized by FVH, the innovation company of the city, and has existing relationship with older citizens through the programme "Welfare plan of the city of Helsinki 2017-2020", reinforcing in a sustainable way the older adults' active participation in a city through e-services in the public sector. Helsinki decided to recruit with this privileged channel. To ensure a back-up recruitment channel, AGE approached its Finnish member, the Finnish Pensioners´ Federation [27].
As for civil servants, they are already in touch with them through the municipality.

- Flanders:

The pilot site is defined by AIV with the help of IMEC. IMEC is also responsible for the recruitment and operational aspect of the interactions with older adults. Since AIV does not have a privileged relationship with older citizens through its activities, AGE approached its Belgian Flemish members, the Vlaamse Ouderenraad [28] which agreed to support the recruitment of older people through their weekly newsletter, and Okra [29] who also showed their support for the recruitment. The local Flemish organisation VIEF was considered as a

potential recruitment channel; however, due to a clash of thematical agendas, VIEF preferred to decline our invitation. SeniorenNet [30] was contacted by IMEC and is also willing to assist if the recruitment does not go as planned. Finally, the Coordinator of age-friendly Ghent was contacted for additional support for the recruitment of older people in the area of Ghent. The specificity of the Flanders use case is that the research focuses on the region, including various cities and more rural areas. Recruitment channels may therefore change according to the cities chosen as pilot sites, which can then approach their local communities to recruit older citizens. As for civil servants, they will be recruited according to the cities chosen as pilot sites.

Table 1 Preparation phase: recruitment channels for each pilot site

	Older People	Civil Servants	Experts (if relevant)
Santander	- Municipality' social services - CEOMA	City departments: - Culture, leisure, sport and tourism - Town planning, housing and infrastructures - Transport, traffic, and fines - Social Services, Equality and Personal Autonomy - Innovation - Citizen participation - Security and emergency - Environment	Project partners and pilot site investigation
Helsinki	- Finnish Pensioners' Federation	City department: - Social services and heath care - Maps and transport - Culture and leisure - Housing and environment	Project partners and pilot site investigation
Flanders	- Vlaamse Ouderenraad, the Flemish Elderly Council - Okra - Seniorennet - Local community once cities are determined	Once pilot cities have been determined, the city departments in charge of the following domains will be contacted: - Outdoor environment - Transport & Mobility - Housing - Social participation - Communication & Information	Project partners and pilot site investigation

5.3. Recruitment message

To optimize the older user's engagement in the project, especially in the focus group and co-creation activities, we need to be clear on the objectives of their involvement [12].

Define your objectives

The user's capacity and motivation to engage varies as a result of their knowledge of the objectives of the project and the scope of their engagement.

You need to clarify the objectives of the involvement in order to select the right users and the appropriate methods with which to engage them. When you recruit them, you need to give them an answer to the following questions:

- What are the objectives and criteria of the work?
- Why is this work done now?
- Who will benefit from the social innovation?
- Who is funding the work? What resources are available?
- What happens after?
- Where will the work lead?

Figure 1 Recruitment message: define the objectives [12]

Based on the principles mentioned above (see Figures 1 Recruitment message: define the objectives), IMEC has developed the following message recruitment:

"Welcome to URBANAGE, a European project on **how urban planning in cities can better address the needs of an ageing population**. As part of the project, [name responsible pilot partner e.g. IMEC] is looking for a diverse group of enthusiastic respondents to participate in one or two group discussions:
- Focus group session (indicative timing: late July 2021). These sessions are focused on exploring the **ways in which you currently participate in your city and city policy making.** What kind of activities are you involved in, and why? What keeps you from being more actively involved? Do you want to be informed about changes in the public domain in your city, and if so, how?
- Co-creation sessions (October 2021): In these hands-on sessions, you will **collaborate with other citizens and/or urban planning experts to design a solution** for being informed about or involved in urban planning decisions that impact the accessibility level of your city."

5.4. Sign-up process

Before the focus group and co-creation activities take place, pilot sites need to ensure the sign-up process is completed:
- the subscription form is ready in time, translated by the pilot sites and includes:
    - Informed consent with opt-in in which participants allow the use of their personal data for research purposes and to be contacted if they are selected.

- A brief survey with:
  - ✓ Personal contact data
  - ✓ Recruitment criteria
  - ✓ Interest & availability for test date(s)
- Pilot sites make sure there is a sign-up process in place for non-digital recruitment e.g. through paper forms or assisted digital subscription, and follow up on this by digitizing the information. Pilot sites need to clarify to potential participants where the paper form needs to be sent and brief their team on how to process the paper versions received.

How does the sign-up process flow look like?
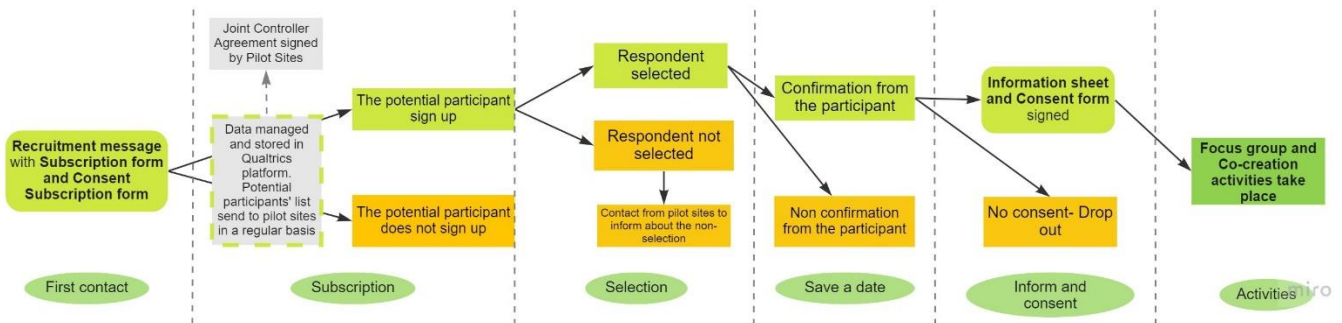
Figure 2 URBANAGE sign-up process

For a better readability, the figure is available in annex 5.

Selection process

As mentioned in the subchapter 5.1 Recruitment Process, pilot sites will have the responsibility to select the participants for both focus group and co-creation activities.

Table 2 Number of participants to be recruited per target group

	Focus Group	Co-creation activities 1st round	Mixed Co-creation activities 2nd round
Older people	6 to 12	6 to 12	5
Civil Servants	/	6 to 12	5
Experts	To be determined if a need comes up to involve experts		

- Step 1: According to the ideal composition of the focus group and co-creation activities explained in chapter 4, and based on the angle of the use case of each pilot site, some selection criteria might be prioritized by pilot sites compared to other ones. E.g. the migration criteria is not really important for the research of Helsinki's use case as their migration population is very low.
- Step 2: each pilot site will receive a list of potential participants, based on Qualtrics platform data, who have signed-up to the subscription form for their specific location.
- Step 3: According to the prioritization criteria and the number of respondents, pilot sites make a list of the desired participants.
- Step 4: Pilot sites will contact participants to confirm their participation in accordance to the slots per group defined beforehand by the pilot sites. The **non**-selected participants will also be contacted and thanked.

Depending on the needs of pilot sites, or if the outcomes of the focus group and co-creation activities do not turn out satisfactory, experts can be included in the mixed Co-creation activities. Number of experts selected by pilot sites is defined according to the needs.

5.5. Contact point

In this recruitment process, it is important to allow participants who have questions to contact the pilot sites. Project-related questions may rise from participants or potential participants, before or after the focus group and co-creation activities. Furthermore, information and communication around URBANAGE and its results need to be communicated, e.g. feedback after the activities, final reports, invitation to specific event as participant, newsletter. Therefore, URBANAGE needs to have a point of contact per pilot location, who will be appointed at the beginning of the process.

6. Recommendations for inclusive activities implementation

One of the key challenges of the URBANAGE project is to define how urban planning can respond to real needs of older people. This is therefore essential to ensure that the needs and wishes of the persons ageing in a city are effectively taken into consideration by the researchers. Involving older adults in the focus group and co-creations activities will not only improve the quality of data but will provide a better understanding of the urban planning from another point of view than ours as researchers and can potentially improve the quality of life of older adults by giving them a sound to their unique voice [31].

This roadmap will thus give recommendations on how to make sure that the focus group and co-creation activities are inclusive, with the final objective to engage older adults in the project and in a more long-term way, in the urban planning of the city [31].

a) Awareness of stereotypes and ageism:

To understand the challenge to be tackle for the inclusion of older adults within these activities, we need first to define the most important discrimination that they are facing in the day-to-day life as well as in research activities: ageism. The WHO defined ageism as "the stereotypes, prejudice and discrimination directed towards others or oneself based on age" [32]. They defined 3 dimensions of ageism related to a psychological faculty: thoughts (stereotypes), feelings (prejudices) and actions or behaviours (discrimination). Ageism has concrete impact on the life of older adults: it is associated with earlier death (by 7.5 years), poorer physical and mental health, and slower recovery from disability in older age. Ageism also increases risky health behaviours, such as eating an unhealthy diet, drinking excessively or smoking, and reduces our quality of life [33].

To avoid any kind of ageist attitudes during URBANAGE activities, we can apply and give more concrete examples of the 3 dimensions of ageism that need to be considered by the pilot sites: :

- **Stereotypes**: Considering all the participants within a given age group to be the same: "Older adults are often stereotypically described as a homogeneous group, lagging behind, associated with cognitive decline, frailty and needs" [34]. Researchers need to have in mind that older people are a heterogeneous group with diverse needs, wishes, lifestyles and expectations, different socio-economic background. Thus, these diverse needs should be equally reported and considered during the URBANAGE activities.
- **Prejudices**: In the case of ageism, prejudice is directed towards an individual or a group based on perceptions of their age. As an example, feelings of pity or sympathy are two common forms of prejudice towards older adult and can generate a desire to exclude oneself from the company of older adult [32]. Concretely, someone feeling pity for an older adult may exclude his or her company and create a direct prejudice by excluding him or her from the society.

- **Discrimination**: In relation to ageism, discrimination relates to behaviours – including actions, practices and policies – that are directed towards people based on their age. During URBANAGE activities, assuming and act as if older participants do not know, neither manage using digital technologies only because of their age will be considered as a discrimination.

Here are further concrete tips to consider when organising the URBANAGE focus groups and co-creation activities [35]:

- **Environmental stimuli** can be explicit and remind people of a given stereotype. If you start a cognitive performance task by saying "we would like you to perform this task because *it is widely assumed that intellectual performance declines with age*", you will remind the participants with an ageist stereotype that can affect and influence how well or badly a person will do during the task or how they will interact during the discussion.
- **Subtle stimuli**: If you need to collect demographic data on a person, try to ask this question at the very end of the form. Filling one's age in the demographic information form can activate older adults' self-stereotype.
- **In quantitative methods**: Instruction and verbal description in the research tools and test materials should avoid age-related cues e.g. ageist words or pictures that could activate age stereotypes among older people.
- **In qualitative methods**: try to avoid age stereotypes and try not to be ageist in non-verbal interactions. For example, when interviewing older adults with cognitive decline, avoid asking *factual info* (dates, names), prefer asking about *experience* and *feelings*.
- Consider their **sensory changes:** if you know a person might have hearing problems, ensure the activity is taking place in a quiet venue. If you know a participant has vision problem, you might consider printing the material in a bigger, more contrasted font/colour.

b) Autonomy, trust and respect
- Before the activities, make sure the older citizens are consulted and available. Unlike the general assumption linked with retirement, older adults are very active and have other commitments.
- During the activities, to create trust and respect the autonomy of participants, make sure to assess the person's needs and wants at that particular time and place.
- Give the opportunity to withdraw from the activities if they want.
- Respect the older person's choice and answers, suggestions need to be taken into consideration, and space for questions needs to be provided.

Older participants are not only participating to serve the research but are rather looking at contributing to improve the environments they live in. They need to be part of the research and be informed of the result and process of the research. For their further engagement in the urban planning of their neighbourhood or city it is important to keep them updated and show them that their participation had a concrete value for the project and for their city. No financial compensation is envisaged for the participation of these activities, but rewards or non-financial compensation can be offered and decided at pilot sites level.

c) Consent and re-consent
- To obtain a clear consent, we need to communicate the goals of URBANAGE, the purpose of the activities that we want to perform and the meaning of the process.
- Simplify consent forms by cognitively adapting language, take the time to explain the goals of study.

d) Accessibility aspect:
During the activities, pilot sites should be aware of:
- Making sure the meeting venue is fully accessible and easy to reach, especially by public transport;
- Providing a place with sufficient air and light;
- Ensuring there is an easy access to the entrance and toilets. If outdoor activities are organised, make sure there is an easy access to public toilet and resting area;
- If snacks or coffee breaks are planned, make sure there is no counter indication for certain food;
- Visual impairment, hearing problems or other issues need to be considered and addressed (e.g., providing written materials) and personal assistance should be ensured if this is needed. If we realise the person has hearing problems, there is no use to scream in their ear. Instead, we should make sure the meeting will take place at a quiet place, which enables a successful interaction.
- Make sure you are respecting local sanitary rules in regards with Covid-19 regulations.

Some participants could feel a lack of confidence or familiarity with the content and methodology of the focus group and co-creation activities. Therefore, support from pilot sites during the activities is necessary and should include [12]:
- Support in their personal development by increasing people's confidence, assertiveness and expectations, as well as encouraging them to fully participate in the discussions;
- Providing them with trainings and practical support (e.g., additional information, reimbursement of the expenses);
- Ensuring equal opportunities to participate, regardless of age, gender, sexuality, disability, social background and communication differences.

e) Research methods and tools
Generally, the tools used in focus group and co-creation activities in research are not "older adult friendly".
- Please consider the sensory changes of the participants: using the right fonts, contrast, ensure the visibility and lighting, use sound amplification if needed and reduce background noises. For focus groups, we will normally use a whiteboard and images. Make sure the visibility of the images is correct and that the letter height is sufficient to be read easily.
- If there is a digital technology included in the co-creation, you need to provide instructions on how to use it. E.g., if a sensor device is considered, explanation needs expressly to be given on the usage of the sensor, make sure it is not creating discomfort.

In any case, the tools and setting place of the focus group and co-creation activities should be tested before the sessions to make sure it is adequate and respecting the above tips.

f) Privacy and confidentiality

It is important to involve participants to define their vision of their own privacy and barrier. We need to be aware of their limit and be sure we make the compromise acceptable. For digital technologies that could be used during co-creation activities, older adults need to decide how much privacy loss is acceptable.

To respect the confidentiality of the data, pilot sites should provide control to whom they are given access to sensitive information about the older adult and limit as much as possible the number of people that have access to this data.

g) Safety and security

Participants to the activities need to feel safe and secure:

- Prefer natural environment so older adult can feel safer and issues of safety can be addressed vs. a controlled environment e.g., Living Lab;
- Include older adults with different conditions and health statuses to adapt and account for various situations.

Following these 7 dimensions can ensure the inclusiveness of the activities performed but will also encourage older adults to engage in the research and in the urban planning in more long-term perspective.

On the other hand, the project also wants to investigate the adoption and usage of digital twins as a tool to visualise and prototype scenarios to address the needs of the ageing population in the urban environment. It is recommended to select different profiles of civil servants (e.g., gender, expertise, age, race) to enable a rich and multi-perspective view of the global needs and challenges. Making sure that different gender, ages and digital skills are represented is a key aspect in avoiding the stereotypes of women or/and middle age public servants not being interested in technologies or in leaving their comfort zone. Moreover, in order to increase the engagement of public servants in the activities, we recommend selecting participants who have a direct (personal) experience in interacting with ageing people (e.g., ageing parents, parents that take care of their children, family in care homes etc.). Finally, in order to ensure a sustainable implementation of the URBANAGE ecosystem, besides technical civil servants, civil servants in the position to make political decisions should also be involved in the process.

7. Focus Group Roadmap for older adults' involvement

7.1. Objectives of the focus group activities

The aim of the focus group is to develop this **user engagement strategy** for involving older citizens in the decision-making process of age-friendly urban planning. A secondary goal is to investigate the **potential of gamification[1] for older people's engagement**. One focus group per pilot site will be organized.

IMEC took the lead in this task. Due to the pandemic situation, unclarities regarding Covid-19 rules at the time focus group were planned and language barriers, it was decided that pilot sites would do the actual data collection (conduct the focus group, transcribe and translate them). IMEC provided a train-the-trainer session to the pilot sites (see chapter 9), consisting of how to conduct, transcribe and/or translate the focus group discussions.

7.2. Research process design guidelines

Content
To answer the research questions defined in the previous section, a topic list was developed by IMEC -MICT-UGent. The topic list was based on input from the use cases on the one hand and literature on the other hand. More specifically, the topic list consisted of 2 main parts: one part on **civic engagement** and one on **gamification**. The **civic engagement** part will gauge for civic engagement 'as is', discussing neighbourhood, civic and political engagement both non-digital and digital. The aim is to not only understand current behaviour, but also motivations and barriers for engaging in certain activities. When gauging for digital civic engagement activities, more general questions will also be asked regarding current smartphone behaviour and attitudes towards providing and receiving information to and from the city through a smartphone. The **gamification part** aims at understanding motivational drivers for everyday activities of the life of older citizens using the Octalysis framework [36]. For both the civic engagement and gamification part, concrete and pilot-specific examples will be provided by the pilot sites. IMEC will provide feedback on these examples.

Practical organization of focus group
To provide a Covid-19 proof solution, the focus group will be conducted outdoors. The groups will be split in two, where one group will receive the topic of civic engagement first, followed by the topic of gamification and vice versa for the other group. The focus group will be recorded. Ideally, there is also a notetaker per subgroup available to take notes during the focus group as a back-up for poor audio recording quality as a result of conducting the focus group outdoors.

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[1] Gamification can be understood as game elements used as a tool to motivate people to engage in certain activities. This does not automatically refer to digital computer games or games you play with a playstation or another game device. This is often used to make unpleasant tasks more fun or to engage people to participate in certain activities and/or increase their loyalty towards their brand.

Moderators and train the trainer

Two moderators will thus be required per focus group. Each moderator will be in charge of one topic (either gamification or civic engagement). The moderators will receive a training session, "Train the trainer" sessions (see Chapter 9 of the document) on these topics. Moreover, they will be provided with a detailed script guiding them through the focus group.

Data collection & processing

Data that IMEC requires to be able to conduct analyses are transcripts translated to English. The pilot sites will organise the transcription of the audio files in the native language and organize the transcription process (providing the audio files to the organization, providing guidelines regarding transcriptions). This will be invoiced to Im IMEC ec who will in turn look for an organization that can translate the transcripts to English.

For the transcripts, no names or surnames are required. Participants may be described as 'participant 1', 'participant 2' etc. At the beginning of the transcript, some socio-demographic information regarding the participants needs to be provided. More specifically, gender and age range.

Data analysis

The transcripts will be analysed in vivo and the grounded theory coding will be applied (i.e., coding in 3 phases) by IMEC -MICT-UGent. In a first phase, open coding will be used to reduce data. In a second phase, axial coding will be used creating categories in the data. In a final phase, relationships between categories will be investigated to develop a user engagement strategy to involve older citizens in the decision-making process of age-friendly urban planning.

8. Co-Creation Roadmap for older adults, civil servants and experts' involvement

8.1. Objectives of the co-creation activities

While the goal of the focus group is to understand and identify what are the motivations, challenges and barriers, impacting the participation and engagement of older people in the pilot areas finding the most adequate strategy, specific tools and methodologies to promote inclusion in data-driven policymaking; the co-creation activities aim to identify the challenges older citizens find for ageing well in cities and will give the information to refine the use-case definition and define the user requirements (from civil servants) and solutions related to the implementation of each use-cases (e.g. data sources, visualizations, simulation models and AI) required to address those challenges ('Data model of the digital twin' in figure 5).

To reach this goal, 3 co-creation sessions will be organized per pilot site:

1. One with public servants on *Challenges and opportunities:* discussions will focus on challenges and opportunities they find both in urban planning focused on age-friendly environments, and the use of new technologies in the urban planning and civic engagement fields.
2. One with older citizens on *Challenges and opportunities:* they will focus on identifying the challenges and opportunities older citizens find for ageing well in cities.
3. One with a mixed group of public servants and senior citizens on *User requirements and Solutions:* Based on the previous co-creation sessions, the next round of co-creation sessions will be to define the user's requirements and the solutions or functionalities to be developed through the URBANAGE Ecosystem.

Format will need to be decided based on the current situation regarding Covid-19 regulations and input of the focus group.

In order to design the Co-creation sessions for each pilot case, coordination with WP6, and specifically with Task 6.1. is key. To ensure correct alignment with URBANAGE's objectives, an iterative process has been developed, as described in the next chapter.

8.2. Research process design guidelines

8.2.1. Process to identify the questions to be asked during the co-creation activities

The questions that will be launched during the co-creation activities have to be thoroughly thought. To identify these questions, an iterative process has been designed with the pilot sites and their specific use cases in order

to find a balance among the city's age-friendly needs and the city´s fields of interest. The intention is to confirm that the use case that has been decided is really addressing a need of the city regarding age-friendliness. To achieve the use case confirmation, or to redefine it in case it does not fit a need or a gap of the city, the steps below have been followed:
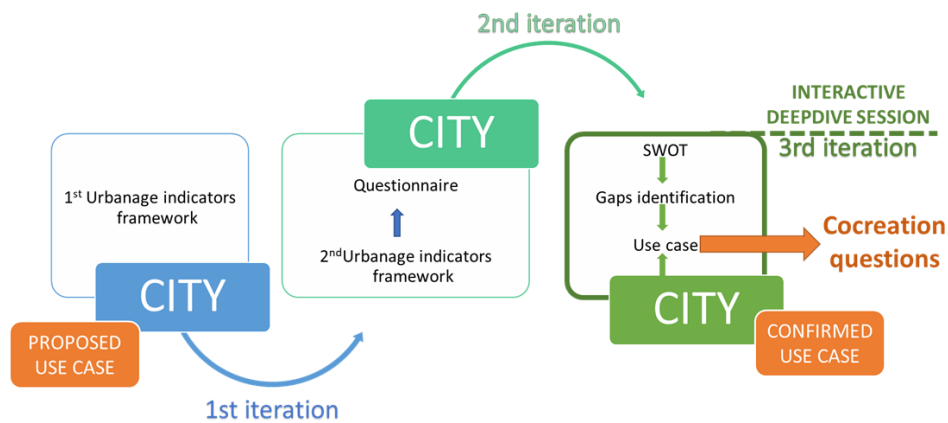
Figure 3 Iterations defining use cases

1. 1st iteration: Based on the first URBANAGE indicators framework (See Annex 6) developed in the early stages of the URBANAGE project, a first selection of the indicators has been done by the cities in order to adapt to the local contexts taking into account climatological and cultural differences. With this intention simple questions have been launched:
    1. Which of the indicators identified in the Annex 6 do you consider that are applicable to your local context?
    2. Can you already identify any indicator that is missing for your use case?
2. 2nd iteration: Based on this first iteration and the URBANAGE indicators framework, a **questionnaire for the identification** of the **strengths**, **weaknesses**, **opportunities**, and **threats** of the cities regarding age-friendliness was developed (See Annex 7 Questionnaire for the identification of the SWOT Analysis). Pilot sites were asked to identify different profiles of public servants (see Chapter 4.3.2) to fill in this questionnaire, since the domains the questionnaire covers require knowledge of different city departments. The steps were the following:
    1. Sending of the questionnaire to the cities;
    2. Different departments at city level fill in the questionnaire;
    3. After receiving this completed questionnaire, desk work should be carried out by **analysing** the answers to the different questions, the aim of this activity is to use the **SWOT methodology** to get an overall picture of the state of the city in terms of age-friendliness.
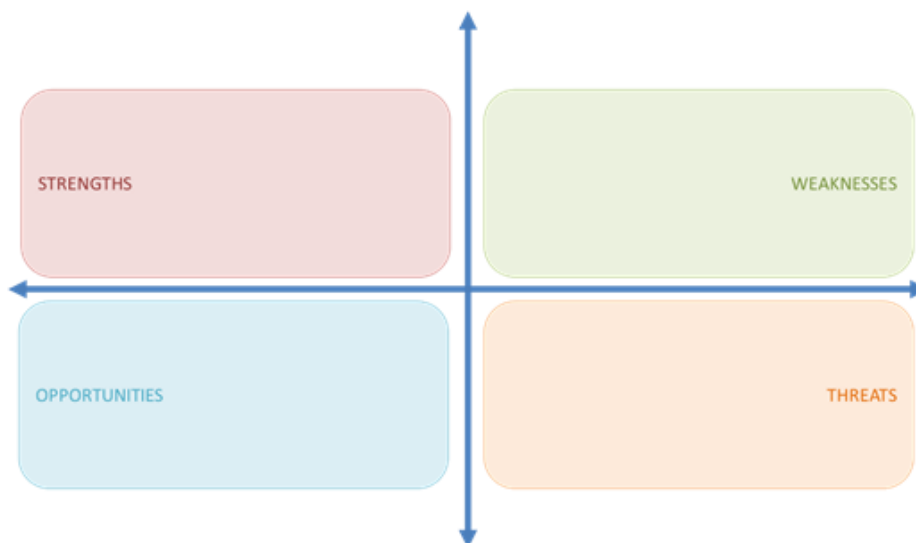
Figure 4 SWOT Analysis

3. 3nd iteration Interactive Deep-dive session: When this work is done the 3rd iteration with the cities takes place. The interactive deep dive session intends to have a contrast with the pilot sites on the results of the SWOT analysis. By discussing these results with the different public servants from different city departments, the final picture of the SWOT of the pilot site regarding age-friendliness will be redefined. This exercise will point out which are the gaps the pilot site has regarding age-friendliness and will analyse if the proposed use case is covering any of those gaps. When the use cases are confirmed or redefined (depending on the case) the questions for the co-creation will arise. The steps were the following:

    1. Sharing the results of the SWOT.
    2. Redefinition of the SWOT with the participation of the public servants.
    3. Common identification of the gaps the pilot site must fill in to cover the needs and requirements of older adults of the city.
    4. Contrast of the previous work with the use case
        1. is the proposed **use case** replying to the citizens' needs regarding age-friendliness (always related to urban planning)?
        2. Are we **filling in a gap or a weakness** with what will be developed in the use case?
        3. What **opportunities** can **push the use case**?
        4. What can be a **threat** for it?
        5. Is there any aspect of the **use case** that has not been considered but that after the analysis of the SWOT should be **completed/added**?
    5. Formulation of the questions for the co-creation: after having the general picture of the current state of the pilot site regarding age-friendliness in the field of urban planning, and after analysing if the use case is replying to a need and with the use case already redefined, which are the questions we should ask to the target groups in the co-creation workshops?

Since each pilot site will have a different focus for their use case, specific questions will be defined for the co-creation sessions in each pilot site. The first results of this interactive Deep Dive Session for **Santander** and **Helsinki** are annexed in this deliverable (See Annex 8 Results of the Deep Dive Session for the Use Case of Santander & Helsinki).

On the other hand, the process for **Flanders** deviated from that for the other pilots. As a region, represented through the Agency Digital Flanders of the Flemish government (AIV), there is no pre-determined city-specific location or network with which the use case and related questions could be developed. Therefore, IMEC and AIV worked closely together to develop a tailor-made approach that helped identify the right questions to be asked (See Annex 9 for a detailed description of the tailor-made approach applied in Flanders).

**Tailor-made approach for Flanders:**

> _**Phase 1: Flemish use case refinement:**_ The two original use cases as defined in the project proposal were taken as a starting point for Flanders, of which resulted 13 scenarios presented to the attendees (the Flemish Elderly Council and 3 cities and municipalities, representing different sizes and geographic areas: Ghent, Roeselare and Turnhout). After voting, 3 scenarios were selected:
> 1. Availability and accessibility of (care) services
> 2. Heat stress & heat islands
> 3. Mobiscore for older adults

> _**Phase 2: Scenario refinement, data needs & persona**_
> As a next step, the outcome from the interactive session was used by the project team to:
> 1. Refine the scenarios: create a more detailed scenario (use case implementation) taking into account the elements that were considered lacking or requiring more detail.
> 2. Data needs: a first draft of the types of data considered necessary to realize the scenario. To this end, a meeting was scheduled with OSLO (Open Standards for Linked Governments), an initiative by the Flemish government to stimulate the exchange of information by creating an open semantic information standard for governmental data. Based on their input, a preliminary list of currently available (relevant) data could be made.
> 3. Persona: for each scenario, two personas were developed: one for older adults, and one for civil servants[2].

> After internal deliberation, and based on both the feedback from different stakeholders and data availability, it was decided to advance the Flemish use cases based on the following two implementation scenarios:
> - Heat stress

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[2] A persona can be defined as a fictitious and archetypical user whose goals and needs reflect those of a larger group of users and will help with formulating the right questions. The personas reflect which need(s) will be addressed in each scenario and per type of end user, but also address why this need is relevant and how the solution can help solve it.

- Availability and accessibility of (care) services

Phase 3: persona validation, variable definition and data source identification
At the end of August 2021, a follow-up session will be held with the interested stakeholders (cities, municipalities, Flemish Elderly Council, ...). The different cities and municipalities will be asked to be represented by both a domain expert and a data expert to ensure cross-departmental expertise. Additionally, they will be asked to prepare a list of (available) local and relevant data sets related to the use cases in preparation for the session.

8.2.2. Conducting co-creation sessions with public servants

The goal of the co-creation workshops with public servants is threefold: (i) link the proposed use cases with existing initiatives and organizations; (ii) integrate in the use cases the knowledge and expertise of domain and technical experts with the goal of making the definition and implementation of the pilots relevant and feasible; and (iii) promote the participation and collaborations between different departments and expertise with the aim of addressing the needs of older people with a holistic view. For this, we propose the following flow for the session:

- **Introduction to the URBANAGE** project and to the specific Pilot.
- Civil servants from each department will **present** their **current active ageing** initiatives, programmes, and challenges.
    - Before the session:
        - Civil Servants will prepare in a given presentation template 3/4 slides about current related projects.
        - Civil servants will prepare one slide with a list of challenges.
    - During the session:
        - Civil Servants will present their current related projects
        - Civil servants will present their challenges related to the needs of older people in the urban environment.
        - Participants will vote the most relevant challenges (3/4)
    - **Shaping of the use case:** starting from the existing needs, barriers, challenges and current projects.
        - Participants will map the intersection between needs and current projects and the specific use case.
        - Participants will identify needs, barriers and challenges that **could** be addressed by the use case.
- **Promote collaboration between different city departments** and establish the role of each of them in the use case:
    - Participants will draft a list of the departments they think should collaborate/participate to address the needs of the pilot and of the older adults.

- Participants will map active and lacking collaborations.
- Participants will mention what are the barriers for such collaborations.

Moreover, the outcomes of the co-creation sessions with civil servants will directly serve the design of the URBANAGE Ecosystem. The goal is to generate a decision-support tool to be adopted by public servants and other stakeholders engaged in addressing the needs of the older adults in the city.

8.2.3. Conducting co-creation sessions with older adults

The interaction with the older adults in the co-creation sessions will be done in two different stages. In the first stage, the aim will be to identify the challenges and opportunities the older citizens find for ageing well in cities. The user engagement strategy developed with the output of the focus group sessions, will be used in the process.

In order to guide the session, different questions in the domains identified in the indicator's frameworks (See Annex 6 URBANAGE Indicator's framework for Age friendly cities) will be prepared. These domains are:

- Outdoor environment
- Transport & Mobility
- Housing
- Social participation
- Communication & Information

The result of this co-creation session should help us understand the current state regarding ageing well in the different pilot sites and in the different domains, and at the same time, be a validation of the indicator framework developed by Tecnalia (see Annex 6 URBANAGE Indicator's framework for Age friendly cities), to which additional potential indicators can be added.

On the other hand, and in parallel, the kind of data needed to respond to the citizen´s requests must be identified, be it the data already available at the city level, or that citizens must provide. The intention is to have ready, beforehand, questions about the availability or disposal of people to provide that data.

One of the outcomes of this co-creation session will be the fine-tuning of the use cases, how the use cases can better approach the needs of the older people to age well in each of the cities.

The plan is to organize these workshops in October-November 2021. In order to meet the deadlines and achieve the expected results, a preliminary work is needed to design the sessions and the questions that are going to be asked, including the provision to inquire about the willingness of the older people to provide data actively. To achieve the best results, when these sessions are planned, specific questions should be defined for the co-creation in each pilot site.

8.2.4. Conducting co-creation session with mixed group

The goal of this co-creation workshop is to define the user requirements and solutions related to the implementation of each use case. The specific topics and activities will be defined by the outcomes of the previous focus group and co-creation sessions, together with the use case definition and the available data sources. During the workshop, participants will work with the concept of a paper version of a Digital Twin and its capabilities. For this, we will provide physical maps of the specific area of each use case. Civil servants and older citizens will provide inputs and map the current state and the possible "what if" scenarios. Each pilot site will host a co-creation workshop, when relevant, supported by consortium experts such ageing experts, urban planners, civic participation experts.

An optional follow-up meeting with technical civil servants may be organized to further define the functionalities and technical specifications of the solutions to be developed in each case, based on the users' requirements defined in the mixed co-creation workshops. Technical civil servants who will oversee the pilot-specific implementation of the URBANAGE Digital Twin and Ecosystem will be invited to this session.

8.2.5. Relation to other deliverables and WPs

The outcomes of the focus group with the definition of a civic engagement strategy will help to define the design of tools through which interaction with older adults will occur in the co-creation sessions. The interaction will be possible either by asking inputs from an older adult or providing information from the city (e.g., civil servants) to older adults.

The outcomes of the co-creation sessions will directly serve the design of the URBANAGE Ecosystem. The main findings, requirements and knowledge of the co-creation activities will be delivered to the technical partners that will translate them into technical and functional requirements for the development and implementation of the URBANAGE Ecosystem. The goal is to generate a decision-support tool to be adopted by public servants and other stakeholders engaged in addressing the needs of older adults in the city.

Building on a preliminary definition of multi-interest use case scenarios for each pilot by the participating local and regional authorities, the outcomes of the co-creation process will be used to identify priorities and refine the use case design, implementation and validation plans for the 3 pilots. In particular, they will help to identify which specific challenges are perceived as most important from the users' perspectives, as well as the kind of interfaces and tools that are most appropriate for the target groups.

Based on the use cases defined by Santander, Helsinki and Flanders, there will be at some point inputs required from the older citizens to feed the data model of the digital twin (see figure 5 Data model of the digital twin). In order to receive this data, older citizens need to be engaged to provide consent to available personal data or actively contribute to non-available data. Moreover, at some point older citizens will need to be informed about certain events impacting their accessibility.
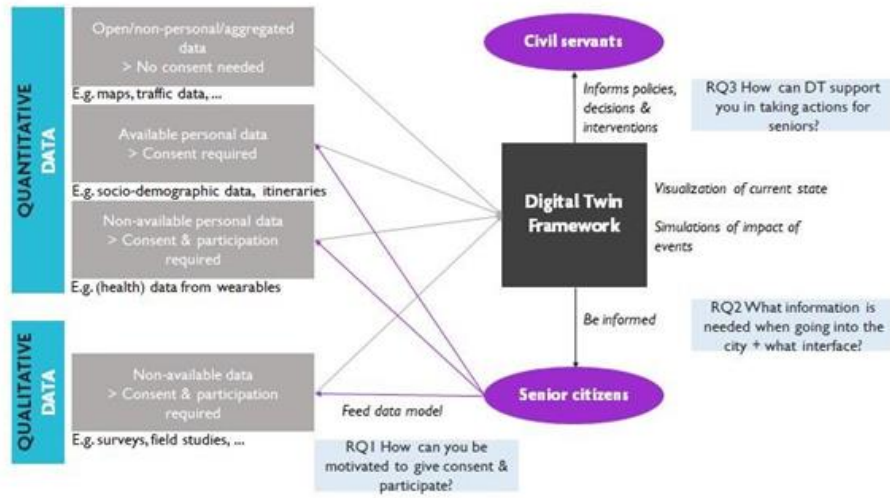
Figure 5 Data model of the digital twin

It is therefore important that project partners defining and conducting co-creation activities in WP2, and technical development partners (WP 3, 4 and 5), work in parallel and share the intermediate outputs towards successful pilots, with continuous involvement of participating local and regional authorities

9. Train the trainer

In order to be able to conduct the focus group and co-creation sessions in the native language of the participants, a "train the trainer" was provided by AGE and IMEC to the moderators involved in the Santander and Helsinki pilot sites. In other words, people in charge of organising and moderating the focus group and co-creation sessions received a "train the trainer" session. For the Flanders pilot, focus group and co-creation sessions will be conducted by IMEC.

Two train the trainer sessions were organised with the organisers of the pilot sites, namely SANT and FVH. The first one on 11th June 2021 and the second one on 17th June 2021. The first session provided practical guidelines related to the recruitment, practical organisation of the FG regarding the set-up and equipment needed for the recording. Finally, recommendations on how to avoid ageist attitudes during the activities were also shared with SANT and FVH.
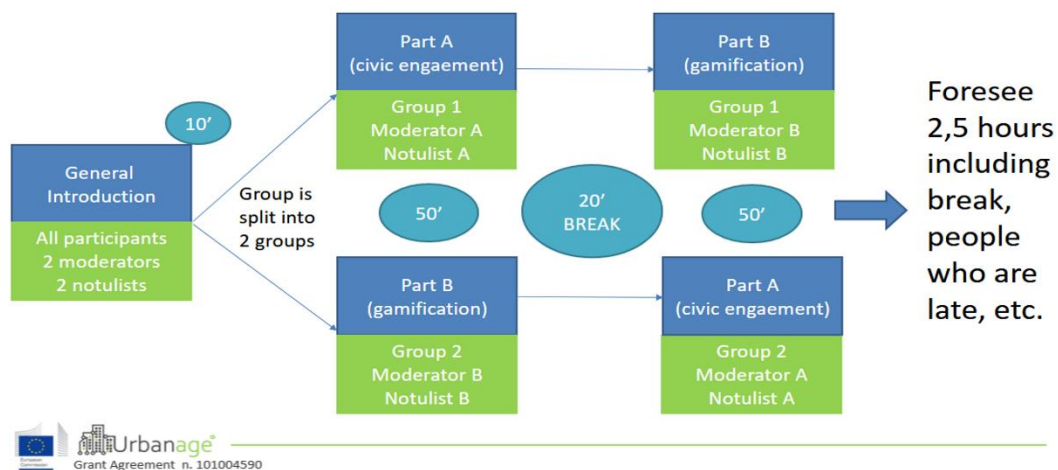
Figure 6 Flow of the focus group activities

The second session covered the content part of the focus group, such as the topic list, data processing and examples to trigger discussion among the participants. Finally, pilot sites also received a detailed script that guides the moderators through the focus group. IMEC researchers remain at the pilot sites' disposal for any unclarities that might pop-up after the train the trainer and before the focus group and co-creation sessions.

10. Conclusion

The "**Stakeholder mapping and engagement roadmap"** deliverable is a supporting document for the URBANAGE pilot sites to organise inclusive focus group and co-creation activities. These activities are dedicated to understand the challenges, opportunities, requirements and impact from the end-users' perspective, namely older adults and public servants, of using data-driven decision-making support systems and technologies in urban planning for age-friendly environments.

The deliverable provides the reader with an understanding of what an **age-friendly city** can provide to its inhabitants and the importance to improve it with the involvement of its younger and older citizens (see chapter 3). According to the WHO, making cities age-friendly is one of the most effective policy approaches for responding to demographic ageing. To achieve such goal, a collaborative approach is needed to ensure this change. In the case of URBANAGE, we encourage researchers, older adults, civil servants and experts to work together and identify the use cases that would improve the accessibility to the urban space, and at a later stage, build the URBANAGE Ecosystem. To organize such collaboration, the previous chapters guide the pilot sites step by step.

In order to involve the right stakeholders in the process, chapter 4, "**Mapping of Stakeholders**", lists the different actors that the pilot sites should involve to adopt an inclusive approach and ensure they are considering all relevant beneficiaries in the process. These actors are older adults, civil servants, and experts. Indeed, organizing focus group and co-creation activities with end-users requires to have a good overview of the stakeholders who can influence and contribute to a project such as URBANAGE, but also determine whose interests should be taken into account when developing and/or implementing a policy or programme. A growing body of work has highlighted the value of research carried out "with" or "by" **older people** and its contribution to understanding the variety of health and social issues experienced in later life [10]. The older participants of the URBANAGE activities will be selected to reflect the diversity of ageing populations along the lines of age, gender, ability and digital literacy, as well as older adults from difference social class, race and ethnicity when relevant [13]. Based on the "Global Age-Friendly cities: a guide" by the WHO, the URBANAGE Co-creation activities will involve **civil servants** and **experts** working in some of the domains a city must take into account in order to be considered age-friendly within the urban planning competences, namely outdoor spaces and buildings, transport and mobility, housing, social participation, communication and information, reflecting the importance to understand the urban environment as a network of interactions among different domains that need to work together in defining common strategies to support the autonomy of the ageing population.

Once the pilot sites understand who they need to involve, chapter 5 guides them in the **recruitment process**, which consists in a three-phase process: preparation phase, contact stage and follow-up stage; it presents the local channels pilot sites can consider for the recruitment, but also explains how the sign-up process flow looks

like once participants have registered and the importance of setting up a contact point per pilot sites in case potential participants and confirmed participants have questions regarding the project and the activities.

One of the key challenges of the URBANAGE project is to define how urban planning can respond to the real needs of older people and how to do that in an inclusive way together with civil servants. This is therefore essential to ensure that the needs and wishes of the people ageing in a city are effectively taken into consideration by the researchers. Involving older adults in the focus group and co-creations activities will not only improve the quality of data but will provide a better understanding of the urban planning from another point of view than researchers' and can potentially improve the quality of life of older adults by giving them a sound to their unique voice [31]. Chapter 6 therefore provides **recommendations for organizing inclusive activities**. It points out how pervasive explicit or subtle ageist attitudes can influence the outcomes of the URBANAGE activities. If researchers start a cognitive performance task by saying "we would like you to perform this task because *it is widely assumed that intellectual performance declines with age*", they will remind the participants with an ageist stereotype that can affect and influence how well or badly a person will do during the task or how they will interact during the discussion. That part the deliverable intends to make sure pilot sites and researchers are aware of ageist attitudes to avoid when conducting the interviews.

As mentioned previously, two types of activities are planned to reach the necessary understanding of the challenges and barriers faced by the end-users and come up with solutions. These activities are **focus group** and **co-creation activities** described respectively in chapter 7 (Focus Group Roadmap for older adults' involvement) and chapter 8 (Co-Creation Roadmap for older adults, civil servants and experts' involvement). While the goal of the focus group is to understand and identify what are the motivations, challenges and barriers, impacting the participation and engagement of older people in the pilot areas finding the most adequate strategy, specific tools and methodologies to promote inclusion in data-driven policymaking; the co-creation activities aim to identify the challenges older citizens find for ageing well in cities and will give the information to refine the use case definition and define the user requirements (from civil servants) and solutions related to the implementation of each use cases (e.g. data sources, visualizations, simulation models and AI) required to address those challenges. The focus group activities will be organized in 2 main parts: one part on **civic engagement** and one on **gamification**. The **civic engagement** part will gauge for civic engagement 'as is', discussing neighbourhood, civic and political engagement both non-digital and digital. The aim is to not only understand current behaviour, but also barriers for engaging in certain activities. The **gamification part** aims at understanding motivational drivers for everyday activities of the life of older citizens using the Octalysis framework [36].

As for the co-creation activities, a preliminary work must be implemented with the pilot sites to fine-tune the use cases. The questions that will be launched will have to be thoroughly thought. To identify which ones are these questions, chapter 8 describes the iterative process designed to accompany the pilot sites to find a balance among the city's age-friendly needs and the city´s fields of interest. The intention is to confirm that the use case that has been decided is really addressing a need of the city regarding age-friendliness. Finally, the **"Co-Creation Roadmap for older adults, civil servants and experts' involvement"** presents a framework the pilot sites will have to follow when organizing the co-creation activities in fall 2021.

The **"Stakeholder mapping and engagement roadmap"** deliverable is aimed at deploying the processes in the URBANAGE pilots, and once revised with lessons learnt in URBANAGE, they will feed D2.5 Pathways for replication for other cities to embark on the process.

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Annex

Annex 1 - Subscription's form

URBANAGE

Welcome to URBANAGE, a European project on how urban planning in cities can better address the needs of an ageing population.

Introduction

Welcome to URBANAGE, a European project on how urban planning in cities can better address the needs of an ageing population. As part of the project, [name responsible pilot partner e.g. IMEC] is looking for a diverse group of enthusiastic respondents to participate in one or two group discussions:

-    Focus group sessions (indicative timing: late July 2021)

These sessions are focused on exploring the ways in which you currently participate in your city and city policy making. What kind of activities are you involved in, and why? What keeps you from being more actively involved? Do you want to be informed about changes in the public domain in your city, and if so, how?

-    Co-creation sessions (October 2021):

In these hands-on sessions, you will collaborate with other citizens and/or urban planning experts to design a solution for being informed about or involved in urban planning decisions that impact the accessibility level of your city.

Consent : Opt-in acceptance of terms and conditions
I have read and accept the privacy policy

Selection criteria:

For the purpose of selecting the right mix of profiles we would like to ask you the following questions:

- Place of residence :
    - Enter zipcode
    - How would you describe the neighborhood you live in?
      Urban center – Outskirts – Rural setting
- Digital literacy :
    - To what degree do you feel comfortable when using the following technologies:
      - Smartphones: 1 (not at all comfortable) – 5 (very comfortable)
      - Wearables (i.e. devices that you were on your skin and which incorporate build-in sensors that collect data such as your heart rate, e.g. a fitness tracker): 1 (not at all comfortable) – 5 (very comfortable)
- Mobility
    - How often do you usually leave your place of residence? : More than once a day – daily – more than once a week, but less than daily – once a week – rarely if ever

- When leaving your residence, do you usually do so independently, or do you get assistance? : Independently – professional assistance (e.g. home care) – non-professional assistance (e.g. family, friends, ...)
- Special needs
  - Which of the following statements are applicable to you:
    - My eyesight is: Good-to-excellent, no real issues / Limited, but it does not hinder my everyday actions / Limited, and it hinders my everyday actions
    - My mobility is : Good-to-excellent, no real issues /Limited, but it does not hinder my everyday actions/Limited, and it hinders my everyday actions

General – Personal and contact information:

Finally, we want to ask you a few questions so that we may contact you for the next steps in the research project:

- Opt-in:
  - 'I am interested in this project, and would like to participate in:
    - Focus group session on the ways in which I currently participate in society (indicative timing: July 2021)
    - Co-creation workshop in which I will co-design a solution for urban planning events that impact my life (indicative timing: October 2021)
    - I do not wish to participate
- Information:
  - What is your age?
  - What is your sex? Male / Female / Prefer not to say
- Contact information
  - Name (first & last)
  - Phone number
  - Email address

Contact preference

- How would you like to be contacted (indicate your preference)?
  - Email
  - Phone

Annex 2 - Consent form included in the Subscription form

"We invite you to participate in the URBANAGE project. We are contacting you to ascertain if you are a suitable candidate to participate in our research project. The purpose of the URBANAGE project is to assess the potential benefits, risks and impact of implementing a long-term sustainable framework for data-driven decision-making in the field of urban planning for aging well in cities. The local study in [Helsinki, Flanders, Santander] study is carried out by [use case].

Who is responsible for protecting your privacy in this study?
[Use case] and IMEC are partners in the European project URBANAGE and are responsible for the processing of your personal information which means they are the controller according the GDPR. They will process your feedback and information in accordance with the General Data Protection Regulation (EU) 216/679.

What does your participation entail?
In filling out this recruitment form, we will ask some basic background information, which may affect your mobility and access to urban areas. This will help us identify suitable candidates for our study. Your participation is entirely voluntary, and it is up to you if you wish to participate or not.

What data do we collect for the recruitment phase?
The following personal data are collected and processed in the context of this recruitment process
- Identification data (e.g. name, first name, ...)
- Contact details (e.g. address, email address, telephone number, ...)
- Professional data (e.g. profession, education, studies, ...)
- Medical data: possible disabilities or conditions which may impede mobility and access
- Information about behaviour and habits (daily mobility, user experience, transportation, hobbies, ...)

IMEC can use the collected data in pseudonymised form for further scientific research in the same research domain as this study for which you have given permission. The anonymous data is stored for up to 5 years after collection.

Who will have access to your personal data?
The researchers of IMEC and the URBANAGE project only have access to the necessary personal data for carrying out their assignment within the planned research.
If a party is involved that is located outside the European Economic Area (EEA), IMEC will ensure that your data is always adequately protected and therefore only uses countries or organizations or sectors that guarantee equivalent protection.

Your rights
We collect your data on the basis of your consent, which means that you have the right to stop your cooperation at any time without having to give a reason. This can easily be done in writing by e-mail to <project manager at IMEC >, after which IMEC will process your cancellation as soon as possible. In addition, you can

request us to obtain a copy of the personal data collected by us and / or to correct or delete this information in our files.

Questions

With all your questions and / or comments about the processing of your personal data, you can contact us via the email address privacy@imec.be or consult the privacy statement on the IMEC website https://www.imec-int.com/en/privacy-statement.

Consent

I declare that I have read all the information and that I agree to participate in the <study> as described in this brochure. I consent to the collection and processing of my personal data as described in this information brochure.

Name participant:
Date:
Signature:

INFORMATION SHEET FOR THE URBANAGE PROJECT (for co-creation and focus group interviews)
(GA n_0: 101004590)

Enhanced URBAN planning for AGE-friendly cities through disruptive technologies – URBANAGE

We would like to invite you to take part in the URBANAGE project, which has been funded by the Horizon 2020 program of the European Commission.

Purpose of the study

The purpose of this study is to assess the potential benefits, risks and impact of implementing a long-term sustainable framework for data based urban planning for aging well in cities. We are interested in your expertise and experiences regarding mobility and access in urban planning and age-friendly cities. This will entail us asking you questions regarding your experiences and needs in everyday life when moving about in urban areas.

[Each use case will need to clarify how interview will be conducted]:

Voluntary participation

Your participation is voluntary and it is up to you if you wish to participate or not. At the beginning of the study, we will describe and go through this information sheet with you to describe what our aim and goals are. You will then have an opportunity to ask questions regarding the project and its methods. We will then ask you to give consent (either written, oral or on-line) to indicate that you agree to participate. You are free to withdraw at any time, without giving a reason.

Methods of the study

This study is a qualitative study that will use focus group interviews and co-creation sessions to collect information. We use this approach to better ascertain the needs and concerns of individuals and special interest groups whose voice may be underrepresented in urban planning and design.

Info box on co-creation

What is co-creation? Co-creation is a process through which products and services are designed and developed to better meet the needs and concerns of the user. In this process, individuals who have been recruited to participate can contribute their ideas, content and opinions regarding products and processes, which will help designers and planners in their work.

What personal information will be collected and for what purposes?

For statistical purposes, we will ask you to provide socio-demographic data such as age, gender, and place of residence [other if needed]. We will also ask for health-related data, such as possible disabilities [add other if needed], which may affect your ability to access urban places and facilities. The purpose of this information is to understand the needs of older people in accessing urban areas.

The interviews and co-creation sessions will be video recorded with sound. The content of the interviews will be transcribed and translated into summaries so that the content can be compared to results coming from other countries participating in the project. The transcriptions will not contain any personal data, which can be used to identify you. In cases where your statements may provide information regarding your identity, the researchers will transcribe the answer in such a way as to ensure your anonymity.

Who will have access to this data?

Only the researchers within the URBANAGE project will have access to these files. [If anyone else, they will have to be listed here]

Your rights

You have the right to access your personal information and you can also ask us to correct incorrect data or to have all your personal information removed from our systems. You can do this by sending an e-mail to [contact information of use case leader responsible].

or to the project representative

Aaro Tupasela, Email: aaro.tupasela@helsinki.fi

We can ask you for additional information to be able to verify your identity to ensure that we do not falsely delete, share and / or modify personal information.

Data retention

The video or sound files and the transcripts will be stored for a period of 5 years after the end of the project as required for scientific research publications at which point, they will be erased or destroyed. The interviews will be transcribed anonymously and maintained for 5 years after the end of the project as well. The research groups will maintain the summaries of the sessions.

Risk and benefits of the study

The benefits of participation in this study are to help urban planners and developers to create more age-friendly environments, which help foster health, well-being and the participation of people as they age. The risks of the study are minimal and relate mainly to the risks associated with the COVID-19 pandemic.

Due to the global Corona-19 pandemic, we will attempt to minimize the possibility of transmissions. Interviews will be conducted in person or over phone. If the local conditions allow for it, we will organize meetings outside

where appropriate safety measures will be taken into consideration. You always maintain the right to withdraw at any time without providing a reason.

Confidentiality and data collection

Within the context of interviews and co-creation sessions your participation and answers will be kept confidential. The interview or co-creation session will be recorded (video and/or sound). The files will be maintained on a secure, password protected computer.

Research results

The results of the study will be published in reports, scientific and professional journals. Results will also be presented to policy-makers and urban planners and at scientific conferences. We will also be providing regular project up-dates through our website. You will not be identified in any of these publications or presentations. Direct quotations from the interviews may be used in the publications and presentations. These quotations, however, will be anonymized and you cannot be identified through them.

Consent

If you agree to participate, a member from the project will ask you to provide consent either in writing, orally or on-line. You will then take part in a co-creation process. In the co-creation sessions, you will be [use cases will need to describe their methodology in more detail].

Further information and contact

For further information, you can visit the project web site at www.urbanage.eu.

If you have any concerns, further questions or wish to lodge a complaint regarding the URBANAGE project you can contact the local representative:

Contact details of local DPO
IMEC: Klaas Ghesquiere (Data protection officer) - privacy@imec.be

or the project representative (in English):

Aaro Tupasela
Faculty of Social Science
University of Helsinki, Finland
Tel: +358 40 669 8202
Email: aaro.tupasela@helsinki.fi

INFORMED CONSENT FORM FOR THE URBANAGE PROJECT (focus group and co-creation sessions)
(GA no: 101004590)

Enhanced URBAN planning for AGE-friendly cities through disruptive technologies – URBANAGE

By signing this form, I acknowledge that I have read and understood the content of the URBANAGE information sheet that has been provided to me.

The purpose of the use case I will join is [brief summary of the specific use case].
The procedures of the research have been explained as follows. [Brief summary including where the research is being conducted, what the participant will be required to do over what period including what personal data they will provide].

In relation to this project:

- I agree to be interviewed by the researchers
- I agree to allow the interview to be recorded by an electronic device
- I agree to complete questionnaires asking me about my opinions on the project
- I agree to try to use URBANAGE technology prototypes in a use case system, and have my usage of those prototypes recorded by the use case system. [separate info on info sheet will need to be clarified when it is decided what will be used/collected]
- I agree to provide personal data and allow it to be stored and processed in the use case system.

I acknowledge that:
(a) my participation is voluntary and that I am free to withdraw from the project at any time without explanation;
(b) the URBANAGE project is for the purpose of research and not for profit. Results from the URBANAGE project may be commercialised or become part of commercial products in the future to support urban planning activities and agendas for more livable cities;
(c) any identifiable information about me which is gathered in the course of and as the result of my participating in this project will be (i) collected and retained for the purpose of this project and (ii) accessed and analysed by the researchers for the purpose of conducting this project;
(d) my anonymity is guaranteed and I will not be identified in publications or otherwise without my express written consent;
(e) [organization name] is responsible for collecting and protecting my data;

(f) my information can be disclosed in an anonymized or pseudonymized form to research consortium partners within the European Union and outside of the EU provided that the data protection at the receiving end is as secure as in the European Union;

(g) understand the scope of the project, what is expected of me, that all my questions have been answered and that I have been given sufficient time to consider my participation in the project.

Participant information

Participant name (printed]:

Date and location:

Signature:

Statement by the representative of the Partner taking consent

1. I have accurately reviewed the information sheet with the potential participant, and to the best of my ability made sure that the participant understands the purpose of the URBANAGE project and the content of the Informed Consent Form.

2. I confirm that the participant was given an opportunity to ask questions about the nature and manner of participating in the URBANAGE project, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

3. A copy of this ICF (Informed Consent Form) has been provided to the participant.

Date and location:

Organization:

Local contact information:

Name:

Project DPO contact information:

(In English):

Aaro Tupasela

Faculty of Social Science

University of Helsinki, Finland

Tel: +358 40 669 8202

Email: aaro.tupasela@helsinki.fi

Annex 5 – URBANAGE Sign-up process
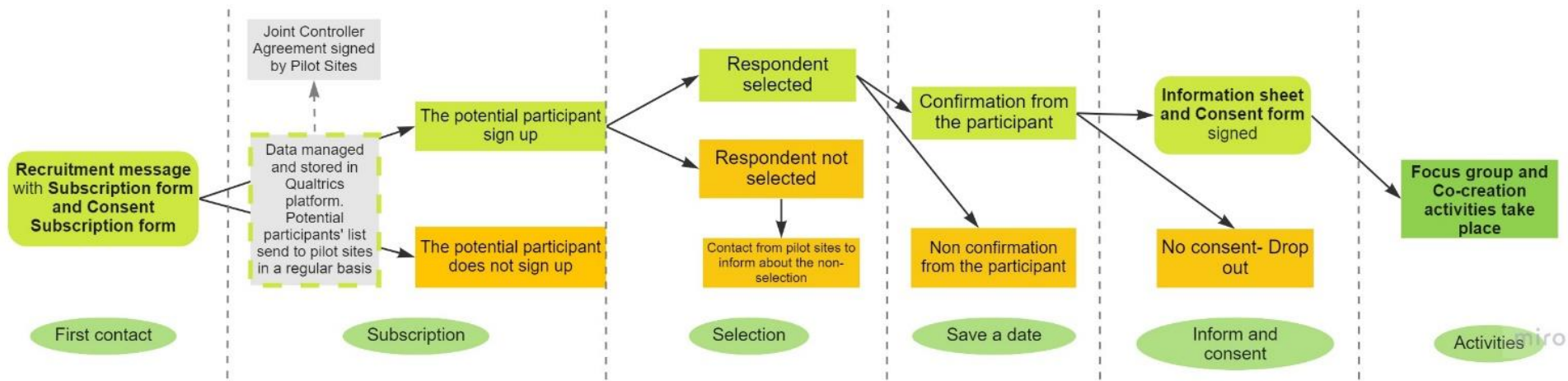
Annex 6 - URBANAGE indicators framework for Age Friendly City (AFC)

URBANAGE FRAMEWORK FOR AFC

CORE INDICATORS OF AGE-FRIENDLY CITIES WHO (2015)
https://www.who.int/ageing/publications/measuring-cities-age-friendliness/en/

EQUITY MEASURES

Difference between population average and highest attainable level of outcome

Difference between two reference groups

AGE-FRIENDLY ENVIRONMENT OUTCOMES

IMPACT ON WELLBEING

Quality of life

Accessible physical environment
Neighbourhood walkability
Accessibility of public transportation vehicles
Accessibility of public spaces and buildings
Accessibility of public transportation stops
Affordability of housing

Inclusive social environment
Positive social attitude toward older people
Engagement in socio-cultural activity
Engagement in volunteer activity
Participation in local decision-making
Engagement in paid employment
Availability of information
Availability of health and social services
Economic security

URBANAGE FRAMEWORK FOR AFC

Grant Agreement n. 101004590

2

INDICATORS FRAMEWORK FOR AGE-FRIENDLY CITIES. WHO

OUTCOME INDICATORS

Issues of **accessibility and inclusiveness of the key facets of urban life**,

- physical accessibility of public facilities (e.g. health and social services, transportation, recreation facilities),
- affordability of decent housing,
- opportunities for social engagement, and
- accessibility of information.

The selection of outcome indicators should be **directly linked to the objectives and desired outcomes of the age-friendly initiative**, and closely related to actual interventions and their expected impact.

*interventions often generate both intended and unintended outcomes beyond their primary expected outcome.

FIGURE 1. A FRAMEWORK FOR SELECTING AN AGE-FRIENDLY CITY INDICATOR SET

INPUTS	OUTPUTS	OUTCOMES	IMPACT
Resources and structures which act as key enabling factors.	Interventions to create an age friendly environment.	Short/medium term changes achieved in creating an age friendly environment.	Long term changes achieved as a result of improvements in an age friendly environment.
→ High-level political commitment → Collaboration of multiple stake holder groups → Shared ownership by older people → Financial & human resources	**Physical environment** → Planning and land use → Design of public spaces & buildings → Housing design & cost options → Transportation design **Social environment** → Culture & recreation programmes → Communication & advocacy → Health & social care services → Employment & business opportunities	**Physical environment** → Walkability → Accessibility of public spaces, buildings and transport → Affordability of housing → Safety **Social environment** → Volunteer activity → Participation in decision making → Economic security → Positive social attitude toward ageing & older adults → Accessible information & services	**Health** **Wellbeing**

EQUITY · EQUITY · EQUITY

3

INDICATORS FRAMEWORK FOR AGE-FRIENDLY CITIES. WHO

Careful consideration should be given to **adopting and adapting the core indicators, and also supplementing them with additional indicators**, in order to obtain an assessment that is **most appropriate for the locality of interest**.

ACCESSIBILITY OF THE PHYSICAL ENVIRONMENT

NEIGHBOURHOOD WALKABILITY

Suggested definition	Proportion of streets in the neighbourhood that have pedestrian paths which meet locally accepted standards.
	Suggested data sources: _ Field survey of city streets _Administrative data on city planning, roads and infrastructure
Suggested definition using self-report data	Proportion of older people who report that their neighbourhood is suitable for walking, including for those who use wheelchairs and other suitable for walking, including for those who use wheelchairs and other mobility aids.
	Suggested data sources: _Survey of older residentes
Comments	Neighbourhood walkability refers to the extent that a neighbourhood design supports walking. Walkability is characterized by a range of features including mixed land use, accessibility of destinations, safety, and the availability, quality and connectivity of pedestrian facilities. Locally accepted standards (path wide enough, no step to road, obstacle free, etc.) should be applied.

ACCESSIBILITY OF PUBLIC SPACES AND BUILDINGS

Suggested definition	Proportion of new and existing public spaces and buildings that are fully accessible by wheelchair.
	Suggested data sources: _ Field survey of new and existing public spaces and buildings _ Administrative data on city planning, building safety/permits, and parks
Suggested definition using self-report data	Proportion of older people who report that public spaces and buildings in their community are accessible for all people, including those who have limitations in mobility, vision or hearing.
	Suggested data sources: _Survey of older residents
Comments	Universally designed buildings and spaces enable access for everyone, including children, older people and people with functional limitations. The buildings and spaces are easily understood regardless of experience or knowledge, minimize hazards and accidental or unintended actions, and can be used efficiently and comfortably with a minimum of physical effort. Several guidelines on universal design are currently available ; locally accepted standards should be applied.

ACCESSIBILITY OF THE PHYSICAL ENVIRONMENT

ACCESSIBILITY OF PUBLIC TRANSPORTATION VEHICLES

Suggested definition	Proportion of public transport vehicles with designated places for older people or people who have disabilities.
	Suggested data sources: _Administrative data from local transit authority

Suggested definition using self-report data	Proportion of older people who report that public transport vehicles (e.g. train cars, buses) are physically accessible for all people, including those who have limitations in mobility, vision or hearing.
	Suggested data sources: _Survey of older residentes

Comments	Physical accessibility of public transport vehicles refers to the ability of people with disabilities and older people to safely ride in a public transport vehicle in order to reach their destination. Several guidelines on accessible public transport are currently available); locally accepted standards should be applied. The suggested indicator on availability of designated seating areas can be supplemented with additional indicators for a more comprehensive assessment of public transport vehicle accessibility.

ACCESSIBILITY OF PUBLIC TRANSPORTATION STOPS

Suggested definition	Proportion of housing within walking distance (500 m) to a public transportation stop.
	Suggested data sources: _Administrative data from local transit authority or city plannin department

Suggested definition using self-report data	Proportion of older people who report that public transportation stops are accessible.
	Suggested data sources: _Survey of older residentes

Comments	Accessibility of transportation stops in this context refers to the distance from the homes of older people to public transportation stops. If door-to-door services of public transportation are available, the proportion of housing within the coverage area of door-to-door services could be an alternative indicator. Additional indicators would be needed to take into consideration the safety and quality of the route to the transportation stop, the accessibility of transportation stops from important destinations (e.g. community centres, healthcare service, grocery stores, banks, etc.), the extent to which people's activities are actually limited due to lack of access to public transport, and other aspects.

ACCESSIBILITY OF THE PHYSICAL ENVIRONMENT

AFFORDABILITY OF HOUSING

Suggested definition	Proportion of older people who live in a household that spends less than 30 per cent of their equalized disposable income on housing.

Suggested data sources:	
_ Household census	
_ Administrative data from department of economic affairs or housing	
_ Public expenditure report	

Suggested definition using self-report data	Proportion of older people who report that housing in their neighbourhood is affordable.

Suggested data sources:	
_ Survey of older residentes	

Comments	Housing costs include renting costs, mortgage payment, and repair and maintenance costs. The threshold of 30 per cent of disposable household income is based on existing practice (see References below). Locally accepted thresholds for defining affordability can be applied.

URBANAGE FRAMEWORK FOR AGE-FRIENDLY CITIES

		DATA	USE
CITY INFORMATION	GENERAL GEO INFO	Topography	information of the difference of height among two points, when you calculate the distance to have the third vector is important for accesibility
		Access to services	Geolocation of services available and how to reach them
		Distances	
	PUBLIC SPACE	Parking reserved for people with disabilities	Will allow to give information to people with recognized special needs, living out from the city center of where are the reserved parking places in order to plan their access to city center and othes services.
		Traffic light with warning	In order to design the city tours for people with sight impairments
		Public spaces	To identify where they are for the design of healthy routes in the city
		Green public spaces	To identify where they are for the design of healthy routes in the city, specially in hot months, avoid hot islands
		Public toilets	To take into account for the design of any age friendly route in the city
		Urban furniture	To identify where it is, and if its adequate for all the citizens, characterization
		Accesibility	Accesibility plans, to design city tours for all (no specifically tourism)
CITIZEN INFORMATION	HEALTH	Health services	Primary care, kind of services in each, nursing homes,health info
		Teleasistance	where is the vulnerable older people living?under what conditions
	PUBLIC SERVICES	People >64 years with transport card	to locate where they live and the kind of travels they do. The kind of transportation means they use
		People >64 years with sports equipment card	to locate where they live and the sports equipment they use (distances, kind of equipment) The kind of services they require (swimming pool, gym)
		People >64 years with library card	To identify their social profile and the puclic services they use, or the ones they don´t
	PRIVATE SERVICES	People getting services from formal carers.	where is the vulnerable older people living?under what conditions
		Home delivery of food	where is the vulnerable older people living?under what conditions
		Home care service	where is the vulnerable older people living?under what conditions
		other home services (hairdresser, chiropodist)	where is the vulnerable older people living?under what conditions
	OTHER	driving license <64	to locate where people using cars over 64 years old are living
		circulation permit <64	to locate where people over 64 years old that have a vehicle in property live

Annex 7 - Questionnaire for the identification of the SWOT analysis

NAME: …………………………………………..
CHARGE: …………………………………..
CITY OF THE USE CASE: ………………………………………..
This questionnaire has been prepared to obtain information about the cities participating in the URBANAGE project to characterize them in relation to the domains of the age friendly cities, and also to describe the capacities of the city administration to plan and manage in order to achieve the age friendliness of their cities.
With the answers obtained, we intend to prepare a SWOT (Strengths, Weaknesses, Opportunities and Threats) of the city in this area; the SWOT will be completed and contrasted in the Workshop that will be held with different stakeholders from the cities where the use cases will be implemented.
…………………………………………………
QUESTIONS to identify STRENGTHS and WEAKNESSES.
If you answer "Yes" it means it is a strength of the city.
If you answer "No" it means it is a weakness of the city.
In either case, include a brief description explaining the option chosen
In case you consider it does not apply to your case select: "doesn't apply"

OUTDOOR ENVIRONMENTS
Neighbourhood walkability

1. Do you think that in your city is walkable in general? Is it walkable for all the citizens independently of their intrinsic capacities?
2. Does your city have an accessibility plan? Is it implemented?
3. Does your city´s accessibility plan consider all the different citizen profiles?
4. Does your city have accessible public toilets? are safe and well maintained?
5. Are your public paths well maintained, well enlightened, secure?
6. Are the different neighbourhoods of your city well connected to be able to walk from ones to the others?

Accessibility of public spaces and buildings

7. Are the public buildings in your city fully accessible? for all the citizens independently of their intrinsic capacities?
8. Are the public spaces in your city fully accessible? for all the citizens independently of their intrinsic capacities?
9. Do all the neighbourhoods in your city have accessible public spaces within X m. (this value will depend on the country, in Spain Salvador Rueda 300 m)
10. Do you have other urban pedestrian facilities at urban level (escalators, urban elevators, etc.)? which is the service availability?

Public safety

11. Do you pay a specific attention to the crimes committed against older people?
12. Do you think your city is safe? Do you think it's safe at night?
13. Do you have an idea or control over the number of people that has suffered falls or injuries in public spaces of the city?

TRANSPORT AND MOBILITY

Accessibility of public transportation stops

14. Is there enough proportion of public transport stops in the neighbourhoods of your city? (walking distance depending on the country)

15. Are the public transport stops accessible and safe?

16. Has the public transport services enough regularity?

Accessibility of priority vehicle parking

17. Are there priority vehicle parking lots close to the public buildings? Are they in enough proportion in relation with the people with a special parking permit?

18. Are these parking lots correctly maintained?

19. HOUSINGIs there availability in the city of affordable housing well located and within walking distance of a public transportation stop?

20. When licences for new housing are given is required that the houses are physically accessible? Is considered if the new houses can be adapted so that people can age at home if that is their desire?

21. Are there programmes at city level to support people that wants to improve the accessibility, safety and adaptability of their homes?

Other

22. Do you have a cycling infrastructure? Is it safe?

SOCIAL PARTICIPATION

23. The older people of your city, has the option to access participation activities? Are there public venues for community-based activities, libraries, places of worship, physical activity centres...? Are these buildings accessible (e.g. adapted washrooms, ramp to enter the building, adequate lightning, temperature control)? Are they walkable in within X m?

24. Are there at district level local cafes, convenience stores, access to fresh food, pharmacies? Are they accessible and walkable in within X m?

COMMUNICATION AND INFORMATION

25. Does the city offer access to fibre?

26. Are there programs at city level to foster the internet access and to inform older people about its use?

GOVERNANCE

27. Does it exist in your city any department with competences to make the city more age friendly?

28. Has the city already established means for public participation? And for the participation of older adults?

29. Is the city involved in projects that have to do with age-friendliness?

30. Is there an ecosystem in the city around age friendliness?

o Private companies that commercialize products or services for older people.

o Universities with specific departments or research groups with studies related to population ageing and its consequences at city level.

o Research centres or institutions working on the matter

* Please include those aspects of the city that have not been covered by the previous questions but can be considered as strengths or weaknesses of your city in relation with age friendliness.

QUESTIONS to identify <u>OPPORTUNITIES and THREATS</u>
Please explain why you consider it an opportunity or a threat.

1. Are the new technologies (such a as the disruptive technologies) an opportunity or a threat to achieve an age friendly city? In what sense? Explain please.
2. Do you consider that the existing funding opportunities at local , regional or national levels (such as Renovation Wave for Europe and more largely the Green Deal, funding programmes available to tackle energy poverty which increase the risk of poverty among people in vulnerable situations , EU Cohesion Policy Fund, EU initiative, policy and funding programmes on health given that age friendly environments are a key parameter to enhance healthy ageing...) are an opportunity or a threat in order to transform your city in an age friendly city?
3. Are the existing social and public policies an opportunity or they can be considered a threat in order to make your city age friendly?
4. In the current situation, in the COVID pandemic, do you see it as a threat or as an opportunity?
5. Do you consider that the current social perception of older adults at your city level, in your local context, can be an opportunity or it can be considered a threat?
6. Please include those aspects that have not been covered by the previous questions but can be considered as opportunities or threats of your city in relation with age friendliness.

Annex 8 - Results of the Deep Dive Session for the Use Case of Santander & Helsinki

Two breakdown sessions were launched, one for each city, and the attendees were distributed between the 2 groups, each of them worked on a jam board prepared for the activity:

<table>
<tr><td>

SANTANDER
- Coordinator: Silvia Urra
- Facilitator: Marine Luc
- City attendees:
  - Juan Echevarría
  - Celia Gilsanz
- Project attendees:
  - Patricia Molina
  - Mathias Maes

</td><td>

HELSINKI
- Coordinator: Nhu Tram
- Facilitator: Juanita Devis
- City attendees:
  - Ville Nousiainen
  - Tiina Inki
- Project attendees:
  - Sofie De Lancker
  - Anissa All
  - Ben Robaeyst

</td></tr>
</table>

In this breakdown rooms the next steps have been followed:
- Analysis of the **SWOT** developed based on the questionnaire. In this slot the strengths, weaknesses, opportunities and threats of the city regarding age friendliness identified by the cities were explained and discussed with the attendees of the group:
  - SANTANDER: the explained SWOT analysis was agreed by everyone. There was a correction in the weaknesses part where it was not identified the existence of a specific department in charge of the leisure of older people and that part was removed and moved to the strengths.

Strengths

- **Walkability and accessibility** : the city is walkable and accessible. A lot of effort has been done to overcome the barriers due to the hilly orography , it´s developing the 3rd accessibility plan and has specific plans for accessible tourism and accessible beaches. The city has public accessible toilets and the street lighting has been recently renewed. Pedestrian connectivity among neighbourhoods is good.
- **Public spaces and buildings** : regulated by law accessibility of public buildings and spaces is guaranteed, in those cases where the orography means a barrier escalators , ramps and lifts have been installed.
- **Safety**: older people´s safety has been studied and the city is one of the safest in Spain.
- **Transport and mobility**: the public bus transportation was renewed and the focus was put in those neighbours that are far from the city centre. The stops are accessible and safe and studied have been done to ensure the regularity of the service. Priority parking complied with the law.
- **Housing**: existing public entity to guarantee affordable housing, and existing tools to guarantee accessibility in new and retrofitted buildings. Funding for solving accessibility issues at building scale (lifts)
- **Social participation**: several accessible civic centres with several activities for older people guarantying the access and use of them. In a natural way there are convenience stores , local coffees and pharmacies.
- **Communication and information**: many companies offer fibre at home. There are programs at city level to foster the acquisition of digital skills by the older population.
- **Governance**: at city level there are departm_____ public health and special needs and mainly they are the _____is. Santander has experience in public consultation , fac_____ telephone of email. They are involved in different funded_____ EC and eCare aligned with healthy ageing. At city leve_____ stakeholder working around ageing, from private sector ,

Department in charge of leisure of people. Finca altamira. Mayores

Weaknesses

- **Orography:** its hilly orography sometimes makes difficult to guarantee accessibility
- **Citizen profile**: the citizen with mobility issues the one in the focus of most of the plans.
- **Safety**: No idea or control over the number of people that has suffered falls or injuries in public spaces of the city.
- **Housing** : no specific focus in homes for all life course. The funding for accessibility issues is at building level, not at dwelling level.
- **Communication and information**: private companies offer access to fibre at home
- **Governance**: at city level there are departments in charge on public health and special needs and mainly they are the ones involved in this , but age friendliness is not just a social of health issue , it has to be a city plan.

Opportunities

- **New technologies** well applied and finding the way and the right moment to introduce them.
- **Existing funding opportunities** are always positive
- **Existing social and public policies** in the case of Santander are an opportunity to move forward achieving an Age friendly city.
- **COVID pandemic:** the pandemic has pushed all of us to the online/remote paradigm. The knowledge and lesson learned are really unvaluable.

Threats

- **New technologies** if are not applied properly, older adults can fall in the technology gap not only missing the opportunity but being excluded from their benefits.
- **Current social perception of older adults** frightens the society. We are aware that we are ageing, that we need more support and that the family structure has changed from the past situation.

o   HELSINKI: the SWOT analysis was agreed by everyone.

Strengths

- **Walkability and accessibility** : the city is walkable and accessible with few exceptions, and since 2005 there is an accessibility plan in place transversal to all city departments and takes into account different citizen profiles. The city has public accessible toilets. The city is very pedestrian friendly.
- **Public buildings** : By 2011 the city is mostly accessible for all.
- **Safety:** the city is in general very safe.
- **Transport and mobility:** Public transportation works very well and the network is vast and the fleet is big enough. Priority parking in most parking areas near public buildings. The city's cycling infrastructure is under construction.
- **Housing:** different organisations (public and third sector) provide affordable housing, it's included in the town planning processes to spread the affordable housing throughout the city. Accessibility is taken into account to give permissions for new apartments.
- **Social participation:** there are a lot of different activities (third sector, public , private). Food stores and pharmacies are also spread throughout the city.
- **Communication and information:** many companies offer fibre at home. There are programs at city level to foster the acquisition of digital skills by the older population.
- **Governance:.** Helsinki has participatory budgeting included in city decision making. At city level there are several stakeholder working around ageing, from private sector, and the universities have specific departments researching aspects involving ageing population.

Weaknesses

- **Accessibility:** there are public toilets but depending on the district they are not safe or well maintained. Some roads/paths do not have winter maintenance (it´s informed).
- **Public spaces:** some areas have topographical elements that hinder access to some people. Some places and parks have stairs or other barriers. It does not have urban pedestrian facilities.
- **Safety:** no specific attention to the crimes committed against older people and no idea or control over the number of people that has suffered falls or injuries in public spaces of the city.
- **Transport and mobility:** no information about safety and accessibility of the public transport stops. The city's cycling infrastructure is under construction.
- **Housing** : no specific focus in homes for all life course.
- **Communication and information:** private companies offer access to fibre at home
- **Governance:** at city level there is not specific department with competences to make the city more age friendly.

Opportunities

- **New technologies** can help to take into consideration accessibility in the city
- **Existing funding opportunities** at EU level can finance projects on the city and governmental level
- **Existing social and public policies** are one of the most efficient way to affect the city environment and its activities.

Threats

- **COVID pandemic:** as older people is a vulnerable group interaction with them is risky. Confinement has had an effect as well in general wellbeing.

- After this analysis some questions were launched to the city representatives in order to contrast the adequacy of the use case:

Santander:
- o is the proposed **use case** replying to the citizens needs regarding age friendliness (always related to urban planning)?
  - In the case of Santander orography is an issue in the city that must be solved.
  - Most of the problems have been addressed already by the city with the installation of different solutions (escalators, urban lifts, ramps) but some elements out of the scope of the city administration are not.
  - The use case will reply to the needs of the citizens since it will work also in the availability of the infrastructure.

- o Are we **filling in a gap or a weakness** with what will be developed in the use case?
    - Yes, several weaknesses will be addressed
    - Yes, the need to be informed about the infrastructure (is it working, which ones can I use?)
    - How get the information to the older adults (radio? flyers? other?)?
    - To find solutions to the non-inclusion of some groups, difficulty to reach them.
    - yes, the use case aims not just to ensure the physical accessibility but also to ensure that the inputs of the older people regarding how they use the facilitating systems
- o What **opportunities** can **push the use case**?
    - New technologies
    - New Urban Plan
    - Receptiveness of public servants in Santander due to the situation of new urban plan
    - New maintenance contract of the existing accessibility infrastructures like urban lifts with data gathering (provides data to municipality)
- o What can be a **threat** for it?
    - Sometimes the political use of the public initiatives, which can result on the non-participation of the people in the processes or the participation of people just wanting to disturb it.
    - Collection of the opinion of all the people
- o Is there any aspect of the **use case** we have not considered but that after the analysis of the SWOT we should **complete/add**?
    - It should be thought how to link with private sector that could help the public sector

Helsinki:

- o is the proposed **use case** replying to the citizens needs regarding age friendliness (always related to urban planning)?
    - need of more information about how ageing people is interacting with the urban space and mobility (e.g. in paper good accessibility, in practice people don't use buses), to validate the use-case
    - Mobility should be related to other aspects (library, supermarkets)
    - Need to check current city knowledge of the City about ageing people
- o Are we **filling in a gap or a weakness** with what will be developed in the use case?
    - Not sure, city is also looking for information on how to shape mobility use case in a broader context
- o What **opportunities** can **push the use case**?
    - Loneliness of ageing people is an issue (investigate more)
    - Defining problems regarding accessibility (at the level of the older citizen him/herself)
    - in paper good accessibility, in practice people don't use buses, need to investigate the why.
    - Check with local organisations if they have reports on barriers, challenges older people face
- o What can be a **threat** for it?
    - Finding the right officials from city, holiday season, no time to wait for co-creation workshops

- there any aspect of the **use case** we have not considered but that after the analysis of the SWOT we should **complete/add**?

It was identified that more information was needed for shaping the use case:

Try to find out for follow up to shape more the use case

- Which facilities exist for older people?
- Which facilities do older people use? Daily patterns?
- Statistics of public services used by older citizens
- Statistic information or literature about usage of spaces by older people
- Issues reported by older people in the area (existing reports, quantitatively & qualitatively)
- Activities and proximity to friends & family in the neighbourhood
- Usage of public transport by older people
- Consider the diversity of older people (different age group, gender, socio-eco)

Which are the questions we should ask to the target groups in the cocreation workshops?

Santander: some questions appeared focused in the perception of the older people, and the way they use the existing infrastructure and their perception of distance and safety

- What are the good channels to reach older people?
- Do you use the lifts/ramps/escalators? why yes, why not?
- Perception of the distance e.g. if you live here, would you go to this specific park?
  - What is the urban element that can influence the perception of distance?
  - What are the mental limits to go to a place?
- Influence of the new mobility transports in the city (electronic scooter, bike for delivery) and the influence they have in the sense of safety for the older people.

Helsinki: the question suggested were very vague since the use case needs more definition.

- Go deeper into issues in the city regarding accessibility
- What works well on paper vs reality?

SHARING THE RESULTS OF THE ANALYSIS

The last part of the session was dedicated to share the result of each of the breakdown sessions with the other city.

Santander:

The use case is aligned with the already existing initiatives at city level to solve accessibility issues at urban scale. With the use case Santander intends to go further being able to get and share information and to learn about:

- the availability and actual state of the infrastructure,
- real time data of the current use of the infrastructure
- Knowledge about how older people use the facilitating systems
- Knowledge about how to reach older adults and other groups of people sometimes non included.
- How to share the information with them, how to inform them about the different incidences that can occur in the infrastructure so that they can take other solution.

They consider it´s a good moment since the new urban plan is under discussion and the public servants are committed with the improvement of the city planning and the accessibility. And besides, they have included data gathering in the new maintenance contracts for the urban lifts.

They consider that they must analyse how to link with private sector in order to achieve their goals.

The neighbourhoods they have proposed are also being engaged in other projects and this part can be complementary.

Some questions for the cocreation have been proposed but further work is needed to ensure that the questions that are planned are really going to enrich the use case.

Helsinki:

In the case of Helsinki, the use case is not so defined and there is a lack of knowledge about the actual issues older people may face in the proposed neighbourhood, so further analysis for this is requested , and in one month another specific meeting with Helsinki will be held in order to define the use case. Anyway, it's clear that mobility is in the focus of the city.

Some interesting things appeared, that can help in the definition of the use case, such as the loneliness of older people (is an issue that should be further investigated) and the need of definition of problems regarding accessibility (at the level of the senior citizen) and the need to check which are in general the barriers the older people faces.

The session has resulted interesting and has made all of us aware of what the use cases should be focusing on.

The session finished on time.

Annex 9 – Tailor-made approach in Flanders

Phase 1: Flemish use case refinement

The original two use cases as defined in the project proposal were taken as a starting point for Flanders, but were further refined via a bottom-up, collaborative session with different potential stakeholders. An invitation was sent to the 13 Flemish center cities and the Flemish Elderly Council to participate in an interactive session on the 24th of June 2021. Eventually, the Flemish Elderly Council and 3 cities and municipalities (representing different sizes and geographic areas) chose to actively participate in the session: Ghent, Roeselare and Turnhout. Each attendee was represented by a domain expert with expertise in the domains of care, older adults, accessibility or urban planning.

In preparation for the session, 12 scenarios were identified by the project team, mapping onto the existing two use cases. A scenario was defined as a 'potential specific implementation of a use case'. The 12 scenarios could be divided into 5 overarching themes:
1. Health & wellbeing
2. Physical accessibility
3. Social experience
4. Housing
5. Mobility

For each scenario, the project team developed a description of what it was (goal), how this could be achieved (which variables or elements go into delivering this scenario) and a few possible examples of implementations/uses for this scenario. Below, one can find the original scenario for 'heat stress' as presented during the workshop:

What: Identify shaded areas and heat islands in urban and rural settings (incl. shaded resting places and walking routes)

How: Based on the already-present greenery, street furniture (benches), pedestrian sidewalks (width, height, ...), one can identify green, accessible and shaded neighborhoods, squares and streets in Flanders. AI can be applied to improve the score and to integrate the subjective, real-life perceived score by (older adult) users.

Example 1: Calculate the experience score (for square, street, ...) by matching information on trees, building heights, shadow, street furniture (e.g. benches with handrails), sidewalks (e.g. space for wheelchairs), surface (hardened), ...

Example 2: Determine those zones most in need of renovation based on the population density of older adults (as derived from aggregated personal data from the MAGDA platform of the Flemish government).

During the session, the 12 scenarios were briefly presented to the attendees, who were asked to provide feedback or ask questions when needed. After, they were invited to add additional scenarios to the original list. One more scenario (focused on the themes 'social experience' and 'housing') was proposed and added to the list.

Consequently, each attendee (with the exception of the moderators/facilitators) were given 4 votes to distribute among the 13 scenarios. This dot voting led to a clear preference for 3 scenarios among all participants (presented in order of preference):

4. Availability and accessibility of (care) services
5. Heat stress & heat islands
6. Mobiscore for older adults

The three selected scenarios were then further discussed by the attendees, and refinements were made along 3 dimensions:

1. *General questions & remarks*: elements to consider when further advancing the scenario
2. *Details*: additional levels of detail giving more body and depth to the scenario
3. *Missing elements*: elements that are currently missing that need to be added in a further iteration

This input was then used to refine the scenarios, identify data needs and develop the personas.

Phase 2: Scenario refinement, data needs & persona

As a next step, the outcome from the interactive session was used by the project team to:

1. Refine the scenarios: create a more detailed scenario (use case implementation) taking into account the elements that were considered lacking or requiring more detail.
2. Data needs: a first draft of the types of data considered necessary to realize the scenario. To this end, a meeting was scheduled with OSLO (Open Standards for Linked Governments), an initiative by the Flemish government to stimulate the exchange of information by creating an open semantic information standard for governmental data. Based on their input, a preliminary list of currently available (relevant) data could be made.
3. Persona: for each scenario, two personas were developed: one for older adults, and one for civil servants. A persona can be defined as a fictitious and archetypical user whose goals and needs reflect those of a larger group of users and will help with formulating the right questions. The personas reflect which need(s) will be addressed in each scenario and per type of end user, but also address why this need is relevant and how the solution can help solve it. Below, one can find the persona as defined for the 'heat stress' scenario:
   a. *Older adult*: My name is Jeff, and I'm 72 years old. I'm a member of the neighborhood committee. You can always find me at all kinds of neighborhood events, where I participate as a volunteer. Nowadays, summers tend to be too hot for me, and participating in events becomes harder for that reason. I would therefore really like to know where it's cool and comfortable to sit, so that I can take a breather when needed.

b. _Civil servant_: Hi, I'm Nathalie. I work for the Urban Planning department, where we're currently investigating how to best redesign a certain neighborhood. The neighborhood is characterized by many older adults living in apartments, so we want to make sure that these people can find cool outdoor places during the hot summer months. The department is working hard on mapping which streets and squares would benefit most from infrastructural interventions, but this is hard work: we need to take many different factors into account (from accessibility over temperatures, reachability, buildings & greenery, infrastructure, ...).

These insights were added to a report, which was shared with the original attendees and other cities and municipalities who had previously indicated interest in the project. As a result, one additional city (Leuven) asked to take a more active role in the next steps.

After internal deliberation, and based on both the feedback from different stakeholders and data availability, it was decided to advance the Flemish use cases based on the following two implementation scenarios:
- Heat stress
- Availability and accessibility of (care) services

Phase 3: persona validation, variable definition and data source identification
At the end of August 2021, a follow-up session will be held with the interested stakeholders (cities, municipalities, Flemish Elderly Council, ...). The different cities and municipalities will be asked to be represented by both a domain expert and a data expert to ensure cross-departmental expertise. Additionally, they will be asked to prepare a list of (available) local and relevant data sets related to the use cases in preparation for the session.

The eventual goals of this session will be to:
1. Validate some assumptions made when creating the personas (especially concerning the needs of civil servants);
2. Validate the key variables needed for realizing each scenario (i.e. what types of information will be required);
3. Identify the specific data sources or data sets that can be used per city and per scenario.

Finally, the session will also allow the attendees to advance some additional questions they may have or want to see answered with respect to older adults and the specific scenarios.

Phase 4: co-creation sessions
Eventually, the information gathered throughout these preparatory sessions with the cities and the Flemish Elderly Council should provide some clear guidelines on both the use case (what need will be addressed throughout the project) and the questions that need to be asked to the end users (civil servants and older adults). Moreover, this approach will stimulate the different stakeholders (who, as a whole, represent the

region Flanders) to be engaged in the project, and gives them room to formulate their own ideas and questions with respect to the proposed solution and its users.