



D6.1: Intermediate report on implementation of behavioural change, with a focus on active and healthy modes

Version 2.3

Disclaimer

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D6.1: Intermediate report on implementation of behavioural change, with a focus on active and healthy modes

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List of acronyms

Acronym	Meaning
CMS	Content Management System
CRM	Customer Relationship Management
CRTM	Consortio Regional de Transportes de Madrid
EC	European Commission
FUA	Functional Urban Area
MAL Agreement	Land Use, Transport, and Housing Agreement
MVP	Minimum Viable Product
TEN-T	Trans-European Transport Network
WP	Work Package

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1. Executive summary

Each of the three SCALE-UP urban nodes – Antwerp (BE), Madrid (ES), and Turku (FI) – implement several measures that have behavioural change as a key component. These measures are clustered into WP6: Behavioural change, with a focus on active and healthy modes. The current report presents the status of the implementation of the WP6 measures. It offers a description of the current status concerning the implementation of the behavioural change measures in each of the three urban nodes, focusing on the context, status, risks identified and corrective actions, preliminary results, and next steps.

The measures that the three urban nodes are focusing on in order to drive behaviour change towards sustainable modes cluster around a number of common topics:

- Data collection and digital tools for targeted behavioural change approaches;
- Mobility management around events and using events as a catalyst for behavioural change;
- Mobility under specific conditions (seasonal specificities: winter, rainy weather, etc.) and local branding strategies and communication campaigns.

Beyond the operational level of measure implementation, the three urban nodes are engaged into mutual knowledge exchanges to learn from each other's experiences. An active thematic cooperation dialogue exists to exchange knowledge and build up capacity around the behavioural change actions and tools, with a specific focus on active and healthy mobility. As a result of thematic cooperation and peer-learning activities, several common challenges were identified that will be addressed in future exchanges and capacity building activities:

- Measuring the impact of behavioural change measures – effective methods to assess the impact of the incentives/nudges tested;
- Data collection and privacy issues in relation with digital tools;
- Governance and integration across departments and administrative levels;
- Lack of capacity or expertise within public administrations on aspects pertaining specifically to transport behaviour and psychology;
- Specific nudging and incentivisation mechanisms to drive behaviour change.





2. Introduction

As part of SCALE-UP, three advanced urban nodes – Antwerp (BE), Madrid (ES), and Turku (FI) – team up around one main goal: developing data-driven and user-centric strategies to accelerate the take-up of smart, clean, and inclusive mobility, by means of well-connected and multi-usage urban nodes, and to the level needed to meet EU climate and transport objectives. Changing travel behaviour and focussing on clean, active, and healthy modes of transport is one of the strategic objectives put in place in order to reach the main goal.

Each of the three urban nodes implement several measures that have behavioural change as a key component. These measures are clustered into WP6: Behavioural change, with a focus on active and healthy modes. The objectives of the work package include:

- Understand and gain insights into (travel) behaviour and user needs through data analytics and business intelligence; these insights are the foundation for planning mobility measures (incl. infrastructure);
- Raising awareness, with a focus on clean, active, or multimodal travel;
- Implementation of incentive mechanisms to understand and change travel behaviour;
- Nudging travel behaviour based on user insights/feedback, with a special focus on major events.

2.1. Content & aim of the deliverable

The current deliverable offers a description of the current status concerning the implementation of the behavioural change measures in each of the three urban nodes, focusing on the context, status, risks identified and corrective actions, preliminary results, and next steps.

The measures implemented as part of WP6 include:

- A9: Nudging and incentivising sustainable travel
- A10: Active travel campaigns and events as a catalyst for sustainable travel
- M8: Nudging multimodality at regional level
- T8: Incentivization of mobility services in Turku
- T9: Mobility guidance in connection with events and exceptional circumstances





- T10: Winter as a mobility season.

2.2. Relation to other work packages & project activities

SCALE-UP is engaged in demonstrating and evaluating a combination of 28 technical and non-technical innovative, clean, smart, and inclusive mobility measures to be implemented within the three urban nodes under real life conditions. These measures were clustered into five fields of intervention, mapped within the SCALE-UP concept, where most drivers and barriers for a transition towards clean, smart, and inclusive transport are found. The five fields of intervention are GOVERNANCE (looking at multi-level and multi-stakeholder governance), MULTIMODALITY (focusing on multimodal transport networks for passengers and freight), DATA (considering data-driven strategies and tools), CLEAN-SAFE-INCLUSIVE (looking at mobility measures that drive the transition towards clean, safe, and inclusive mobility), and BEHAVIOUR (collect insights, understand, and incentivise/nudge the end-user to realise a behavioural change towards sustainable modes, with a focus on active modes). The implementation of the 28 measures is managed in WPs 2-6, each dedicated to one field of intervention, and there are clear interrelations between them.

Beyond the operational level of measure implementation, SCALE-UP focuses on the strategies to achieve their upscaling beyond the urban level and in an interconnected mobility ecosystem. The SCALE-UP concept relates to two ways of scaling up: vertical upscaling refers to integrating the mobility and transport strategies on multiple governance levels and beyond geographical boundaries (city, functional urban area, TEN-T) through collaboration with all stakeholders; horizontal upscaling refers to addressing, in a balanced way, the different layers that shape the mobility system that we see today, being a physical or infrastructural layer, a digital layer, and the human layer referring to the central position of the end-user. To function as a data-driven urban node, all three layers need to be addressed in a balanced way. The work on horizontal and vertical upscaling constitutes WP1 and there is a continuous dialogue and exchange between the implementation work packages (WPs 2-6) and WP1.

Similarly, WP7 is dedicated to evaluation and monitoring, by developing and implementing a layered evaluation framework on the measure level, level of the





functional urban area, and strategies for integration (TEN-T, multi-layered mobility system). It aims to deliver both impact and process evaluation results, to understand what strategies and measures are effective to become well-connected and multi-usage urban nodes, to the level needed to meet climate targets and European transport policy objectives. As a consequence, there is a continuous exchange between the implementation work packages (WPs 2-6) and WP7.

WP8, dedicated to knowledge exchange and take-up, organises mutual learning and capacity building amongst the SCALE-UP urban nodes, in close consultation with WP and Task leaders. WP8 exploits the results of thematic cooperation under each of the implementation WPs, including WP6, to organise thematic knowledge exchange webinars in relation with the five areas of intervention, as well as study visits and cities' session next to the project meeting in each of the three cities. Moreover, capacity building webinars are organised in order to answer the needs identified and to support the three urban nodes in the implementation of the measures, as well as in the vertical and horizontal upscaling.

2.3. Thematic cooperation

Beyond measure implementation, the three urban nodes are engaged into mutual knowledge exchanges to learn from each other's experiences. Under WP6, an active thematic cooperation dialogue exists to exchange knowledge and build up capacity around the behavioural change actions and tools, with a specific focus on active and healthy mobility.

The three urban nodes all acknowledge the importance of a user-centric approach, and changing perceptions and travel behaviour towards more sustainable travel. Common interests and topics that need to be addressed are identified on an ongoing basis as part of the thematic cooperation activities, and knowledge exchange or capacity building events – bringing together expertise from across the consortium, the members of the Advisory Boards, or from external experts and projects – are organised to answer these needs as part of the Community of Practice activities developed in WP7. These exchanges feedback into the measures by means of new insights, expertise, best practices.





3. Context & status of the interventions

3.1. A9 – Nudging and incentivising sustainable travel

3.1.1. Context

To incentivize the use of smart mobility solutions, the city of Antwerp has been launching and testing different incentive and rewarding schemes in the city, such as the bike discount, discounts for students, MaaS test offer for companies, etc. However, this process is not yet automated and the right back-office is missing to organise this in an efficient and streamlined way. This leaves opportunities to work together with mobility providers and MaaS providers to reward end users. A central identity manager for the mobility profiles of end users, linking to a platform or back-office for incentives, allows a more targeted and personalised approach towards end users, a systematic follow up of compliance for the incentives criteria and the collection of (tracking) data from the end users. Furthermore, this gives more possibilities for evaluation and follow-up.

3.1.2. Status

The development of the back-office for incentives is still ongoing. Originally, the back-office was conceived as a tool focused on mobility incentives. At the beginning of the development phase, it became clear there was a wider interest by other departments within the city to start using an incentives platform. Since this would increase the usability of the components build, meetings were organised with different departments to see how current and future developments could be aligned and integrated. The various projects that needed to be aligned were:

- REFO: a tool to manage all types of support measures (subsidies, incentives, funding). This tool focuses on the rules linked to support measures and is linked with policy goals and decisions by the city council.
- WCM: the content management system that is behind the various websites of the City of Antwerp. This system makes sure the content that is shown to citizens is correctly linked and maintained.
- Forms Engine: a component that is used across the city in various applications that controls the creation, publication, and management of forms.





- Fenix: the tool that is currently used to manage some of the approval flows of support measures. This tool is end-of-life and therefore was not suitable for new development. It is still unclear which tool will replace the Fenix application.
- A-profile: the A-profile is a user profile used across applications of the city. This can also be linked with itsme®, an authentication service used by Flemish Government, Belgian Federal Government, and private players. The A-profile is used to identify the citizens who want to receive an incentive.

Due to the added complexity of the various tools, a lot of time was spent on aligning the teams, the technology, and the definitions. Although there was a willingness of all stakeholders involved to take the integrations further, it was decided after long discussions to keep the integrations as lightweight as possible to ensure that development for all parties on all applications could continue in a lean way.

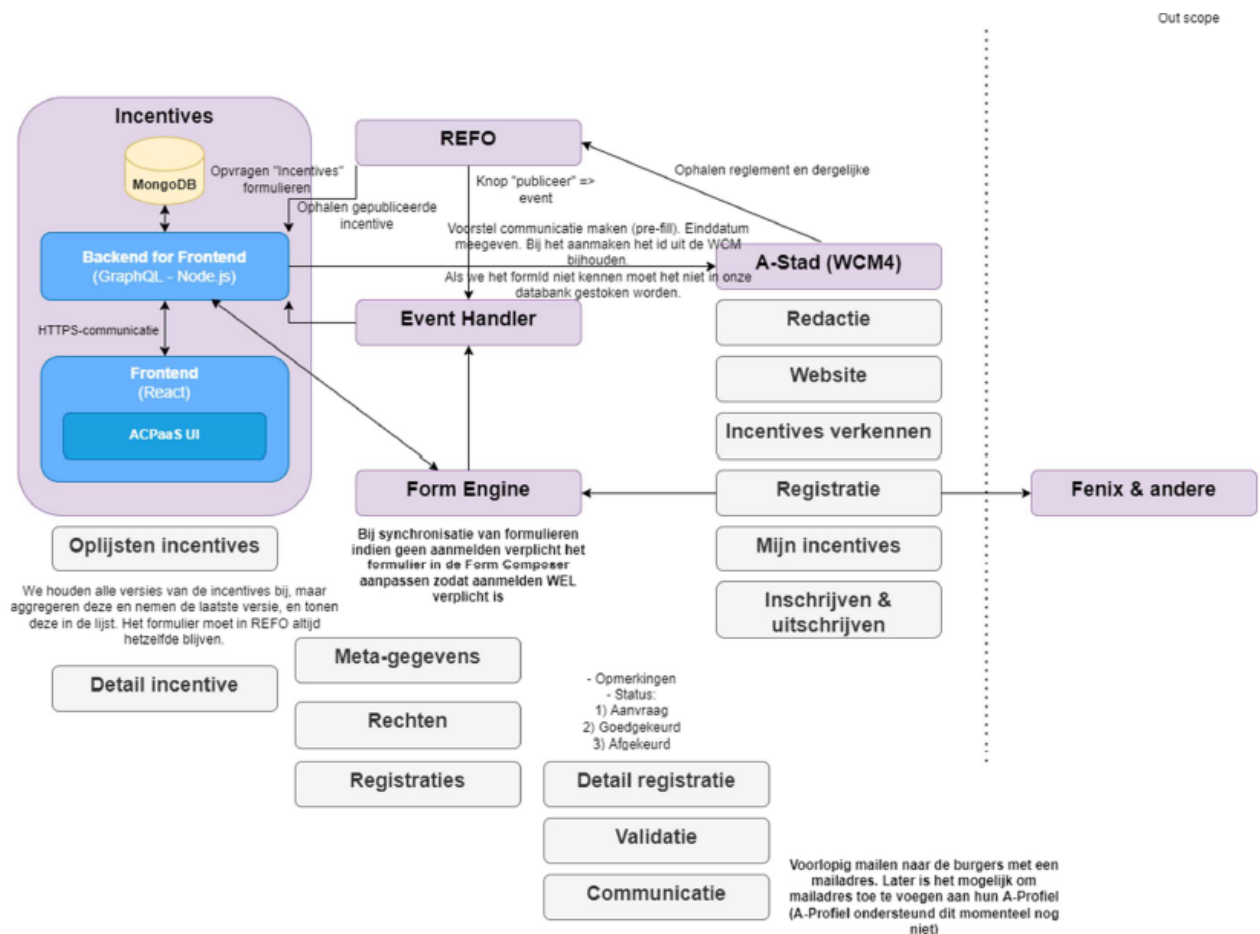


Figure 1: Integration of the various digital platforms used by the city of Antwerp





Due to the extra time that was needed to align the scope of the various projects, there was a delay and resources needed to be shifted both on the developers' side as well as internally. Due to these reasons and other things that needed to be prioritised, the development of the back-office was slow between August 2022 and September 2022.

3.1.3. Risks found and corrective actions performed

The development of a back-office for incentives depends on a number of stakeholders and innovations. The following risks were found, where corrective actions were performed:

- The original idea was to use a decentralised mobility profile based on SOLID-technology giving the user complete control over their data and where they want to store it. This is based on the Flemish initiative of “datakluzen” (data pods). This is a very new technology which is still being developed by Flanders and others involved in SOLID.¹ To avoid that the development of this new technology would block the development of the back-office, we opted to use the A-profile. This profile can easily be extended or upgraded making it capable of using the data pods defined within SOLID.
- Full integration with the various systems already available within the city was deemed too complex. To make sure a workable first Minimum Viable Product (MVP) can be launched, some integrations will be postponed. Publication of the incentives on the city of Antwerp website has been postponed since an update of the CMS of the city website is under development.
- By focussing on mobility incentives, there was the risk that the functionality and usability of the tool would be too little. The scope for the types of incentives that can be given has therefore been extended. The focus is now a platform for small incentives city wide (technically). The first implementations, however, will still be mobility focused.

¹ SOLID is a specification that lets people store their data securely in decentralized data stores called Pods. Pods are like secure personal web servers for data. When data is stored in someone's Pod, they control which people and applications can access it. For more information: <https://solidproject.org/>.





3.1.4. Preliminary results

Currently there is a front-end for citizens which shows the various incentives that are available to them. They can find all the information related to the incentives and a link to the registration page for each incentive. In further development, they'll also be able to see for which incentives they registered for and what their status is.

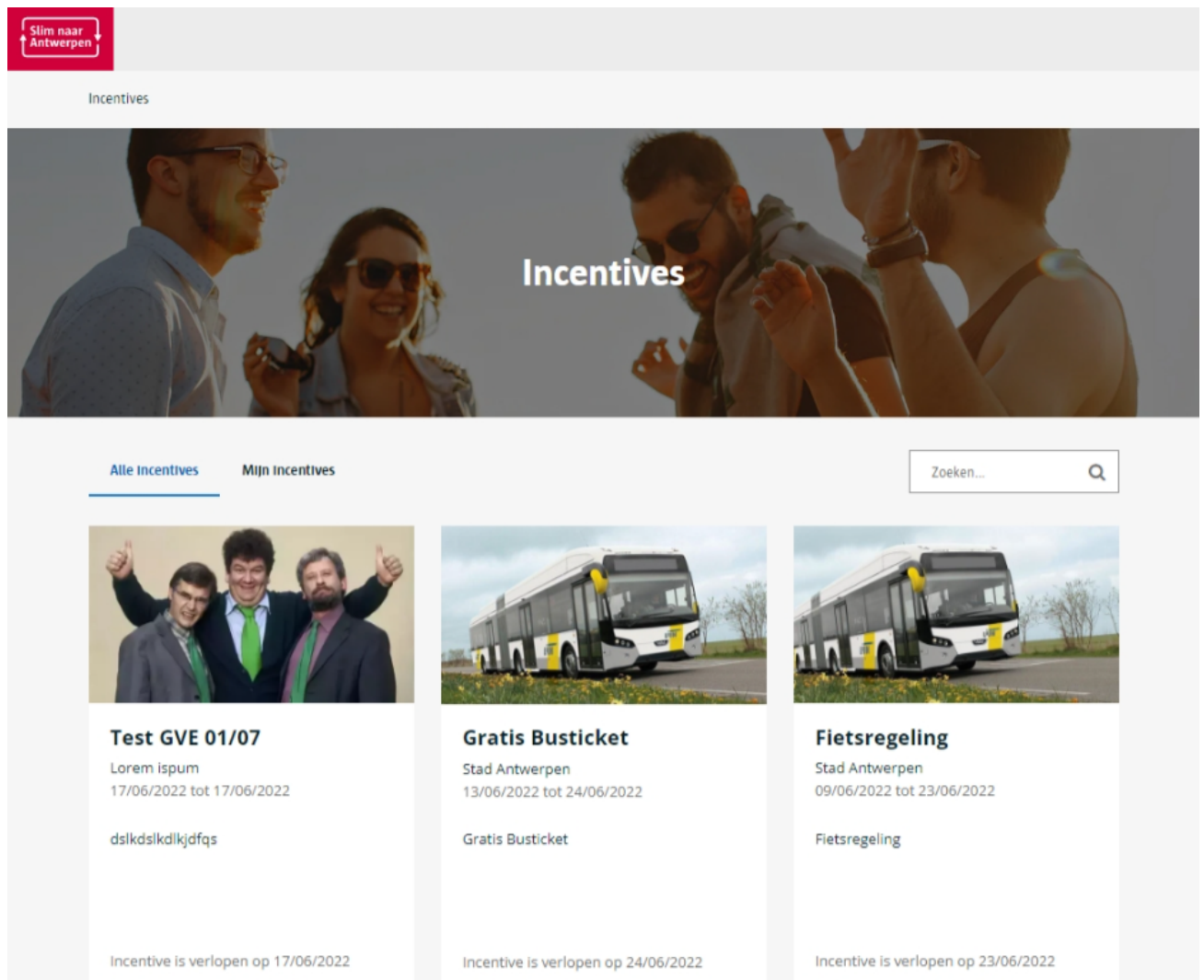


Figure 2: Smart Ways to Antwerp – Incentives interface

A back-office is available in which incentives can be created, managed and all the necessary actions can be taken to control the incentive and manage registrations.





Incentives

Zoeken...



Filters

Naam	Aangemaakt op	Aanbieder	Looptijd	Aangemaakt door	Versie	Laatste aanpassing
Kopie van Voorbeeld_A-Stad_20211005e	14/10/2022 15:14	district Deurne	/	ex04490	2	14/10/2022 15:14
Test GVE 14/06	14/06/2022 13:12	/	/	ex03474	1	14/06/2022 13:13
Gratis Busticket	10/06/2022 16:03	/	/	ex03474	1	10/06/2022 16:03
Fietsregeling	09/06/2022 17:45	/	/	ex03474	1	09/06/2022 17:45
Test sjabloon	25/04/2022 14:55	stad Antwerpen	/	d740544	1	25/04/2022 15:03
Districtsfonds: beleef je buurt! Straatfeest AANPASSING PRC	09/12/2021 20:17	district Antwerpen	/	sa59444	1	09/12/2021 20:17
Speelstraten 2.0 of 3.0 (test)	17/11/2021 09:56	district Antwerpen	/	sx00335	1	17/11/2021 09:56
Districtsfonds: beleef je buurt! Speelstraten	06/09/2021 14:27	district Antwerpen	/	sx00335	1	13/09/2021 16:22

Feedback

Figure 3: Smart Ways to Antwerp – Personal incentives inventory and status

3.1.5. Next steps

The first step will be to accelerate the development of the platform again to make sure an MVP (Minimal Viable Product) is available for implementation of the first incentives. Once a new timeline for the development is available, the other partners in the project will be involved to see which incentives can be setup to be offered to citizens through the platform and which development/integrations are required to make this possible.

On 20 October 2022, an inter-federal vision on MaaS was released. In this vision portability of user information and mobility products is also key. Further actions will be taken to make sure this is made more concrete and also refers to incentives provided by third parties.





3.2. A10 – Active travel campaigns and events as a catalyst for sustainable travel

3.2.1. Context

After COVID-19 still had a big impact in 2021, 2022 was a very busy summer in Antwerp, with multiple bigger events each weekend that needed communication and incentives. The city of Antwerp made an exceptional communication effort for all the large events and even supported some smaller events.

3.2.2. Status

The city of Antwerp launched communication and incentives in regard to several active travel campaigns and active travel towards events in the last 18 months. Implementing new and innovative ideas and actions takes time and all stakeholders need to be informed ahead of time. Therefore, the city of Antwerp discussed with other departments which large events for 2022 were most interesting to try out completely new things. For four events, the city has been able to work more closely with the organizers and tested various innovating incentives and rewards:

- **Night of the museum** (event, August 2022): free velo (shared bicycle) pass for 24 hours, very popular with 1,127 free day passes given out.
- **Antwerp Marathon** (event, September 2022): special spectator's routes for biking and walking, very popular with 3,490 page views.
- **Antwerpen Shift** (event, September 2022): free drink and goodie bag when having over 10,000 steps; not popular, with 22 people coming to collect, but also due to bad weather.
- **Studay** (event, September 2022): discounts on smart mobility through campaign + sustainable mobility village and bike repair shop at the event, results are not in yet.





Figure 4: Incentives and campaigns promoting sustainable mobility in relation to events in Antwerp 1

- Left – bike route during the Antwerp Marathon for spectators (event, September 2022)
- Middle – online image of the student discount (active travel campaign, September 2022)
 - Right – promotion for the bike repair shop at Studay (event, April 2022)

The city held a large workshop in March 2022 with 7 colleagues from different departments of the city administration: mobility, events, marketing, culture and sports. Following the workshop, there have been several internal meetings with colleagues from those departments to look into promoting active travel towards events. Some of the conclusions of the workshop and extra meetings are:

- Highly promote bicycle transportation and make extra content to support it + promote routes to events and during events.
- Look into reusable signalisation: use the digital bike counters and digital road signage more for events.
- Promote the Smart ways to Antwerp app during events.
- It is expensive to higher the quality of bike parking facilities during events, but the city will look into alternatives.

There were larger follow-up meetings for specific events in April, May, August, and September 2022 for the Marathon (event, September 2022) and Scheldecross (event, December 2022).



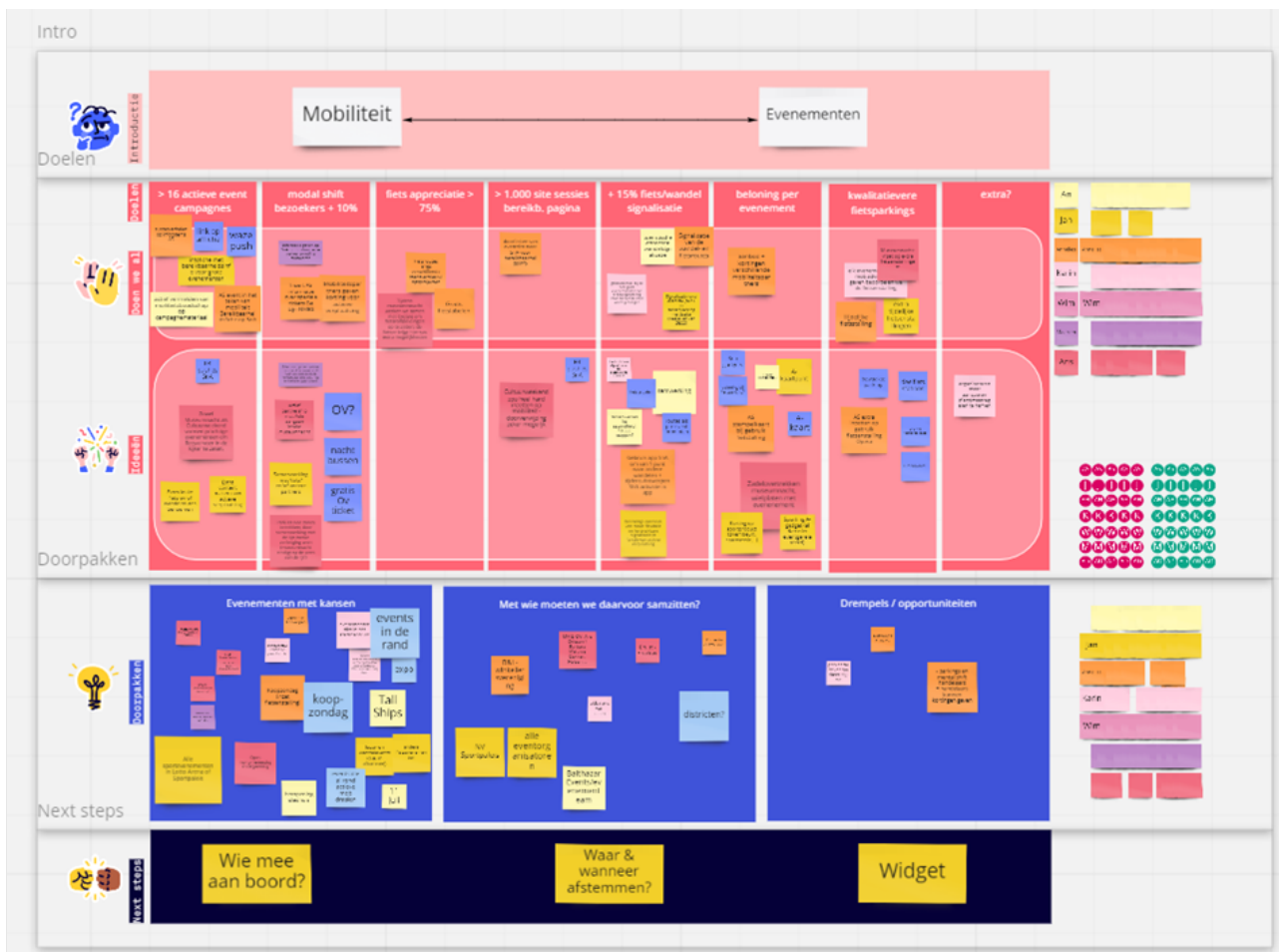


Figure 5: Antwerp – Brainstorming board on promoting sustainable mobility for events

3.2.3. Risks found and corrective actions performed

Not every department in the city of Antwerp operates along the same timeline when working on events and the team of Smart Ways to Antwerp is not always involved at the right time. It's important to be involved at the beginning of the project, to explain the need for sustainable mobility and certain actions as well as discuss certain frameworks and rules (e.g., bicycle parking facilities). Implementing new and innovative ideas and actions proves to take time and all stakeholders need to be informed well ahead of time.

Many cyclists don't use the temporary event bike parking facilities (72% at Tour of Flanders). For next events, more temporary bike parkings should be posted and/or





the permanent bike parkings should be promoted more. These permanent parkings are also indoors and often have camera surveillance.

For the Tour of Flanders, the city tried to launch a campaign through the Waze navigation app but this has proven to be very difficult and didn't happen in the end. It is unclear if this will be tried again.

The flow of pushing mobility information on social media was not flexible enough because this had to run through an external supplier. The city hopes to have linked its own payment methods to the platform in 2023 so it can post more often and quicker.

Due to the migration of the website platform in April 2022, the meta data from the website were no longer accessible for crawlers, Google and social media. This is probably the biggest cause of lower website visits for the accessibility pages for events. The technical issue was resolved at the end of August 2022.

Most visitors look up mobility information on the website of the event itself. It is therefore important to heavily promote active mobility through the event organisation. The accessibility information that the city provides needs to be linked and reused by the organisation. The collaboration with the different event organisers is very important but not always as easy.

Improvement of the signage in the city of Antwerp developed itself a rather complicated output to implement. Temporary signage is prohibited for sustainability reasons within the city administration and the department responsible for the creation and storage of temporary signage was closed down. The city administration therefore needs to reinvent themselves on signage on events. It is yet to be analysed what the impact of the proposed solutions will be.

3.2.4. Preliminary results

The information pages with the accessibility for events are very successful, but even more successful when the event organisers link well to this page throughout their communication. Smaller events where the collaboration with the organisers isn't as tight runs more difficult and the information has a much lower reach.

When looking into the modal split numbers, the percentage of travellers by car are above 50% in the year 2021 but the first numbers of 2022 already show a much lower number and active travel is much higher. The city of Antwerp will keep monitoring as





many events as possible to check if this is a general trend or a specific change for the measured events.

- **Antwerpen Shift** (event, September 2021): information page + active travel campaign -> Overall reach of 37%. Overall appreciation (well made, informative, useful, original, clear) is weak.
- **Heroes campaign “You are the change”** (active travel campaign, September 2021): radio commercials, OOH, Print and digital (no results measured).
- **Vaccination village Antwerp expo** (event – Fall/Winter 2021): information page with 15.678 page views + modal split survey (56% travelled by car, 22% by bike, 5% on foot). The percentage of people coming by car to this location is the same as a different event on this location in 2014. The city will investigate ways of improving the mobility communication for this event location.
- **Promotion P+Rs** (active travel campaign, December 2021 – January 2022): post on Facebook with reach of 670,176 and engagement of 9,961 people. Page views of the P+R info page of 47,311 views for December 2021 and January 2022.
- **Winter in Antwerp** (event, December 2021): information page with 459 page views + modal split survey (52% travelled by car, 3% by bike, 11% on foot). The amount of people travelling by car has risen in comparison to 2019 (36% car). This could be because a big part of the event was mostly cancelled due to COVID-19 restrictions and a lot of visitors from the Netherlands came to Antwerp by car because the COVID-19 restrictions there were even stronger.
- **Tour of Flanders** (event, April 2022): information page with 23,743 page views + wrapped bike parkings + extra bike parkings + digital and print road signage.
- **10 miles** (event, April 2022): information page with 30,634 page views + mobility campaign on street (11 canvasses, 80 A0 billboards, 380 city billboards and bus stalls) and online (reach of 626,005 and engagement of 4,723 people) – additional bike parkings (4,200 places) + road signage (14 locations) + modal split survey (19.7% travelled by car, 14.1% travelled by (e-)bike and 13.1% travelled on foot).
- **Route planner promotion** (active travel campaign, May 2022): posters + social media posts + bannerings + out of home + pre-roll + print advertisements + teads (reach of 4,276,300 people and engagement of 9,146 people).
- **Sinksenfoor** (event, June to July 2022): Information page with 27,053 page views – additional bike parking (600 places) – modal split survey (26.8% travelled by (shared) car, 20.6% travelled by foot & 10% travelled by (shared) bike). Reasons for not coming with a bike were 34% “too far” and 30.7% “don’t





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have a bike". Since the last survey in 2015, the amount of people that came on foot doubled and the amount of people that came by car halved. These are extremely good results.



Figure 6: Incentives and campaigns promoting sustainable mobility in relation to events in Antwerp 2

- Left – image of a wrapped bike parking for the Tour of Flanders (event, April 2022)
 - Middle – image of the road signage for the Antwerp Marathon (event, April 2022)
 - Right – image of the on street mobility campaign for the Antwerp Marathon (event, April 2022)
-
- **Tall Ships Races** (event, July 2022): Information page with 12,879 page views – three large extra bike parkings – modal split survey (26.3% travelled by (shared) car, 9.7% travelled by foot & 18.5% travelled by (shared) bike) – happiness level of bicycle transportation (78.6% very happy + 19.4% rather happy = 98% happy bikers).
 - **Antwerp Pride Parade** (event, August 2022): Information page with 898 page views – digital road signage and bike counters.
 - **Antwerp Marathon** (event, September 2022): Information page with 22,460 page views – active travel incentive: a hiking and biking route was created for supporters to encourage them towards active mobility during the event. The information was promoted through city and event channels, online and offline. This info got 3,490 page views on the website.





- **Antwerpen Shift** (event, September 2022): Information page with 2,628 page views – 80 extra bike parkings for 7 bikes each - bike tour with on street signage (330 arrows) – mobility campaign (reach of 2,628,273 people and engagement of 4,852 people) - active travel reward (10,000 steps hike was made especially for the event through the entire car free zone in the city centre. If people had over 10,000 steps, they were rewarded with a drink and a goodie bag.)
- **Studay** (event, September 2022): Information page with 158 page views – printed road signage for people on foot and bike – sustainable mobility village (very successful with large reach) and bike repair shop (30 bikes repaired) at the event – large temporary bicycle parking with room for 4,200 bikes – lockers next to the bicycle parking.
- **Student discounts** (active travel campaign, September 2022): Thanks to promotions from Smart Ways to Antwerp and its partners, students could try out several means of transport at the start of the academic year for a small price or even for free. There is a campaign about the discounts and the information is linked to the Studay event to celebrate the start of the new academic year. (Campaign had a reach of 1 10,262 people and engagement of 2,293 people).
- **Smart Ways to Antwerp app promotion** (active travel campaign, October 2022): videos on social media, news sites, teads, video apps (results to follow later in 2022).



Figure 7: Incentives and campaigns promoting sustainable mobility in relation to events in Antwerp 3

- Left – Image for the route planner promotion “The smartest way to your work starts at slimnaarantwerpen.be”, May 2022
 - Middle – Digital road signage for the Antwerp Pride Parade (event, August 2022)
 - Right – Image of the mobility campaign for Antwerpen Shift (event, September 2022)





There were also some smaller events with a low number of page views for the accessibility information: Antwerp Port Epic (71 page views) – Antwerpen Proeft (28 page views) – Left Festival (37 page views) – Borgerrio (30 page views) – Museum Night (51 page views) – Opening KMSKA (953 page views).

3.2.5. Next steps

In October 2022 it has been decided that for the event year of 2023 requirements for active travel will be made clear as from the first step when an event organiser asks the city for permission to hold an event. Information will be added on the event application website and will be sent earlier to organizers. The city of Antwerp will provide an informative brochure for event organizers.

The marketing department of the city of Antwerp has also agreed to work more closely with the mobility department in regard to communication for large events. The mobility department will be making a year planning and tagging the most important events with active mobility possibilities. They will then be able to ask the marketing department to provide more communication materials, online and offline. For 2023 a total number of 21 events has been selected to increase efforts for. 8 events of those 21 have been chosen to be of very large importance for mobility communication.

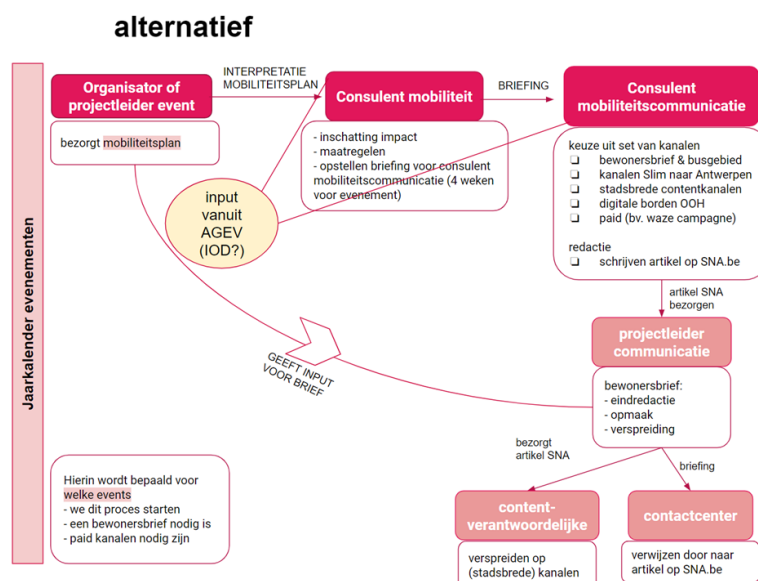


Figure 8: Antwerp – Suggestion of the new flow for communication on larger events





In addition, the departments of mobility, marketing and events are working together to see if several requirements can be made a hard rule for getting an event license. The requirements being discussed are the following:

- Organisers need to send all their mobility information to the team of Smart Ways to Antwerp at least three weeks in advance.
- Event organisers are required to install a temporary bicycle parking from 2,000 visitors per day.
- Event organisers are required to install a manned temporary bicycle parking from 20,000 visitors per day.
- Mandatory signage on the street between the nearest mobility hub(s) and the event + bicycle parking from 10,000 visitors per day.
- Mandatory modal split measurement for events from 15,000 visitors per day.

The city of Antwerp will be developing a widget of their route planner in Q1 2023 which event organisers will be able to add to their website. The Smart Ways to Antwerp route planner, developed by the city itself, will always nudge towards sustainable travel by promoting walking under 2 km, biking under 15 km, and public transport when it does not take more than 1.5 x the travel time by private car.

For the contribution with the Vervoerregio Antwerpen (Antwerp Transport Region), the city of Antwerp has sent a request for looking into ways of promoting the electrical shared bike system of Donkey Republic for events.

The city will look into the possibility of a larger active travel campaign in January and again in the spring of 2023. An idea for the spring campaign is to work with pins and engagement with quotes that people can get for free to show off their active travel behaviour. This pin can also be used to give as a reward on events.

3.3. M8 – Nudging multimodality at regional level

3.3.1. Context

Madrid Region is one of the 17 autonomous regions of Spain. Around this central and main city, the Region is structured in rings. The first ring around the city is the metropolitan area with very strong relations with the main city, and the second ring comprises the rest of the region with small and medium sized municipalities in a more





rural environment. The public transport system for the Madrid region is a complex intermodal system with more than 40 operators giving services to users.

In this complex mobility and territorial context, CRTM covers the provision of public transport services to the inhabitants of the entire Madrid Region and associated municipalities. Two thirds of the trips devoted in public transport daily, more than five million on average are multimodal. For this reason, the improvement of multimodality at regional level has been at the core of CRTM's strategy since its creation.

Two main sub-measures will be implemented within the project in order to incentivise multimodality and sustainability at regional level.

- HaCon, as a technological partner of CRTM, is developing a route planner where users can find information about green routes (i.e. cycling trails, intended mostly for recreational use) within the region and their connection with public transport and other sustainable modes of transport. This app will be integrated in the MaaS action plan that will be developed within the project by CRTM. CRTM will prepare campaigns and communication actions in order to increase the number of people that use these green routes.
- Moreover, CRTM, EMT and MADRID will improve communication actions with special focus on large events. This sub-measure has the main objective of promoting sustainable and multimodal travel to large events within the Madrid Region. These campaigns will include the creation of leaflets, maps, creation of secure routes for arriving to the places of the event, direct communication with the users, etc.

3.3.2. Status

Regular meetings are taking place between CRTM, HaCon, and SRA to prepare the pilot route planner app developed as part of M4. Once the pilot app has been developed, the plan is to integrate the information of the green routes of the Region of Madrid. Currently these routes can already be consulted through the CRTM website.

As for communication campaigns for large events, a major event will be considered to test solutions for improving mobility by public transport in order to attend it, but it has not yet decided which event will be considered.



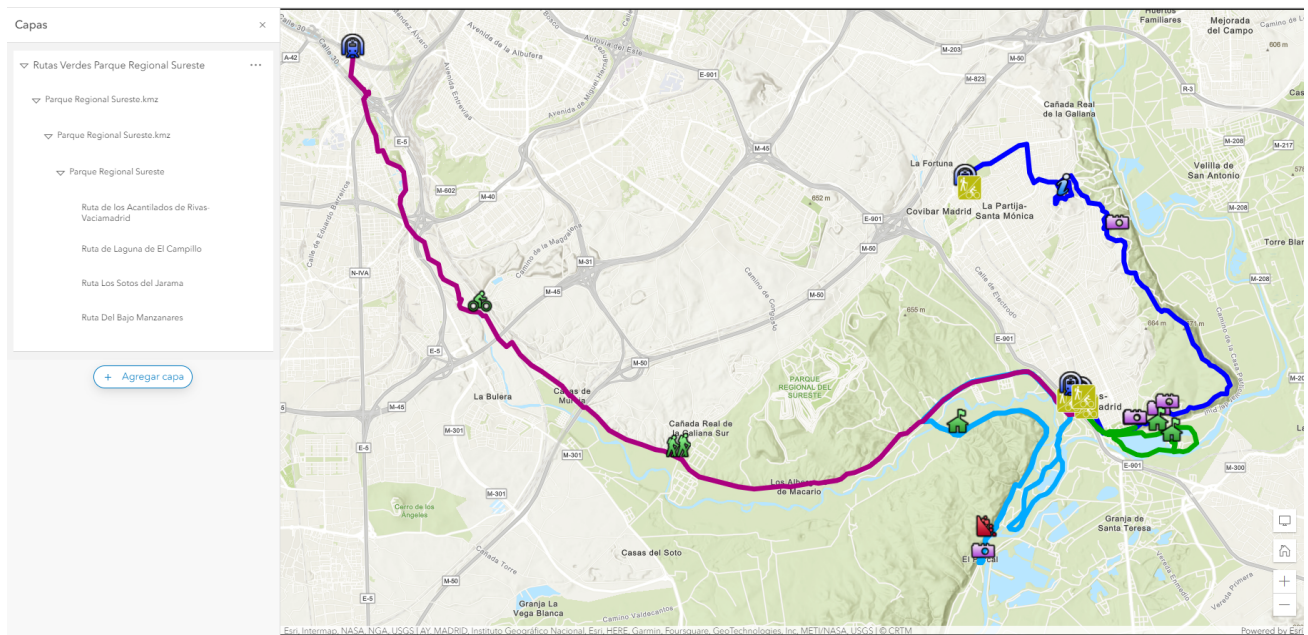


Figure 9: Madrid – Example of a green route in the CRTM website viewer

3.3.3. Risks found and corrective actions performed

The measure involving the green routes depends on the progress of M4, therefore more progress is to be made after the pilot of the app will have been launched.

In the other sub-measure, we have realised that there is a risk of incorrectly measuring the efficiency of the communication campaigns, since when comparing one year with another it is possible that the change is due to many factors beyond the improvement in communication. Therefore, the way in which its impact is to be assessed is still to be considered.

3.3.4. Preliminary results

The MaaS app is still under development, and the test of the green routes depends on the progress of the pilot app, so for this part of the M8 there are no results to show yet.



3.3.5. Next steps

The next steps will be to test and include the green routes from the website in the pilot route planner app. Regarding communication campaigns, we will look for a major event to be improved in order to compare whether future communication campaigns work. In parallel, the best way to assess the impact of these measures will be pondered.

3.4. T8 – Incentivization of mobility services in Turku

3.4.1. Context

Turku is currently developing a centralized Customer Relationship Management (CRM) system which will allow for the categorization of customer segments and subsequent development of target group – specific marketing, incentives and experiments with nudging to influence mobility behaviour. In this measure the CRM system will be used to link the mobility profile data with the existing customer data.

In this measure, incentive schemes and nudges will be developed and tested. This development work requires service design, identification and profiling of user segments, stakeholder engagement, negotiations with different service providers and developing and carrying out marketing campaigns for specific target groups. Incentive schemes and nudges will be implemented in phases, starting from 2023.

Direct incentivization of target groups has been found an effective method in influencing mobility behaviour. So far, Turku has not carried out any incentives/nudges in the mobility context. The need to address this has been identified in the wellbeing and activeness strategic programme of the city, part of Turku City Strategy: Turku in the 2030s.

This measure is connected to T5, T6 and T10. The development and testing of incentive schemes and nudges facilitate the activation model development in T6 and winter mobility promoted on T10. Data connected to this measure can be displayed on the mobility data platform developed in T5.





3.4.2. Status

In this measure, the concept of mobility profiling is being investigated. The technical solution for the profiling is being discussed with IT services that are responsible for the CRM system. Also, the lessons learnt are gathered from Turku region public transport (Föli) who is already using the CRM system to communicate with the customers.

A workshop for mobility nudges was held in the spring 2022. Currently the ideas are analysed and there is research done on other mobility nudges around the world. The first nudge is planned to start in the spring 2023.

The ongoing Academy of Finland funded research project Climate Nudge and the city of Turku's research project City Nudge provide a solid background for developing and implementing the nudge pilots. Cooperation with these projects has been ongoing from the start of SCALE-UP. A webinar was organized to introduce the nudging topic to the city employees in Spring 2022. At the moment, a project group of Turku University of Applied Sciences is innovating nudges and as the result the group is producing 3-5 different mobility nudges. If the proposed nudges are suitable for the measure, they might be implemented.

3.4.3. Risks found and corrective actions performed

The highest risk is the CRM system that is novel to the city, hence work needs to be done in utilizing it for incentive purposes. It is not yet known how the new CRM system will ultimately work. For example, it is unclear how customers and data will be linked. In addition, it is not yet established if and how the profiling provided by the CRM system can be aligned with the planned incentive/nudging campaigns. If the profiling must be carried out without a link to the CRM system, a solution needs to be identified through which the data can be saved and added later to the CRM.

Also, there is a risk that the co-operation with Climate Nudge and Turku city research project City Nudge will not give anything new or usable to the project.

3.4.4. Preliminary results

It has become evident that the concept of nudging is very new and needs time to be introduced to the different stakeholder groups. There is a lot of interest towards it but it is quite difficult to measure the nudges and prove the efficiency of the nudge.





3.4.5. Next steps

For measure T8, the next steps are the following:

- Figuring out the schedule and current possibilities of the CRM system;
- Planning and preparations for the mobility profiling, including creating the profiles and finding the technical solution;
- Deciding and planning nudges in co-operation with other measures (at least T6 and T10).

3.5. T9 – Mobility guidance in connection with events and exceptional circumstances

3.5.1. Context

Currently, the city of Turku is developing its physical guidance signs in the centre of the city and the process in connection with the events. There is no plan available for the electronic guidance in the city at the moment. A need for this has been recognized as a focus area to develop in the Finnish state agreements concerning land use, housing and transport (MAL 2020-2031²), especially during events and exceptional situations.

Effective mobility guidance in cities improves citizen, visitor and company experience by making mobility easier and safer. The need to develop mobility e-guidance particularly in connection with events towards visitors and service providers (logistics) has been recognized in Turku. In this measure, an e-mobility guidance concept will be developed and tested. This concept will take into account the needs of different mobility modes, user groups and logistics during, e.g., big sport or cultural events in the city centre. Also, it will focus on the need for mobility guidance under exceptional circumstances, such as during constructions works, natural catastrophes or pandemics.

² Retrievable in Finnish at the following link: <https://tinyurl.com/cntnm5bu>.





In this measure at least five different guidance solutions are piloted for visitors in large mass events. The measure has a specific focus on the needs of vulnerable groups such as the visually impaired and accessibility when developing these elements.

3.5.2. Status

After the first full and normal summer event period (2022) after the COVID-19 pandemic (2020 and 2021), the event organisers have successfully followed through their summer festivals and other mass events. Visitor surveys and other research is now available after negotiations with the major organizers.

Plans for the application for city event visitors in future events has been started and the application will be in use in future events organised by the city of Turku.

Future mass events during 2023-2024 in Turku, from all different sectors (sports, music, maritime, free entrance, entrance fee, others) have been assessed. Negotiations with the organisers of several of these events have been started in regard to mobility guidance.

In Autumn 2022, the city of Turku carried out a market analysis regarding guidance planning, of which digital guidance was a part of.

3.5.3. Risks found and corrective actions performed

There are possible risks related to the fact that private event organisers have no interest or resources to work with developing for future and with actions during events and exceptional situations. Typically their responsibility does not go outside of the event areas.

Potential corrective actions: to support the event marketing with guidance concepts or similar; city support for land lease and traffic planning.

3.5.4. Preliminary results

Event organizers have been contacted and got interested in the project. First guidance project in an actual event was carried out in August 2022, organised by the city of Turku. The information and results can now be used for future project planning and next steps.





3.5.5. Next steps

- The application planning continues with the technical service provider (City Nomad Ltd.).
- Contacting the event organisers during 2022 – Spring 2023, assessment of their plans for summer 2023, and the possibility to test different guidance solutions.
- Collecting more information of the summer event period 2022 from the rest of the organisers.
- Procurement of the app for visually impaired users.
- Integration of guidance elements to Mobility map under measure T5.
- Preparing requirements for e-mobility guidance concept.

3.6. T10 – Winter as a mobility season

3.6.1. Context

Turku is located in the south of Finland where the varying wintertime weather and lack of light influence highly on citizens' desire to walk or cycle or even to take public transport. In the winter people tend to use their own cars instead of sustainable mobility. To increase the cycling in the winter city of Turku has established a 12-kilometer-long winter cycling route that is kept clean from ice and snow by sweep-salting. The route has been enlarged a year after year with other snow removal methods. Despite that the number of cyclists decreases in the winter. The modal share of pedestrians is still relatively high during the winter season.

In this measure, the focus is on promoting a more active wintertime lifestyle. It requires not only improved safety via street maintenance but also conscious efforts in promoting winter as a mobility season and innovative branding. This need has also been identified in the Wellbeing and activity strategic programme of the city. Therefore the "Winter as a mobility season" brand will be developed, and it will be introduced to local communities and businesses. Currently wintertime mobility and winter as a brand are not actively advanced in the city of Turku.

This measure also aims on increasing the number of events organized during the winter season. In addition to that snow-assisted mobility will be enabled and





promoted by, e.g., keeping the snow on parts of pavement for the use of sleds, skis, kick sled or similar. Art and lights will also be used to promote wintertime mobility.

The wintertime actions will be targeted towards different user groups with a specific focus on children and the elderly (8/80). Citizen science methods are applied to engage different user groups in developing the winter brand and mobility opportunities in connection to it.

This measure is linked to T5 and T8.

3.6.2. Status

On the southern coast of Finland, it is sometimes difficult to define the change of seasons as the weather can vary drastically between autumn and winter. Based on this city of Turku has defined winter as the period between December and February. The winter 2022-2023 will be the baseline for this measure since it's difficult to find information on the winter events etc. from the previous winters.

During winter 2022-2023 a winter street pilot will be organized in the old town of Turku. A part of the street *Piispankatu* will be closed to motor traffic from December until the end of February. The winter street offers a peaceful place to sit down to admire the seasonal lightning of the small park nearby and it enables organisation of small-scale outdoor events. After the winter street pilot, we'll evaluate the success of it and create a process for temporary road closures. The winter street is planned in co-operation with the city personnel that organized the summer street 2021 and 2022 in Turku city centre.

A group of Turku University of Applied Sciences students did a project on service design of winter street in Spring 2022 and two different students are writing their graduation dissertations on these activities. The one is about mobility behavioural change during wintertime and the other is about social science research methods.

One of the goals is to increase the number of winter events in Turku. At the moment, a project workshop at Turku University of Applied Sciences works on innovating ten different winter outdoor events. The outcomes will be available in December 2022 and the best idea or ideas might be implemented in the winter of 2023-2024.





3.6.3. Risks found and corrective actions performed

The highest risk is that the winter conditions in Turku are very difficult to predict. The time when it snows, the amount of snow and ice and temperature varies a lot from year to year. The varying weather poses a challenge for event planning, snow-assisted mobility and winter maintenance. This means that snow-dependent activities cannot be fully scheduled.

The potential of winter is not yet understood and it is rather treated as a threat. Winter is perceived as a poor time for walking and cycling, which leads to a reduced physical activity in the wintertime. Also, most winter outdoor activities are located on the outskirts of the city, e.g., skiing tracks and outdoor fireplaces, which makes them difficult to reach. Winter maintenance focuses on controlling the level of slipperiness, but not on benefiting from the snow. Up-to-date information on winter maintenance is not available which might prevent people from cycling and walking.

In this measure, stakeholder involvement and getting feedback proves to be particularly challenging.

3.6.4. Preliminary results

Local medias have been very interested in the winter street concept. A few articles have been written and there will probably be more when the pilot starts.

3.6.5. Next steps

In measure T10, the next steps are as follows:

- Decisions on the evaluation plan of the winter street pilot and writing the process for temporary closures. Taking the lessons learnt from the summer street project 2021 and 2022.
- Planning and deciding mobility nudges together with T8 and winter mobility campaigns for the winter 2023-2024.
- Collecting baseline data during the winter 2022-2023.
- Defining the citizen science methods to be used in this measure.
- Research and preparations for the “Winter as a mobility season” brand.
- Defining key stakeholder groups and engaging them into the brand work.





4. Conclusions

The measures that the three urban nodes are focusing on in order to drive behaviour change towards sustainable modes cluster around a number of common topics:

- Data collection and digital tools for targeted behavioural change approaches;
- Mobility management around events and using events as a catalyst for behavioural change;
- Mobility under specific conditions (seasonal specificities: winter, rainy weather, etc.) and local branding strategies and communication campaigns.

That allows for thematic cooperation and exchanges on common knowledge questions, challenges, drivers or barriers, existing experiences and good practices. Also, exchanging on behavioural change topics demands for integration with other streams of activities within SCALE-UP, in particular, the implementation work packages (WPs 2-6) and the work packages dedicated to strategies for integration (WP 1) and respectively evaluation (WP7).

Several common challenges were identified that will be addressed in future exchanges and capacity building activities:

- Measuring the impact of behavioural change measures - effective methods to assess the impact of the incentives/nudges tested;
- Data collection and privacy issues in relation with digital tools;
- Governance and integration across departments and administrative levels;
- Lack of capacity or expertise within public administrations on aspects pertaining specifically to transport behaviour and psychology;
- Specific nudging and incentivisation mechanisms to drive behaviour change.

For a more structured approach and in order to achieve a more transversal perspective, future thematic knowledge exchange webinars will be structured along the following dimensions:

- **The physical dimension:** creating space and options (e.g., multimodal hubs, extra offer, etc.);
- **The digital dimension:** digital tools such as route planners and MaaS;
- **The human dimension:** awareness raising and nudging tools.

This will allow for a more integrated approach, promoting horizontal and vertical integration, along the strategies developed as part of WP1.

