Pilot Cities: Piercing Through the Gridlocks

Results Report

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Introduction

City climate goals and current situation with transport and waste management

City of Reykjavík, the capital of Iceland, has positioned itself as a leading city in environmental sustainability and climate action. With abundant renewable energy resources, primarily geothermal and hydropower, the city has already achieved significant reductions in greenhouse gas emissions compared to many urban areas worldwide. Reykjavík has set ambitious climate goals, including becoming climate neutral by 2030.

In line with these ambitions, the City of Reykjavík has taken an active role in European climate initiatives. Reykjavík is one of the selected "Mission Cities" under the European Union's Climate-Neutral and Smart Cities Mission. As part of this commitment, the city undersigned its Climate City Contract in October 2024, outlining concrete actions and investment plans to achieve climate neutrality. The contract was subsequently validated by the European Commission, and Reykjavík was awarded the Mission Label in May 2025, recognizing the credibility and ambition of its climate strategy.[1]

Despite its advantages, Reykjavík faces ongoing challenges in achieving these objectives. The transport sector remains the largest contributor to emissions, largely due to high car dependency, urban sprawl, and limited public transport options. Efforts to address this include investments in new rapid transport system, increased support for cycling and walking, and the transition to low- and zero-emission vehicles. One of the key objectives of the municipality is to promote sustainable mobility by reducing dependence on private vehicles and increasing the use of public transport, walking, and cycling. The Reykjavík Municipal Plan 2040 establishes the following modal share targets[2]:

Private car: 75% → 50%

Bus: 4% → 15%

Walking and bicycle: 21% → 35%

Waste management is another important factor influencing Reykjavík's climate performance. Although a comprehensive waste sorting and recycling system was introduced in 2023, approximately 3% of waste still ends up in landfill, contributing to greenhouse gas emissions. Increasing recycling and source separation, reducing waste generation, and promoting circular economy principles remain key priorities for the City

[1] https://netzerocities.app/QR-CCC

[2] https://reykjavik.is/sites/default/files/2022-05/AR2040_utgafa_screen_0.pdf

of Reykjavík. While the city's Environment and Resource Policy does not establish specific quantitative targets for waste management, it sets the following overarching objective:

> *"Waste disposal to landfill shall be reduced, and the rates of reuse and recycling shall be increased."*[3]

Project description and goals

Piercing through the Gridlocks is a pilot project funded by Climate-KIC, supporting Reykjavík's pathway to climate neutrality. Running from September 2024 to August 2026, the project focuses on addressing key behavioural, systemic and governance barriers with the aim of reducing emissions from road transport and waste.

The project aims to identify and "unlock" these barriers by analysing how decisions are shaped across public and political institutions, businesses, civil society and everyday practices. Through participatory methods, including surveys, workshops and co-creation activities with residents and stakeholders, the project will explore attitudes, habits and narratives that influence climate-related behaviours, and reveal opportunities for social and organisational innovation.

Figure 1 illustrates the project's vision, mission, and objectives. The project contributes to Reykjavík's climate neutrality ambitions by analysing transport and recycling behaviours, identifying barriers to change, and co-creating solutions with residents and businesses to promote more sustainable practices.

Figure 1. Project's Vision - Mission - Objectives.

[3] https://reykjavik.is/sites/default/files/2022-05/AR2040_utgafa_screen_0.pdf , page 138.

Research outline

Data collection was conducted using the online survey platform Maptionnaire, which offers a variety of question formats, including integrated map-based functionality. This feature enabled respondents to identify specific locations on a map and was used to collect information on home and workplace locations, as well as locations associated with positive and negative experiences related to transportation and waste management.

The research consisted of two survey rounds. The first survey was conducted between February and April 2025 and focused on residents' habits and perceived barriers related to transportation and waste management. Participation exceeded expectations, with a total of 1,801 responses submitted. The survey was distributed through the City's communication channels and was therefore based on a self-selected, non-random sample of residents.

To further explore the findings of the first survey, a series of focus group interviews was conducted. The purpose of these interviews was to gain a deeper understanding of residents' behaviours, motivations, and barriers, and to identify potential measures that could encourage more sustainable choices. The interviews were conducted on 19 November 2025. A total of 60 participants took part in the discussions, with approximately 60% female and 40% male participants, representing a broad range of age groups. Participants were divided into eight groups, consisting of six neighbourhood-based groups and two English-speaking groups.

The second survey was conducted between March and April 2026 to provide a more comprehensive understanding of residents' habits and barriers. In addition to transportation and waste management practices, the survey examined how residents experience different areas of the city by asking respondents to identify locations associated with positive and negative experiences related to these topics. Similar to the first survey, the questionnaire was distributed through the City's communication channels and therefore did not constitute a random sample of the population. Participation was lower than in the first survey, with 1,082 responses submitted. However, considering that the survey was open for only half as long as the first survey, the response rate remained high.

An overview of the socio-demographic split of the survey samples and their comparison to national and capital area statistics (obtained from Statistics Iceland) is provided in Table 1. Although the surveys were distributed via social media using a snow-balling method, the survey samples were relatively representative and comparable to capital area adult statistics. Key differences were in the gender distribution in which the study had more female respondents than male. Similarly for the education level, the survey samples lean strongly towards people with tertiary level education, and the survey

captured people with a basic education level less. Income levels were similar or slightly lower than the regional and national averages.

Table 1. Overview of the key socio-demographics of the two survey samples versus national statistics for the country and the capital area obtained from Statistics Iceland.

		2025 survey	2026 survey	Iceland	Iceland adults	Capital area	Capital area adults
Sample size		1801	1099	394324	304403	251912	194506
Gender	**Male %**	32.9	37.6	51.3	51.1	50.8	50.6
	Female %	66.4	59.4	48.7	48.8	49.1	49.4
	Non-binary %	0.5	1.1	0.1	0.1	0.1	0.1
Average age		42.3	44.6	39.2	47.4	38.6	47.2
Household size		2.8	2.7	2.7	-	2.7	-
Education level	**Basic %**	3.1	2.6	25.7	18.8	21.7	14.1
	Secondary and vocational %	23.8	18.4	34.2	32.4	32.9	30.2
	Tertiary %	64.2	78.8	40	48.8	45.3	55.7
Disposable income		516,001 - 562,000 ISK	562,001 - 672,000 ISK	617750 ISK	626413 ISK	677500 ISK	687001 ISK

All surveys and focus group interviews were designed and conducted by the Faculty of Civil and Environmental Engineering at the University of Iceland. This report presents an overview of the main results and key findings of the research.

Recycling

Habits

Most people in the 2025 survey sample (over 90%) recycle the main mandatory waste types – plastic, paper, food waste. In addition, over 97% recycle beverage containers, and over 60% recycle metal, glass, textiles, batteries, and electronics.

In the 2026 survey sample, the habits were quite similar to the previous year. Between the surveys, a few special categories were added explicitly, and it is now clearer that over half of the respondents also recycle chemicals, medicine, furniture and construction waste. (Figure 2) Recycling can be categorized into four types (confirmed by factor analysis): daily recyclables (paper, plastic, food waste), glass and metal, deposit-based recyclables (beverage bottles and cans), and special categories (electronic, batteries, medicine, furniture, etc.).

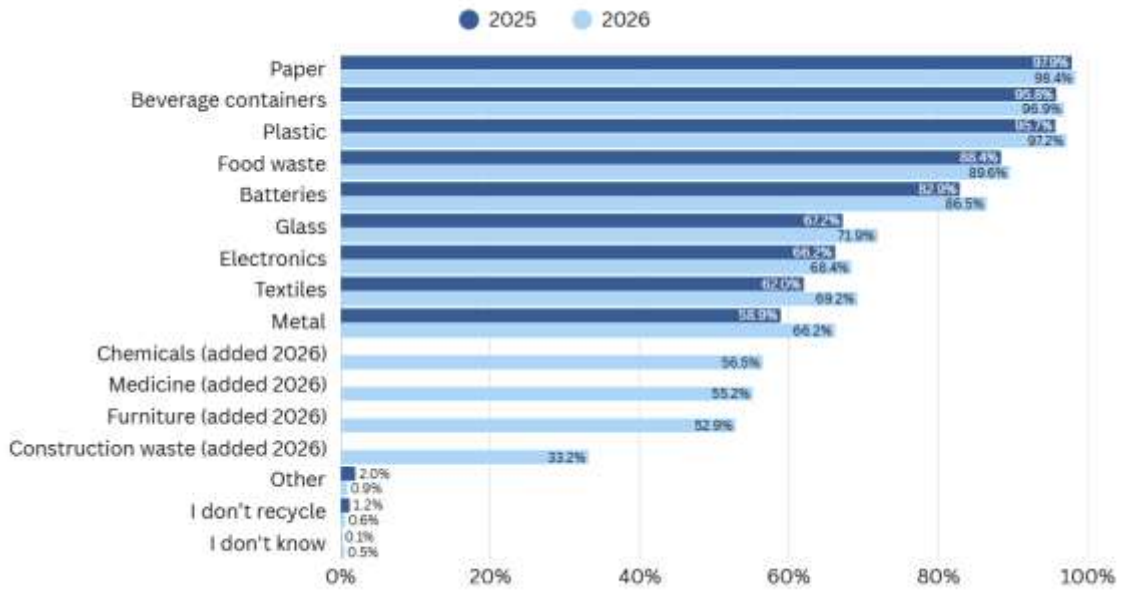


Figure 2. Recycling habits in 2025 (1782 responses) and 2026 (1081 responses). Respondents were asked what kind of waste they sort at home for recycling and were asked to choose all categories they sort.

To participate in recycling beyond daily recyclables, people often need to visit designated stations, but lack of information and infrequent emptying of neighbourhood recycling containers may hinder participation. Also, efficiency is emphasized. If recycling stations are not on the regular route for people, they are less likely to participate in additional recycling practices.

> *"The recycling stations are in opposite directions from my home, neither on the way to work. And I haven't been able to get into the habit of taking three glass jars on my way to work. I would really love to be that kind of person. Or that someone in the household was like that, but they're not. So maybe I'm missing that, yes, I always want to do better," G4I3F*

For daily household sorting, socio-demographic background or other factors had no influence, as the model showed low explanatory power, which suggests that daily recyclables have become a normal part of society due to their mandatory nature and availability of necessary bins by the home.

The habits are further corroborated by the focus group interviews, which were conducted in neighbourhood-based group settings. Across the focus groups, recycling behaviour was highly widespread and socially embedded, with nearly all participants engaging in the four standard household categories. However, within this general compliance, there is variation in how consistently specific materials, especially plastic, are recycled. This may be influenced by convenience, space constraints, and trust in the system. While most participants demonstrate strong pro-recycling attitudes and even go beyond basic requirements, a small minority express scepticism or selective participation. Recycling of additional items is strongly influenced by convenience, accessibility of recycling infrastructure, and available space, with participants relying on multiple systems such as local stations, donation centres, and retail drop-off points. Overall, recycling is both a normalized practice and a value-driven activity, shaped by infrastructure, personal beliefs, and past experiences abroad.

Higher recycling rates were primarily connected to older age, higher education, Icelandic citizenship, cohabiting, and strong climate concern. Gender differences were initially present, with men reporting lower at-home recycling rates, but vanished once controlling for pro-climate attitudes. Other variables like income, children, and vehicle ownership showed no overall effect, though vehicle access specifically facilitated deposit-based bottle and can recycling. Ultimately, climate attitudes predicted recycling behaviour more strongly than satisfaction with the waste management system or socio-demographics. Controlling for pro-climate attitudes diminished the impact of most demographic variables, leaving age as the most stable predictor. Individuals of older age may have more time for extra trips to sorting stations, and more experience in sorting from their youth.

> *"Being from the countryside and if you know, and where there was, there was little rubbish. I sort the rubbish. We participate in that because we're nature-loving and feel it's the right thing to do." G4I8M*

> *"I grew up with it. Like, I don't know, my parents are recyclers. So for me, it was always just the normal thing to do ... [ ] ... it's the habit, I guess" G7I3F*

> *“As a little kid in the countryside, there was never any rubbish and everything was reused. And I somehow just grew up with the idea that when you finish using something, it becomes a raw material for something else. But I completely recognise this thing of standing there, washing up rubbish... It's a bit of a joke of a situation, to be honest. " G4I7M*

Recycling habits among Reykjavík residents mainly stem from available infrastructure rather than demographic or attitudinal factors. Those who recycle one category of waste are significantly more likely to recycle others. This pattern mirrors earlier findings that environmental behaviours cluster together yet remain sensitive to situational constraints (Whitmarsh & O'Neill, 2010; Geiger et al., 2019). Strong associations between sorting similar materials like glass and metal, or electronics and batteries, point to the role of shared disposal methods. **Meanwhile, weaker links between, for example, electronics and textiles highlight the need for tailored outreach and joining dedicated facilities.**

Demographic factors like age, gender, education, citizenship, and household size were all associated to engagement in recycling. Similarly to previous research, older residents recycle more frequently (Patel et al., 2017; Ágoston et al., 2024). Yet infrastructure remains a bottleneck: access to a car strongly predicts deposit-based recycling due to the limited number of deposit facilities in the Reykjavík area. Interestingly, while there are local neighbourhood recycling containers that accept bottles and cans for donation, typically near glass and metal containers, residents willingly travel further when financial deposits are involved.

Satisfaction with one's at-home recycling system, which includes space they have for various bins, the amount of waste types they can sort and the availability of bins by their home, was on average 3.6 on a 5-point Likert scale. Satisfaction with waste collection frequency was on average 3.22 on a 5-point Likert scale. The interviews helped to understand the satisfaction a bit better. People are generally satisfied with their own efforts and recycling behaviour but exhibit dissatisfaction with the overall system, stating that it limits their ability to recycle effectively and efficiently. Satisfaction comes from regular recycling within a built routine and a sense of responsibility for the environment and the waste they produce. Some even go as far as expressing pride in their recycling habits, while others express annoyance in those who do not do their part.

> *"I'm a total recycling pervert if I may say so in this safe environment, here. I have a storage unit, you know, of course you have the paper, plastic and I love the organic. I was so happy when that bin arrived, and, here, and then I have two storage units and one of them, I call it the recycling center." G1I3F*

> *"I suppose I started with a bang, recycling and sorting everything really well. But... it's not really accumulating. It's just going well now, and I have paper and plastic, and then I have glass and metals in one bucket and... I've stopped thinking about it. If I have plastic around food, for example, with some red, disgusting liquid, then I just can't be bothered to wash it. I just throw it in the general waste. Also, because you see it when you go to Sorpa yourself, If you have something that [you don't know where to put], you get*

told to "Just throw it in the incinerator pile." And in the containers there, everything is just 'dumped' all together, plastic and everything. So, you kind of think, why should I? You just do it. It's become no big deal and I just take it and I'm even renovating an apartment now, an apartment I own. And I'm sorting a lot there before it goes to Sorpa, and the contractors, they would have just dumped it all in the same container. So sometimes you just feel like you're doing incredibly well, and then you just see others or... Ohhhhh, why am I doing this? " G4I5M

"I've participated in this with full commitment and it's just very necessary. Well, compared to the people who work around me, I'm very diligent and I'm not bragging about it around those people. But I just sort everything I possibly can." G2I3M

In contrast, the frustration stems from overflowing neighbourhood containers and domestic bins, inconvenient systems, lack of options at sorting stations, and trash collection frequency. Limited space and housing conditions may also affect satisfaction. Many say they would do better if the system supported them more.

“And also sometimes the space is very limited in my apartment and that leads me to sometimes perhaps not sorting stuff as much as I would like to because you know I cannot use half of my apartment for this and that is true." G7I4F

Participants also mention the excess waste they produce and wish there were plastic-free options available in stores. Responsibility should be shifted from the consumer to the producer or retailer in this regard.

"I just think that, you know, it has to be, you know, companies need to have to pay for the pollution they create, so that they see an incentive in creating, you know, products that pollute less in packaging that pollutes less, that is easier to sort or recycle or reuse or something like that." G3I2F

"It needs to be easier and cheaper to, you know, go packaging-free." G3I1F

"I think I would like just to have less waste. I feel like I have much more plastic waste in Iceland than I have had in other places that I lived also because I do eat a lot of vegetables and fruits and they always come in plastic and it's very difficult to buy it without plastic.." G7I3F

"I would prefer not to reach the recycling stage of the of the process, you know. So from all the Rs, recycling is not the best one or the better choice. So but we all consume a lot of things here. A lot of things are just, I mean, most of the things are just imported. So everything is going to come in some sort of packaging. I would like to see more environmentally friendly packaging" G7I4F

"It's a systemic problem with where this packaging is coming into the house anyway. It's coming from the shops." G8I4F

90% of respondents felt that they have access to information in a language understandable to them, and 77% said they know how to find this information. From the interviews we learned that while all participants have access to recycling information, primarily via the Sorpa website, the findings reveal that knowledge of the system is largely self-directed, experiential, and supplemented by informal social networks. Participants do not typically learn recycling practices through structured instruction but instead develop their understanding over time through repetition and trial-and-error. Gaps remain in terms of accessibility and usability, particularly in the lack of simple, visible guidance in everyday environments. Importantly, differences in recycling behaviour across groups cannot be explained by access to information alone. This suggests that improving recycling outcomes may depend less on providing more information, and more on making information easier to use and aligning systems with everyday practices.

"There are trash cans in the city but there aren't many out on the streets for sorting if I have a... plastic bottle or some plastic packaging that I want to throw away. There's only a general trash can available. Whether it's in the city center or just in our, in the neighborhood or wherever. Just always small trash cans. And never any way to sort there when you're out for a walk." G3I3M

Most participants report that they have access to sufficient information about recycling, their responses reveal a more complex reality. While information seems to be widely available, participants frequently experience confusion, uncertainty, and frustration when applying this knowledge in practice. A key issue lies in the lack of clarity and simplicity, especially regarding complex or mixed materials, which often leads to guesswork and inconsistent behaviour.

“And then so much of the packaging is just five different things. Am I supposed to peel the plastic film from inside the bag? Or should you think, no wait, the milk cartons can go in the paper recycling, therefore this must also be allowed to go in the paper recycling, and just like that. Yes, you know, it can get very overwhelming." G4I6F

Additionally, participants express a lack of transparency about what happens to waste after collection, contributing to scepticism and distrust in the system.

"We're quite cynical, I'll say, about our recycling, since I'm being brutally honest. we do recycle cardboard but we don't separate out the organic or plastic because we found out that the plastic just gets shipped somewhere else to be put in a landfill anyway and also our kitchen is incredibly small and we didn't we don't have room to have boxes for every category and I didn't want to deal with the compost situation so yeah." G8I2F

"Yes, they are just incinerated, so I've stopped sorting cartons. I put them in the general rubbish. I don't know if it's a myth or what, but anyway." G6I7F

The responsibility for understanding recycling practices is largely placed on individuals, who must learn through experience and informal sources rather than clear, structured guidance. Furthermore, gaps in accessibility (due to language barriers, disability barriers, etc) affect certain groups more than others.

"I just think that, you know, it has to be, you know, companies need to have to pay for the pollution they create, so that they see an incentive in creating, you know, products that pollute less in packaging that pollutes less, that is easier to sort or recycle or reuse or something like that." G3I2F

"I used to be a teacher. And I've often thought that I'm not going to spend my entire retirement figuring out how to sort my rubbish." G6I1F

"Then also, to connect to the other thing, what's being talked about next here, transportation, it's also just difficult to get to Sorpa without a car" G3I3M

Overall, participants do not perceive other people's opinions as having a strong direct influence on their recycling behaviour, which is primarily driven by personal habits and a sense of responsibility.

"We try to recycle almost everything and we're a family of four and we're aware that we create a lot of waste. " G8I4F

However, social influence operates more indirectly through knowledge sharing, social norms, and comparisons with others. Participants often express frustration with neighbours who do not recycle properly, while in some cases behaviour is shaped by peer perceptions, particularly among younger individuals.

"I asked my teenage son once to do it, and he absolutely refused. And then my husband reminded me that it probably wasn't very cool, and he didn't want to be seen walking in the neighborhood with recycling. So I'm the one mostly doing it, my husband and I." G8I4F

"My neighbour being mad at me filling up the bin, but that's the only one. It's not like I don't think it's cool or something." G8I2F

Lastly, we also wanted to know about how the satisfaction with the waste management system is distributed in the city. People living in the city center and in Kópavogur (200 postcode) were significantly more satisfied with the waste pickup services in their neighbourhoods, whereas people living in Grafarvogur and Grafarholt, Árbær and near Eðistorg in Seltjarnarnes were significantly less satisfied than others with the waste collections services (Figure 3).

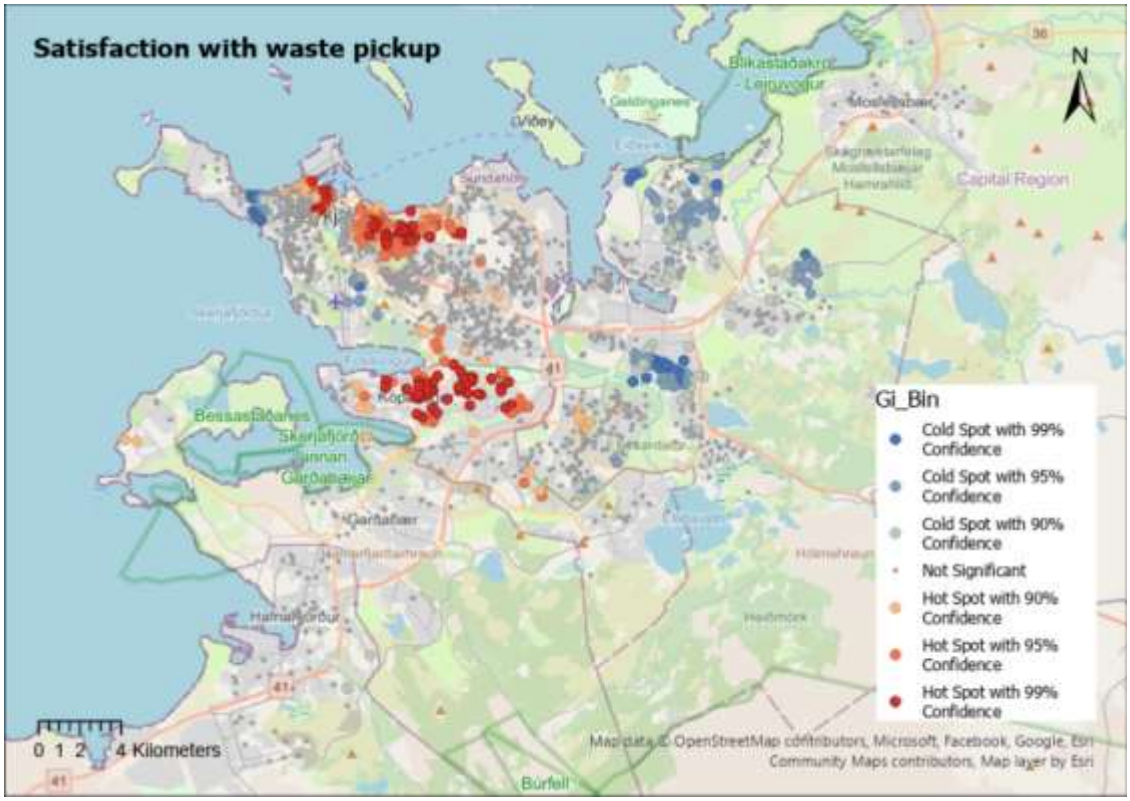


Figure 3. Hotspot map of satisfaction with waste pickup services and frequency. Red dots are areas with high satisfaction; blue dots are areas with low satisfaction.

Respondents indicated that there is a connection between how much and how many types of waste the sort for recycling and the space they have at home. While some took pride in having extra storage space for an in-house recycling center, others pointed out a lack of space to sort all the various types of waste. This satisfaction is represented in Figure 4 as well. Although most areas in the Capital Region remain neutral, people living in the Laugardalur area and parts of Bústaðavegur and lower Breiðholt are more satisfied with their home waste sorting systems. These areas are known to have larger single family houses or rowhouses, built in late 1940s and in 1950s. In contrast, lower satisfaction was evident in parts of Grafarvogur and Grafarholt, and in Árbær around the Hraunbær area, where there are many apartment blocks from late 1960s.

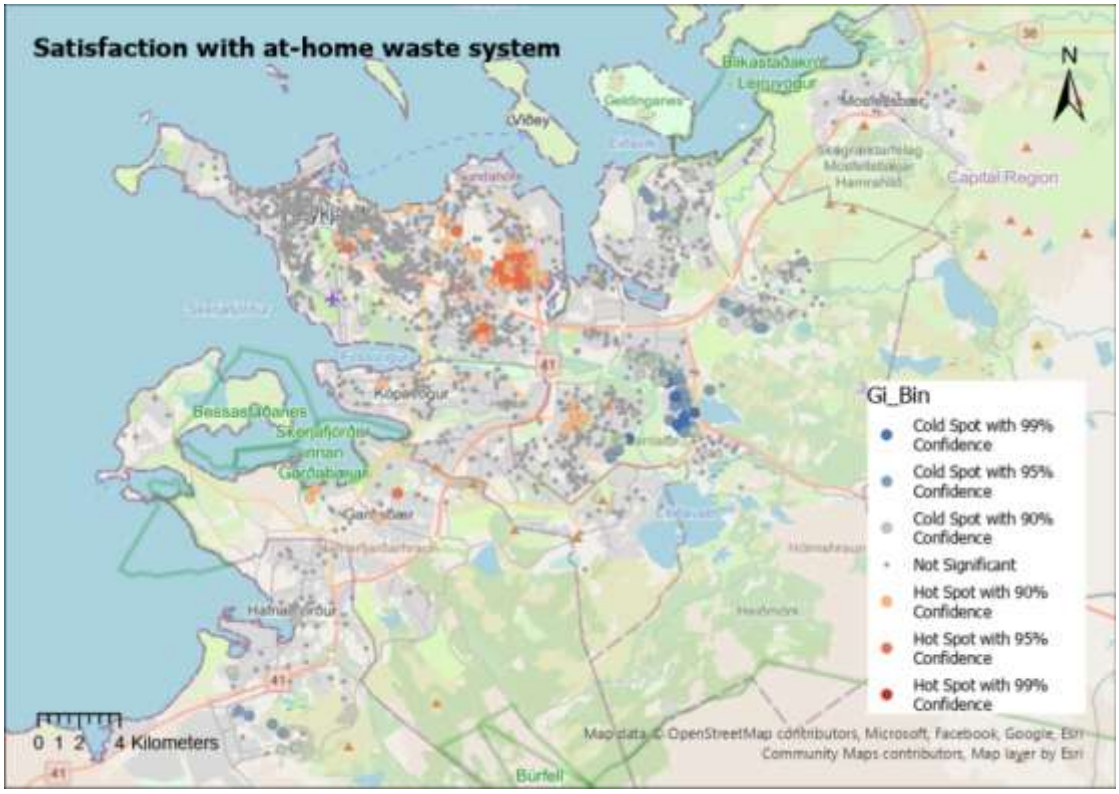


Figure 4. Hotspot map of satisfaction with at-home waste systems (bins by the house or sorting inside the home). Red dots are areas with high satisfaction; blue dots are areas with low satisfaction.

Barriers

The recycling barriers were asked in the 2025 survey in the form of an open-ended question. The answers went through a qualitative content analysis and categorization. A total of 1255 answers were written for this question. 12 themes emerged from the analysis:

1. Not the right type or number of bins: variety of containers offered at stations or bins by the home are not enough.
2. Full bins/not enough space to throw (rephrased into frequency of emptying bins)
3. No barriers/nothing
4. Home situation: due to lack of space for sorting, or due to circumstances related to family or work.
5. Complex process (rephrased into process is too complex): complex packaging, too costly, time consuming or too difficult
6. Lack of information
7. Location of the bins: stations with containers or shared bins are too far away
8. Lack of trust in the process: disbelief in the local recycling system and concerns about its impact on the environment, problems with the municipal waste management system
9. Building/station situation: not the right infrastructure to access stations, poor sanitary conditions at stations; old buildings not equipped to handle all the sorting categories and bins
10. No car: lack of transportation options to get to recycling stations (for example for bottle returns)

11. City service: problems with the level of service the city provides
12. Accessibility: refers to challenges accessing stations for disabled or elderly folk

Main barriers in increasing or changing one's recycling behaviour (Figure 5) were related to equipment and infrastructure (27.1%), frequency of emptying bins (19.1%) and not having enough space at home (15.9%). 20.1% of respondents said they have no barriers to changing their recycling behaviour. What also stood out was a lack of trust in the waste management process and its lack of transparency (7.5%), along with information not being easily available (7.0%).

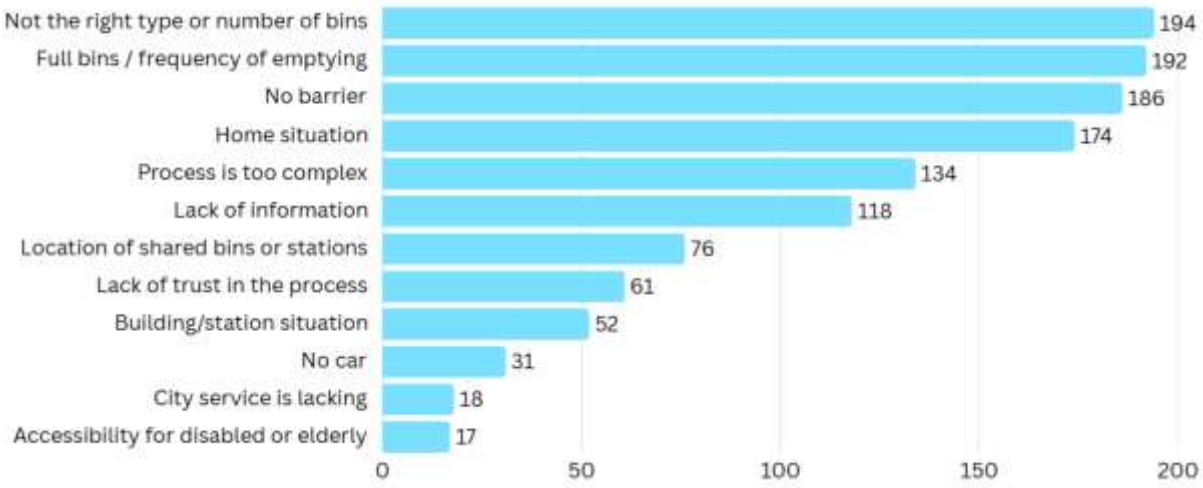


Figure 5. Main barriers to recycling more (2025 survey)

In the regression analysis, only the top barriers were analysed, with the exception of "no barrier". Main trend patterns are presented in Figure 6. For frequency of emptying bins, being a female increases the likelihood of choosing this barrier, whereas being Icelandic decreases it. For the "complex process" barrier, higher satisfaction with the sorting system at home and higher belief in one's individual impact on the climate went hand-in-hand with decreased likelihood of choosing this barrier. In contrast, higher climate concern increased the likelihood of finding the process too complex. Regarding at home recycling systems, Icelandic natives were more likely to feel that their home sorting system was a hindrance to recycling more, whereas respondents aged over 66 were less likely to choose this barrier. Those who use active modes to get to recycling stations were also less likely to choose this barrier. Lack of information was less of a barrier for Icelandic natives and younger people. Older people (55+) were more likely to find this to be a barrier. Also, people who are more concerned about the climate were more likely to find the lack of information to be a barrier.

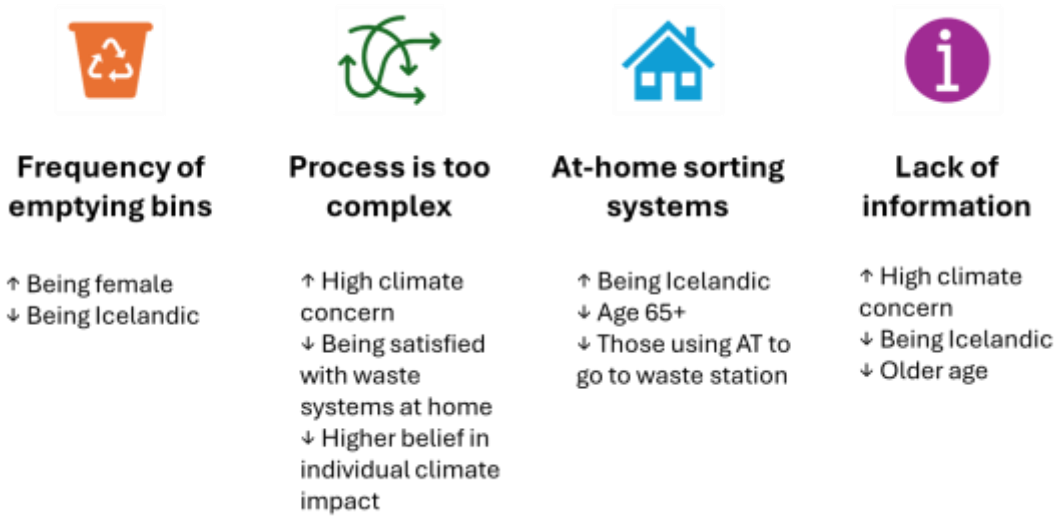


Figure 6. Overview of background factors behind experienced barriers to recycling (2025 survey).

Positive and negative experiences related to recycling

Respondents were asked to mark points and share their positive or negative experiences related to recycling. In total 2234 positive locations were marked by 701 respondents, and a total 1093 negative locations were marked by 488 respondents. Respondents were allowed to choose more than one aspect for every marked point. Respondents valued the convenience of the recycling location (convenient location 544, plus place on usual route 323), its tidiness, variety of containers (Figure 7). Many respondents also valued the ease of access, for example using active modes (314).

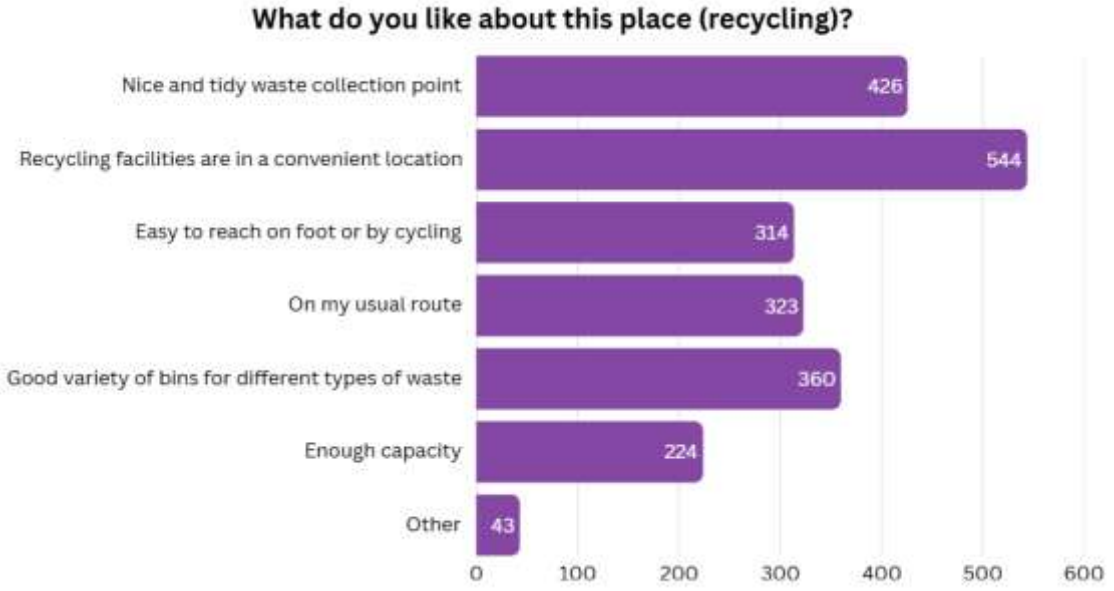


Figure 7. What respondents likes about recycling locations they marked. Respondents were allowed to choose more than one aspect for every marked point.

Regarding negative aspects (Figure 8), respondents were most critical of recycling containers that are overflowing (241), emptying frequency (173), and illegal dumping (153). Convenience issues were pointed out at 115 locations, with 87 locations difficult to access without a car. There were also 36 points marked that respondents felt like needed a new recycling station.

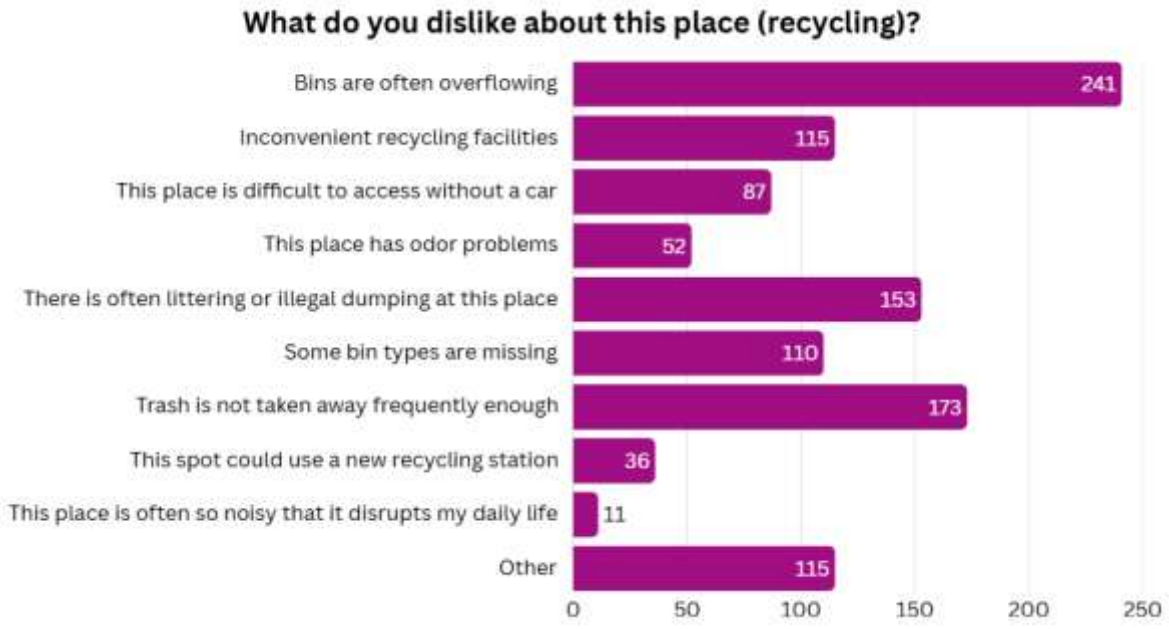


Figure 8. What respondents disliked about certain recycling locations. Respondents were allowed to choose more than one aspect for every marked point.

Positive locations

Many of the positive locations related to recycling were concentrated around existing neighbourhood stations and larger recycling stations (Figure 9). When examining locations marked for convenience (Figure 10), many of the current sites for recycling are in convenient locations or on participants usual route and therefore more likely to be used. There are also several locations which have not been marked at all for convenience, which could be evaluated by the city. Stations downtown are rated more for their capacity and variety (Figure 11) than stations on the outskirts.

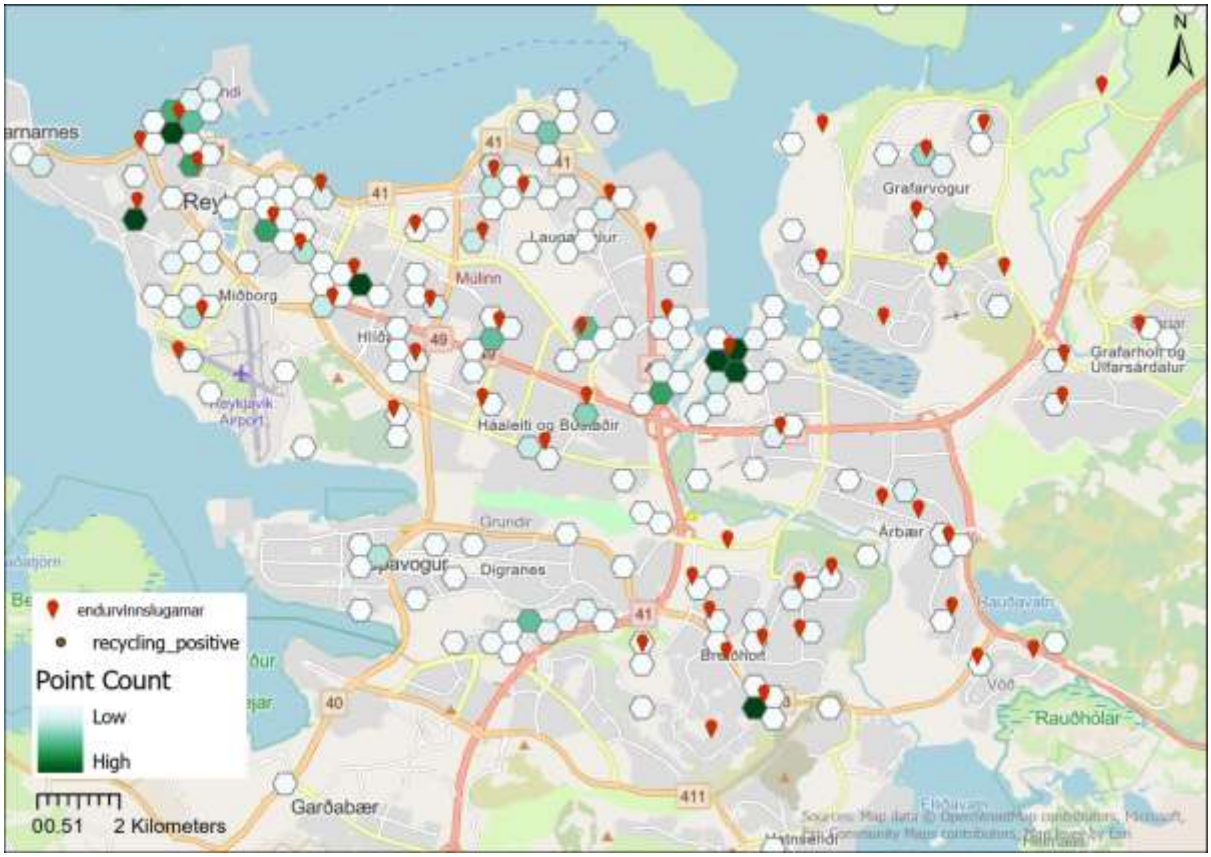


Figure 9. Density map of positive locations related to recycling. Darker green indicates higher concentration of points.

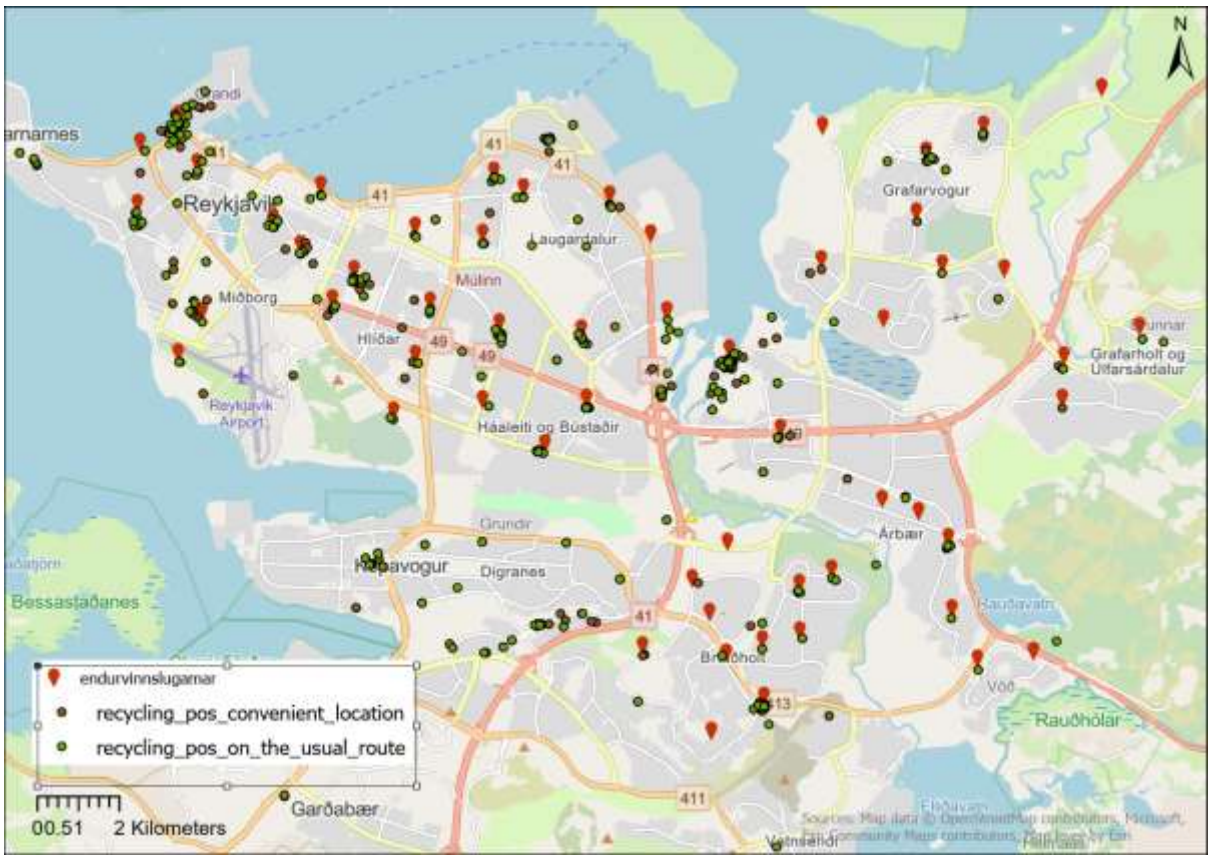


Figure 10. Positive recycling locations related to convenience aspects.

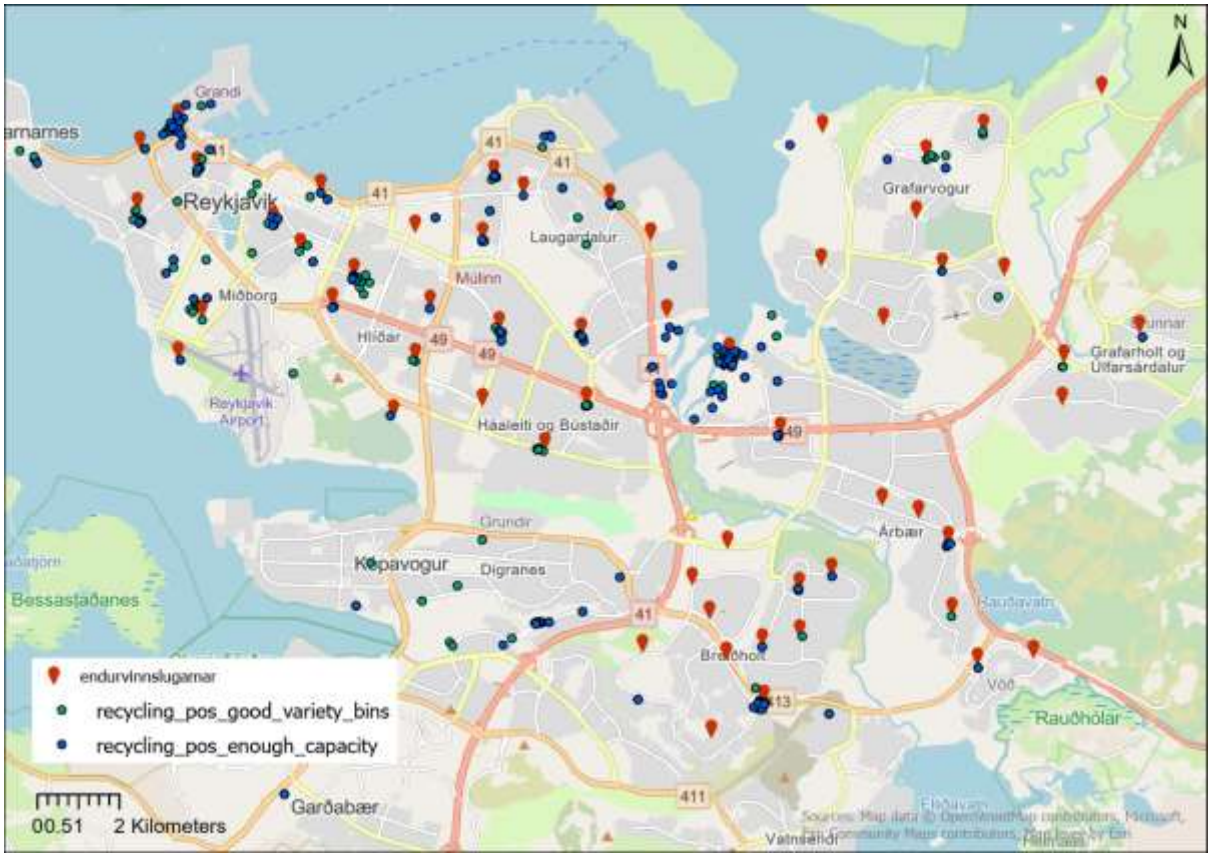


Figure 11. Positive locations in recycling related to variety of recycling containers and their capacity.

Many places have also been valued for their tidiness and cleanliness (Figure 12). Most current sorting stations have been rated positively for being accessible with active modes (Figure 13). However, active transport access seems more challenging in locations in Efra-Breiðholt, Mjódd, Árbær, Grafarvogur, Grafarholt, and Sæbraut.

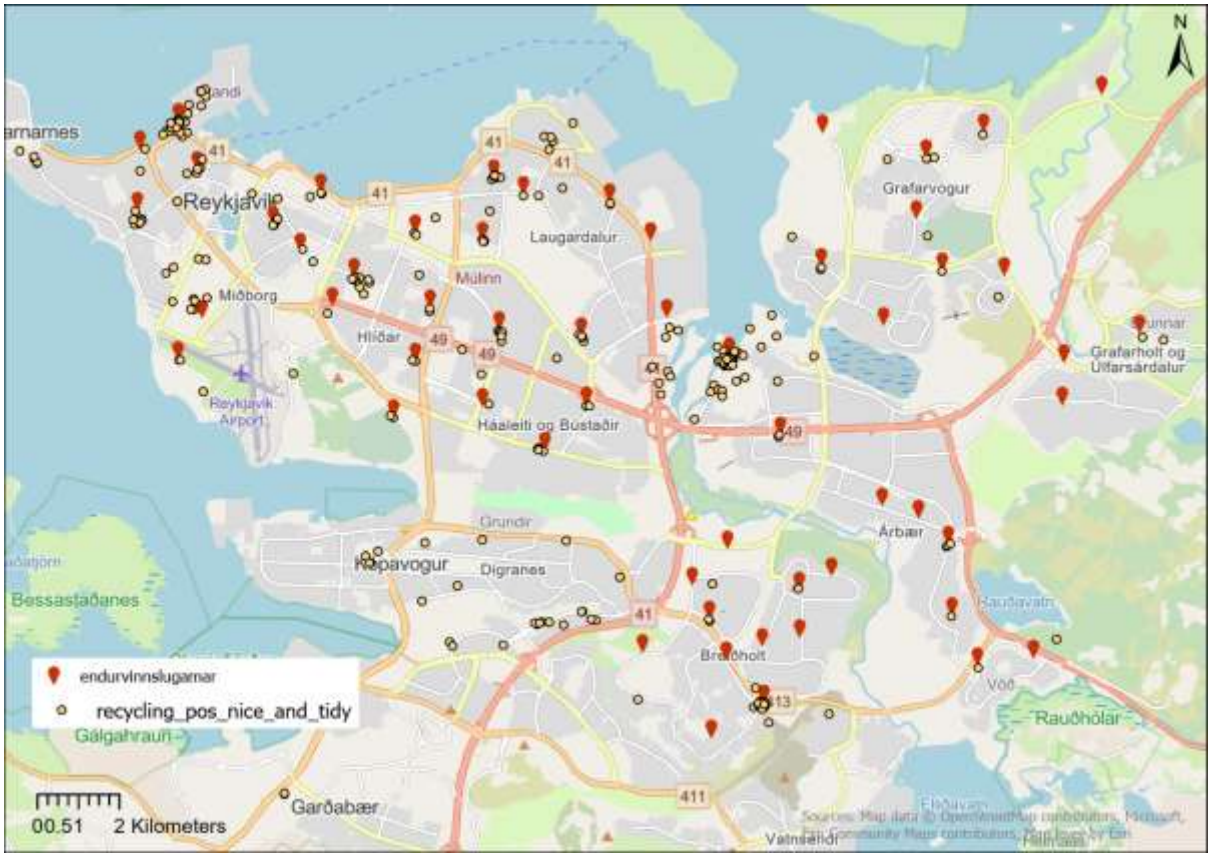


Figure 12. Recycling locations rated positively for their tidiness and cleanliness.

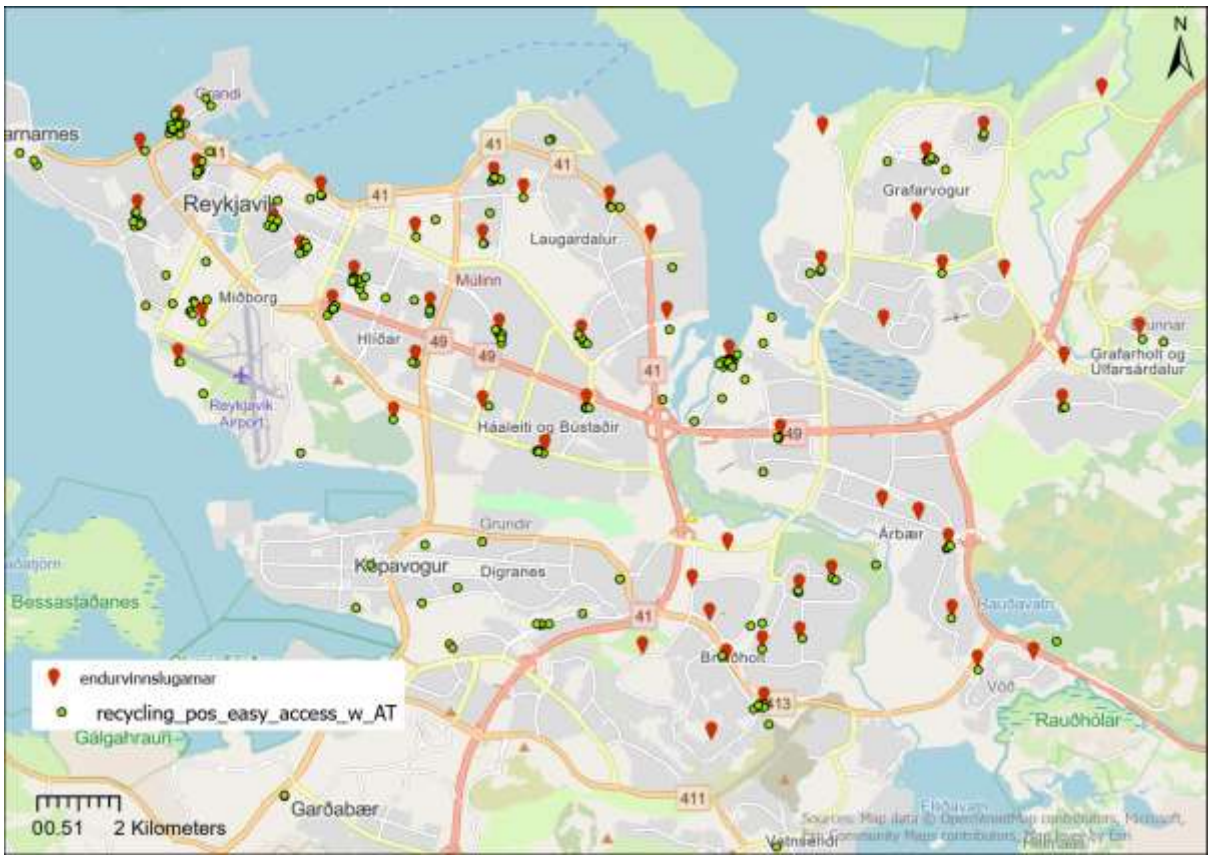


Figure 13. Recycling stations with easy access using active transport modes (AT).

Negative locations

Regarding negative experiences related to recycling stations, it can be seen that a larger number of negative points (darker blue on map below) have been marked near or at existing recycling stations (red pins), which are big Sorpa stations or smaller neighbourhood stations (Figure 14). This pattern is similar to that of positive locations, although more darker spots appear for negative clusters of points.

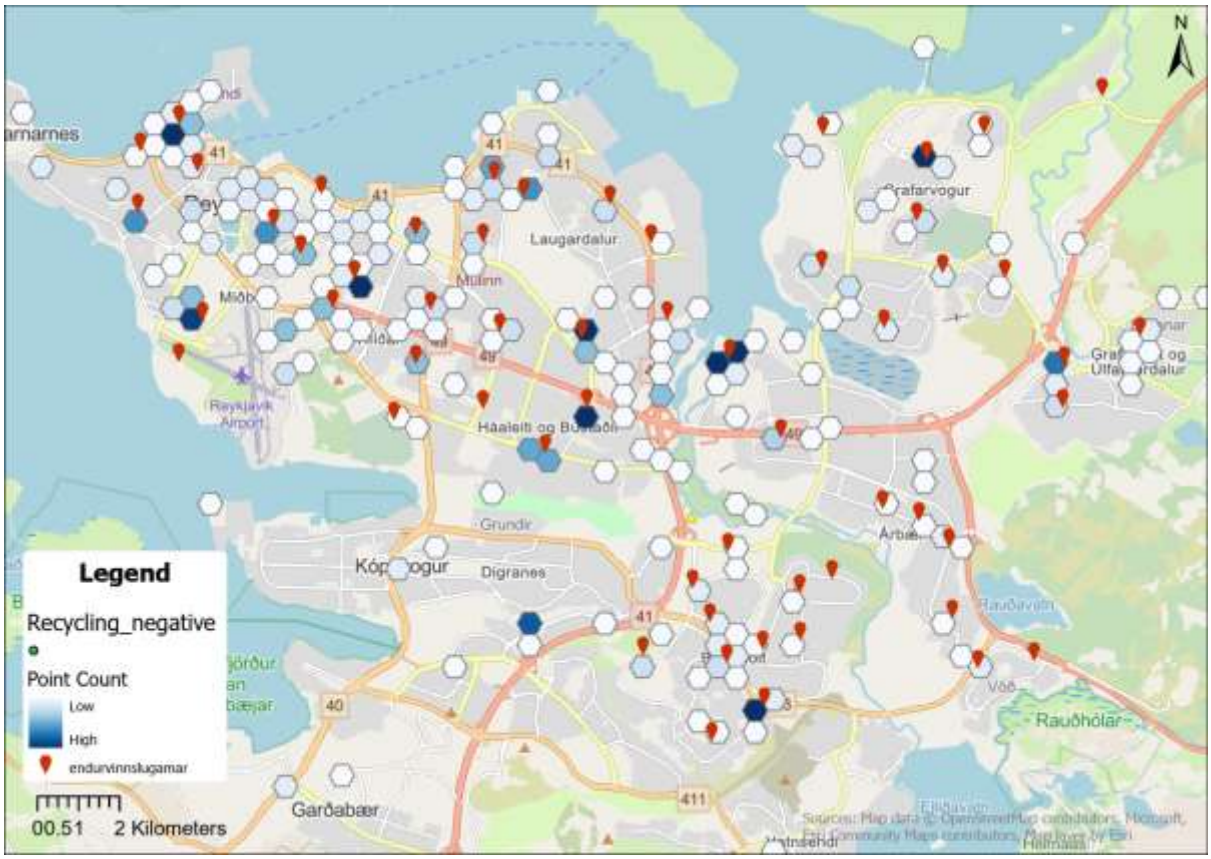


Figure 14. Map of negative recycling spots in Reykjavik, where high concentration of negative associations are in darker blue. Existing sorting centers and neighbourhood stations marked with a red pin.

Overflow (Figure 15) and emptying frequency (Figure 16) are a challenge mostly in downtown locations (101 and 107), in Glæsibær, Bústaðavegur, and in some locations in Breiðholt and Grafarvogur. Access without a car is difficult at major recycling centers, but most within neighbourhood stations do not seem to have access issues like that (Figure 17). Odour at locations is not a major problem, as it is marked in very few occasions and could just indicate rare occurrences (Figure 18).

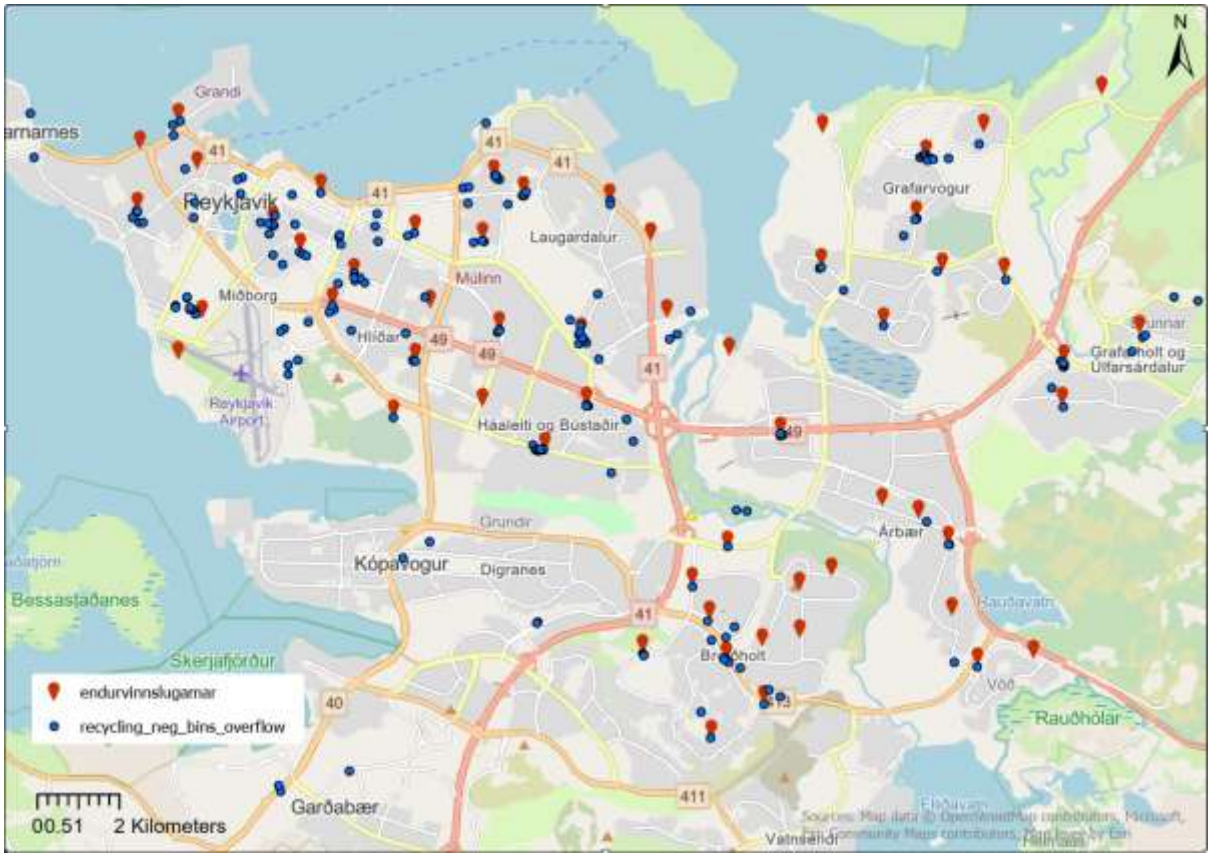


Figure 15. Negative recycling locations where containers often are overflowing.

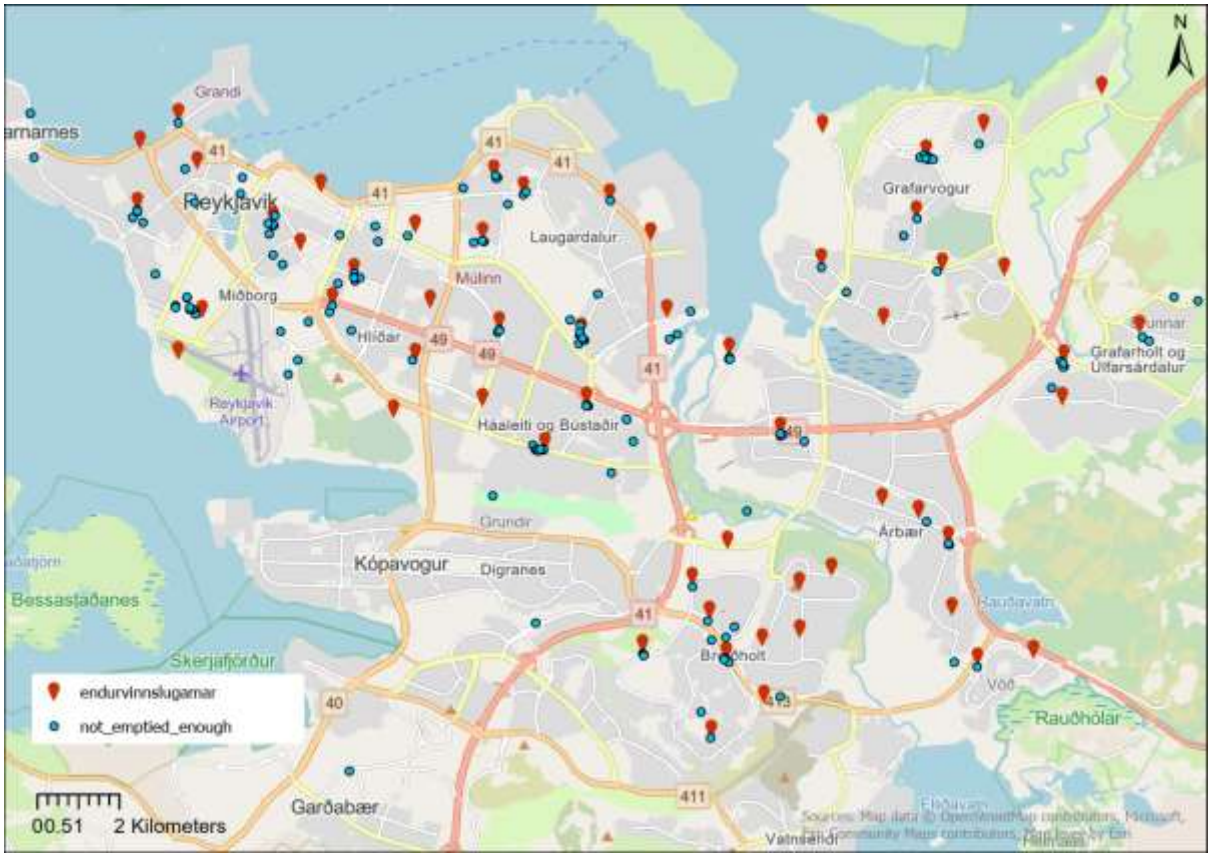


Figure 16. Negative locations where recycling containers are not emptied enough.

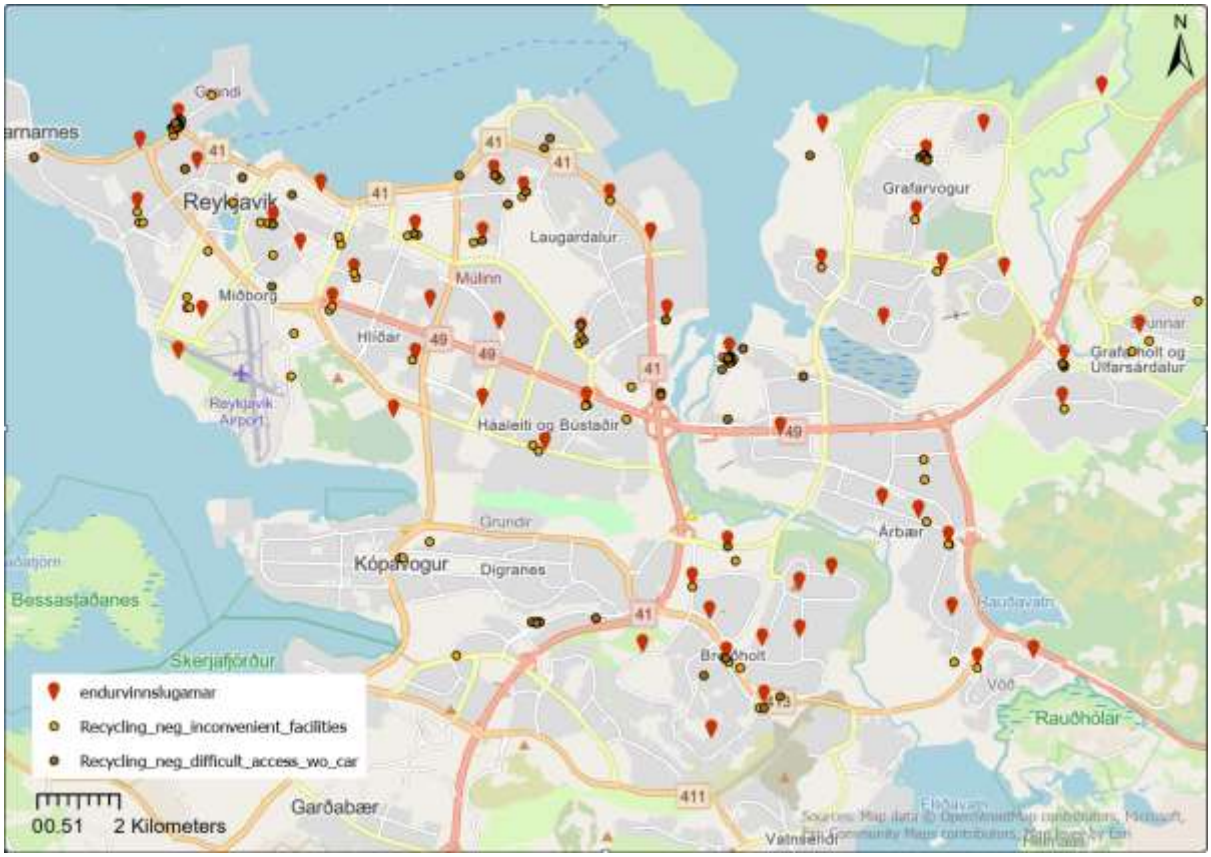


Figure 17. Recycling stations which are at inconvenient locations or difficult to access without a car.

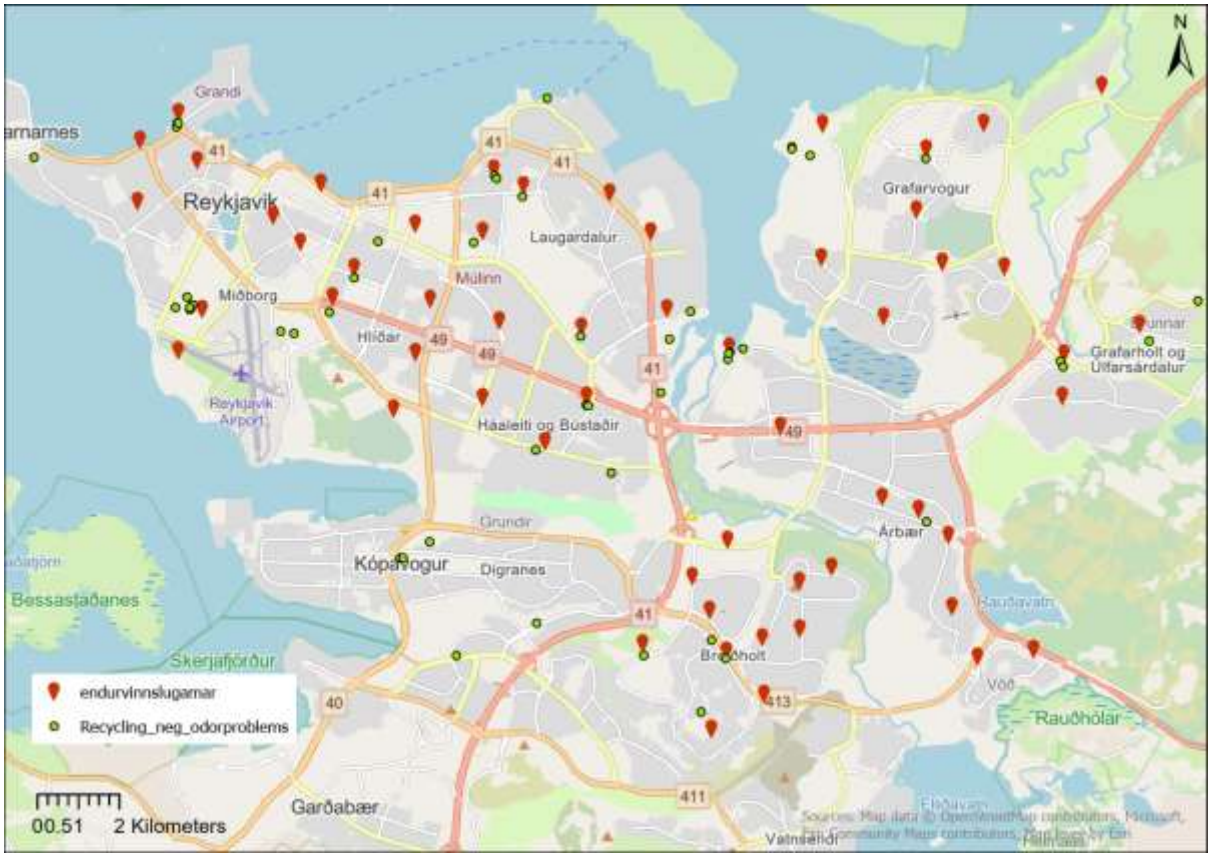


Figure 18. Recycling stations where residents report odour problems.

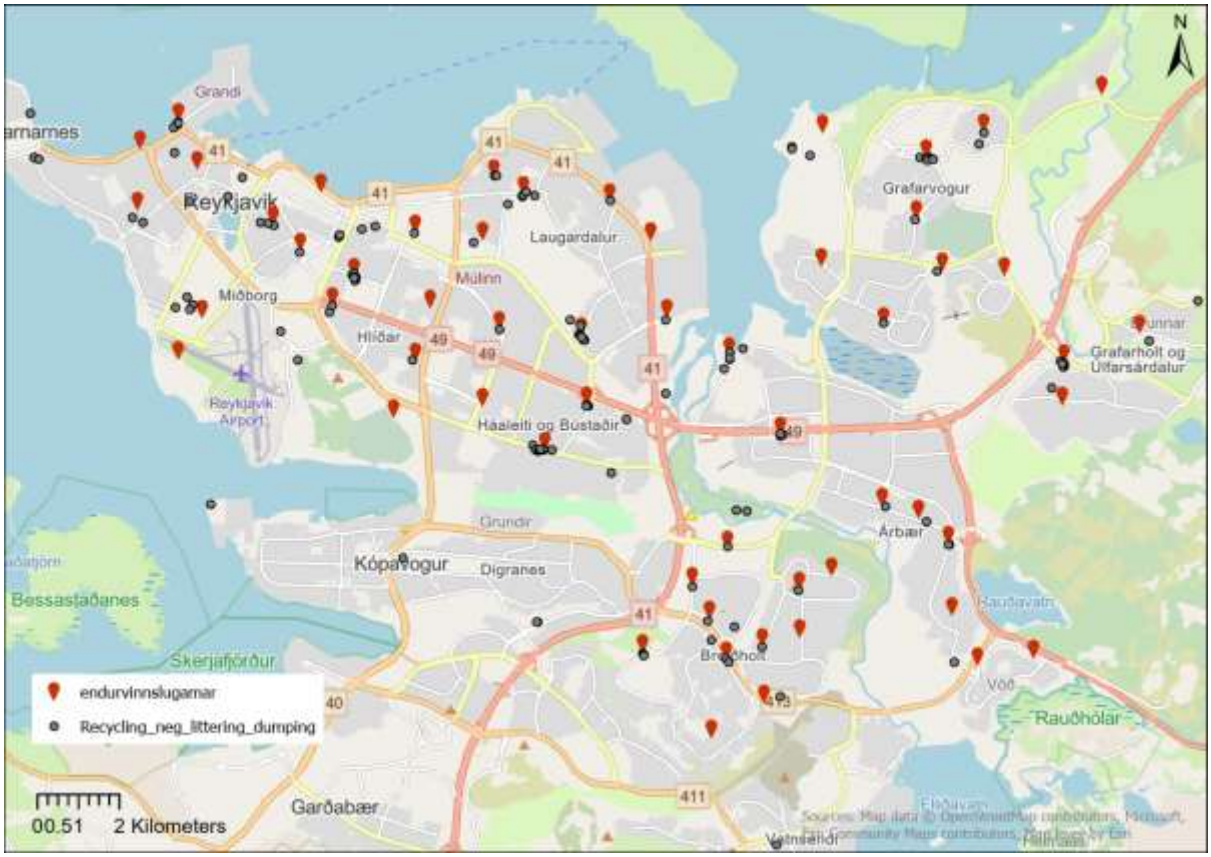


Figure 19. Recycling locations that experience littering and dumping outside of containers.

There are, however, several locations where dumping and littering seems to occur (Figure 19). For example, stations in Laugardalur, Klambratún, Bústaðavegur and Spönginn. This likely strongly relates to emptying frequency and bin overflow issues noted before. Lastly, we wanted to know where bin types are missing and where locations could use a new sorting station (Figure 20). Convenience issues were prevalent in areas like Grafarvogur, and there participants have suggested several new locations for containers that may make it easier to recycle. Breiðholt seems to have great coverage with stations, and more points have been marked there related to missing bin types rather than sorting stations themselves. Residents in the Vesturbær and city center area would, however, like more sorting stations. The main areas that could be improved are the campus and surrounding areas of Háskóli Íslands. Ther has also been a suggestion for a station close to BSÍ.

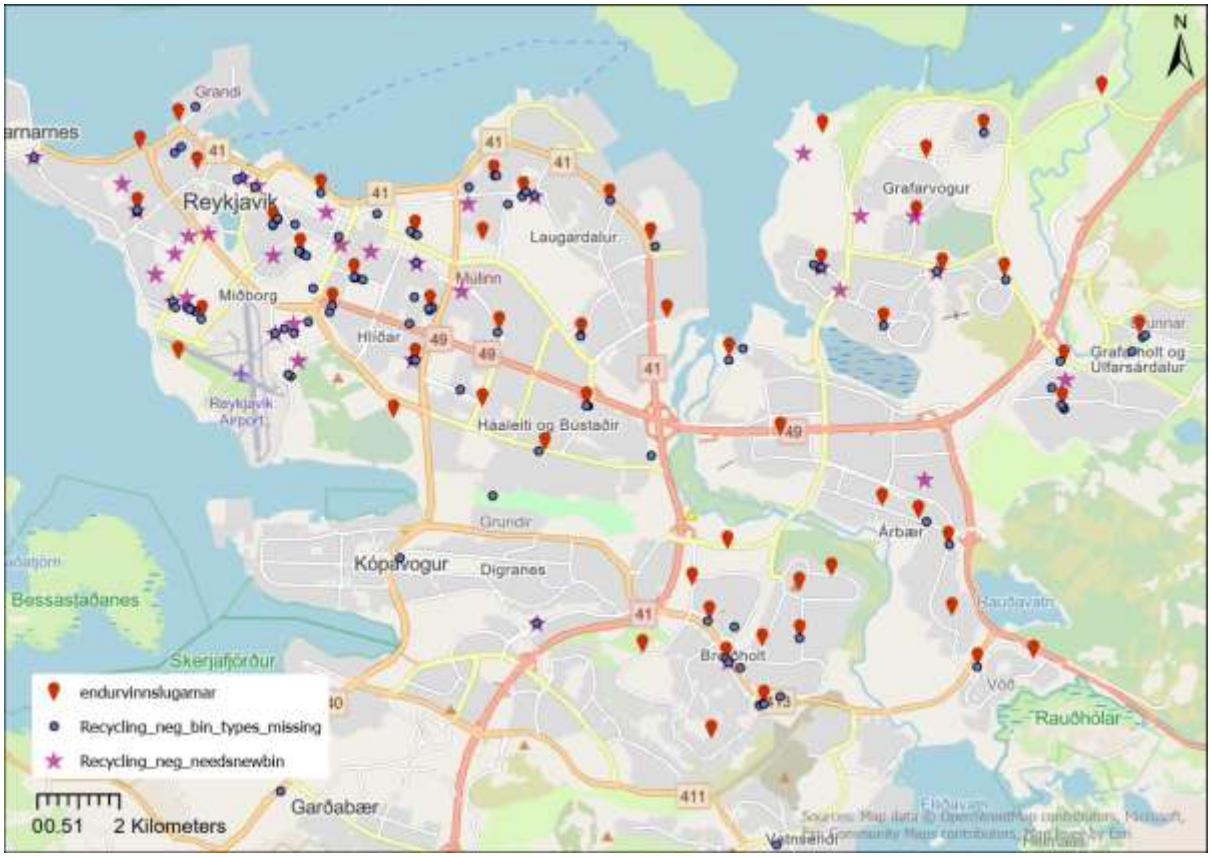


Figure 20. Recycling locations that are missing bin types, compared with sites where people think there is a need for a new station or bin (stars).

Suggestions for improvements

Urban planning and public policy directly facilitate pro-environmental behavior (PEB) through mandatory regulations and convenient infrastructure (Ogieriakhi & Wang, 2024). The results here show that daily household waste categories—such as plastic, paper, and organics—show far less variation in participation because they are directly supported by municipal services. Ultimately, improving infrastructure for high-effort recycling could yield a larger positive impact than targeting individual attitudes alone, though attitudinal changes and education remain relevant. Designing supportive urban environments and policies is key to driving consistent change towards more sustainable behaviour.

In addition, many participants emphasize the need for upstream changes, such as reducing plastic packaging, expanding refill systems, and introducing stronger policy and economic incentives. While education and communication are mentioned, they are seen as secondary to structural improvements.

> *"I just think that, you know, it has to be, you know, companies need to have to pay for the pollution they create, so that they see an incentive in creating, you know, products that pollute less in packaging that pollutes less, that is easier to sort or recycle or reuse or something like that." G3I2F*

"I lived in Germany before I moved here and there was just a system where I lived. Once a month, a Sorpa truck would just come for everything that is larger and something that would go to Sorpa here. You have to book it, but first something... two, three times a year it's just free to book and then I think more often you had to pay. But then people were just throwing out some furniture and bicycles and all that kind of bigger stuff. It's just put out here on the street, on the street. And then some Sorpa truck came and took all of it."
G3I3M

In WP2 of the project, an independent study ("Fjölskyldur og umhverfi í íslensku nútímasamfélagi") was conducted with households in Iceland on similar topics. Their results echo what was found within our survey and focus group research within WP3. The work concluded that restoring public trust in the city's recycling program is critical. Even dedicated recyclers are often confused about how materials that we sort daily are processed. Launching clear public campaigns using infographics and posters to map out the waste lifecycle will build confidence and encourage participation. Limited locations and poor transit options make Sorpa's recycling centers largely inaccessible to non-drivers and residents with disabilities, especially following the Dalvegur center closure. Launching targeted city doorstep collections for larger recyclables, metals and glass would help bridge this gap for elderly and disabled residents. Transitioning to a low-carbon lifestyle requires families to spend more time sorting household recycling. Policymakers should remain mindful of who carries this load, ensuring that eco-friendly policies do not unintentionally increase the unpaid labor burden on women. To foster sustainable urban living, the city should expand support for community-driven sharing initiatives. Funding and resources for public food pantries ("freedges"), resident swapping forums for clothes and furniture, and neighborhood gardens will empower citizens to adopt eco-friendly practices.

Below we summarize the suggestions from the surveys and interviews:

- More transparency and information on what happens to our waste
- Shift the wrong discourse on sorting (magnets for metals, no need to sort it as it gets sent out of the country, washing waste before sorting, etc.)
- Go back to basics with a big campaign
- App with barcode or QR code scanning function that tells you how to sort the item's packaging
- Improving access to stations without a car and for people with disabilities
- Increasing the number and variety of containers available in neighbourhoods + easy-to-use info/maps on what can be sorted at the nearest station
- Good and easy-to-use/-find information
- Brochures
- Social media

- Regular discussion on media (news, radio, etc)
- Materials for kids
- Magnets for fridges
- Put responsibility on producers/retailers to provide info on how to sort each item
- QR codes
- Stickers
- Utilize commonly visited locations (grocery stores) for collecting recycling (e.g. bottles, glass, metal, batteries)
- Would be nice to recycle metal and glass by the home

Case examples from other countries

COMMUNICATION, COMMUNICATION, COMMUNICATION

Research is showing that communication strategies seem to be one of the most effective ways to improve recycling behaviour. Key elements include frequent and consistent messaging, colours and symbols, and info in multiple languages. It is important to engage the community to establish social norms around recycling. In Manchester, UK, they have been successful using a gamification method via an app to educate kids on sorting. Various solutions could also be provided that help residents adapt their existing living space for sorting different waste efficiently, in a compact manner. A study from China places knowledge and information at the top of the waste policy hierarchy, followed by social motivation, and institutional changes. Similar results have been found in Singapore, Nigeria, and the UK. The main aim of the education and awareness is to develop and establish new social norms, which may be especially fruitful in early-stage recycling systems. It is important to note that even in established systems, like in Sweden, policy and regulations alone are not enough to increase recycling.

Read more: Good practices to improve recycling performance in urban areas

MAKING BOLD MOVES

Cities should also not be afraid to make bold moves when it comes to recycling policy. In San Francisco, California, U.S., regulations have made it mandatory for landlords or building owners to provide their tenants with adequate bins for recycling and information on their use. If these are not provided, landlords risk getting fined by the city. In Woodbury, New Jersey, U.S., when recycling and curb-side pickup became mandatory in the late 1970s, residents responded by throwing trash on the councilman's front lawn in an act of protest. However, the city persisted and within just three months they reached 85% compliance.

RECYCLING IN THE CITY

In our results, one notable theme was how the municipality requires extensive sorting of recyclables at home but does not have the same requirements for public spaces. In a case study from Leeds, UK, they did a trial of bin colours and apertures of municipal street bins to increase recycling among the public. By using clear messaging, colour-coding and apertures designed for a specific waste type, the manage to triple recycling rates and reduce the contamination rates in bins. While they did note that during big events and football matches, the contamination went up, the overall result was still positive. This is a promising result considering the number of tourists and visitors in Iceland.

Transportation

Habits

2025 survey (N=1801)

The further away from the city center one lives, the more likely the respondent is to use a car. Cars were used for over 50% of weekly trips, and even among those whose home-work distance is short (under 4km), weekly car use was around 50%. Bikes were used for less than 10% of journeys and walking for less than 10% of journeys outside of downtown Reykjavik. Public transport use did not exceed 30% of weekly trips anywhere in the capital region. Of our sample, 79% own a car and an additional 9% have a car available for them to use. Most respondents drive their car every day (60%) and a third use it a few times a week (33%). People living in the city center use a car less than their suburban counterparts. They also use active transportation more. Interestingly, the highest rate of public transportation use was among residents of Hafnarfjörður. 45% of respondents use a different mode in the summertime compared to winter.

There were an average of 1.2 cars per household. Among car-owners, the main reasons for having a car are convenience, reliability, enabling of leisure activities, and usefulness in running household errands and transporting kids (Figure 21). Among non-car-owners, the main reasons for not having a car were income or cost, having no need for errands, preference for active and public transportation modes, and climate concern (Figure 22). Both active transport and public transport users were more likely to own a car for running errands, and both find it difficult to run errands with active modes. Public transport and active transport users were more likely to believe in the impact of individual actions on the climate compared to car users. Active transport and public transport users are less likely to find weather to be a barrier compared to car users.

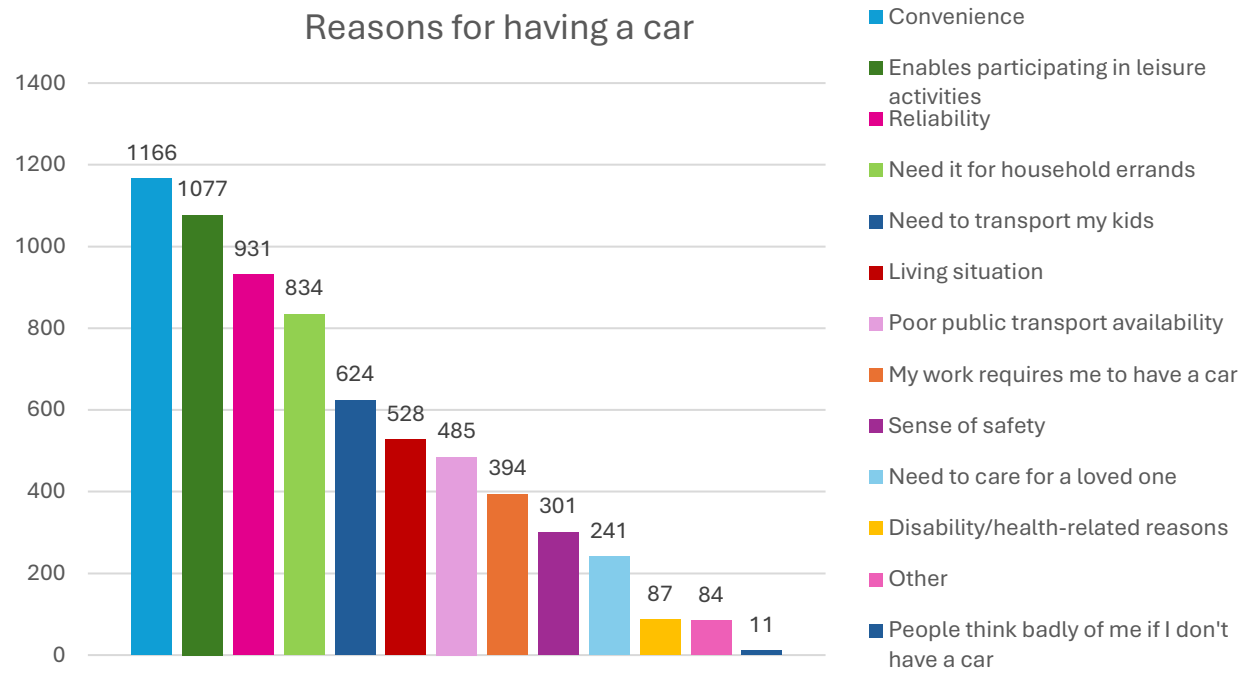


Figure 21. Reasons for having a car, 2025 survey.

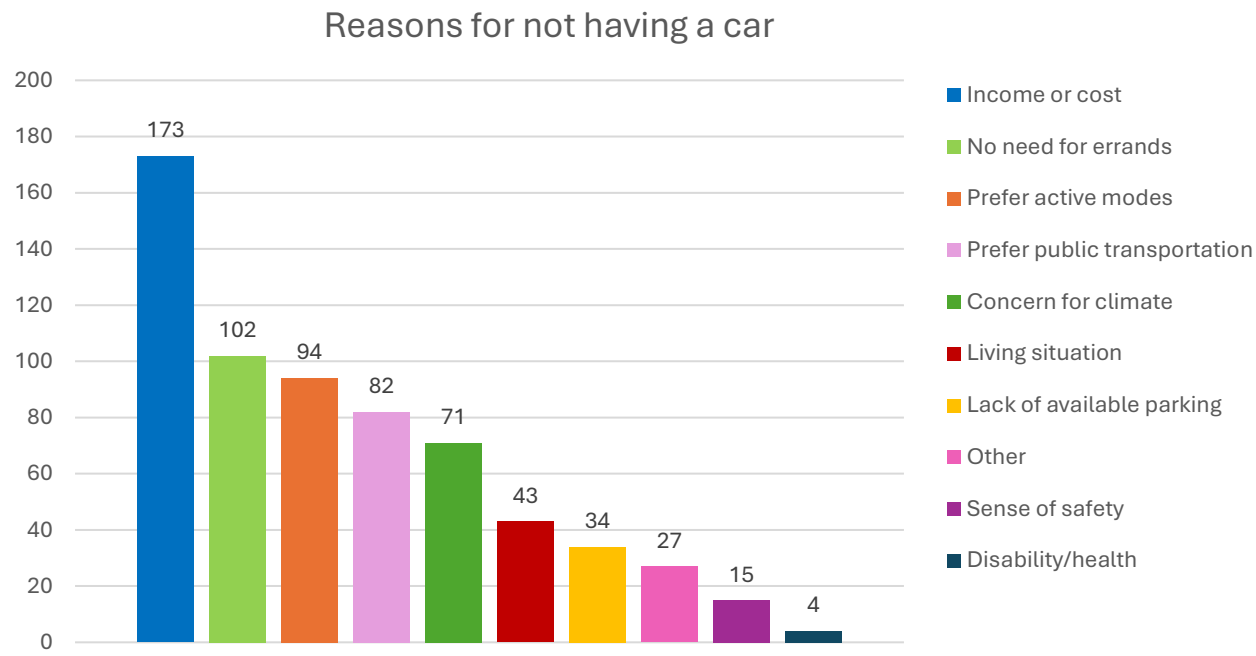


Figure 22. Reasons for not having a car in the household, 2025 survey.

Overall, about 60% of respondents were satisfied with the current mode they use for work commutes. When asked about which modes they use for home-to-work commuting, 60% use a car to get to work regularly. When asked what mode of transportation they would like to use to get to work, a total of 40% said they would still prefer a car. Therefore, about a third of people using a car to get to work would already be willing to make the shift to public or active transportation modes. Among those willing to switch to another mode (Table 2), public transport is a strong candidate

(31%), followed by cycling (20%), e-mobility (17%) and walking (11%). E-mobility encompasses electric bikes and electric scooters. When asked about whether they get benefits from work for not using a car, 37% said yes, 11% said yes but they do not use it, and 40% said no. 12% said they do not know or are not sure how to use the benefits offered by their workplace.

Table 2. Main mode used to commute to work or school versus mode wish for commutes (Sample total N=1697; those who want to switch N=657).

Current commute mode	No. of respondents for current mode (N=1697)	Percentage of respondents for current mode (N=1697)	No. of respondents for desired mode for commutes (N=1697)	Percentage of respondents for desired mode (N=1697)	Percentage of desired mode among those who want to switch their commute mode (N=657)
Car (as a driver)	955	56%	62	4%	9%
Car (as a passenger)	68	4%	46	3%	7%
Bus	186	11%	206	12%	31%
Bicycle	90	5%	128	8%	20%
Walking	261	15%	72	4%	11%
E-mobility	116	7%	110	7%	17%
Other	16	0.3%	33	2%	5%
I am satisfied with my current mode	-	-	1038	61%	-

The reluctancy to switch to public transport was also reflected in the satisfaction with the public transport system. Mean satisfaction with public transport in the capital area was 2.55 and mean satisfaction with public transport at the neighbourhood level was 2.91, both on a 5-point Likert scale (Figure 23). Satisfaction levels were lower in both categories among those who regularly drive to work compared to those not driving to work, particularly with public transport in the city overall (2.00 for those driving, 2.85 for those not driving).

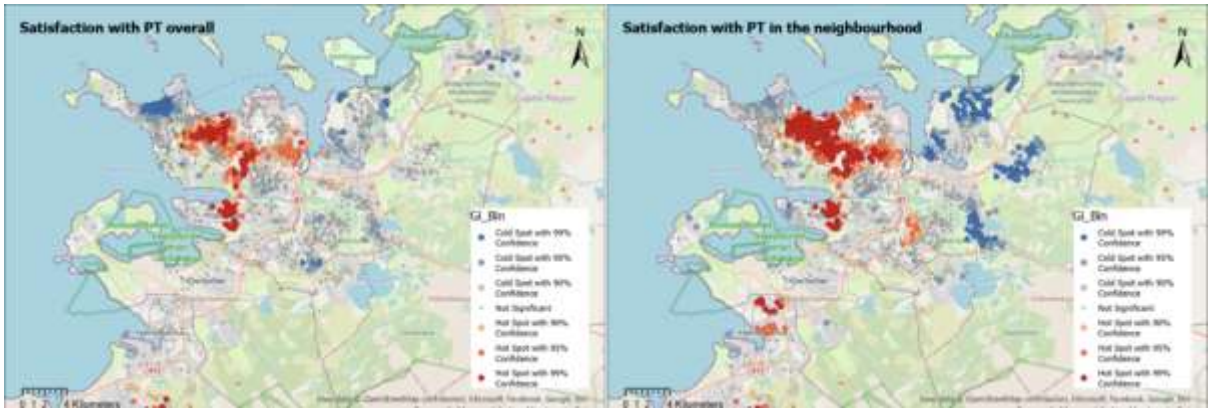


Figure 23. Satisfaction with the public transport (PT) system overall (left) and within the neighbourhood (right). Red dots indicate concentrations of high satisfaction areas (or hot spots), and blue spots indicate areas with generally lower satisfaction (or cold spots). Satisfaction question was asked on a 5-point Likert scale.

2026 survey (N=897)

Mean weekly car use is about 48% (as a driver) plus 11% as passenger. Bus use is about 10% of weekly trips, while cycling is used for on average 5% of trips and walking for 20% of trips. Electric bikes or scooters are used on average for about 7% of weekly trips. 33.6% of respondents use a different mode in summer compared to winter and 22.9% say that they sometimes use a different mode depending on the season. Commute distances vary a lot depending on location. Mean commute distance is 4.36 km (stdv: 7.60 km). Cars are most commonly used for work commutes, followed by active modes and bus and e-mobility. E-mobility encompasses electric bikes and electric scooters. Across all modes used, most respondents (59%) are on average quite satisfied with their chosen commute mode (4 out of 5 on a Likert scale). If they could switch their mode (Table 3), 38% would switch to bus, 32% to car, 16% to e-mobility and 11% to walking. 3% said they would like to carpool (or 10% is counting with car use as a passenger). None said they would like to switch to a bicycle, but current cyclists were satisfied with their main commute mode, with few wanting to change to a bus or a e-bike instead.

Table 3. Mode used to commute to work or school versus mode wish for commutes. Respondents were allowed to choose multiple for their current commutes (question sample N=807, total count N=1087), and one option for the mode wish (question sample N=741, those who want to switch N=302).

Current commute mode	Count of current commute mode	Percentage of sample for current mode	Count of desired mode	Percentage of sample for desired mode	Percentage of desired mode among those who want to switch modes
Car (as a driver)	453	56%	75	10%	25%
Car (as a passenger)	63	8%	22	3%	7%
Bus	136	17%	115	16%	38%
Bicycle	111	14%	0	0%	0%
Walking	225	28%	34	5%	11%
E-mobility	85	11%	48	7%	16%
Other/Carpooling	14	2%	8	1%	3%
I am satisfied with my current mode	-	-	438	59%	-

General observations for regression modelling indicated that in the sample, higher age, Icelandic citizenship, having children, longer travel distances, and perceiving schedule changes negatively were associated with a greater weekly use of the car. In contrast, stronger climate concern, perceiving public transport schedule changes positively, and higher satisfaction with public transport were associated with lower car use levels. Interestingly, no sociodemographic variable was significant predicting lower car use, hinting that this choice only comes down to personal attitudes.

In addition, being a woman, an Icelandic citizen, having children, with a high income per consumption unit, living far away from one's work/school location, and perceiving schedule changes negatively increased the likelihood of driving a car for one's home to work/school commutes. On the contrary, showing greater climate concern, perceiving public transport schedule changes positively, and being satisfied with public transport reduced the likelihood of driving a car everyday between one's home and work/school. These results for home to work/school commutes made by car are very similar to those for the frequency of weekly driving a car, likely demonstrating that work commutes are a main component of weekly mobility in Reykjavík.

Several questions were asked about the transport system. Respondents were asked to rate their general satisfaction with the transport system in the capital area and in neighbourhoods. The means on a 5-point Likert scale were 2.68 and 3.09 respectively, both slightly higher than in the 2025 survey.

Respondents were asked whether the recent changes to the bus system, implemented by Strætó in summer 2025, had affected their bus use (Figure 24). The vast majority (85%) reported that the changes had not influenced them. This group included 26% who had not heard about the changes, 38% who said the changes had made no difference to them, and 21% who said the changes had not encouraged them to use the bus. In contrast, 13% reported using the bus more frequently following the changes, while 3% said they now use it less (Figure 24).

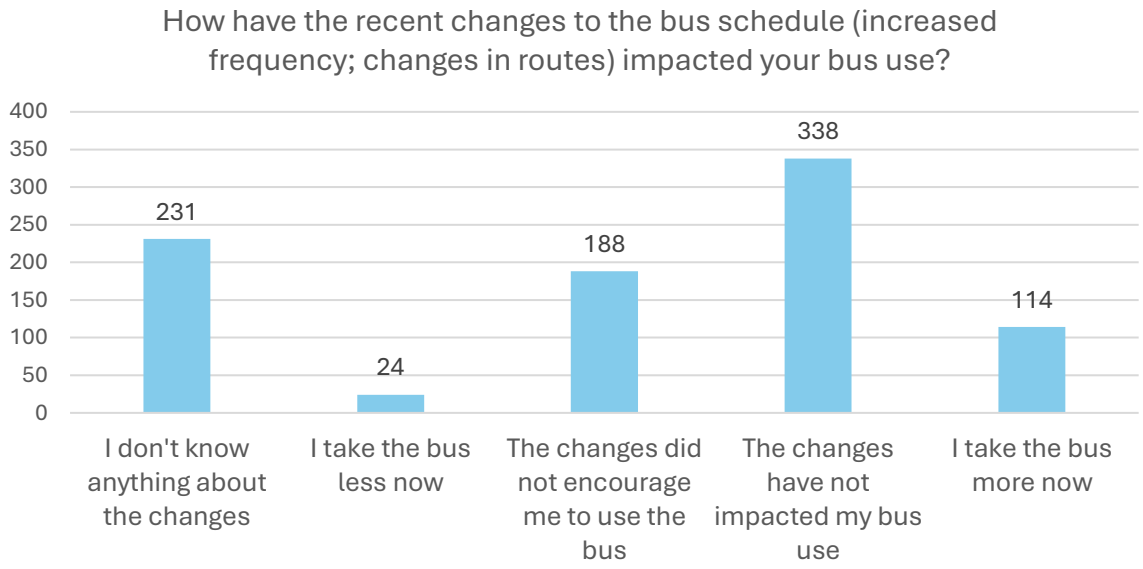


Figure 24. Have recent changes to the bus schedule (implemented in summer 2025) impacted bus use?

We also wanted to know about ticket prices for public transport. Most respondents would not be willing to pay more than the current ticket prices for a good quality bus system. 17% said they would not want to use the bus even if the system improved (Figure 25).

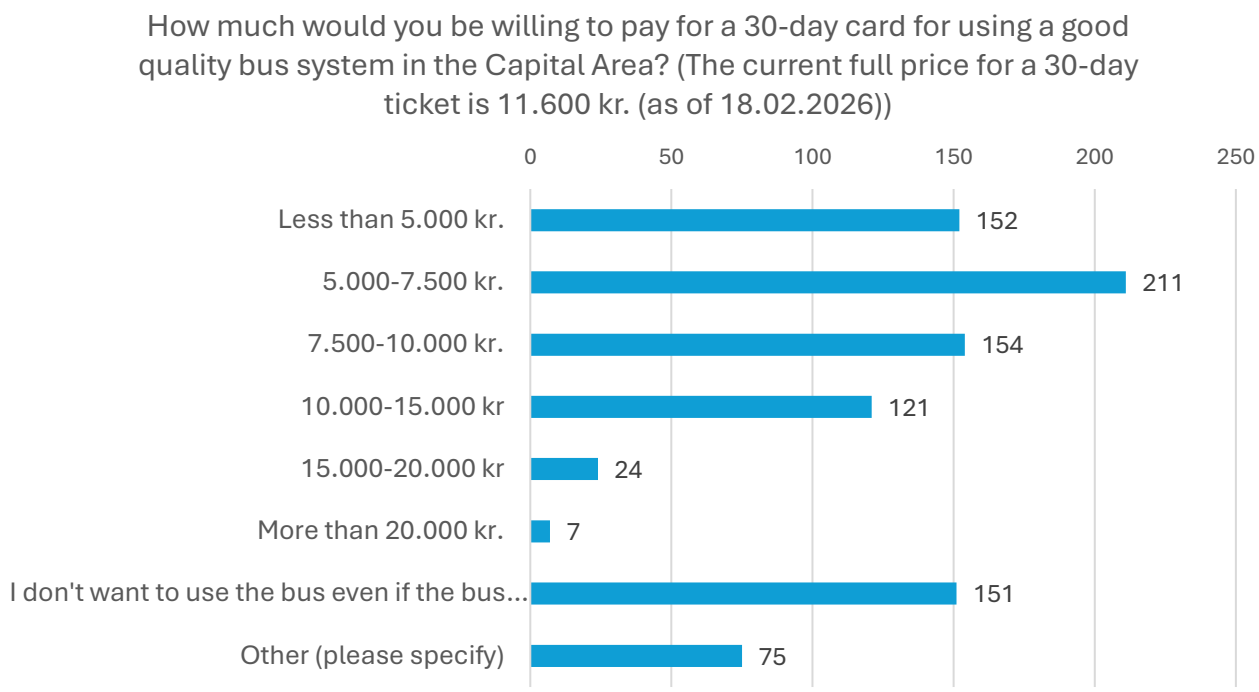


Figure 25. How much would residents be willing to pay per month for a good quality bus system?

Most respondents do not carpool regularly, and of those only about 11% are interested or somewhat interested in carpooling for their commutes (Figure 26).

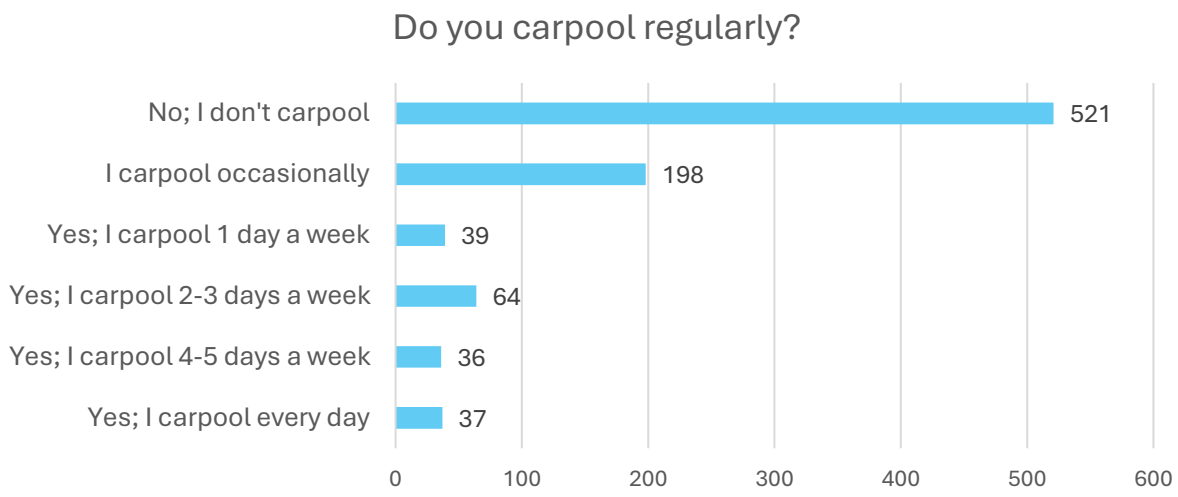
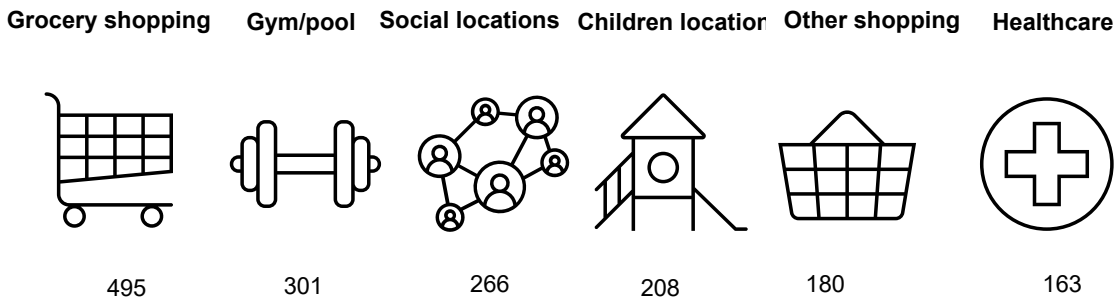


Figure 26. Carpooling habits of residents.

During commutes, trip chaining is common and other locations tend to be visited on the way to or from work. The most commonly visited locations (number of respondents indicated in brackets) include grocery shopping (495), gym or swimming pool (301), social locations (266), locations related to their children (208), other types of shopping (180) and healthcare (163).



Barriers

The main barriers for switching main mode of transport to bus or active modes were quite similar in character. For switching to public transport, the main barriers were "takes too much time", "difficult to run errands", "no direct connections to my destinations", "not reliable", and "too expensive". For active modes, the top barriers were "difficult to run errands", "weather", "frequently visited destinations too far apart", and "takes too much time". It can be concluded that the barriers to modal shift are centered around time, convenience and reliability in daily life. In previous research, the negative image or connotations related to being a public transport user were a prominent feature in discourse (see Heinonen et al., 2021). However, results of the barrier question in the survey 2025, the negative image or opinions of others was not as prominent, and the experiences barriers remained quite practical.

Some respondents also raised concern about the accessibility of the modes to people with disabilities or health concerns. Weather was more prominent of a barrier for active modes than for bus use.

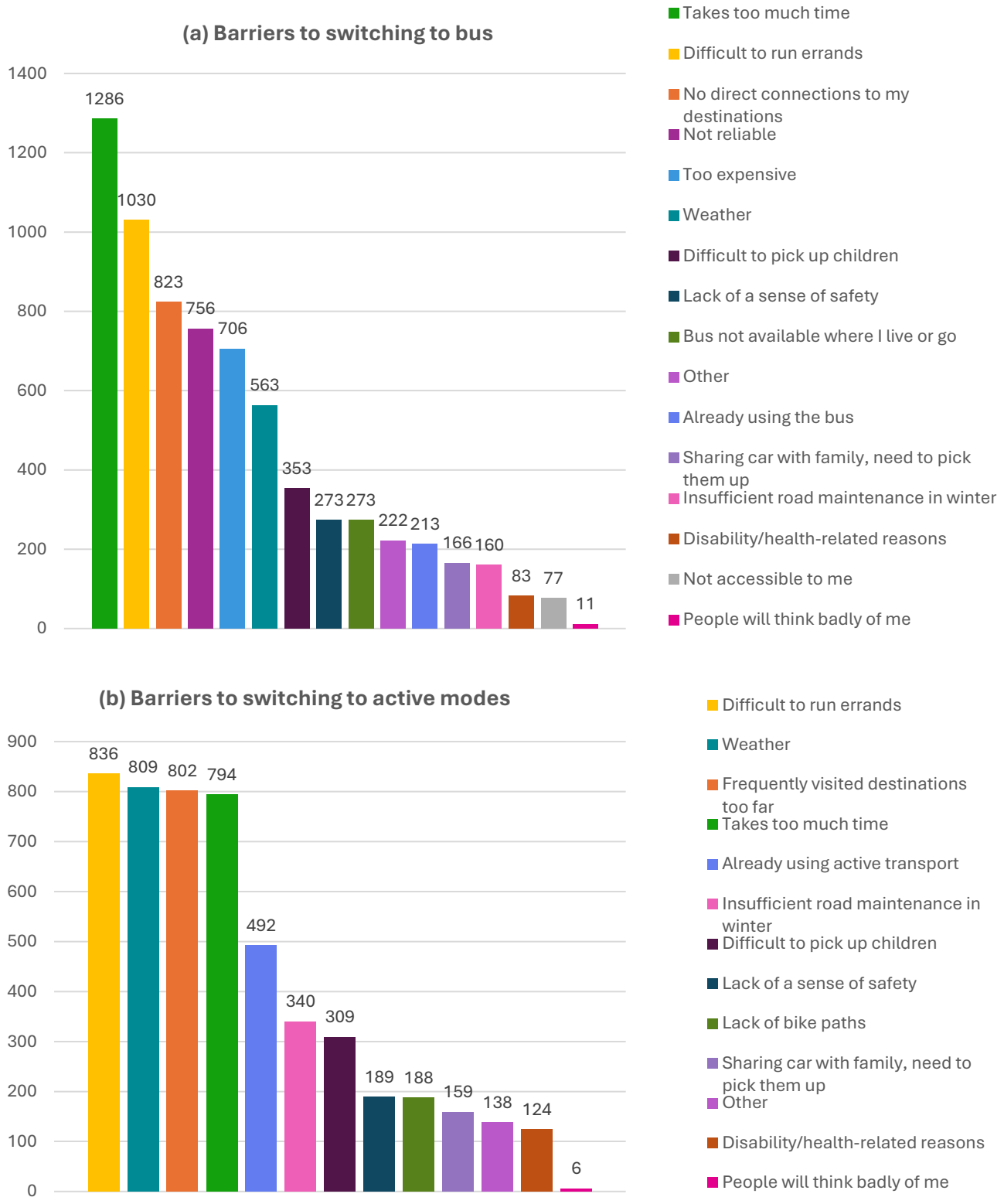


Figure 27. Main barriers to changing to (a) bus and (b) to active transport as main mode of transportation (survey 2025).

We also studied the underlying factors to choosing the top barriers using regression modelling. For the public transport barriers, female respondents were more likely to experience connectivity and errand-related barriers to switching to public transportation. Younger people were more likely to be affected by unreliability, while those aged 45+ less are likely to find public transport expensive or have trouble running errands with it. People may already own a car to combat barriers related to time, connectivity and the need to run errands. People who believe in the impact of their actions on the climate are less likely to connect to the most common barriers to public transport use (Figure 28).

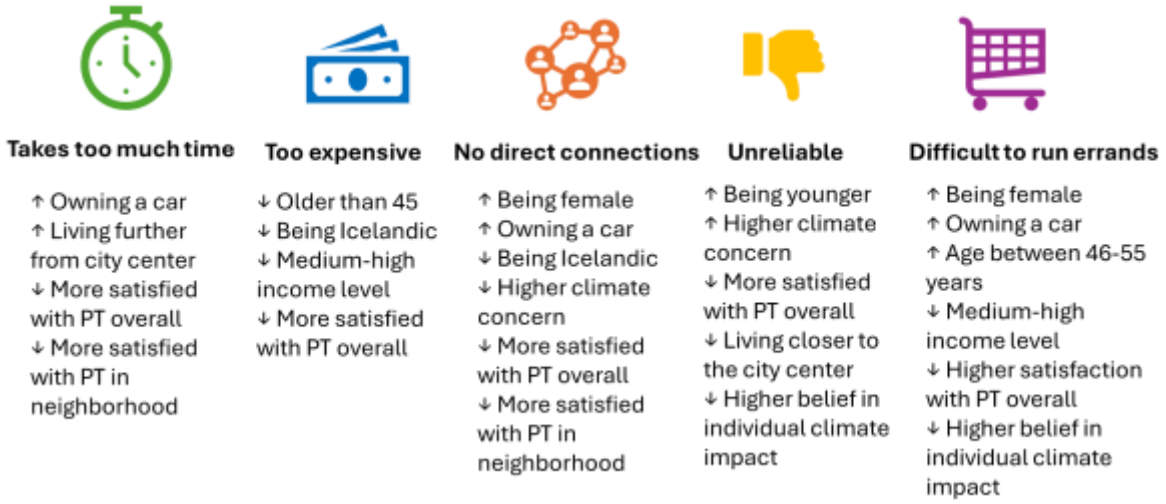


Figure 28. Background factors increase/decrease the likelihood of choosing the top barriers for switching to public transport.

Similarly to public transport barriers, for active mode barriers female respondents were more likely to experience time- and errand-related challenges to switch to active mode. Older age and lower satisfaction with health and disability make it more difficult to switch to active modes. Living further away from the city center was connected to barriers on errands, distance and time, but are potentially already mitigated by car ownership. Higher levels of climate concern and belief in individual action for climate were connected to a lower likelihood of experiencing the main barriers to switching to active modes (Figure 29).

Figure 29. Background factors increase/decrease the likelihood of choosing the top barriers for switching to active transport.

In summary, the main barriers experienced are structural, rather than related to personal biases. Convenience, reliability and cost are practical everyday considerations in mobility planning and are therefore a top priority for citizens and thus should also be a top priority of the city. It is important to note that over 60% of respondents used a car for work commutes, but a third of them show willingness to switch modes, which matches well with the city's targets. Modal switch is somewhat hindered by the availability of free parking at work locations, which encourages car use. For many, daily errands still require a car, even if work commutes are done without one. In addition, families with children are more inclined to feel that they need a car. Although public transport frequency increased in 2025, the infrastructure has not changed and still heavily favours the private car. As such, the current system does not compete with the car in any way. Even when people are willing to change, the alternatives are not practical and feasible enough at this time.

Insights from interviews

Transport behaviour in the Reykjavik Capital Area is highly mixed and situational, with most participants using a combination of modes depending on purpose, time, and life circumstances. While many value and actively use walking and cycling for their health and wellbeing benefits, the car remains the dominant mode due to its convenience, flexibility, and time efficiency, particularly for households with children or complex daily routines. Public transport is used to some extent, but is often perceived as too slow, indirect, or difficult to use, limiting its competitiveness with the car.

> *"I had to get a driver's license because of children and because the bus system is just... not very usable, for a family at least. [ ] .. [ ] I had a pass for a long, long time, a public transport, just a bus pass because, I got it for free from work (yes). But now I have to pay 100,000 a year. I mostly just walk and I*

occasionally buy a ticket for the bus because I find it way too expensive to have a bus pass. But in the end, that also means I use the car more (yes). But we only have one car and we're a family of six" G1I7F

"I want the freedom to be able to go out, get where I want to go, right at that moment, not have to, yes, you know, wade through these snowdrifts and, and then wait for a bus that might not even come. " G6I5M

"I think I was spending two hours a day getting between places that took half an hour combined by car. I just, I don't have two hours a day to just hang around on a bus." G6I6M

"It's just that we're forced to have a car because we have children in preschool. We had children in preschools in two different districts, you see, because the youngest didn't get priority placement in Breiðholt. So, of course, I applied in Árbær and got a spot for him there, so I had to drive between them. And that was an extra 40 minutes just for pick-ups and drop-offs and driving between them in traffic. So we were forced to have a car, but I would have preferred to just use the bus. It just doesn't work when you have kids in school, you see." G5I6F

Satisfaction with the chosen travel mode is highest for active mode users, moderate but conflicted for car users, and lowest for public transport users. However, across all groups, satisfaction is strongly shaped by necessity, system limitations, and environmental context rather than genuine preference.

"I walk everywhere, really. You know, I prefer to use that as my main mode of transport and I, so, yes, and I kind of dread the thought of having to own a car someday" G1I6M

"Mine [main mode] is car. My husband does have a bike as well, but he doesn't really use it in the winter. And I have a car because it takes me 15 minutes to drive to my job, or it could take me two hours by bus. So yeah." G8I2F

Participants generally reported being satisfied with their current transport mode in terms of its ability to meet daily needs, particularly regarding reliability and travel time. However, this satisfaction was often qualified. Car users, while functionally satisfied, expressed frustration with traffic, urban car dependency, and a desire to reduce usage. Public transport users reported low satisfaction due to issues with reliability, cost, and travel time. In contrast, users of active modes expressed high satisfaction but identified infrastructure and seasonal limitations. Across groups, many participants indicated a willingness to shift modes if viable, efficient alternatives were available.

"I would probably just get rid of the car today. If the bus were cheaper. I think it should be half the price." G4I1F

"We have one car in our household, and then one electric bike, and my husband and I just take turns on which one of us goes. I often need to be in a car for work, you know, when there's some kind of errand or something like that. But I would love to be rid of it or, you know, for every trip." G2I7F

The system does not compete with the car in convenience and efficiency. The barriers to switching to active and public transport are primarily structural rather than individual. The most significant factors include longer travel times, lack of direct and frequent public transport connections, and the convenience and flexibility offered by the car, particularly for managing daily tasks such as transporting children or running errands. In addition, inadequate infrastructure, such as poor winter maintenance, unsafe cycling and walking conditions, and long distances to bus stops, further discourages the use of alternative modes. There were also several mentions of the poor driving style of city bus drivers which makes passengers sick.

"In neighbourhoods that weren't perhaps designed for buses or public transport, the crosswalks are in just ridiculous places, so people either have to walk or take the risk and cross the street." G3I1F

"[I use a] Bicycle. Bus is never an option. I literally have a bus that starts at my front door and goes here at the right minute. And I'm still like, yeah, last time I cycled, I out-cycled the bus. [...] The bus is really never an option. Also, to work, like, oh, I work at 8, but the bus only goes from 9. And it doesn't even stop at my work. Well, OK. Then what do you do on an icy Sunday morning? Yeah, you just fall [and then] you're late, and the bus [driver] gets angry. But that's still better than trying to take the bus." G8I3M

"I find in Strætó I always end up travel sick or shaken around or... " G8I2F

“If you're further to the centre from that, there's no way to go north to south. To go between cars, between pedestrians, there's no way without getting [in] an accident. [...] And then what I think is also one of these things, the visibility on the street. You know, there's a lot of streets where you have a cycling lane that is just a picture of a bike with two arrows on the car road. And cars are never aware of that." G8I3M

Social norms and cultural expectations around car use also play a role, alongside accessibility challenges for groups such as children and the elderly. Overall, these findings suggest that while attitudes toward active and public transport are generally positive, current system limitations prevent widespread behavioural change.

"Yes, we, my husband is retired and he drives me to work. And we're on, we've calculated this back and forth and we, it's cheaper for us for him to drive me and pick me up than for me to take the bus. Unfortunately. Because I find the bus incredibly enjoyable. I just love watching all the people and the kids getting on. Some happy and some grumpy. I just love it."

"I find it complicated, I have an elderly mother and I feel there's something lacking in the service for her. You know, when she's travelling by car and bus and everything. It's difficult for her to deal with the Klapp thing. Then finally when she got it. And I just thought, hey, she can pay with her credit card. Awesome, she'll never have to think about anything. And then it's not for senior citizens, then she doesn't get the discount. So I'm always buying tickets for her and, you know, it's always some hassle and then there's just someone. Then she just doesn't dare go downtown because it's so complicated to pay for parking. So I've now convinced her. I'm always driving her downtown to show her that.... " G4I1F

Positive and negative experiences related to transport

836 places were identified as associated with positive experiences of transport, while 1,401 were associated with negative mobility experiences. Respondents were able to tell what they liked or disliked, respectively, about the places and were able to choose more than one reason for liking or disliking a place. Among the positive places (Figure 30), 66.5% were labelled "Walking or cycling here is easy", and nearly half (48.5%) were labelled "This area feels safe for walking or cycling". For the negative places (Figure 31), "Traffic congestion" was the most frequently selected label (45.1%), followed by "Traffic in the area feels dangerous" (37.8%) and "Walking or cycling here is difficult" (36.3 %). Safety and the ease of using active modes appear to be influential determinants of both positive and negative mobility experiences, while traffic congestion emerges as the most prominent negative aspect of Reykjavík's transport environment.

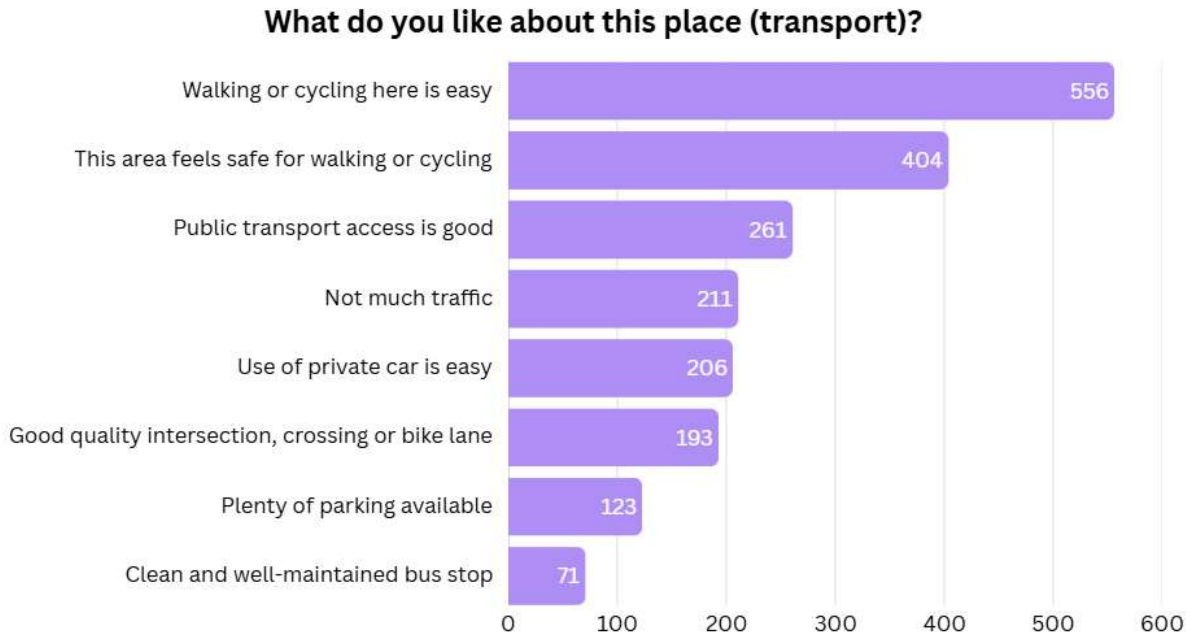


Figure 30. Positive places related to transport in main categories. Respondents were able to choose multiple reasons for why they like a place.

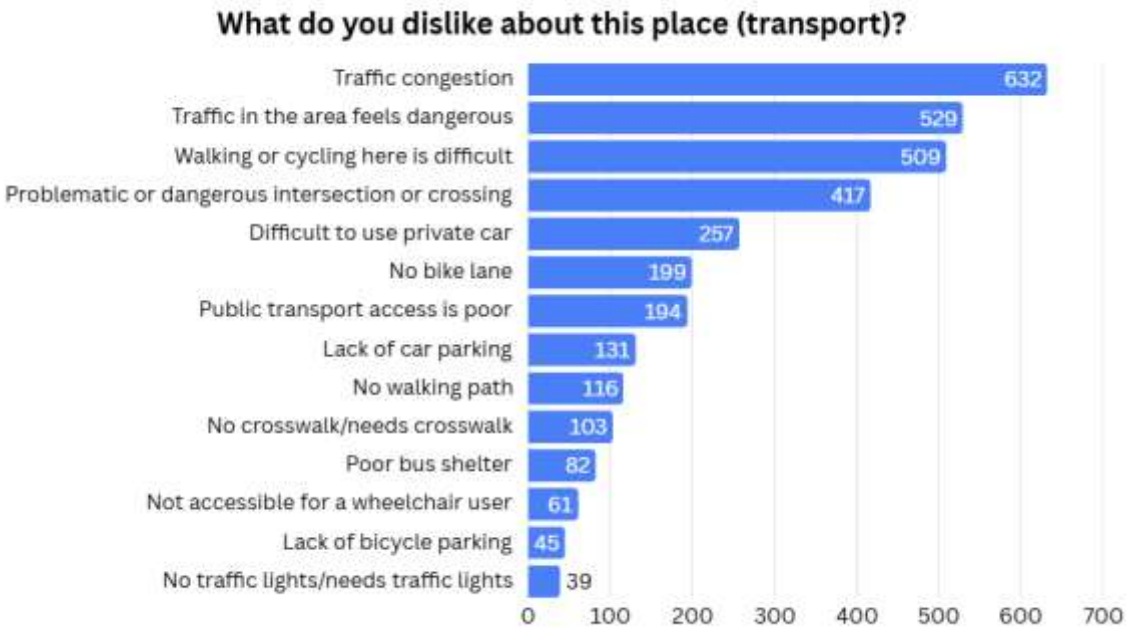


Figure 31. Negative places related to transport in main categories. Respondents were able to choose multiple reasons for why they like a place.

The main types of positive and negative places were examined using regression modelling, to identify the reasons for their appreciation or depreciation. Overall, respondents were more likely to report positive or negative experiences related to the transport mode they used most frequently. In contrast, safety- and traffic-related experiences were shared more widely across social categories, suggesting that sociodemographic and background characteristics did not play a significant role in shaping positive or negative perceptions of places related to such topics. **This indicates that safety and traffic issues may be broadly experienced by Reykjavík's population rather than being specific to any particular social group**.

Respondents expressing greater climate concern were more likely to share both positive and negative experiences related to active modes, as well as negative experiences of public transport, while being less likely to identify places related to private car use. Elder people were less likely to report negative experiences of active modes or positive experiences of public transport, but more prone to identify positive places related to private car use. Longer travel distances were associated with fewer negative experiences of active modes and public transport, and with a greater probability of reporting positive experiences related to private automobile. Finally, satisfaction with the public transport system was associated with more positive evaluations of places related to active modes and public transport and with fewer negative experiences of public transport. In summary, positive and negative experiences related to a given transport mode reflect the

respondents' habits in terms of preferred and most frequently used transportation mode. The results also exemplify that some mobility issues, such as safety and traffic, may impact all sociodemographic groups and represent shared challenges within Reykjavík's transport environment.

When mapping respondents' positive and negative mobility experiences, several areas stand out, either as appreciated, depreciated or associated with both types of experiences. Regarding places linked to positive mobility experiences, the city centre, separated active modes paths (e.g. in Elliðaárdalur), green areas and parks (e.g. Klambratún), and major bus hubs such as Háskóli Íslands and Lækjartorg generally stand out. The city centre was particularly appreciated among the sample for the opportunities for social interaction and access to services it provides. It was also valued for its speed limitations that contribute to smoothen car traffic, its good public transport accessibility, connectivity and frequency, and its overall multi-modal aspect. Respondents highlighted the city centre's urban environment quality and the feeling of safety it provides, especially for active modes users, thanks to its pedestrian streets, clear sidewalks, and visible crosswalks, for instance.

Several active modes corridors were associated with positive experiences, including the ones in Elliðaárdalur, Fossvogsdalur, along Suðurlandsbraut and Ægisíða. Respondents appreciated the dedicated walking and cycling paths, built separately and away from car traffic. The surrounding greenery and the overall quality of these urban spaces further contributed to positive perceptions (Figure 32).

Figure 32. Examples of active mode paths in the city.

Similarly, parks and green recreational areas were often associated with positive mobility experiences, among them Klambratún, Vatnsmýrin, Hljómskálagarðurinn (and Tjörnin), Öskjuhlíð, Laugardalur, Fossvogsdalur and Elliðaárdalur. Most of these green areas are accessible to all transport mode users, are located away from car traffic, pollution and noise, and are considered as safe and comfortable by respondents. Finally, major bus hubs and transfer points, such as Háskóli Íslands (Figure 34), Klambratún, stations in downtown Reykjavík, and Lækjartorg, were generally associated with positive experiences. Respondents appreciated these locations for the quality of their facilities,

the variety of connections available, frequent bus service, and year-round maintenance. Positive locations related to public transport clustered around key transport hubs (Figure 33).

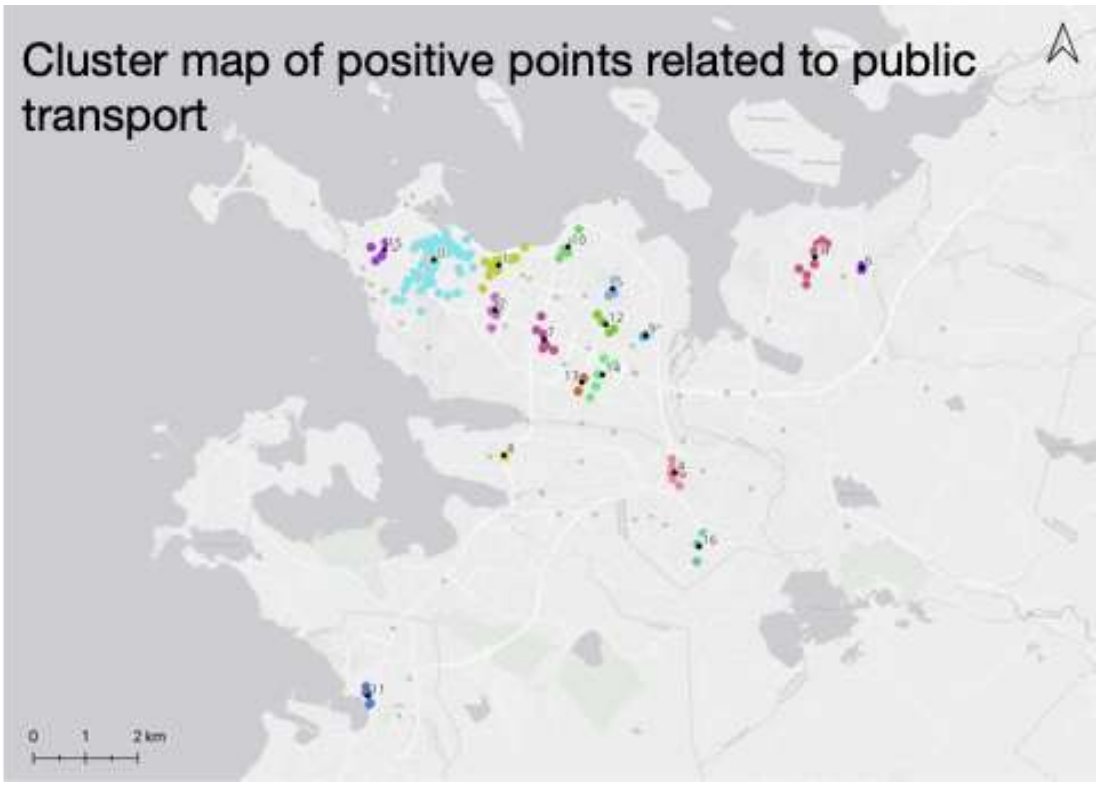


Figure 33. Clusters of positive locations related to public transport. Dots represent positive locations, with various colours to represent each cluster separately.

Figure 34. Bus stop at the University of Iceland campus with many connections

Recurring themes emerge to explain the appreciation of the previously quoted locations, notably safe and dedicated infrastructure that is specific to each mode of transport, public transport connectivity and frequency, and high-quality public spaces that include greenery.

Regarding places linked to negative experiences of mobility, Skeifan emerged as the most frequently depreciated area, being mentioned by respondents regardless of their primary mode of transport. Other locations commonly associated with negative perceptions include the district of Grandi, the fraction of road 49 (Hringbraut/Miklabraut) which is in downtown Reykjavík, as well as several busy road segments and intersections. Skeifan and Grandi are two historically car-oriented districts, characterised by sprawled retail blocks with large parking lots, wide roadways, and complex intersections (Figure 35). Respondents criticised these car-centric places for focusing on cars users at the expense of safety, comfort, and convenience for active modes and public transport users.

Figure 35. Heavily paved areas with a car-oriented infrastructure in Skeifan and Grandi make it challenging for people to use active modes in those areas.

Interestingly, the city centre was also associated with negative mobility experiences. This suggests that the area is undergoing a transition in its mobility patterns, creating both opportunities and tensions. Indeed, the city centre now gathers a diversity of transport users and concentrates activities within a limited street space. Respondents reported traffic conflicts between private vehicles and other transport mode users, discontinuities in active modes infrastructure, and disruptions caused by ongoing construction works, all of which contributed to perceptions of limited safety and comfort. Car users also highlighted the limited availability of free parking in the city centre. In addition, the concentration of tourist-oriented shops and restaurants contributed to a perception among some respondents that the city centre offers limited social activities, leading them to prefer seeking entertainment and leisure in other neighbourhoods.

Finally, several major roads and intersections were associated with negative mobility experiences. High-speed roads, such as 41 (Sæbraut to Reykjanesbraut) and 49 (Miklabraut to Suðurlandsvegur), were criticised for their heavy traffic flows, which contribute to congestion and reduced connectivity between neighbourhoods. Respondents also mentioned the limited presence of buffering elements such as trees and vegetation along these roads, the lack of infrastructure dedicated to active mobility or public transport, and the complexity of intersections and access points. Some respondents also reported dangerous driving behaviours, including excessive speeds

and limited consideration for pedestrians and cyclists, reinforcing perceptions of a lack of safety and unpleasant environments.

Gap of those who want to change modes

Survey participants were asked which mode of transportation they currently used to commute to work or school. They were also asked what mode of transportation they would like to use if different from their current mode. Figure 36 shows the current and desired work travel modes of the survey respondents. The majority of respondents reported that their main mode of transportation to work was the car (60%) followed by walking (16%), bus (11%), e-mobility (electric bike % scooter) (7%) and biking (6%). When asked "If you could choose, what mode of transport would you use to get to this location," about 28% reported that they would like to switch from using the car to other modes, walking shares remained the same (16%), and there were increases in shares of bus (18%), e-mobility (13%) and biking modes (12%). Interestingly, the desired travel modes of the respondents were in-line with the goals of the Reykjavík Master Plan (car = 50%, bus = 15%, and active transport = 35%). The desire to use more sustainable methods of transportation is there amongst residents and further research is needed to see what may be preventing people from using these modes.

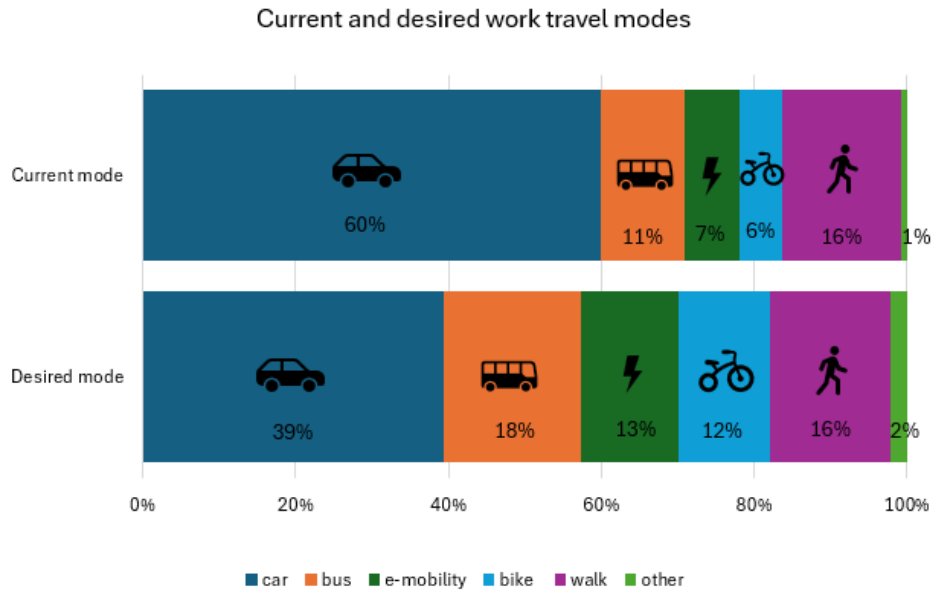


Figure 36. Current travel mode to work vs desired travel modes to work based on the 2025 survey.

The distance between someone's home location and their workplace can be a factor that may determine what mode of transportation they use. For example, it has been suggested by the Norwegian Directorate of Health and Norwegian Roads Administration that 0 to 2 kilometers (km) is a feasible walking distance, 2 to 7 km can be traveled by bicycling, and 7 to 15 km can be done through multimodal trips (combining public transport with walking or biking) (Rohrer et al., 2025). The survey respondents were asked to mark their home and work locations on a map to determine the distance that they travel to work or school. Figure 37 shows the percent of respondents who live within walkable, bikeable, multimodal or further distances from their workplace.

98% of the respondents live close enough to take a sustainable transportation mode to work, so for most respondents there is great potential to use a sustainable mode of transportation to commute to work or school. Table 4 shows the average distances that people currently travel from home to work and their current travel. The mean and median distances fit within the ranges of what is considered feasible according to the distances described above (Rohrer et al., 2025).

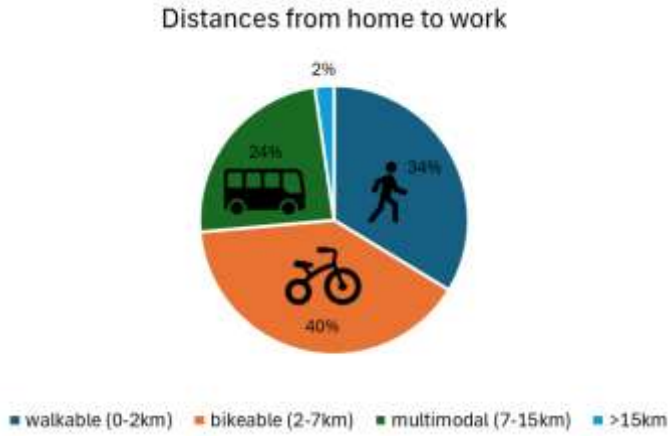


Figure 37. Percent of respondents living within walkable, bikeable, multimodal, or further distances from their home location to workplace.

Table 4. Mean and median distances travelled from home to work across current work travel mode groups

	Current travel mode (km)	
	Mean	Median
Car	6.5	6
Bus	5.4	5
Bicycle	3.7	3
Walking	1.2	1
E-mobility	4.3	4
Other	4.4	2

KEY FINDING
98% OF THE SURVEY RESPONDENTS LIVE WITHIN WALKING, BIKING, OR PUBLIC TRANSPORT RANGE OF THEIR WORKPLACE

Those wishing to change their main transportation mode to the bus are the largest subgroup within the Switchers (Table 5). They tended to come from couple-type households, have higher education levels, and higher life satisfaction compared to the other subgroups of the desired travel modes of the Switchers. Individuals in this group had higher climate concern and belief that the government and companies have the responsibility to facilitate pro-climate behavior (Table 6).

The respondents who wished to switch to biking as their main mode of transportation to commute to work also had higher climate concern and education levels. They had slightly higher levels of car ownership than the other groups (Table 6). The group that wanted to switch to e-mobility modes differed from the other groups in that they had a higher representation of families (couples with children), Icelandic citizens, and a higher belief in personal responsibility when it comes to pro-climate actions (Table 6).

Those who would like to use a car as their main mode of transportation had a slightly higher representation of foreign citizens, younger aged people, and students. This group also had lower income and education levels, but this may be related to higher number of students and young people in the group. This group also reported slightly lower life satisfaction levels than the other groups (Table 6).

Table 5. Cluster analysis summary by predictor variables.

	Switchers	Drivers	Bus, Bikers, & E-mobility	Walkers
Sample Size	510 (40%)	386 (30%)	216 (17%)	160 (13%)
Current travel mode	Car (70%) Bus (13%) Walk (11%) Bike (4%) E-mobility (2%) Other (1%)	Car (100%)	E-mobility (38%) Bus (36%) Bike (27%)	Walk (96%) Other (4%)
Desired travel mode	Bus (32%), Bike (21%), E-mobility (17%) Car (16%) Walk (10%) Other (4%)	Same as current	Same as current	Same as current
Commuting distance (mean)	Bikeable (5.2 km)	Bikeable (6.9 km)	Bikeable (4.4 km)	Walkable (1.1 km)
Current mode satisfaction (mean)	Satisfied (3.9)	Very satisfied (4.6)	Very Satisfied (4.4)	Very satisfied (4.7)
Climate concern (mean)	High (4.0)	Medium (3.1)	High (4.1)	

The group that wanted to shift to walking as their commuting mode varied from the other groups in that there were proportionally more females, individuals with a medium level of education, and they tended to work more hours than the other groups. (Table 6)

The final group, who chose 'other' as their preferred transportation mode was quite small, so it is difficult to infer too much about this group, but a few notable differences was that this group had a more even representation of gender, were mostly mid-age, and a higher proportion of EV (electric vehicle) owners. (Table 6)

While current travel patterns remain dominated by private car use, respondents' desired travel modes closely align with the sustainable transportation targets outlined in the Reykjavík Master Plan. The largest share of respondents who wished to change modes indicated a preference for switching to public transportation, followed by biking and e-mobility. (Table 6)

Table 6. A comparison of demographic information and climate concern and responsibility for the desired travel mode groups.

Bus	Bike	e-mobility	Car	Walk	Other
↑ largest group ↑ couple households ↑ education levels* ↑ climate concern* ↑ belief in government and companies' responsibility* ↑ life satisfaction*	↑ education levels* ↑ climate concern* ↑ car ownership*	↑ Icelandic citizens* ↑ couples with children ↑ education levels* ↑ belief in individual responsibility & impact*	↑ foreign citizens* ↑ younger* ↑ students* ↓ education levels* ↓ climate concern* ↓ car ownership* ↓ income ↓ life satisfaction*	↑ female ↑ medium education levels* ↑ petrol cars* ↑ overtime workers	↓ Smallest group ↔ even gender ↑ 36–45-year-olds* ↑ EV owners*

A cluster analysis identified a large group of "Switchers" who were generally less satisfied with their current transportation mode, lived within distances suitable for sustainable travel, and reported relatively high levels of climate concern (Table 5). The primary barriers preventing mode shift were not a lack of interest, but rather practical constraints related to travel time, reliability, route design, weather conditions, childcare responsibilities, and the need to complete daily errands.

Suggestions for improvements

Based on the surveys and focus groups, several improvements are proposed. Across focus groups, motivation to shift away from private car use was strongly tied to improvements in travel time, reliability, and affordability of public transport, alongside safer infrastructure for active modes. Participants also highlighted the role of policy measures, such as subsidized transit and parking restrictions, as well as broader urban design changes. However, entrenched habits, weather conditions, and low trust in institutional delivery remain significant barriers.

There is a need to increase understanding of one's individual impact on climate change especially through continued car use, and to raise awareness of health benefits, usability and safety when it comes to active transport modes. There is also a need to improve active transport infrastructure in its connectivity and safety. For public transport/bus system, attention should be paid to connectivity outside of the city center, adopting more continuous bus lanes that bypass traffic and take priority during rush hours.

Independent research with families conducted through WP2, confirm our findings, coming to similar conclusions about the transport system in the Capital Area. There is a need to strengthen and expand the public transport network. In addition, the work also points out a cultural narrative among working-age adult residents, connecting those who use public transport and do not have a car to poverty. There is a need to change the perception and stigma of bus use and other more climate friendly transport modes, including carpooling.

Better training for bus drivers also needs to be provided for a more pleasant and inclusive. Several people mentioned getting injured when a bus speeds off or getting motion sickness from the driving style used by bus drivers in Reykjavik, which ultimately has put them off using the bus. For example, during the interviews, an impactful story was shared where a bus user was not able to use the service due to the negligence of the driver, on one hand, and the negligence of the city on the other (in snow removal priorities).

> *"Something that I also think I would like to add is that the buses are very not accessible for anyone who has a disability or is elderly or something, and there doesn't seem to be any training for drivers or any company policy that reinforces that. I have quite some colleagues that use wheelchairs and some of them still try to use the bus and the experiences are horrific. So it's also just like getting into the bus, and now when there was so much snow, they just didn't clear, and I guess that's the city, they didn't clear the bus stations. So my friend in a wheelchair was supposed to climb magically over like a meter of an iceberg to get through the back door. And when I told the bus driver to just drive the back door please to the little space where that they had*

made, so I could somehow help him get in, the bus driver just screamed and drove away." G7I3F

To ensure that modal shift has longevity, it is also important to educate future generations so that they feel independence in mobility without needing a car, and so that parents feel that they can be sure that their children get to school or sports or wherever else safely and securely.

"We have to plan for training the next generation in, in using public transport because we know full well that people, my parents, think it's a terrible fate that I'm mainly on the bus." G5I4F

Infrastructure

Urban design directly shapes how people travel. Many respondents cited the inconvenient locations of jobs, schools, daycare, and essential services as a key challenge. Integrating housing with commercial zones encourages sustainable transport (Ermans et al., 2018). To drive transit adoption, stops should be positioned near where people live and work (Kwoka et al., 2015), while seamlessly accommodating daily multi-stop trips like errands and school drop-offs (Santos et al., 2023).

For kids, having safe, connected biking and walking paths between school, play, and social spots makes a massive difference, especially for medium-distance trips of 3 to 5 km (Rohrer & Kačkus Tybjerg, 2026). Better networks can take the pressure off parents who feel stuck driving their children everywhere. Adding green infrastructure like tree-lined paths not only protects kids from weather, traffic noise, and fumes, but also doubles as smart urban drainage for stormwater.

Improving bus service was by far the most frequent recommendation from the research. Making transit competitive with cars requires upgrading service quality, imposing strategic car restrictions, and reforming land use, moving from a model of minimum viable service to direct competition with the private car (Silva et al., 2021). While better frequency and reliability may boost transit appeal, its direct impact on changing habits is less clear (Göransson & Andersson, 2023). Capitalizing on climate concern may encourage potential "Switchers" to adopt buses, bikes, or e-mobility as their main mode, but internal motivation has limits. Physical infrastructure improvements are essential to overcome the challenges of high levels of car ownership and car-centric urban design. Drawing on successful models abroad could help to upgrade Capital Region's network to match international standards.

Bad weather can certainly discourage walking, biking, and taking transit. But while we can't change the weather, we can make bad-weather travel much easier through smarter urban design, reliable services, and proper gear. Keeping sidewalks and bike lanes clear in winter is key to helping people keep moving (Kajosaari et al., 2022). In fact, research from Sweden shows that summer cycling levels can be sustained all year long, provided the cycling network is well-maintained. The study also revealed that e-bikes make winter rides much more manageable, with people being more willing to

brave the cold for their work commute than for leisure trips (Chapman & Larsson, 2021).

To support active and sustainable travel in all weather conditions, city of Reykjavík should prioritize the following measures:

- Make public and active transport a priority in planning
- Improved snow and ice removal on walking and cycling routes
- Secure covered bicycle parking
- More protected walkways and bus shelters (indoor, underground, enclosed bus shelters, connections between buildings)
- Continuous bus lanes to bypass traffic
- Improved connectivity outside of the city center
- Isolated cycling lanes
- Logical locations for pedestrian crossings that match actual user needs
- Increased reliability and frequency of the bus system.

Policy

Beyond physical and service improvements, several respondents noted that societal structure, individual mindsets, and social norms present major hurdles to adopting sustainable transport. Local placement issues often force parents to drive outside their own neighbourhoods, which is a challenge municipal planning can fix. But we also need to understand *why* parents choose to drive. A Swedish study found that driving kids to school is not just about convenience. It is often a valued opportunity for parents to connect with their children on the way (Westman et al., 2017). Cars are naturally favoured by families when transit accessibility is low or public transport fares become costly for multiple family members. Higher incomes and larger family sizes further increase car reliance (McCarthy et al., 2017). Infrastructure changes need to be supported be effective policy that incentivizes sustainable transport modes.

To support active and sustainable travel in all weather conditions, city of Reykjavík should prioritize the following measures:

- Recognize and reward employers or other initiatives that are facilitating sustainable transportation use
- subsidized transit
- parking restrictions
- Improve kindergarten situation to make it easier for families to use sustainable modes of transport
- Support family friendly transport
- Encourage and support business development from companies that sell or provide:
    - Bikes (including, for example, cargo bikes that make transporting kids or running errands possible with a bike)

- Gear for walking and biking in inclement weather
- Repair shops
- Build bike sheds or other quality bike parking solutions
- Mobility as a service- bike, scooter, and car sharing

Education

Education and raising awareness can be a powerful tool to support the adoption of sustainable transportation modes.

From family interviews: As number of migrant-background people increase, it is important that policymakers and city authorities meaningfully engage with migrant communities who often have experiences of living

To support active and sustainable travel in all weather conditions, city of Reykjavík should prioritize the following measures:

- Education campaigns
  - Teach the skills necessary to use various modes at all ages
  - Highlight the benefits to using these modes (health, climate, etc.)
  - Working to improve the perception of public and active transportation modes and shifting these modes to the norm
- Public information campaigns about clothing and equipment for year-round active travel
- Training for bus drivers on passenger safety and service etiquette

Employers

Employers can play an important role in facilitating sustainable commuting. Respondents frequently mentioned workplace-related barriers, including limited flexibility and insufficient facilities for active transportation users. Lower time stress and lowering financial barriers to using alternative modes could boost active mode use. Organisations could also engage in internal competitions and campaigns to increase active mode or public transport use. Suggestions for employers are summarised in Table 7.

Table 7. Summary of strategies for employers to facilitate the use of sustainable modes of transport to commute to work among employees.

Lower financial barriers	Free or subsidized bus passes Bike subsidies or reimbursement Allowance for clothing or other gear to walk or bike to work
Reduce time stress	Flexible work schedules to reduce stress around commuting
Quality facilities to support biking	Showers and changing rooms Drying areas for gear Secure and covered bike parking Charging for e-mobility
Support & champion	Incentive programs that reward sustainable commuting Education campaigns about sustainable transportation

Case examples from other countries

PARIS, FRANCE

Since the early 2000s and more significantly since the mid-2010s, Paris has gradually shifted away from a car-dominated mobility model towards sustainable transport alternatives, combining investments in cycling infrastructure, public transport improvements, and car-restrictive policies. Successive cycling plans (Plans Vélo 2015-2020, and 2021-2026), the creation of shared-mobility services such as Vélib', and the circumstantial effects of COVID-19 (47 km of temporary « coronapistes » later converted into permanent cycling paths (Baudelle and Marrec, 2022) contributed to the development of a continuous and protected cycling network. Complemented by financial incentives such as the Sustainable Mobility Package, and regional subsidies for bicycle purchases, these measures participated in increasing the share of cycling trips (EMG 2023, APUR 2025). At the same time, Paris increased the attractiveness and affordability of public transport through mandatory employer reimbursement of subscriptions, secure bike parking at public transport stations, fare reductions for students, seniors, low-income residents and other eligible groups, and investments in metro, tramway and regional rail networks. Alongside measures facilitating active modes and public transport, Paris has adopted measures reducing car attractiveness, such as strict parking restrictions, 30 km/h speed limits on almost all roads, pedestrianisation projects - notably around elementary schools -, low-emission zones (Crit'Air scheme, which studies suggest can reduce air pollution exposure and generate health benefits (Host et al., 2020),while inciting shifts towards public transport and active modes (Diallo et al., 2026)) and traffic-restriction zones ("Paris Respire"). The implementation of some

15-minute city principles has further encouraged proximity-based mobility and reduced the need for long car trips (Moreno et al., 2021). Overall, these combined policies contributed to a substantial decline in car use, with roughly 25% of car journeys disappearing or shifting to other modes between 2001 and 2018 (APUR, 2021), as well as improvements in air quality, with fine particulate matter levels decreasing by 60% over two decades (Airparif, 2025). However, Paris still faces challenges related to public acceptance of car-restrictive measures and mobility inequalities, particularly between central and peripheral areas.

FRANKFURT-AM-MAIN, GERMANY

Since the late 1990s, Frankfurt-am-Main has promoted cycling and a shift away from car use. The city has adopted mode share goals and detailed bike plans, developed cycling infrastructure, and promotion tactics to encourage bike use. The biggest impact came, however, from car-restrictive policies and strict implementation of them. Between the late 1990s to 2018, the city increased their cycling ratio from 6% to 20% (Buehler et al., 2021). Increased cycling infrastructure has positive effects not just on cyclists but also improve the overall perception of the urban environment and quality of life for residents (Lanzendorf et al., 2022). They also trialled free public transport tickets for state employees in the state of Hessen, in which Frankfurt-am-Main is located, which increased the share of public transport use even if it was already high before. Free tickets were more effective than price reduction, benefitting low income, female and older state employees the most (Busch-Geertsema et al., 2021).

PONTEVEDRA, SPAIN

The city of Pontevedra in North-Western Spain tackled congestion and heavy car use with pedestrianizing the city center and allowing car access only to central residents and service providers. The city of 83000 people has set a maximum speed limit of 10 km/h in city center and to 30 km/h in the rest of the pedestrian zones. As a result, traffic has reduced by 92% in the center and 53-77% in the rest of the city. There have also not been any fatal traffic accidents in the pedestrian zones since 1999, and only three accidents across the entire city since 2007. The changes have also yielded significant reductions in carbon emissions (66% between 1999 to 2014), and they have had a positive effect on the local economy.

Read more: Detailed transport strategy and report from Pontevedra

GHENT, BELGIUM

Ghent's traffic circulation plan, implemented in 2017, divided the city into six zones, including a car-free zone in the old town center. To move between zones, traffic had to go through a ring road system. The change was implemented just over one weekend by way of 80 street reconfigurations and 2500 road sign updates and 14 road closures. The

accessibility has improved for both locals and tourists. The city has since continued to expand its cycling network and plans to expand into multimodal hubs, electrified public transport, and connect to surrounding regions. The shift decreased through-flow traffic and increased cycling to 35% of modal share. (EU Tourism Platform) Car usage has reduced to 27% of modal share, and public transport has increased from 9% to now 20% modal share. The city center remains accessible to service, health care and elderly citizens who have to use a car. (EU Urban Mobility Observatory) The key element here was that car use was not banned but redirected.

OSLO, NORWAY

In Oslo, the pedestrianization of the city has roots in the 1970s, but started progressing heavily in 2017 when the city trialled the removal of 300 parking spots in the city center. A total of 700 parking spots for private cars were removed by 2019, resulting in a traffic decrease of about 28% in the inner city. Key elements in the success of the policy were clear political ambition and leadership, piloting and trialling solutions and designs before implementing long-term policy, listening to younger generations, and legally solidifying the policy to ensure longevity (City Changers).

REDUCING CAR USE ACROSS EUROPE

Congestion charges for cars entering central zones, especially during particular times of the day. Revenue can be redirected into public transport or developing infrastructure. The strategy has been effective in European cities such as Gothenburg (12%) and Stockholm (22%) (Sweden), London (UK) (33%), Milan (Italy) (31%). However, the impact may be concentrated only to the geographical central locations and does not necessarily mean that overall trips by car have reduced. In Utrecht, Netherlands, where they deployed a Mobility Service for commuters, by way of providing and marketing free public transport services and private shuttles, showed a 37% reduction in car users.

INTEGRATED BIKE SHARING IN NORTHERN CLIMATES

Helsinki, Finland (population approx. 660,000) and Tartu, Estonia (population approx. 100,000) have managed to successfully implement bike sharing systems that are integrated with the general public transport network. The cities are of particular interest because of their vastly different sizes and cold climates. In Helsinki, the system was initially launched and tested in its urban core, before expanding to suburbs. They focused on public transport connections and varied their station density accordingly (for example lower intensity of bike use in suburbs). In Tartu, a city-wide system was immediately established to ensure strong user adoption. In both cities, the system is integrated into the public transport network and is considered a public transport option.